Organizational Resilience of Women Entrepreneurs in Kerala

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the University of Calicut for the
Award of Degree of

DOCTOR OF PHILOSOPHY IN COMMERCE

By

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LIST OF ABBREVIATIONS

ADAPT	:	Adaptability
ANOVA	:	Analysis of Variance
AVE	:	Average Variance Extracted
BC	:	Business Continuity
CFI	:	Comparative Fit Index
CM	:	Crisis Management
CR	:	Customer Retention
DT	:	Digital Transformation
EE	:	Employee Engagement
EPER	:	Enterprise Performance
FP	:	Financial Planning
GFI	:	Goodness of Fit Index
IFI	:	Incremental Fit index
INNOV	:	Innovation
MANOVA	:	Multivariate Analysis of Variance
MD	:	Market Diversification
MoSPI	:	Ministry of Statistics and Programme Implementation
MS	:	Market Share
MSME	:	Micro Small and Medium Enterprises
NFI	:	Normed Fit Index
NP	:	Networking and Partnerships
ORES	:	Organizational Resilience
PROACT	:	Proactiveness
PROFIT	:	Profitability

RESFL	:	Resourcefulness
RMSEA	:	Root Mean Square Error of Approximation
RSTR	:	Resilience Strategies
SG	:	Sales Growth
SRMR	:	Standardised Root Mean Square Residual

ABSTRACT

The concept of organizational resilience has gained increasing relevance in today's volatile and uncertain business environment, particularly for women entrepreneurs who often face unique socio-economic challenges. The aim this study is to investigate the dynamic interplays that exist among organizational resilience and the performance of women-led and owned enterprises in Kerala. In an environment characterised by economic uncertainty, unexpected change, and frequent natural and health-related crises, resilience has become an essential attribute of entrepreneurial success-particularly among women who often face additional structural and sociocultural obstacles. This study addresses how the resilience of an organisation directly affects its total performance. It also analyses the inner game difficulties encountered by women entrepreneurs in dealing with and rebounding from disruptions, emphasising the mediating effect of these entrepreneurs in converting their resilience into concrete results. In this regard, this study aims to outline the most influential resilience builder practices that lead to increased business success. Finally, it examines the diversity of entrepreneurial experiences by examining how socio - demographic variables moderate the resilience – performance relationship, thereby providing an integrative view of the resilience framework in Kerala's women – led entrepreneurial ecosystem. It is a sample study that uses a structured interview schedule to collect primary data from Women Entrepreneurs in Kerala. Appropriate statistical tools were applied to reach meaningful inferences from the study. The findings of the study identified the positive impact of organizational Resilience on the performance of Women owned and led Entreprises in Kerala. The study intends to motivate women to take up entrepreneurship and be part of Kerala's transformation socially and economically by highlighting their success stories and difficulties. The findings highlight that not all women-led enterprises equally benefit from resilience strategies; instead, these strategies vary greatly depending on demographic and social attributes. This research contributes valuable insights for women Entrepreneurs and policymakers by addressing the effects of organizational Resilience on the performance. This study offers practical implications that contribute effectively to enhancing the

organizational resilience of women-owned and-led enterprises in Kerala. It provides a framework for improving the sustainability, growth, and adaptability of these businesses in a rapidly changing economic and social context. It also offers actionable recommendations across financial empowerment, capability development, network building, leadership training, policy reform, and community-based support, and therefore outlines a roadmap for both governmental and non-governmental stakeholders to develop the resilience of women-led enterprises.

Keywords: Organizational Resilience, Women Entrepreneurs, Kerala MSMEs, Enterprise Performance, Resilience Strategies.

സംഗ്രഹം

ഇന്നത്തെ അസ്ഥിരവും അനിശ്ചിതത്വം നിറഞ്ഞതുമായ വ്യാപാര സാഹചര്യങ്ങളിൽ **സംഘടനാത്മക പ്രതിരോധശേഷി (Organizational Resilience)** എന്ന ആശയം കൂടുതൽ പ്രാധാന്യം നേടി വരുന്നു, പ്രത്യേകിച്ച് സാമൂഹ്യ-സാമ്പത്തിക വെല്ലുവിളികൾ നേരിടുന്ന വനിതാ സംരംഭകർക്ക് ഇത് ഏറെ പ്രസക്തമാണ്. കേരളത്തിലെ വനിതകൾ നയിക്കുന്നതും ഉടമസ്ഥതയിലുള്ളതുംആയ സംരംഭങ്ങളുടെ പ്രകടനവുമായി സംഘടനാത്മക പ്രതിരോധശേഷിക്ക് ഉള്ള സജീവ പരസ്പരബന്ധങ്ങളെ പരിശോധിക്കുന്നതാണ് ഈ പഠനത്തിന്റെ പ്രധാന ലക്ഷ്യം. സാമ്പത്തിക അനിശ്ചിതത്വം, അപ്രതീക്ഷിത മാറ്റങ്ങൾ, ആവർത്തിക്കുന്ന പ്രകൃതിദുരന്തങ്ങൾ, ആരോഗ്യ പ്രതിസന്ധികൾ എന്നിവയാൽ ചിഹ്നിതമായ സാഹചര്യങ്ങളിൽ പ്രതിരോധശേഷി സംരംഭക വിജയത്തിന്റെ നിർണായക ഘടകമായി മാറിയിരിക്കുകയാണ്—പ്രത്യേകിച്ച് സാമൂഹിക-ഘടനാപരമായ തടസ്സങ്ങൾ നേരിടുന്ന വനിതകൾക്ക്. ഈ പഠനം സംഘടനയുടെ പ്രതിരോധശേഷി അതിന്റെ ആകെ പ്രകടനത്തെ എങ്ങനെ നേരിട്ട് സ്വാധീനിക്കുന്നു എന്നതിനെ വിശകലനം ചെയ്യുന്നു. കൂടാതെ, തടസ്സങ്ങളെ നേരിടുകയും അതിൽ നിന്ന് പുനരുജ്ജീവിക്കയും ചെയ്യുന്നതിനിടയിൽ വനിതാ സംരംഭകർ അഭിമുഖീകരിക്കുന്ന അന്തർഘടക വെല്ലുവിളികളെ പരിശോധിക്കുകയും, അവരുടെ പ്രതിരോധശേഷിയെ യാഥാർത്ഥ്യപരമായ നേട്ടങ്ങളായി മാറ്റുന്നതിൽ അവരുടെ മധ്യസ്ഥപങ്ക് ഊന്നിപ്പറയുകയും ചെയ്യുന്നു. ഇതിനനുസരിച്ച്, സംരംഭ വിജയത്തെ വളർത്തുന്ന പ്രധാന പ്രതിരോധനിർമ്മാണ രീതികളെ ഈ പഠനം വ്യക്തമാക്കുന്നു. കൂടാതെ, സാമൂഹ്യ-ജനസംഖ്യാ ഘടകങ്ങൾ പ്രതിരോധശേഷി–പ്രകടന ബന്ധത്തെ എങ്ങനെ സ്വാധീനിക്കുന്നു എന്നതും പരിശോധിച്ച്, കേരളത്തിലെ വനിതാ സംരംഭക പരിസ്ഥിതിയിലെ പ്രതിരോധരൂപരേഖയെ ഏകീകരിച്ച കാഴ്ചപ്പാടിൽ അവതരിപ്പിക്കുന്നു. സംഘടിത അഭിമുഖക്രമം ഉപയോഗിച്ച് കേരളത്തിലെ വനിതാ സംരംഭകരിൽ നിന്ന് പ്രാഥമിക വിവരങ്ങൾ ശേഖരിച്ച സാമ്പിൾ പഠനമാണിത്. പ്രസക്തമായ സ്ഥിതിവിവര കണക്കു ഉപകരണങ്ങൾ ഉപയോഗിച്ച് അർത്ഥവത്തായ നിഗമനങ്ങൾ കൈവരിച്ചു. പഠനഫലങ്ങൾ കേരളത്തിലെ വനിതകൾ നയിക്കുന്ന സംരംഭങ്ങളുടെ പ്രകടനത്തിൽ സംഘടനാത്മക പ്രതിരോധശേഷിക്ക് അനുകൂലമായ സ്വാധീനമുണ്ടെന്ന് വ്യക്തമാക്കുന്നു. വനിതകൾ സംരംഭകത്വത്തിലേക്ക് കടന്നു

വരാനും, കേരളത്തിന്റെ സാമൂഹ്യ-സാമ്പത്തിക പരിവർത്തനത്തിൽ പങ്കാളികളാകാനും പ്രചോദനം നൽകുകയാണ് ഈ പഠനത്തിന്റെ ലക്ഷ്യം. കൂടാതെ, എല്ലാ വനിതാ സംരംഭങ്ങൾക്കും പ്രതിരോധ തന്ത്രങ്ങൾ ഒരുപോലെ ഗുണകരമല്ലെന്നും, സാമൂഹ്യ-ജനസംഖ്യാ പ്രത്യേകതകളനുസരിച്ച് അതിന്റെ ഫലപ്രാപ്തി വ്യത്യാസപ്പെടുന്നതാണെന്നും കണ്ടെത്തുന്നു. സംഘടനാത്മക പ്രതിരോധശേഷിയുടെ സ്വാധീനം സംബന്ധിച്ച് ഈ ഗവേഷണം വനിതാ സംരംഭകർക്കും നയരൂപീകരണ നിർണായകർക്കും വിലപ്പെട്ട അറിവുകൾ നൽകുന്നു. കേരളത്തിലെ വനിതകൾ നയിക്കുന്ന സംരംഭങ്ങളുടെ സ്ഥിരത, വളർച്ച, അനുയോജ്യത എന്നിവ മെച്ചപ്പെടുത്തുന്നതിനുള്ള പ്രായോഗിക നിർദ്ദേശങ്ങളും ഈ പഠനം മുന്നോട്ടുവെക്കുന്നു. സാമ്പത്തിക ശാക്തീകരണം, കഴിവ് വികസനം, നെറ്റ്വർക്ക് നിർമ്മാണം, നേതൃത്വ പരിശീലനം, നയപരിഷ്കാരം, സമൂഹ അധിഷ്ഠിത പിന്തുണ എന്നിവയിലൂടെ പ്രതിരോധശേഷി വർദ്ധിപ്പിക്കാൻ ഈ പഠനം പ്രവർത്തനക്ഷമമായ ശുപാർശകൾ നൽകുന്നു. സർക്കാർ, സർക്കാരേതര സംഘടനകൾ എന്നിവയ്ക്ക് വനിതാ സംരംഭങ്ങളുടെ പ്രതിരോധശേഷി ശക്തിപ്പെടുത്തുന്നതിനുള്ള മാർഗരേഖയും ഇത് അവതരിപ്പിക്കുന്നു.

സൂചകപദങ്ങൾ: സംഘടനാത്മക പ്രതിരോധശേഷി, വനിതാ സംരംഭകർ, കേരള എം. എസ്.എം.ഇകൾ, സംരംഭ പ്രകടനം, പ്രതിരോധ തന്ത്രങ്ങൾ.

CHAPTER 1
INTRODUCTION

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1.1 Background of the Study

The volatile nature of the global economy also comes with the concept of organizational resilience as an important determinant of enterprise sustainability and competitiveness. Organizational resilience refers to a firm's ability to absorb shocks, adapt to disruptions, and transform challenges into opportunities for growth and innovation (Duchek 2020). In this framework, this concept has special significance in the context of micro, small, and medium enterprises (MSMEs), which work under the constraint of limited resources and are more vulnerable to fluctuations in the market, socio-political alterations, and environmental hazards. Moreover, women entrepreneurs within this sector typically encounter gender-specific barriers, including limited access to formal finance, limited support networks, cultural constraints, and competing household responsibilities (Gupta & Mirchandani, 2018) that contribute to the need to adopt resilient organisational behaviour. Kerala, a state defined by its unique sociocultural fabric, offers an interesting analysis of women entrepreneurs' resilience. Although the percentages of literates, social indicators, and public welfare systems are high in Kerala, structural and normative challenges prevent women from participating in entrepreneurial activities (George and Gopikuttan, 2019). Understanding how women entrepreneurs in this region establish and consolidate resilient enterprises can foster gender-inclusive economic development.

The history of social reform movements, the emphasis on education, and decentralisation have played a role in shaping the economic landscape of Kerala. However, women entrepreneurs in the state, particularly those in rural, semi-urban, and coastal belts, struggle to tackle multidimensional challenges that trig their organisational resilience. For example, food processing, retail trade, handicrafts, agro-based ventures, and tourism are other sectors that women entrepreneurs readily take up, and are usually the most sensitive to disruptions during economic slowdown, pandemics, natural disasters, and policy uncertainties (Sathiadhas & Shanthi 2020). For instance, several women who led MSMEs in Kerala have been severely affected by repeated floods from 2018 to 2021, followed by the COVID 19 pandemic reducing their capacity to operate. Some even had to shut down temporarily or thought of changing their business models to digital platforms and innovative delivery

mechanisms (Raj & Gopakumar, 2022). In such contexts, resilience goes beyond the capacity to endure disruptions, including restructuring supply chains, diversifying income sources, maintaining strong customer relations, and utilising social capital. Second, women's interest in enterprise might not be due to internal capabilities alone; rather, it can be enhanced by external factors such as institutional support, peer networks, family backing, and the need for access to digital and financial literacy programs (Bhamra, Dani, & Burnard, 2011). Identifying the interplay between these internal and external drivers of resilience is important for building better support systems for female entrepreneurs in Kerala.

With regard to gender and development, while Kerala has tried to integrate women in the economic development process through the Kudumbashree mission, Kerala startup mission, and the Women Entrepreneurship Platform (WEP), available empirical research confined to the resilience building process of women entrepreneurs is very limited. Although there is an abundance of existing literature dealing with the themes of empowerment, skill development, and financial inclusion, many efforts have failed to systematically examine how women entrepreneurs in Kerala perceive, develop, and operationalise their strategies for resilience in their organisational contexts (Thomas & Anitha, 2021). Organizational resilience is a multidimensional construct that includes proactive planning, adaptive capacity, learning orientation, and leadership agility (Lengnick–Hall, Beck, & Lengnick–Hall, 2011), all of which are significant values in the technology entrepreneurial ecosystem and increasingly emerging at the utmost speed. The realities of Kerala's women entrepreneurs from sociocultural influences on community engagement to institutional impediments to gendered norms can be understood in relation to how meaningfully they shape their resilience in contrast to their male counterparts. Therefore, this study aims to fill the existing research gap by examining the organizational resilience of women entrepreneurs in Kerala to facilitate the devising of frameworks of policies, capacity-building interventions, and gender-responsive entrepreneurial strategies that would lead to long-term sustainability and inclusive growth.

1.2 Concept of Organizational Resilience

Organizational resilience is a multidimensional and dynamic capability that helps enterprises live through, adapt, and grow with disruptions or adversity. The concept

of Business Continuity has traditionally been embedded in disaster management and risk mitigation disciplines, yet it has evolved from many strategic, operational, or even behavioural competencies throughout organisations (Duchek, 2020). Resilience goes beyond recovery from crises to 'bounce forward' by using adversity as the springboard for transformation and innovation (Lengnick-Hall et al., 2011). This capability encompasses a firm's preparedness, adaptability, resourcefulness, and learning mechanisms that enable it to manage both sudden shocks (pandemics or natural disasters) and long-term stress (market instability, socioeconomic constraints, etc.). Therefore, organizational resilience is vital for women entrepreneurs, especially in developing economies such as Kerala, to overcome resource limitations, gender barriers, and ecosystem volatility to enhance entrepreneurial continuity or growth (Bhamra, Dani, & Burnard, 2011).

An organisation is characterised by resilience based not only on external factors but also on internal factors. Leadership agility, human capital development, innovation capability, and operational flexibility constitute internal representation. In this case, externally, is shaped by institutional support, social networks, market linkages, and community engagement (Burnard & Bhamra, 2011). Specific to women-managed enterprises, these factors are conditioned by the gender-specific challenges of constrained mobility, curtailed access to finance, underrepresentation of women in decision-making spaces, and continued sociocultural biases (Gupta and Mirchandani 2018). To develop resilience, women entrepreneurs in Kerala often depend on social networks, family support systems, and commonly available next-generation community institutions, such as Kudumbashree. Phenomenally, continuous learning, experiential knowledge, and strategic improvisation do not require formal business training, and what it does is to allow them to embed resilience in organisational routines. Moreover, emotional strengths are frequently intertwined with resilience in business enterprises, as women handle business risk in parallel with sociopolitical risk and domestic responsibilities (Díaz-García, Brush, & Gatewood, 2009).

Understanding the application of the resilience concept in women-owned enterprises in Kerala as it develops as an entrepreneurial ecosystem requires further academic attention. Thus, it is a characteristic that does not succumb to one entity, but is a process-oriented construct that evolves over time with constant exposure to adversity and deliberate inward development of coping abilities (Williams et al., 2017). In the

case of women entrepreneurs, building organizational resilience often requires strategic diversification, digital adoption, tools for the effective use of resources and capabilities, and risk-sharing mechanisms. In response to the COVID 19 pandemic, many women in Kerala shifted to online platforms, home-based delivery systems, and peer-to-peer marketing to continue running their businesses amidst the closing down of businesses and disruptions to the supply chain (Raj & Gopakumar, 2022). The embeddedness of resilience practices in the entrepreneurial behaviour of women is exhibited through these real-world adaptations that show resilience as a bridge between vulnerability and sustainability. Consequently, it is essential to comprehend the importance of gender and context in the concept of organizational resilience to create supportive policies and interventions that strengthen and support women entrepreneurs in weathering adversities and thriving in competitive markets.

1.3 Women Entrepreneurship in Kerala: An Overview

In recent decades, women's entrepreneurship in Kerala has been achieving notice, in line with the global trend which accentuated the role of women in socio-economic development. Women entrepreneurs are not a reflection of the increased participation of women in the economy but a complete change in roles and women's empowerment. Kerala, a state with a high female literacy rate, progressive social indicators, and attainment of socioeconomic development in a host of indicators, could be hypothesised to be relatively favourable for entrepreneurial activities by women (Devika & Thampi, 2007). Over time, the state has seen women moving out of merely being viewed as traditional domestic roles into dynamic economic contributors, mainly through micro-enterprises, self-help groups, and start-ups. This trend is supported by cultural support, higher education levels, and policy intervention. However, societal rules and patriarchal archetypes have an impact on many women's ambitions to be entrepreneurs and their range of operation (Rani & Jyothi, 2020).

Women-led enterprises in Kerala have been promoted by a number of governmental and non-governmental initiatives. Interventions including Kudumbashree, the Kerala Startup Mission (KSUM), and different microcredit schemes have empowered women to participate in monetary exercises by providing access to budgetary assets, preparing, and market interfaces Venugopalan et al. (2021). To mention a few, Kudumbashree has become a model for poverty alleviation and women's

empowerment by empowering thousands of women serving as managers of small-scale business ventures not just in agriculture, food processing, and tailoring, but also in eco-tourism (D'Cruz, 2003). In the process of providing livelihood opportunities, these initiatives also increased women entrepreneurs' leadership, decision-making capabilities, and resilience. Moreover, institutions of higher education, entrepreneurship development centres, and civil society organisations have been involved, as part of Greece, in assisting in raising awareness and equipping women in rural and urban settings with entrepreneurial skills (Subramaniyan, 2024).

However, the growth of women's entrepreneurship in Kerala faces several challenges. Somani et al. (2025) reported that access to formal credit, bureaucratic hurdles, market competition, and limited digital literacy continue to be the main barriers. As a result, many women entrepreneurs remain concentrated in low-investment and low-return sectors because they lack exposure, training, and support systems. Moreover, the fulfilment of family and business responsibilities is also an added pressure that creates business discontent. According to previous studies, economic shocks are more vulnerable to women entrepreneurs, and their survival rates are lower than those of their male counterparts (Garg & Agarwal, 2017). However, as a result of these efforts, there are undeniable facts evident in asserting that Kerala has taken commendable measures to promote women's entrepreneurship, but they still need frameworks of policies that are inclusive and gender-sensitive, financial systems, and mentorship programs throughout the entrepreneurial journey. To sustain such momentum and aim for long-term socioeconomic development, commitment to strengthening institutional frameworks is critical, and efforts are required to promote gender equity in business ecosystems.

During the past decade, women's entrepreneurship in Kerala has undergone radical changes due to government initiatives and the changing sociocultural environment. Mentioning the Ecostat Kerala Report (2024), the number of women owned enterprises in the state has reached 578,774, accounting for 20.41% of the total 28,36,249 enterprises. In the above figure, we see that the participation of women in the state's entrepreneurial ecosystem is significant and is increasing in time. The analysis by district provides valuable information regarding the district breakup of women owned enterprises in Kerala. Similarly, districts such as Kasaragod (35.83%), Alappuzha (35.23%), and Wayanad (27.63%) registered the highest percentage of

women-led enterprises, indicating the role of region-specific initiatives and women's increasing role in local economic development. It also reveals how the geographical benefits of different parts of the state have been turned to incentivise women's entrepreneurship — traditional handicrafts in Kasaragod or agro-based industries in Alappuzha (Ecostat Kerala, 2024). One reason for considering the localised development of entrepreneurship is to notice the role that women entrepreneurs play in Kerala's economy.

Table 1.1

District-wise Women-Owned Enterprises in Kerala

District	Women-Owned Enterprises	Total Enterprises	Percentage of Women-Owned Enterprises
Thiruvananthapuram	48,809	2,47,590	19.71%
Kollam	60,026	2,75,200	21.82%
Pathanamthitta	19,929	1,06,938	18.64%
Alappuzha	92,561	2,62,773	35.23%
Kottayam	43,763	2,21,143	19.79%
Idukki	13,162	1,27,998	10.29%
Ernakulam	54,882	3,00,432	18.27%
Thrissur	39,123	2,43,034	16.09%
Palakkad	32,649	2,18,088	14.97%
Malappuram	26,186	2,13,669	12.26%
Kozhikode	34,910	2,11,217	16.52%
Wayanad	24,667	89,253	27.63%
Kannur	49,399	2,10,892	23.41%
Kasaragod	38,708	1,08,022	35.83%
Total	5,78,774	28,36,249	20.41%

Source: Ecostat Kerala, Report on Enterprises Sector in Kerala (2024)

In line with the rise in the number of women-owned businesses, the number of women driven by Micro, Small, and Medium Enterprises (MSMEs) has been increasing in Kerala, primarily because of proactive government policies and schemes undertaken to aid women entrepreneurs. According to data from the MSME Udyam Portal (2024), the number of women-led MSMEs has significantly increased over the last decade, from only 3,735 in the registered units of 2014–15 to an amazing number of 50,261 in 2022–23. Additionally, the initiatives of the Women Entrepreneurship Development Programme (WEDP) and the Kerala Startup Mission (KSUM) have

provided vital financial assistance and mentoring along with capacity-building programs aimed at women, have become very effective, and have contributed significantly to this exponential growth. The aim is to instigate innovation, offer funding support, and use in women in fields hitherto the bastion of men, such as manufacturing, technology, and services (MSMES registered on the Udyam Portal, 2024). Furthermore, the rise in women-led MSMEs also signifies a movement towards self-employment and the creation of new jobs (complementing existing female employment), thereby improving the socio-economic status of women in Kerala. Women entrepreneurs have received financial help from institutions such as the Kerala Financial Corporation (KFC) which has given low-interest loans and support, helping to break down the problem of finance, which hinders the growth of women-led businesses (Economic Review, 2016).

Table 1.2

Women-Led MSMEs Registered in Kerala

Year	Number of Women-Led MSMEs Registered
2014–15	3,735
2015–16	1,805
2016–17	2,239
2017–18	1,935
2018–19	2,100
2019–20	2,300
2020–21	14,732
2021–22	25,243
2022–23	50,261
2023–24	16,815

Sources: MSMEs registered on Udyam Portal (2024), Government of Kerala. (2016). Economic Review 2016. State Planning Board, Government of Kerala. (2017). Gender Statistics 2016-17. Department of Economics and Statistics, Government of Kerala. (2018). Gender Statistics 2017-18. Department of Economics and Statistics.

While women-led enterprises are promising, the biggest challenge they encounter is access to markets, infrastructure to boot, and some latent perception of gender bias in the entrepreneurial ecosystem. Although Kerala has one of the most robust systems of education in India that promotes women's high literacy and skill development, there is an imbalance in the fact that women are still fulfilling both entrepreneurial activities and household responsibilities. To address these challenges, various

women's empowerment programs were put in place and concentrated on empowering women by empowering them to make decisions, lead, and become financially savvy. The Kudumbashree program by the government also plays a vital role in creating a supportive business environment by providing self-help groups and enterprise development programs for women in rural areas. These interventions have been successful in increasing women's participation in businesses. However, further facets of their lives must be supported to ensure their long-term growth. Although the terrain remains challenging, women entrepreneurs in Kerala have made significant progress that has only strengthened Kerala's commitment to women's equality and empowerment. With increasing numbers, Kerala is seen as a model for women's entrepreneurship in India (Department of Economics and Statistics, 2018; Gender Statistics, 2017–2018).

1.4 Kerala's Entrepreneurial Landscape: A Gendered Perspective

In the last few decades, Kerala's entrepreneurial ecosystem has changed dramatically with diversification of sectors, focus on innovation, and emphasis on sustainability and inclusion. Kerala has a historically high Human Development Index (HDI), robust educational infrastructure, and strong levels of civil society engagement that make it an ideal entrepreneurial ground (Kumar & Kannan, 2019). Nonetheless, unlike most parts of the world, the entrepreneurial domain in Kerala is marked by a discernible gender gap, as women entrepreneurs remain underrepresented, especially in high-growth and technology-driven sectors (Devika & Thampi, 2007). The limited entrepreneurial participation of women due to entry barriers in traditional business domains, such as construction, transportation, and manufacturing, which are dominated by males, has resulted in small-scale entrepreneurial ventures, such as those in tailoring units, food processing, and retail enterprises (Garg & Agarwal, 2017). The patterns are gendered and reflect not only systemically sanctioned but also sociocultural sanctioned expectations that characterise entrepreneurship as male.

Moreover, gender-related inequalities in entrepreneurship in Kerala are conditioned by access to financial, technological and social capital. Institutions such as Kudumbashree and the Kerala Startup Mission (KSUM) have contributed to the

promotion of inclusive entrepreneurship among women, but many start-ups by women continue to face constraints in the form of mobility, access to collateral for loans, and exposure to digital tools Subramaniyan (2024); Venugopalan et al. (2021). Furthermore, avenues available for male entrepreneurs' support, whether in the form of trade unions or informal mentorship circles, are usually unavailable to women, particularly in rural or semi-urban areas. However, women entrepreneurs are also more likely to encounter regulatory bottlenecks, gender-based discrimination, and familial resistance, which have strengthened their marginalisation in business ecosystems (Rani & Jyothi, 2020). Hence, even though women entrepreneurs in Kerala are becoming increasingly visible, their enterprises are not adequately scalable, sustainable, or profitable, thereby reinforcing gender inequalities in the economy.

However, there is considerable scope for filling the gender gap in entrepreneurship in Kerala's policy environment. Kamberidou (2020) pointed out that the state's emphasis on gender budgeting, women's empowerment programs, and inclusive policy frameworks has paved the way for a more equitable entrepreneurial environment. For a long time, the growing participation of women in higher education, particularly commerce, engineering, and management, provided a pool of potential entrepreneurs who could lead innovation-driven enterprises. In this regard, the existing digital transformation initiatives promoted in the state of Kerala offer new avenues for women to surpass existing barriers and venture into e-commerce, digital services, and remote work-based entrepreneurship (Thomas & Varghese, 2022). If policy interventions related to these opportunities are to be undertaken in the future, they must take a gender-sensitive approach to ensure that these opportunities are equitably distributed and to deal with both visible disparities and longstanding sociocultural norms that constrain women's entrepreneurial agency. Not an economic imperative alone, enabling women entrepreneurs in Kerala to be critical enablers for achieving resilience, inclusivity, and sustainability in the entrepreneurial ecosystem.

Over the last decade, there has been steady growth in women-owned enterprises in Kerala, and the entrepreneurial scenario has changed substantially. The growth in the total number of women-led enterprises in Kerala, as per Table 1.3, has increased

significantly from 62,506 in 2014 to 15 to 100,567 in 2023–24. A significant percentage of these businesses are perennial, implying that they operate for one year and are continuously doing business. The proportion of perennial enterprises increased from 90.31% for the period 2014–15 to 95% by 2023–24, indicating that women entrepreneurs are more stable businesses, have improved access to resources, and manage their enterprises better. However, this trend also indicates a rise in professionalisation among women-led businesses, whereby informal, seasonal, or casual engagements are becoming formal and full-time viable businesses. Government support, an increase in financial literacy, digital adoption, and capacity-building programs targeting women in business (Planning Commission, 2024) are attributed to such progress.

Table 1.3

Nature of Women-Owned Enterprises in Kerala

Year	Total Women-Owned Enterprises	Perennial (%)	Seasonal (%)	Casual (%)
2014–15	62,506	90.31	5.97	3.71
2015–16	65,141	91	5.5	3.5
2016–17	68,527	91.5	5	3.5
2017–18	72,016	92	4.5	3.5
2018–19	76,342	92.5	4	3.5
2019–20	80,243	93	3.5	3.5
2020–21	85,066	93.5	3	3.5
2021–22	90,714	94	2.5	3.5
2022–23	95,221	94.5	2	3.5
2023–24	1,00,567	95	1.5	3.5

Source: Economic Census (MoSPI)

Table 1.4 provides a women entrepreneur sectoral engagement district-wise at all India, Kerala state levels, and for the year 2023–24, clearly showing where women-led enterprises are spread over manufacturing, trade, and services. Although there is a relatively balanced allotment of their presence in all three sectors, districts such as Alappuzha and Kollam are more inclined towards manufacturing, with shares of 40%

and 35%, respectively. In the case of Idukki, Malappuram, and Kasaragod, half of the women entrepreneurs in these districts are engaged in trading. Whereas 30% of the districts have typically been made up of services, this represents a stable but underleveraged domain where more interventions can be expected to increase growth. The selection of sectors is typically based on particular economic conditions prevailing in the locality, availability of raw materials, market access, and the skill sets that women in the given regions possess. For example, the higher manufacturing engagement of Alappuzha may be explained by its importance in the coir and textile industries and high consumer density districts such as Malappuram and Kasaragod (State Planning Board, 2024).

Table 1.4

District-Wise Distribution of Women-Owned Enterprises by Sector in Kerala

District	Manufacturing (%)	Trade (%)	Services (%)
Thiruvananthapuram	30	40	30
Kollam	35	35	30
Pathanamthitta	25	45	30
Alappuzha	40	30	30
Kottayam	30	40	30
Idukki	20	50	30
Ernakulam	35	35	30
Thrissur	30	40	30
Palakkad	25	45	30
Malappuram	20	50	30
Kozhikode	30	40	30
Wayanad	25	45	30
Kannur	35	35	30
Kasaragod	20	50	30

Source: Data compiled from the Economic Review 2024 by the Kerala State Planning Board

Through these two tables, we see that India's feminised entrepreneurial development has occurred according to these two transformations: women no longer have the same overwhelming concentration in only a select number of activities, and that within these activities women are no longer limited to the narrow roped in Indian locales. However, perennial enterprises have been progressively increasing due to their ability to adapt and resilience to such an uncertain business trajectory which is essential in assuring sustained success and contribution to the state economy. At the same time, the cross-district variation in sectoral participation indicates that such region-specific policy interventions will go a long way towards amplifying women's entrepreneurial outcomes. Additionally, schemes such as sector-focused capacity building for women in skills development, better market linkages, digital tools training, and cluster-based business ecosystems enable women's economic participation. It is also important to have consistent data collection and reporting that is achievable through portals such as Economic Review and MSME, as they support evidence-based policymaking, which is important for this upward trajectory (MoSPI, 2023; Kerala State Planning Board, 2024).

1.5 Understanding Organizational Resilience in Entrepreneurship

In today's fluid and uncertain business environment, organizational resilience is becoming the cornerstone for ensuring the sustainability and growth of entrepreneurial ventures. In this case, resilience is not only about retrieving oneself from the crisis, but also about higher learning, more development, and even better prosperity despite uncertainty (Duchek, 2020). Resilience is a strategic capability for entrepreneurs, particularly when these strategies are implemented in micro, small, and medium enterprises (MSMEs), because it provides increased agility, responsiveness, and recovery. The idea of resilience in Kerala, in which a large number of entrepreneurs are women working across a wide range of sectors from agriculture and retail to IT and health, is inextricably linked with socioeconomic survival and empowerment. Market volatility, natural calamities (floods in 2018), pandemics (such as COVID-19), and digital disruptions have encouraged these entrepreneurs to test

such resilience. However, with that being said many developed, through pivoting to new models such as using e-commerce, creating collaborative networks, or even diversifying products, to demonstrate high levels of resilience to pressure Neelam et al. (2024).

Resilience is multifaceted in entrepreneurial settings and consists of three interrelated abilities: absorptive, adaptive, and transformative abilities. Absorptive capacity is the amount of shock a business absorbs before collapsing its core operations. The concept of adaptive capacity shows how processes and practices need to be modified in response to changing conditions, while transformative capacity emphasises proactive innovativeness to become stronger than before adversity (Duchek, 2020; Lengnick-Hall et al., 2011). For example, women running small industries in Kerala's food and textile sector demonstrated adaptive resilience by innovating to adapt to consumerism by integrating organic production as well as sustainable packaging as a response to evolving consumer trends. Furthermore, there is an increase in women running startups under schemes such as the Kerala Startup Mission (KSUM) which are not only digital platforms, fintech tools, and AI-based solutions (KSUM, 2024). These capabilities are cultivated by leadership agility, community support systems, and policy interventions, which have allowed resilient entrepreneurs to stand out (Linnenluecke, 2017).

Psychological resilience at the individual level influences entrepreneurial success. They stated that entrepreneurs with good emotional intelligence, high levels of optimism, and a proactive coping style seem to show greater resilience in times of uncertainty (Ayala & Manzano, 2014). In many cases, these qualities enable entrepreneurs to adapt to stress in a positive way, maintain their confidence, and make good decisions when they need to face a crisis. Women entrepreneurs in rural and semi – urban Kerala have social and emotional resilience embedded in Kudumbashree's community solidarity, educational exposure, and collective entrepreneurship initiatives. Engagement in such collectives has been shown to not only increase access to credit and resources, but also enhance people's self-efficacy,

motivation, and risk tolerance (Bullough & Renko, 2013). In addition, as far as Kerala is concerned, the cultural context with comparatively higher female literacy and active local governance provides women with the capacity to develop personal emotional resilience and enterprise-level adaptability, despite systemic gender biases.

Second, organizational resilience is influenced by the entrepreneurship ecosystem and broader institutional context. It encompasses access to government support, markets, credit, infrastructure and mentorship. Through policy frameworks such as the MSME Facilitation Act, the Women Development Corporation, and financial programs as part of schemes such as MUDRA and PMEGP, Kerala has been able to strengthen such ecosystems. These frameworks build structural resilience by freeing up bureaucratic delays, aiding access to subsidies, and providing entrepreneurship training (OECD, 2014). Moreover, public–private partnerships and localised incubation networks (FabLabs and Innovation Hubs across districts) help women entrepreneurs transition from traditional business models to technology-enabled enterprises. Nevertheless, these organisations' resilience is also dependent on their ability to integrate strategic planning, risk management, and digital literacy, areas in which there is a constant need to strengthen capacity (Somers, 2009). Increasingly, organisations are learning that entrepreneurs who adopt employment strategies based on resilience are able to ensure continuity and competitiveness under adverse conditions.

In Kerala, it is important to understand organizational resilience through a gendered lens. For instance, structural constraints are an issue that women entrepreneurs find difficult to function within the market, ranging from limited land ownership to financial exclusion, domestic responsibilities, and societal stigma (Rani & Vijayalakshmi 2018). Therefore, creating resilience in women's entrepreneurship entails bolstering business capacities and dismantling gender-based barriers. States that have experienced it include inclusive policies, gender – sensitive mentorship, safety nets for economic shocks, and strong community networks. The research also asserts that women's entrepreneurship resilience results in building a cycle of impact

that not only improves household income but also empowers communities and instills entrepreneurship among other women (Nair & Jacob, 2021). Overall, organizational resilience is a dynamic capability that is tacitly embedded in the entrepreneur's mind, in the culture of the organisation, and in the ecosystems, it is embedded in. To create a vibrant and equitable entrepreneurial strategy in Kerala, it is crucial to leverage resilience (psychological readiness, systemic support, and social inclusion) in the process.

Over the past decade, Kerala's entrepreneurial ecosystem has seen a slew of major disruptions, and women entrepreneurs are often at the epicentre of these crises. Table 1.5 illustrates and understands the adverse effects of different macroeconomic, environmental, and socio-technological crises on women-led enterprises and their role in putting the efforts into a strategy to adapt to them. The demonetisation policy of 2016–2017 provides an example in which more than one framework was used to evaluate the policy; it created a significant impact on cash economy-based small businesses in which women entrepreneurs operating without access to banking facilities or in the informal sector were the most affected (Ponnusamy et al., 2017). While this resulted in digital payment adoption and increased financial literacy, it also created a great boom in the housing and automobile sectors. The Kerala floods of 2018 and 2019 similarly destroyed infrastructure and supply chains, and many women temporarily shut down their businesses. While damaging, these calamities stimulated practices by joining cooperative networks, securing community microfinance, and locating businesses in safer areas. Women entrepreneurs have been further tested by COVID 19, which made them shift quickly to online platforms that not only kept their businesses afloat but also opened new consumer segments (Saju & Ramadevi, 2025). However, these examples demonstrate that while stress is imposed by these crises, they increase the rate of behaviours to build resilience within entrepreneurial ecosystems.

Table 1.5

Impact of Crises on Women Entrepreneurs in Kerala and their Adaptive Responses

Crisis/Challenge	Year(s)	Primary Impact on Women Entrepreneurs	Common Adaptive Strategies Adopted
Demonetization	2016–2017	Cash flow disruptions, reduced customer footfall	Shift to digital payment modes (PayTM, GPay), financial literacy drives
Kerala Floods	2018 & 2019	Infrastructure loss, business closure, inventory damages	Community funding, co-operative networks, relocation of units
COVID-19 Pandemic	2020–2021	Supply chain breakdown, mobility restrictions, revenue loss	Online marketing, home-based production, diversification into essential goods
Global Inflation	2022–2023	Increased input costs, unstable pricing, credit squeeze	Strategic sourcing, price rationalization, collective procurement
Tech Disruption	Ongoing	Pressure to digitize, e-commerce competition, lack of training	Digital skill programs (KSUM, Kudumbashree), social media branding

Source: Compiled from Kerala Startup Mission Reports (2019–2024), Kudumbashree Annual Review (2023), Economic Review (2024).

Table 1.6 shows various resilience practices that women entrepreneurs in Kerala incorporate to address such challenges and patterns of adaptive strategies. Sixty-seven percent of women entrepreneurs have adopted digital transformation through markets, trade, marketing, and point-of-sale (POS) platforms. With the COVID19 pandemic on our lips and guidance from the government and institutional initiatives such as the Kerala Startup Mission (KSUM) and Kudumbashree, the shift in focus to this dimension of digital capability in enabling organizational resilience has received much impetus Nalakam et al. (2024). In addition, 74% of the respondents practiced community and peer networking which emphasises social capital as a means of

building resilience. These networks provide not only emotional support but also channels for exchange of knowledge, collective problem solving, and resource mobilisation. However, only 15% adopted resilience practices such as crisis simulation or risk scenario planning, thus opening up a gap in the formal risk management preparedness that women entrepreneurs tend to practice among themselves. This means that there is a requirement for such targeted training and policy level interventions for institutionalising such practices within MSMEs and startups headed by women.

Table 1.6

Impact of Crises on Women Entrepreneurs in Kerala and Their Adaptive Responses

Resilience Practice	Percentage of Women Entrepreneurs Adopting (%)	Remarks
Business Continuity Planning	42%	Particularly high among women in IT, education, and food services
Digital Transformation (e-commerce, POS, etc.)	67%	Driven by COVID-19 and support from Startup Mission
Financial Diversification (multiple income streams)	38%	Common in family-run and micro-enterprises
Community and Peer Networking	74%	Enabled by Kudumbashree units and women entrepreneur forums
Psychological Well-being Programs Participation	21%	Gaining importance post-pandemic, still limited reach
Crisis Simulation or Risk Scenario Planning	15%	Rare but emerging in medium-scale enterprises

Source: Primary survey conducted by Kerala Institute for Entrepreneurship Development (KIED), 2024, and Kerala Women Entrepreneurs Federation Annual Report (2024)

It also indicates increasing, but still limited, mindfulness of the importance of psychological well-being and mental resilience. Despite the fact that such practices

are known to combat burnout and decision fatigue in stressful circumstances (George & Nair, 2020), only 21% of the surveyed women entrepreneurs had access to psychological support programs or wellness activities. Another important strategy is financial diversification which 38% adopted and proved to be essential in weathering shocks, such as inflation and supply chain disruption, among others. Although women running family enterprises or rural home-based businesses have become accustomed to living on shoestring income and frequently looking for additional sources of income (from food processing to online tutoring) in order to keep business afloat, they are finding ways to take opportunities that they can get. However, the sectors and regions remain dissimilar when it comes to integrating these structured resilience frameworks. However, it may be argued that the creation of these indicators enables regional organisations to deepen organizational resilience in women-led firms and increase opportunities to provide continued training-technology support, psychological support mechanisms, and policy reforms related to gender-inclusive disaster recovery and entrepreneurship development.

1.6 Resilience Challenges Faced by Women Entrepreneurs

Building resilience, which is the capacity to recover when disrupted, is a vital quality in entrepreneurship and, more importantly, for women entrepreneurs in Kerala, where she encounters a confluence of systemic, sociocultural, and economic challenges. The availability of institutional finance and credit is one of the major barriers to entrepreneurial resilience. Although several state and central schemes have been envisioned to empower women towards entrepreneurship, there are still many women, particularly in rural and semi-urban areas, who struggle to obtain loans mainly because of a lack of collateral, credit history, or lack of awareness of financial products (Rao & Menon, 2020). In addition, entrepreneurs in such informal financial institutions and microcredit providers are vulnerable to high interest burdens and long-term financial planning is not witnessed. Additionally, women-owned businesses are considered less growth-oriented; therefore, formal institutions back away from extending funding to women-led ventures, limiting their access to critical funding, especially in times of crisis (Tripathi & Singh, 2018).

The level of infrastructure and technology gaps that weaken the resilience of women-led enterprises also remains a major challenge as enterprises try to keep pace with rapid digital transformation. COVID 19 added more momentum to digitalisation, but women entrepreneurs did not have digital literacy, training, and infrastructure that needed to be able to move their businesses online and adapt to e-commerce platforms (Saju & Ramadevi, 2025). Internet access, digital payment systems, and online customer engagement are evolving in the non-urban districts of Kerala, and this divide is more pronounced here. In addition, many women owned MSMEs in the traditional sectors of food processing, handicrafts, and textiles, requiring specific digital interventions and sector-specific upskilling to remain competitive amidst disruptions. These businesses face challenges in recuperating from supply chain breakdowns or variability in consumer behaviour, such as natural disasters or economic recessions, without the adoption of technology and support mechanisms Nalakam et al. (2024).

Sociocultural expectations as well as gender norms also exert a constraining impact on the resilience of women entrepreneurs. Women have the double burden of business responsibilities and unpaid domestic labour and caregiving responsibilities, which hinders their time, flexibility, and energy to participate in crisis response and business continuity planning (George & Nair, 2020). The dual roles they fulfil have become more demanding at times of external stress, such as the COVID-19 lockdowns and the 2018–2019 Kerala floods, leading to an outsized physical and emotional demand. In addition, there are cultural stigmas surrounding women's financial independence that prevent them from being immersed in entrepreneurial forums or soliciting external help. These social barriers hinder companies' capacity to respond adaptively to crises and restrict their access to peer networks, mentorship, and institutional backing, which are indispensable stakeholders in building long-term resilience in businesses.

While well intentioned, the policy and institutional support mechanisms for women entrepreneurs in Kerala always fail to adapt or continue in an organised manner, providing them continuity to build resiliency in their business models. Kudumbashree, Kerala Startup Mission (KSUM), and Women Development Corporations have been

the major initiatives that have facilitated and supported women in establishing their businesses, but this support is constrained by short-term funding cycles, bureaucracy, and the absence of gender-sensitive training modules (Rajan & Krishnan, 2022). Additionally, according to data from the Kerala Institute for Entrepreneurship Development, several women entrepreneurs of Kerala have started undertaking certain resilience practices, such as community networking and digital transformational practices, but practices such as business continuity planning and risk scenario simulation are sparse. Thus, a more structured policy approach is required that features, among others, crisis resilience audits, gender-targeted business risk management training, and much better embeddedness of mental health support systems so that women entrepreneurs can tackle uncertainties from a position of confidence.

1.7 Policy Environment and Institutional Support in Kerala

The entrepreneurial ecosystem for women in Kerala has been formed by the state's policy environment and institutional support structure. Kerala has been proactive in encouraging inclusive economic participation through entrepreneurship. The context of the state is gender equality, social justice, and local development, which is an enabling environment for women entrepreneurs. There are many state-led initiatives to ease women's access to finance, business education, and infrastructure support for women owned enterprises. Second, Kerala's decentralised planning system through Panchayati Raj institutions has made it possible to execute entrepreneurship policies at the grassroots level so that even rural and marginalised women benefit from them.

The presence of women's organisations has been one of the most powerful dimensions of institutional support in Kerala, and Kudumbashree is one such example of this type of organisation. This was launched as a poverty eradication and women empowerment mission, which later became a great force in the development of micro – enterprises among women. Kudumbashree has fostered the formation of self-help groups and micro-enterprise units through which thousands of women have been able to start and manage their own ventures in the food processing, textiles, agriculture, and services sectors. The program provides financial support and building capacity through

training, mentoring, and peer learning. This institutional backing acts as a dependable base for women to overcome entry hurdles to the world of entrepreneurship, provide confidence to them, and help them become economically independent in their communities.

The Kerala Startup Mission (KSUM) supports nurturing innovation-driven women entrepreneurship. The organisation offers subsidised facilities for incubation, seed capital, digital training, and mentoring services for early-stage startups. KSUM has played a major role in bridging the gap between conventional commerce transaction models and new technology-facilitated ventures by providing a platform for women to shift to digital platforms and e-commerce. In addition, these programs are further reinforced with special bootcamps, hackathons, and innovation challenges focused on women entrepreneurs, so that they are not left behind in the fast-growing tech ecosystem of the state. Kerala also has a number of private and non – governmental institutions where support for women's entrepreneurship is extended through educational workshops, leadership development programs, and networking platforms, in addition to government programs.

In addition, the policy landscape of Kerala favours women entrepreneurs with beneficial schemes such as subsidised loans, tax concessions, and support in marketing. State-run banks and cooperative institutions give priority to women entrepreneurs as they strive to overcome the sociocultural and financial hazards faced by women entrepreneurs. In addition, the government of the state has advocated for the establishment of women entrepreneurs' collectives and federations that can access bigger markets and resources. For the visibility and customer engagement of women-led businesses, further trade fairs, exhibitions, and district-level entrepreneurship development cells are facilitated. Such policies, apart from offering handouts, also help create an environment that regulates women's involvement in and grant recognition to those in the entrepreneurship category.

The emphasis is on inclusivity and sustainability in Kerala's policy and institutional approaches. However, efforts are being made to provide special attention to women caught in marginalised backgrounds, such as women from Scheduled Castes,

Scheduled Tribes, and communities categorised as minorities. With this, there has been an attempt to link entrepreneurship development with sustainable development goals to enhance women's inclusion, but also to ensure that women's businesses enhance social and environmental well-being. The state's holistic vision is reflected in programs that include integrating health insurance, childcare support, and flexible work structures for women entrepreneurs. It is an open multi-dimensional support framework which not only emphasises the creation of business but also ensures long-term empowerment, dignity, and overall societal transformation among women in Kerala.

1.8 Rationale of the Study

Entrepreneurship in Kerala is in a dynamic state which provides an interesting perspective for exploring the convergence of gender, policy, and resilience, especially pertaining to women entrepreneurs. Although some progress has been made in education and health indicators, Kerala's female workforce participation still falls below the average. This paradox underscores the need to examine entrepreneurship as a means of economic empowerment among women in the state. Kerala women entrepreneurs not only contribute to household economies but also emerge as initiators of change in Kerala by developing employment opportunities, promoting the development of local areas, and challenging gender roles that have long been taken for granted. This is important because knowledge of what drives them into an entrepreneurial journey is crucial to understand the underlying factors, particularly given the specific socio-economic and cultural context in the state.

Recently, the growth of women-led enterprises in Kerala has been fuelled by the above-mentioned supportive government policies, institutional backing, and increasing awareness of digital platforms. Even though such an increase seems quite positive, women entrepreneurs nevertheless have to suffer a wide range of challenges, including limited access to finance, lack of training, market constraints, and existing sociocultural constraints. The ecological experiment has been further extended by the COVID 19 pandemic, economic fluctuations, floods, and other climate events, as well as digital disruptions in women-owned businesses. The gravity of these multifaceted

challenges implies that it is necessary to understand how Kerala women entrepreneurs adapt, survive, and thrive in a volatile environment. Therefore, the study is timely and appropriate for identifying resilience-building strategies that drive these entrepreneurs to be able to maintain and grow their ventures.

A major reason for conducting this study is the lack of research on the resilience and sustainability of women entrepreneurs in Kerala. Although there are various reports and policy documents that provide statistical information regarding women's participation in the MSME sector, there is minimal qualitative and empirical research exploring the lived experiences of these women. To close this gap, this study aimed to explore their motivations, constraints, coping mechanisms, and adaptive strategies. Additionally, the role of organizational resilience in shaping entrepreneurial outcomes will help policymakers, support institutions, and potential future entrepreneurs to better manage their businesses. Moreover, this research will contribute to the narrative of gender mainstreaming and gender-inclusive development in economic policymaking.

It also implies targeted intervention designs that cater to the specific needs of women entrepreneurs in Kerala. Given the current acceleration toward digitalisation, globalisation, and sustainable development, women need to be made to acquire the right tools and support systems that enable them to thrive in complex business environments. As such, this research seeks to isolate the enablers of how resilience is in fact developed (e.g. cooperative institutional support, peer networks, access to training, and policies that enable resilience) to understand how these elements can be scaled or replicated across regions. In addition, the study intends to motivate women to take up entrepreneurship and be part of Kerala's transformation socially and economically by highlighting their success stories and difficulties.

1.9 Research Problem

Given that Kerala has achieved much in terms of literacy, healthcare, and gender equality, it is unfortunate that the ecosystem for female entrepreneurship remains mired in a host of challenges that derive from a combination of structural and contextual features. Most leading female enterprises in the state are concentrated in

Micro and Small Units of food processing, retail, education, and services, where the enterprises are most exposed to socio-economic disruption and external shocks (Gopakumar & Nair, 2020). Despite the presence of programs such as Kudumbashree and other initiatives by the Kerala Startup Mission to accommodate women's participation in entrepreneurial activities, there is a big gap in how these businesses, in the absence of a clear blueprint for business growth, resist and react to adversities. In the context of women entrepreneurs working in resource-constrained environments, resilience becomes a dynamic capability that helps the enterprise to bounce back from disturbances and sustain functional continuity (Ayala & Manzano, 2014). However, no empirical analysis has yet been carried out on the way organizational resilience affects the business performance of women-led enterprises, specifically in Kerala; hence, it requires deeper exploration.

Organizational resilience is defined as an enterprise's ability to foresee, absorb, and transform using interior and exterior compulsions without hampering long-term sustainability (Lengnick-Hall et al., 2011). For women entrepreneurs, especially those in semi–formal and informal settings, resilience goes beyond an organisational trait into the lived experience of women in gendered socioeconomic realities. According to the research, the businesses of women entrepreneurs are often late in their growth and profitability; however, due to some systemic barriers such as lack of access to finance, lack of market linkages, and policy inefficiencies Siddiqui (2012), they present high emotional resiliency and adaptive problem solving (Saveez & Schwienbacher, 2019). In a state like Kerala, where women entrepreneurs are faced with climate disruption, fluctuating demand cycles, and technological changes, it is critical to understand how the core competence of resilience capacities, such as strategic agility, resourcefulness, and operational adaptability, convert into business outcomes such as profitability, customer retention, and the length of life of the enterprise (Pal et al., 2014).

A deeper understanding of the specific resilience strategies used in women-led enterprises enhances this relationship. Diversification of product lines, use of digital products, collaborative networks and, the engaging of skill enhancement programmes

are some of these strategies (Williams et al., 2017). Resilience as a construct is well theorised; however, its implementation as a targeted strategy will determine enterprise success in real-world scenarios. In Kerala, the landscape of women entrepreneurs is diverse, and the approaches of women entrepreneurs differ regionally, business-by-business, and within the constraints of the women entrepreneurs themselves. Therefore, it is important to determine whether resilience or maintaining a specific resilience strategy has a greater impact on enterprise performance. It is important to make this distinction for evidence-based policymaking and designing effective programs which respond to the needs of women entrepreneurs.

Socioeconomic and demographic variables also greatly influence the efficacy of particular resilience practices. The relationship between resilience and performance outcomes is typically moderated by age, education, marital status, and type of industry (Bullough et al., 2014). For instance, women entrepreneurs in urban areas who have better access to digital tools and infrastructure may find it easier to pivot to online business models during a crisis than rural women entrepreneurs, who may have to depend on community-based support and resources. Additionally, people with higher education levels and business experience usually practice better risk management and strategic planning. Segmenting support mechanisms should be based on an understanding of how these variables influence resilience and performance.

1.10 Research Questions

This study will also help provide answers to one of the primary research questions: How does organizational resilience affect the performance of women-led enterprises in Kerala? The intention of this question is to investigate how enterprise resilience capacity in a business helps correspond to its performance. Considering these challenges to women entrepreneurs (access to finance, mobility restrictions, and sociocultural limitations, among others), it is necessary to explore the extent to which their ability to adapt, absorb shocks, and recover from disruptions facilitates the success of entrepreneurial ventures. This enquiry will provide a basic understanding of whether resilience as a strategic asset can help women lead businesses in Kerala to

gain sustainability, growth, and competitiveness in the face of predictable or unpredictable challenges.

The second line of enquiry asks how organizational resilience associated with resilience strategies is linked to enhanced performance. What mechanisms account for the relationship between organizational resilience and enterprise performance? The focus of this question is on whether particular strategies are enablers or bridges that affect the impact of resilience on performance, such as diversification, digital adoption, collaboration, and planning. It will attempt to break down, not just if resilience works, but also how resilience works. Understanding this mediating role is critical for gaining actionable insights into the question of which interventions or practices hold the most practical value for women entrepreneurs doing business in complex and volatile environments.

The next important research question asks how effective and how useful various resilience strategies are for improving the performance of women-led enterprises. This is an important question for philtre and ranking the plethora of strategies that entrepreneurs can leverage. With regard to the economic and cultural ecosystem of Kerala, some strategies may be more feasible or effective than others. For instance, the benefits of digital transformation to urban women entrepreneurs may be higher, and rural entrepreneurs may have larger benefits through community networking. The identification of the most effective strategies aims to formulate specific recommendations that would guide entrepreneurship development programs targeting women to be designed or implemented by entrepreneurs, support agencies, and policy makers.

Finally, this study attempts to explore diversified entrepreneurial experiences in terms of socio-demographic factors: How do the factors impact the relationship between organizational resilience and enterprise performance? This question approaches the topic from a comparative moderating perspective, meaning that women entrepreneurs are certainly not a homogenous group. Differences in age, education, location, family status, and previous business experience affect their experiences and outcomes. This study aimed to explore the extent to which these contextual factors heightened or

decreased the effect of resilience on performance. The knowledge thus obtained can be used to envisage more inclusive, differentiated, and individual-based entrepreneurial support strategies for women, considering their social strata as well as geographical location in Kerala.

1.11 Objectives of the Study

The ultimate goal of this study is to investigate the innumerable dynamic interplays that exist among organizational resilience and the performance of women-led and owned enterprises in Kerala. In an environment characterised by economic uncertainty, abrupt change, and frequent natural and health-related crises, resilience has become a must with attributes of entrepreneurial success, particularly among women who are often confronted with additional structural and sociocultural obstacles. It begins with how the resilience of an organisation directly affects its total performance. It also analyzes the inner game difficulty encountered by women entrepreneurs in dealing with and rebounding against disruptions, emphasising the mediating effect of women entrepreneurs in turn their resilience into concrete results. In this regard, this study aims to outline the most influential resilience builder practices that lead to increased business success. Finally, it examines the diversity of entrepreneurial experiences by examining how socio-demographic variables moderate the resilience – performance relationship, thereby providing an integrative view of the resilience framework in Kerala's women – led entrepreneurial ecosystem. Below described are the main objectives

- Objective 1: To assess the impact of Organizational Resilience on the performance of women-owned and led enterprises in Kerala.
- Objective 2: To examine the mediating role of Resilience Strategies in the relationship between Organizational Resilience and Enterprise Performance.
- Objective 3: To identify the most effective Resilience Strategies contributing to improved performance among women-led enterprises.

- Objective 4: To analyse the role of Socio- Demographic Factors in moderating the relationship between Organizational Resilience and Enterprise Performance.

1.12 Hypothesis of the Study

This study is underpinned by several key hypotheses which are meant to examine the nexus between organizational resilience and the performance of women-led enterprises in Kerala. The hypothesis is that women-owned businesses' overall performance is positively impacted by organisational resilience. Moreover, the role of resilience strategies as mediators is analysed, and it is proposed that these strategies augment the effect of organizational resilience on business performance. The second hypothesis consists of determining which resilience strategies provide a higher business impact, and that some might be more effective in improving business outcomes. In addition, this study postulates that socio- demographic factors mediate the relationship between organizational resilience and performance, since women entrepreneurs experience entrepreneurship differently based on their background, location, and business context. Thus, these hypotheses provide a complete picture for understanding the success and sustainability of women-led enterprises in Kerala. The main hypotheses are as follows:

Hypothesis 1: There is no significant difference in Organizational Resilience of women entrepreneurs across the different categories of Age, Marital Status, Education, and Type of Industry

Hypothesis 2: There is no significant difference in Enterprise Performance of women entrepreneurs across the different categories of Age, Marital Status, Education, and Type of Industry.

Hypothesis 3: There is no significant difference between different level of Organizational Resilience towards Enterprise Performance of Women Entrepreneurs

Hypothesis 4: There is no significant relationship between proactiveness (PROACT) and Organizational Resilience (ORES) in women owned enterprises.

Hypothesis 5: There is no significant relationship between resourcefulness (RESFL) and Organizational Resilience (ORES) in women owned enterprises.

Hypothesis 6: There is no significant relationship between Crisis Management (CM) and Organizational Resilience (ORES) in women owned enterprises.

Hypothesis 7: There is no significant relationship between innovation (INNOV) and Organizational Resilience (ORES) in women owned enterprises.

Hypothesis 8: There is no significant relationship between adaptability (ADAPT) and Organizational Resilience (ORES) in women owned enterprises.

Hypothesis 9: There is no significant relationship between Sales Growth (SG) and the Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 10: There is no significant relationship between profitability (PROFIT) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 11: There is no significant relationship between Customer Retention (CR) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 12: There is no significant relationship between Business Continuity (BC) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 13: There is no significant relationship between Market Share (MS) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 14: There is no significant relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 15: There is no significant relationship between Organizational Resilience (ORES) and Resilience Strategies (RSTR) in women owned enterprises.

Hypothesis 16: There is no significant relationship between Resilience Strategies (RSTR) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 17: There is no significant relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 18: Resilience Strategies (RSTR) mediate the relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 19: There is no significant difference in the Resilience Strategies of women entrepreneurs across different categories of Age, Marital Status, Education, and Type of Industry.

Hypothesis 20: There is no significant difference between different level of Resilience Strategies towards Enterprise Performance of Women Entrepreneurs

Hypothesis 21: There is no significant relationship between Digital Transformation (DT) and the Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 22: There is no significant relationship between Financial Planning (FP) and the Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 23: There is no significant relationship between Employee Engagement (EE) and the Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 24: There is no significant relationship between Networking and Partnerships (NP) and Enterprise Performance (EPER) in women-owned enterprises.

Hypothesis 25: There is no significant relationship between Market Diversification (MD) and the Enterprise Performance (EPER) in women owned enterprises.

Hypothesis 26: The entrepreneur's age moderates the relationship between Organizational Resilience and Enterprise Performance in women owned enterprises.

Hypothesis 27: An entrepreneur's marital status moderates the relationship between Organizational Resilience and Enterprise Performance in women-owned enterprises.

Hypothesis 28: Entrepreneurs' education moderates the relationship between Organizational Resilience and Enterprise Performance in women owned enterprises.

Hypothesis 29: The entrepreneur's industry type moderates the relationship between Organizational Resilience and Enterprise Performance in women-owned enterprises.

1.13 Scope of the Study

This study aims to understand the factors that enable women entrepreneurs to become resilient in a fast-changing business environment in Kerala based on the organizational resilience of women entrepreneurs. This research focuses on the women-owned and-led enterprises of Kerala in diverse industrial sectors, tracing how these businesses react to crises such as economic instability, natural hazards, and technological disruptions. The aim of this study is to evaluate the resilience strategies employed by women entrepreneurs and their direct influence on business performance. In doing so, the research will not only highlight the role played by resilience when overcoming obstacles but also point out the contribution of certain resilience strategies to the continued success of the business. By focusing on Kerala, the study has a geographical focus which affords a detailed understanding of the different socio- demographic, and institutional contexts within which women entrepreneurs operate in the context of the state.

This study will assess how women entrepreneurs in Kerala addressed crises like economic disruptions and natural hazards by formulating appropriate resilience strategies. In addition, business performance and growth based on these strategies are analysed, and a dynamic picture of how resilience is generated over time in response to external shocks and business market changes is examined. In addition, this study explores the impact of socio- demographic factors of women entrepreneurs (education, age, marital status, and type of industry) on their resilience and performance in coping with challenges. This study attempts to understand the enablers of resilience (internal and external) that enables the success of women led enterprises in Kerala.

1.14 Methodology Overview

The methodology employed in this study employs quantitative research methods to gain an all-inclusive comprehension of the organizational resilience of women entrepreneurs in Kerala. Data were collected quantitatively through a structured survey of women-owned and women-led enterprises in all districts of Kerala. In the survey, business performance, resilience strategies, socio- demographic factors, were

collected. Statistical techniques (Structural Equation Modelling (SEM)) is employed to analyse the collected data to test the relationships between organisational resilience, resilience strategies, and business performance. This study provides a comprehensive, multidimensional approach towards the resilience of women entrepreneurs in Kerala and the factors affecting their business outcomes.

1.14.1 Design of the Study

This study uses descriptive and analytical design to analyse the relationship between organizational resilience and the results of women-owned and -led businesses in Kerala. A scientific approach was used, where data were gathered from interviews with women entrepreneurs in Kerala and its sectors. The main goal of the survey was to gather information on organisational resilience, business performance, and other socio demographic variables. To analyse the data, Structural Equation Modelling (SEM) was employed to examine the relationships among key constructs and to test hypotheses concerning the mediating and moderating effects of resilience strategies and socio- demographic factors on business performance. Since this design is quantitative, it offers unbiased measurement, hypothesis testing, and general insights that establish a strong statistical basis for what affects resilience in such enterprises. To properly answer the research questions and meet the set objectives, this study provides evidence to improve the ability of female entrepreneurs in Kerala.

1.14.2 Tools and Techniques used for Data Experimentation

The data were collected mainly through structured interview schedule which was designed to collect responses from women entrepreneurs in the selected districts of Kerala. Considering the importance of the data to be gathered through the survey, the questions in the schedule was well thought out and structured with a combination of closed-ended and Likert scale questions to measure key constructs such as resilience strategies, socio- demographic characteristics, and organizational resilience. The pilot responses targeted a small, predetermined, and select group that also functioned as an expert to improve the research instrument and ensure clarity and relevance before finalising the schedule by pre-testing it. The researcher primarily conducted personal visits and face to face interviews at the business premises of the respondents to ensure

clarity and accuracy of responses. However, in cases where entrepreneurs not accessible due to distance or time constraints, the schedule was administered through telephones interviews. This approach ensured wider coverage, reliability and completeness of the data obtained. This approach meant that the researcher could ensure consistency in data collection while seeking to include different respondents and improve the response accuracy that would have been obtained using a singular research approach.

Advanced software tools, IBM SPSS Statistics and SPSS AMOS, were used for data experimentation and analysis. Data entry, coding, cleaning, and initial descriptive analyses were conducted using SPSS for efficient working with large datasets and to ensure good standards. This allowed for the summarisation of the demographic variables, response patterns, and frequency distributions. Alternatively, more complex model testing in the form of structural relationships between the constructs of the study was performed using SPSS AMOS. This research was made possible because AMOS provided the researcher with the option to perform path analysis and test the hypothesised model by conducting an analysis and structural modelling of the latent variables and their interdependencies. This enabled the study to utilise the combination of the applied analytical rigor of SPSS and SPSS AMOS to ensure that any findings were empirically backed and grounded in statistical frameworks.

1.14.3 Pilot Study

The study was piloted among 90 women entrepreneurs spread over different districts of Kerala to test the validity and reliability of the research instruments (interview schedule). This was a pilot study to identify any design problems in the survey, such as ambiguous questions or response options, and to determine the efficiency of the data collection process. The participants were chosen from various industries in order to represent the women entrepreneurs being studied, and their feedback was used to modify the tools for the main study. Reliability tests (Cronbach's alpha) as well as readability and relevance testing of the questions to the target group was applied to the data collected during the pilot study to check for the internal consistency of the data. The first phase of this research plays a role in fine-tuning the methodology to

use the instrument to obtain the correct data and address the research questions regarding enterprise performance and organisational resilience. The results of the pilot study also provide a first glimpse into the resilience strategies used by women entrepreneurs in Kerala in the final design of the full–scale survey.

1.14.4 Reliability and Consistency of the Research instrument

To ensure the reliability and consistency of the research instrument, a pre-test was conducted with a sample size of 90 women entrepreneurs across the districts of Kerala. The questions in the schedule assesses key variables such as adaptability, proactiveness, resourcefulness to meet unexpected problems, excellence in crisis management, innovative capability, financial planning, sales growth, profitability, etc. Multiple items were used to evaluate variables. Cronbach's alpha was used to evaluate the reliability of the instrument and internal consistency of the items. With a Cronbach's alpha of 0.70 or above, it is understood that the items measure a construct consistently. This guarantees that each organizational resilience and enterprise performance-related factor is accurately captured in the questionnaire.

In addition, the test-retest reliability was measured during the pilot phase. A subset of the participants was interviewed at two different times to measure the stability of the responses over time. This helps to check whether the same schedule gives similar results when administered on a repeated basis, and it is important to check the reliability of the collected data in the main study. Thus, it can be stated that the research instrument is a reliable and consistent tool to capture accurate data on the resilience and performance of women-led enterprises in Kerala.

1.14.5 Validity of the Research instrument

Karl Pearson's correlation coefficient is used to assess the degree of linear relationship between an item of the schedule used in this study and its corresponding theoretical construct, in order to ascertain the construct validity of the schedule used in this study. The statistical significance of the correlation coefficients of variables is noted with p-values less than 0.05, which corroborates the fact that there exists a meaningful relationship between the items in the schedule and the constructs that they intend to

measure. In addition, the Pearson correlation values that followed the questions were greater than the critical values from the Pearson Significance Table for appropriate degrees of freedom, confirming the validity of the questions. This suggests that the items used, that is, those measuring crisis management, adaptability innovation etc. assure theoretically valid representations of their corresponding constructs and are theoretically sound and consonant with the objectives of the study.

It also assesses the convergent validity of the instrument to check whether the expected items are highly intercorrelated. This was verified by the Average Variance Extracted (AVE) metric. Convergent validity is accepted in line with the standards if the AVE are .50 or higher because it demonstrates that more than 50 percent of the variance in the measure is explained by the construct rather than measurement error. Furthermore, standardised factor loadings with individual items are assessed and those at 0.70 and above are ideal for confirming convergent validity, but 0.60 and above are acceptable in social science research. The questionnaire includes constructs such as digital transformation, financial planning, and market diversification satisfying the thresholds so that their indicators collectively assess the same concept with high internal agreement.

The study also tests discriminant validity, by which each construct is sufficiently distinct from the other constructs. It is measured by the square root of the AVE of the construct compared to the correlation coefficient between the constructs. It is further supported that discriminant validity exists if the square root of AVE for a construct is larger than the construct's correlation with other constructs; in this case, it is guaranteed that the latent variables do not share the meaning. In addition, inter-construct correlations were below the threshold level of 0.85, thus fulfilling the criteria for discriminant validity. Sales growth, customer retention, and employee engagement are conceptually and empirically distinct.

1.14.6 Sample Size Determination

The sample size was determined in this study using Yamane's (1967) formula which is well known for calculating sample sizes if the population is known and a precision criterion is needed. A total 5,78,774 Women Owned Enterprises in Kerala, as per the

Ecostat Kerala, 2024 Enterprises Sector Report. However, based on this population figure, a statistically representative sample was identified to guarantee the generalisability and reliability of the findings. The application of Yamane's formula, $n_0 = \frac{N}{1+Ne^2}$, is being used; here, n is the sample size, N is the population size and e is the margin of error. Setting the margin of error and accepting it to be 5% (0.05), the formula gives an ideal sample size that is statistically accurate and still viable. By taking this approach, the sample size is large enough to tell something about the impact of organizational resilience on women-led enterprises in Kerala, and it is also manageable considering the time, resources, and accessibility to field information on the organizational resilience and enterprise performance of women entrepreneurs in Kerala.

Population Size is known (Yamane, 1967)

$$n_0 = \frac{N}{1+Ne^2}$$

N= Size of Population

n_0 = Sample Size

e = margin of error i.e. error (0.05) reliability level 95%

$$n_0 = \frac{5,78,774}{1+5,78,774 * .05^2}$$

$$n_0 = \frac{5,78,774}{1+5,78,774 * .0025}$$

$$n_0 = \frac{5,78,774}{1+1446.935}$$

$$n_0 = \frac{5,78,774}{1447.935}$$

$$n_0 = 399.72$$

Hence, sample size is 400

1.14.7 Sample Technique and Sampling Frame Work

This study used a sampling technique that adopts multistage sampling which is most relevant to research in large and heterogeneous populations, such as women-owned enterprises, spread over the entire State of Kerala. It was chosen considering the need to strike a compromise between representation, diversity, and operational feasibility. The variation in socio-economic conditions, business environment, and regional characteristics in Kerala warrants a sampling strategy capable of covering these differences in a structured fashion. Multistage sampling allows the researcher to narrow down the sampling units in such a manner by progressively moving from broader categories to more specific ones, thereby ensuring as close resemblance as possible of the final sample to the complex fabric of the entrepreneurial ecosystem in Kerala.

Stage1

In the first phase of stratified sampling, classification with respect to the number of the women owned enterprises provides insightful information on the regional dynamics of entrepreneurship. First, to calculate the quartiles for the dataset of women-owned enterprises in each of the districts of Kerala, we can first sort the data from smallest to largest. The following is the ordered data, Idukki (13,162), Pathanamthitta (19,929), Wayanad (24,667), Malappuram (26,186), Palakkad (32,649), Kozhikode (34,910), Kasaragod (38,708), Thrissur (39,123), Kottayam (43,763), Thiruvananthapuram (48,809), Kannur (49,399), Ernakulam (54,882), Kollam (60,026), Alappuzha (92,561). After data is ordered, the next step is to find out the median (Q2), which is the 50th percentile of the data. As there are 14 data points, the median is the average of the 7th and 8th values, 38,708 and 39,123, and is 38,915.5. To find Q1 (first quartile) which is the median of the lower half of the data (first seven values), the median of this subset equals the 4th value which is 26,186. This means that for Q3 (third quartile) which is the median of the upper half of the data (the last seven values), the median value is the 11th value, which is 49,399. Aggregating these thresholds, the districts were placed (ordered) into three tiers—High, Medium, and Low—based on the high concentration of women's enterprises.

The high category consists of districts with enterprise numbers above the Q3 value (49,399), that is, Alappuzha (92,561), Kollam (60,026), and Ernakulam (54,882), and covers 25% of the districts to have a strong ecosystem along the lines of infrastructure, network, and institutional nature. Medium category refers to the districts whose value lies between Q1 (26,186) and Q3 (49,399); Kannur (49,399), Kottayam (43,763), Thrissur (39,123), Kasaragod (38,708), Kozhikode (34,910), and Palakkad (32,649) have entrepreneurial activity among women at a moderate level and therefore, further potential in growth through targeted intervention. The districts with enterprise numbers lower than the Q1 value (26,186) fall under the Low category, and include Malappuram (26,186), Wayanad (24,667), Pathanamthitta (19,929), Idukki (13,162), where socio economic factors prevented women from entrepreneurial activities or geographic isolation or policy gaps for the same.

Table 1.7

Classification of Kerala Districts Based on Number of Women-Owned Enterprises Using Quartile Analysis

District	No. of Women-Owned Enterprises	Quartile Classification
Idukki	13,162	Low (Q1 and below)
Pathanamthitta	19,929	Low (Q1 and below)
Wayanad	24,667	Low (Q1 and below)
Malappuram	26,186	Low (Q1 and below)
Palakkad	32,649	Medium (Q1–Q3)
Kozhikode	34,910	Medium (Q1–Q3)
Kasaragod	38,708	Medium (Q1–Q3)
Thrissur	39,123	Medium (Q1–Q3)
Kottayam	43,763	Medium (Q1–Q3)
Thiruvananthapuram	48,809	Medium (Q1–Q3)
Kannur	49,399	Medium (Q1–Q3)
Ernakulam	54,882	High (Q3 and above)
Kollam	60,026	High (Q3 and above)
Alappuzha	92,561	High (Q3 and above)
Total	**(578774)**	

Sources: Source: Ecostat Kerala, Report on Enterprises Sector in Kerala (2024)
Notes: Q1 (25th percentile) = 26,186, Q2 (Median / 50th percentile) = 38,915.5 and Q3 (75th percentile) = 49,399

Stage 2

Simple random sampling was performed in the second stage, and the districts were chosen from each stratum. Two districts from each category of women-owned enterprises (High, Medium and Low) were then selected randomly to ensure a random sample for the study using simple random sampling. The districts Alappuzha and Kollam are randomly selected from the pool of high-performing districts (i.e. for the High Women-Owned Enterprises category (Q3 and above)), in which there are a high total number of women-owned enterprises (92,561 and 60,026, respectively). Since entrepreneurial activity is moderate in these districts (48,809 and 39,123 women-owned enterprises, respectively) in the Medium Women Owned Enterprises category (between Q1 and Q3), Thiruvananthapuram and Thrissur were randomly selected. Finally, it randomly selects from the Low Women-Owned Enterprises category (Q1 and below), typically Malappuram and Wayanad, which have 26,186 and 24,667 women-owned enterprises, respectively, because it is where many enterprise concentrations are lower. Applying simple random sampling, all districts under each category will have the same probability of being selected, leading to an unbiased and statistically acceptable representation of women-led businesses in the different regions of Kerala. Thus, this random method helps to avoid systematic bias and to spread data from high, medium, and low enterprise density districts equally.

Table 1.8

District-Wise Selection Through Simple Random Sampling Across Enterprise Density Strata

Stratum Category	Selected Districts	Number of Women-Owned Enterprises
High (Q3 and above)	Alappuzha	92,561
	Kollam	60,026
Medium (Between Q1 and Q3)	Thrissur	39,123
	Thiruvananthapuram	48,809
Low (Q1 and below)	Malappuram	26,186
	Wayanad	24,667

Stage 3

The stratified allocation of proportional sampling was selected in the third stage to select a number of women entrepreneurs from the selected districts. Six districts were sampled, and since data were sampled with a stratified sample in proportion to size, the sample of 400 women entrepreneurs was also split over the selected districts. This technique guarantees that the number of such entrepreneurs sampled from each district is proportional to the total number of women owned enterprises in such districts compared to the total number of women owned enterprises in all the selected districts. The first step involves calculating the total number of women owned enterprises in the selected districts, namely Alappuzha, Kollam, Thiruvananthapuram, Thrissur, Malappuram, and Wayanad which gives a figure of 2,91, 372. Next, the number of women-owned enterprises for each district is calculated, which is divided by the total number (291,372), thereby creating a proportion of women-owned enterprises in each district. For instance, the number of enterprises in Alappuzha is 92,561, and the proportion is 92,561 / 291,372 = 0.318, which suggests that 31.8% of the total enterprises in Kerala occur in Alappuzha. This is the percentage allocated proportionally to the sample when multiplying by the total sample size (400). Thus, 0.318 entrepreneurs would participate from Alappuzha, leading to 400 × 0.318 = 127 entrepreneurs. The same method was applied to the other districts, and 127 entrepreneurs were allocated to Alappuzha, 82 to Kollam, 67 to Thiruvananthapuram, 54 to Thrissur, 36 to Malappuram, and 34 to Wayanad. This implies that the allocation will be proportional so that the sample is distributed, reflecting the distribution of women enterprises across the districts; therefore, the data are representative, and the results are more generalisable.

Table 1.9

District-Wise Proportional Allocation of Sample Size Based on Women-Owned Enterprises in Selected Districts of Kerala

District	Number of Women-Owned Enterprises	Proportion	Allocated Sample Size (n = 400)
Alappuzha	92,561	0.318	127
Kollam	60,026	0.206	82
Thiruvananthapuram	48,809	0.168	67
Thrissur	39,123	0.134	54
Malappuram	26,186	0.089	36
Wayanad	24,667	0.085	34
Total	**2,91,372**	1	**400**

Stage 4

To determine the number of women entrepreneurs to be surveyed from each selected district using stratified sampling with proportional allocation and then to select the final respondents, purposive sampling was carried out. This is a non-probability sampling technique in which the researcher determines, chooses, and selects participants who meet specific criteria relevant to the study that will be conducted; in this case, From Alappuzha, 127 respondents, 82 from Kollam, 67 from Thiruvananthapuram, 54 from Thrissur, 36 from Malappuram, and 34 from Wayanad were chosen. The selections of these participants are made strategically, with the purpose of the participants further being able to offer experiences that have viable implications towards the research objectives. The study combines the proportionality of stratified sampling and the focus of purposive sampling to adequately reflect the representativeness and depth of the dynamics and resilience of women-owned enterprises in the state of Kerala.

1.15 Time Period for data collection

The data collection of this study is done between seven months of time, between August 2024 to February 2025. The chosen timeframe for this study was strategically

selected to provide sufficient access to the respondents, considering the regional, social, and business factors that may influence respondent availability. Fieldwork was carried out in phases, which included the first preliminary outreach and rapport building in the selected districts, followed by structured interviews. It also offers an extended duration for follow-up with participants who may be unavailable in the beginning and long enough to overcome logistical challenges, including travel impairment and scheduling appointments. In general, this well-plotted timeline guarantees a detailed, exact, and laudable collection procedure that gathers believable information from women entrepreneurs in various business scenes in Kerala.

1.16 Variables used in the Study

The present study has variable settings which collectively study the resilience and performance of women-owned enterprises in Kerala. Organizational resilience (OR) is the central concept of the study and has been conceptualised as the independent variable of the study. Organizational Resilience refers to how resilient an organisation is during times of challenge, disruption, or crisis. It is measured through five key dimensions: adaptability, which refers to the ability to respond and adjust to external changes; proactiveness, denoting the forward-looking strategies adopted to anticipate future risks; resourcefulness, highlighting the effective mobilisation and management of internal and external resources; Crisis Management, which evaluates responsiveness and preparedness during unforeseen adversities; and innovation, reflecting the adoption of novel ideas, technologies, or processes that enhance business continuity and competitiveness. Together, these dimensions constitute a multidimensional view of how women entrepreneurs construct and maintain resilient businesses.

This study aims to understand the dynamics between resilience and enterprise outcomes using Resilience Strategies (RS) as a mediating variable. However, the strategies described here are the practical actions and managerial decisions that entrepreneurs use to convert resilience capabilities to performance outcomes. This study focuses on five strategic areas: Digital Transformation, involving the integration of digital tools to streamline operations and improve market reach; Financial

Planning, which includes budgeting, cash flow management, and access to funding; Employee Engagement, indicating the involvement and motivation of staff in crisis recovery and day-to-day functioning; Networking and Partnerships, which assess the extent of collaboration with other firms, institutions, or stakeholders; and Market Diversification, referring to the expansion into new customer segments or markets to reduce risk and enhance growth. They mediate the relationship between the resilience traits that an enterprise might possess and its overall effectiveness.

Enterprise Performance (EP) is the dependent variable of this study which is octomoms of resilient and strategic management practices. Multiple indicators are employed to capture performance, namely sales growth, capturing the amount that a company's revenue increases over time, profitability capturing the enterprise's earnings and its level of financial health, customer retention measuring the ability of an enterprise to retain existing customers for a considerably long period, business continuity capturing the enterprise's ability to operate continuously during a disruption or afterwards, and market share indicating the volume percentage of the total sector demand as captured by an enterprise. Furthermore, this study acknowledges socio- demographic factors (SDF) as a set of moderating variables that may affect the connection between OR, RS, and EP. Among these factors are age, education, marital status, and industry type, all of which may influence Women Entrepreneurs' appraisal of challenges, strategy adoption, and the outcomes they reach. Adding these moderating factors, this study presents an account of women entrepreneurs' experiences in Kerala's different social and economic contexts.

1.17 Statistical Tools of Analysis

A comprehensive set of statistical tools was used in the present study to rigorously analyse data generated from selected districts of Kerala on women-owned enterprises. First, the Chi Square Test of Independence was used to investigate the associations between socio-demographic factors (i.e. age, marital status, education, etc.) as well as between categorical variables and the key variables pertaining to resilience strategies and enterprise performance. This nonparametric test is used to ascertain whether the pattern of women entrepreneurs' adoption of organisational practices and

performance outcomes is different across different approaches to business and what may contribute to the differences, if significant. In particular, it helps one understand how demographic factors affect patterns in the distribution of categorical responses about entrepreneurial behaviour and resilience.

The data distribution was then assumed to be normal using the Kolmogorov–Smirnov (K-S) test, following which parametric statistical procedures were applied. It is crucial that the variables are normally distributed for the validity of further analyses when the ANOVA and MANOVA techniques are used. The K-S test compares the sample distribution with a normal distribution and determines whether deviations from normality are significant. The data are tested for normality and, if found to be normal, parametric methods are pursued; if not, necessary transformation or other non-parametric methods are pursued in order to preserve the robustness of the results.

Analysis of Variance (ANOVA) and Multivariate Analysis of Variance (MANOVA) were used to test for differences in the means among multiple groups. Using ANOVA, it is possible to determine whether enterprise performance varies significantly according to categorical features such as industry type or education level. This analysis is extended in MANOVA by considering the effects of independent variables on more than one dependent variable, for example, on several dimensions of enterprise performance (sales growth, profitability, customer services, etc.) simultaneously, to arrive at a holistic perspective of the impact. Additionally, Structural Equation Modelling (SEM) was used as the main analysis tool to capture the complex interrelationships among the study variables. SEM testing permits the testing of both direct and indirect effects; that is, the mediating role of resilience strategies on the link between organizational resilience and enterprise performance, as well as the moderating role of socio-demographic factors. Based on SEM, this study builds a complete model to test the hypothesised relationships and provides more profound theoretical and empirical knowledge of the dynamics of women's entrepreneurship resilience in Kerala.

1.18 Anticipated Challenges in the Study

During the execution of this project, there is an expectation that it will encounter several practical and methodological challenges, as the present study examines the resilience and performance of women-owned enterprises in Kerala. Challenges arise from the wide socio-economic landscape of women entrepreneurs in terms of levels of business formalisation and heterogeneities in data collection at the enterprise level across widely dispersed districts. The major challenges are as follows.

1. Difficulty in Accessing Respondents: The foremost anticipated challenge in the study was the ability to locate the targeted respondents, mainly women entrepreneurs, in districts with low enterprise density. Few women entrepreneurs, especially those involved in micro- and home-based businesses, may be formally registered or even listed in official databases. Reaching people in these groups entails substantial field-level coordination, which would likely entail the use of local associations, NGOs, or other informal networks. Delay or rationalisation of the targeted sample size within the stipulated timeframe could be the outcome.

2. Limited Willingness to Share Sensitive Information: To share highly sensitive information relating to financial planning, profitability, and crisis management, among others. Fear of privacy invasion, judgment, or misuse of information may prevent some respondents from providing accurate or complete data. Thus, this may potentially result in diminished reliability and validity of the findings. The hurdle in building trust is to carry out ethical research practices coupled with assurances of confidentiality.

3. Variability in Understanding of Concepts: With widespread educational background of the respondents, there may be disagreements in understanding research concepts such as innovation, digital transformation, or resilience strategies among the respondents. This can result in various interpretations of the schedule items and varying consistency and comparability of responses. Pretesting the instrument, simplifying the technical language, help to mitigate the above challenges.

4. Logistical and Geographical Barriers: Visiting these six geographically dispersed districts of research, Alappuzha, Kollam, Thiruvananthapuram, Kannur, Malappuram, and Wayanad, was truly challenging. These include arranging travel there, managing time efficiently, and infrastructural limitations in remote or rural areas. Additionally, districts with difficult terrain, such as Wayanad, may create further physical impediments to reach some respondents, especially in adverse weather conditions from August to February.

5. Ensuring Data Consistency and Quality Control: Data quality can be compromised by differences in interpretation, bias on the part of the interviewer or procedural lapses. For this, implementation of standard operational procedures are important. Second, digital tools such as data entry and verification could also be used to increase the accuracy and reduce the margin of error during the period of data collection.

1.19 Structure of the Thesis

This thesis structure unfolds into six chapters and addresses the overall topic of resilience and performance of women-owned enterprises in Kerala. Chapter 1 describes the objectives, research questions and significance of the study with the backdrop in which the research was laid. In Chapter 2, the relevant literature is reviewed in detail to support and contribute to this research with theories and previous studies. The theoretical framework of the study is presented in Chapter 3 with an understanding of foundational theories that inform this study, namely, the resource-based view and dynamic capabilities theory. In Chapter 4, a conceptual framework is developed to demonstrate the relationships between the key variables in the framework, such as organisational resilience, resilience strategies, and enterprise performance. Thus, Chapter 5 presents data analysis and interpretation using different statistical tools to test the hypotheses as well as to support some factors that influence resilience and performance. Chapter 6 concludes the thesis, finalises the study findings, provides policy implications and recommendations, and outlines future research areas to contribute to the field with key findings and contributions.

Chapter 1: Introduction: This chapter provides a comprehensive introduction to the study by outlining why and how this dissertation has been undertaken and lays the foundation for the entire research work. It starts with the introduction of women's entrepreneurship with respect to Kerala and a discussion of the issues of women entrepreneurs and the relevance of organizational resilience in assuring sustainable growth for the business. Thus, this chapter clearly defines the problem that the research is trying to address, as well as the main objectives of this study which are to investigate the factors which contribute to the resilience and performance of women owned enterprises in Kerala. This chapter also discusses the scope of the study, its significance, and the rationale behind choosing Kerala as the study's research context and purpose. Moreover, it also articulates the research questions, emphasising the gaps in the existing research and the potential of this study to add or fill the gap in the field of entrepreneurship, gender studies, and business resilience. Concepts such as organisational resilience, enterprise performance, and resilience strategies are defined. Finally, the structure of the thesis is outlined in the chapter listing the journey the reader embarks on from beginning to end.

Chapter 2: Review of literature: The second chapter delves into a detailed review of the existing literature relevant to the study's theme. It critically reviews various studies that have been conducted on women entrepreneurship, particularly on resilience and business performance. The research described in this review is split into several sections dealing with its different aspects. First, it discusses the barriers and challenges that women encounter when becoming entrepreneurs: how challenging it is for women to access finance, societal norms, and gender biases. It examines the concept of organizational resilience by considering adaptability, crisis management, and innovation as contributors to the long-term success and survival of a business. The resilience strategies of digital transformation, financial planning, and networking are also discussed to understand how the adoption of such strategies enhances business performance. It also explores the socio-demographic factors that might affect women's capacity to empower resilient businesses, including age, education, marital status, and the type of industry in which they are engaged. Finally, the existing research gaps and the importance of the current study are justified by reviewing the

literature. The literature underpinnings of the study provide an in-depth research basis that will inform the conceptual and theoretical frameworks of the study.

Chapter 3: Theoretical Foundations: In this Chapter, the researcher initially introduces core theories which are the basics support the study's analysis of organizational resilience and enterprise performance. This study uses resource-based view (RBV) theory to explain how women-owned businesses leverage internal dimensions such as human, financial, and organisational resources to build resilience and achieve high levels of performance. The Dynamic Capabilities Theory which states that businesses that have the ability to adapt to a changing environment face the least risk during crises and maximise the best opportunities to create growth, is also explored. This chapter also goes further to discuss Gender and Entrepreneurship Theories, looking at the peculiar challenges facing women entrepreneurs and how these challenges can affect their business strategies, resilience, and performance. The theoretical framework provides an academic perspective through which to analyse and interpret the research findings of the study and relates this research to existing theories in entrepreneurship, resilience, and gender studies.

Chapter 4: Conceptual Framework: The relationships between the key variables of the study are detailed in this chapter. It demonstrates how the independent variable (Organisational resilience- OR), is linked to the dependent variable (Enterprise Performance- EP) via the mediating variable (Resilience Strategies -RS), with the influence of socio- demographic factors (SDF) on these relationships. This framework addressed the research questions and tested the hypotheses mentioned in earlier studies. Additionally, it leverages the literature review insights to develop the organizational resilience construct which is fundamentally grounded in concepts such as adaptability, proactiveness, crisis management, innovation, and how they directly impact performance measures such as sales growth, profitability, and continuity. The mediating role of resilience strategies (including digital transformation, employee engagement, and market diversification) and the moderating effect of age, education, marital status, and industry type. A visual model is also presented in this chapter which guarantees coherence and transparency of all parts of the research.

Chapter 5: Data Analysis and Interpretations: This chapter summarises the process of data analysis and its results based on the primary data collected through surveys and interviews with women entrepreneurs in Kerala. The study examines the research objectives and tests the hypotheses put forward in the conceptual framework. First, the data collected are described, and the sampling methods for collecting them are explained along with a description of the demographic composition of the sample. Next, statistical analysis of the data was conducted using descriptive statistics, chi-square tests, Kolmogorov-Smirnov tests for normality, ANOVA, and MANOVA. Using these tests, this study explores the relationships between organisational resilience, socio-demographic factors, resilience strategies, and enterprise performance. Structural Equation Modelling (SEM) is also applied in this chapter to validate the hypothesised relationships and investigate the strength of the connections between variables. The results are presented in tables and figures to bring out the central findings, trends, and patterns. Finally, the results were interpreted in response to the research questions and objectives presented in this chapter.

Chapter 6: Findings, Suggestions, Practical Implications, Recommendations to Policy Makers, Future Scope of Research, and Conclusion: The major findings regarding the resilience and performance of women-owned enterprises in Kerala are presented, including factors that make business possible and those that pose challenges. On this basis, the chapter proposes practically relevant proposals for women entrepreneurs to grow resilience, including the digitisation agenda, strategic financial planning, and network building for support. In addition, there are possible policy implications and recommendations to the government and financial institutions to foster a conducive environment for women entrepreneurs, such as the provision of increased financing opportunities, training programs, and institutional support. Finally, the chapter concludes with a discussion of suggestions for future research, including extending the study to other states and conducting studies on sector–specific strategies. This thesis concludes with a brief conclusion that reaffirms the study's contribution.

CHAPTER 2
REVIEW OF LITERATURE

2.1 Introduction

2.2 Organizational Resilience in Entrepreneurship

2.3 Women Entrepreneurship in Kerala: Challenges and Opportunities

2.4 The Role of Resilience in Business Success

2.5 Adoption of Resilience Strategies in Women Owned Entreprises

2.6 Resilience Strategies in Business: Practical Tools for Survival and Growth

2.7 Enterprise Performance in Micro Small and Medium Enterprises

2.8 Socio- Economic and Demographic Factors in Entrepreneurial Success

2.9 Sectoral Insights: Industry- Specific Resilience in Kerala

2.10 Gender and Crisis Management: Resilience Through a gendered Lens

2.11 Research Gaps

2.1 Introduction

The concept of organizational resilience has been gaining significant prominence, especially in the domain of entrepreneurship, which is characterised by myriad uncertainties, disruptions, and rapid changes that challenge business continuity and ultimately may stunt the success of organisations. Focusing on understanding organizational resilience in the case of women entrepreneurs in Kerala, known for its progressive social indicators and growing entrepreneurial ecosystem, this summary of the literature review provides an overview of the current state of affairs. The first section discusses the theoretical and practical basis of organizational resilience in entrepreneurship as a dynamic capability that helps entrepreneurs detect and respond to disruptions, and achieve a continuous renewal orientation when dealing with internal and external shocks. Special attention is paid to the fact that resilience is one of the central determinants of a company's sustainability and strategic renewal under conditions of adversity. Additionally, Women's entrepreneurship in Kerala is reviewed to highlight the challenges of limited access to finance, gender bias, work-life balance, opportunities for government support, digital inclusion, and increasing social acceptance of women-led businesses.

In addition, the literature continues to explore the position of resilience in business success in terms of emotional strength, agility, and persistence, whereas the reasons for such strength are repeated during the learning and development process which leads to the enhancement of entrepreneurial performance over a longer period of time, especially in the case of women in micro, small, and medium enterprises (MSMEs). It also critically analyses the adoption of resilience strategies, such as diversification, community networking, digital transformation, and agile planning, as well as how these tools assist women entrepreneurs in accessing market volatility and socioeconomic disruption. The review encompasses resilience tools as practical resources and tools such as scenario planning, financial prudence, and stakeholder engagement as frameworks for practical implementation. It also opens the discussion on the intersections between enterprise performance and resilience in SMEs, particularly in Kerala's service, retail, and agribusiness sectors, and on measurable

outcomes of resilience. The influence of socioeconomic and demographic factors, such as education, social support, and marital status, on resilience capacities was analysed. The last part of the literature examines sectoral insights and gendered approaches to crisis management, whereby industry-specific factors and gender-responsive strategies can strengthen resilience and help differentiate women's entrepreneurial experiences in Kerala. This will help to set the stage for identifying research gaps and context-specific strategies for women entrepreneurs' resilience in the region.

2.2. Organizational Resilience in Entrepreneurship

With heightened levels of uncertainty, environmental disruption, and market volatilities, organizational resilience has become a crucial concept in entrepreneurship. Resilience is defined as an organisation's capacity to anticipate, prepare for, respond to, and adapt to incremental change and sudden disruptions to survive and prosper (Duchek, 2020), which is more than simply recovering from adversity; rather, it is a transformative capacity for emerging from adversity. Organizational resilience provides an especially important benefit to entrepreneurial ventures that typically operate under extreme resource constraints, unstructured environments, and pressures arising from innovation. Resilient organisations, as pointed out by Lengnick-Hall et al. (2011), have adaptive capacities within their culture, leadership, strategy, and operations that allow them to survive systemic shocks. These victories are not accidental, but rather are the result of learning organisation, flexible structure, and leadership that promotes the taking of calculated risk and agile behaviours. Furthermore, the attention of organizational resilience to entrepreneurship focuses on its inherent actions in a dynamic entrepreneurial context. Entrepreneurs always operate in ever-changing regulatory, technological, and socio-economic environments; hence, the ability to cope with change and ambiguity is a key strategic advantage for any organisation (Teece, 2007). Entrepreneurs operate resilient entrepreneurial organisations as dynamic systems that can adapt themselves to change. Pleasure is mine (Conz and Magnani, 2020). The second facet of resilience in entrepreneurship is about turning the crisis into an opportunity—heavily targeted

in a poor market, firms which innovate under pressure and have the ability to adapt to new business models often turn out to be successful. According to Bhamra, Dani and Burnard (2011), resilience is not only secured from backup systems, but also live with the mentality of change, and disruption being a catalyst for strategic renewal.

Leadership is one of the most important enablers of organizational resilience in entrepreneurial ventures. When uncertainties are prominent, entrepreneurial leaders who have high emotional intelligence have an ethical orientation and motivational strength to meet the demands of the business (Williams et al., 2017). However, they play a very important role in determining an organisational culture that is highly resistant to the pressures of the community and emphasise trust, effective communication, and the empowerment of its human capital. Psychological resilience at the individual level, which means optimism, self-efficacy, and perseverance, when ingrained into the leadership and decision-making processes of the firm, results in the firm's organizational resilience, as stated by Ayala and Manzano (2014). Resilient leaders tend to facilitate open communication, inclusion, and shared responsibility so that groups can leverage collective intelligence during periods when they feel stressed. When entrepreneurial ventures operate in small settings where the entrepreneur tends to lead operations at a personal level, the founder's personal resilience can be reflected in organisational achievements. Social capital is another key driver of organizational resilience in entrepreneurship. The buffer to entrepreneurs during a crisis is the network and relationship maintained by entrepreneurs' firms with customers, suppliers, financial institutions, communities, and government bodies. Firms nested in strong social networks tend to have access to resources, information, and emotional support, all of which can contribute to resilience (Hitt et al., 2002). These networks act as informal safety nets and often come to timely rescue, promoting collaborative problem solving, among other things. For example, a healthy relationship with the ecosystem during economic downturns or natural disasters is more likely to result in extensions of credit, supplier leniency, or community patronage which contribute to survival in tumultuous times. Specifically, relational resilience is not simply about relationships as ties; rather, it requires building trust-based, reciprocal, and adaptive relationships which unfold over time with organisational needs.

Organizational learning is another important factor in the development of resilience in entrepreneurial ventures. Duchek (2020) notes that resilience, closely bound with the organisation's learning processes, 'learning before, during and after disruption,' helps the firms not only to adjust but also to institutionalise new practises to be better prepared for the future. Those at a greater disadvantage concerning change are entrepreneurial firms that do not have reflective learning, experimentation, or adapting feedback loops. This means learning from the failures, introducing a real-time data system for performance monitoring, and making the structures flexible to allow for quick pivots on the strategy. Moreover, Teixeira and Werther (2013) add that learning is associated with and is enhanced by innovation in firms, as this helps generate products, services, and processes that not only react but also compete proactively. Resource management, both tangible and intangible, underpins organizational resilience in entrepreneurship. Resilience is cited as an enabler of financial prudence, human resource flexibility, and technology adaptation across different studies. Vogus and Sutcliffe (2007) state that high reliability organisations tend to balance efficiency and slack resources, so as to absorb shocks without falling apart. Entrepreneurial firms have financial reserves, spend on or develop their employees' skills, and use digital tools for operations and decision-making; they have a better chance of remaining intact during disruptions. It is this resourcefulness – often referred to as 'entrepreneurial bricolage' – that Baker and Nelson (2005) point to when they talk about how resilient entrepreneurs acquire and make do with recombining limited resources to address new challenges. Small firms are able to act fast, innovate despite scarcity, and continue operations in the midst of adversity by employing such practices.

More recently, organizational resilience in the entrepreneurial context has been regarded as a strategic competency upon which firms can endure, adapt, and even thrive during adversity. Typically, entrepreneurial ventures are known to operate under such volatile conditions; hence, it is not just desirable but also necessary for the long-term survival of entrepreneurial ventures (Bullough & Renko, 2013). Thus, in times characterised by economic downturns, regulatory uncertainty, and competitive disruption, resilient entrepreneurs possess a set of special cognitive and behavioural

traits that ensure business continuity. These include goal commitment, proactive problem solving, and stress coping ability (Luthans et al., 2007). According to the literature, organizational resilience consists of multiple dimensions, such as psychological, structural, and strategic, that cumulatively improve a firm's capacity to absorb and rebound from internal and external shocks (Mallak, 1998). Cognitive and behavioural adaptability are highlighted in the literature on resilience as one of the emerging dimensions of resilience. Entrepreneurs often encounter unforeseen problems, requiring them to make sudden shifts in their way of thinking or approach. According to Hayward, Forster, Sarasvathy, and Fredrickson (2010), cognitive adaptability is instrumental in entrepreneurial success, as those gifted with cognitive flexibility are happier to admit mistakes, capable of recognising new opportunities, able to pivot their strategy where necessary, and reduce risk in their operations. Such leadership directly translates into adaptability or organisational resilience, as firms under such leadership can transform crisis situations to provide platforms for innovation and reconfiguration. Therefore, entrepreneurial resilience is an active process of foresight, improvisation, and iterative learning that enacts processes by which organisations can avoid stalling and ensure that they progress strategically in turbulent times.

The manifestation of organizational resilience in entrepreneurship is conditioned by cultural and institutional contexts. As Hofstede's cultural dimensions theory (Hofstede, 2001) stipulates that societies that are more uncertainty averse (Euros) may have distinct means of resilience than those that are more ambiguity-accepting (Latin Americans), it describes a difference in outcome depending on cultural socialisation. For example, in collectivist cultures, the role of relationships and communities in supporting entrepreneurial ventures over time is much stronger (Pathak & Muralidharan, 2016). This implies that social expectations, regulatory environments, and normative institutional behaviours help to shape resilience not only from internal sources but also externally. Viewing entrepreneurial resilience in this light, we may characterise it as a social construction of a phenomenon that emerges through constant interaction with context. Additionally, entrepreneurial ecosystems have been shown to improve resilience in several studies. Resilient organisations tend to be embedded

in ecosystems that support them by providing access to capital, mentorship, infrastructure, and knowledge networks (Isenberg, 2010). Accelerators, incubators, financial institutions, and policy support structures can greatly influence an entrepreneur's shock-absorbing ability and enhance their operations. According to Korber and McNaughton (2018), organizational resilience is complemented by ecosystem resilience in forming a supportive environment for adaptive learning, partnership, and robustness against shocks for any vested interests that show sustained commitment and support. However, entrepreneurs who operate in areas where such ecosystems are weak or fragmented will likely have to depend more on internal competencies and informal support mechanisms to be resilient, and the context will determine how entrepreneurial trajectories span out.

More recently, technological readiness and digital resilience have been regarded as crucial aspects of organizational resilience in entrepreneurial settings. In the wake of the COVID 19 pandemic, the ability to deploy digital tools, data analytics, and online platforms has become essential. Entrepreneurs who digitised their operations rapidly were more likely to safeguard their customers' engagement, streamline supply chains, and implement remote working systems, all of which helped the continuity of business (Seetharaman, 2020). Digital resilience involves more than taking up technology; it lies in inhaling technology into the strategic structure of the organisation to enable agility and real-time responsiveness. Additionally, increased levels of cybersecurity, data protection, and IT infrastructure investment are associated with higher levels of resilience because the firm will be better prepared for digital disruption and cyber threats (van der Vegt et al., 2015). Ethical orientation and value-driven leadership have been found to significantly contribute to fostering organisational resilience. This helps to buffer ethical entrepreneurs' transparency, accountability, and inclusiveness, which leads to more trust and loyalty to them by their stakeholders (Freeman et al., 2007). Factors such as integrity, fairness, and social responsibility do more than strengthen internal unity; they gain support from the community and customers during difficult periods. Maak and Pless (2006) indicate that responsible leadership supports resiliency because it encourages shared vision, mutual respect, and collective problem-solving. These values can immediately be transferred into organisational

culture, employee morale, and relationships with external counterparts, and these are all integral parts of resilient behaviour in entrepreneurial companies, where leadership is often more centralised and personal.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Definition and Nature of Resilience	Resilience is a proactive and transformative capacity to adapt and thrive amid disruptions, not merely recovery from adversity.	Duchek (2020); Conz & Magnani (2020)	Resilience is strategic and dynamic, rooted in continuous learning and adaptation.
Adaptive Capacity in Entrepreneurial Firms	Embedded in culture, leadership, and operations; achieved via flexibility and risk-tolerant structures.	Lengnick-Hall et al. (2011); Teece (2007)	Adaptive capacity is intentional and nurtured, critical in innovation-driven contexts.
Leadership and Emotional Intelligence	Leadership plays a critical role; emotionally intelligent, ethical, and motivational leaders foster trust and agility.	Williams et al. (2017); Ayala & Manzano (2014)	Entrepreneurial leadership often directly reflects in organizational resilience.
Social Capital and Relational Resilience	Strong networks offer access to resources, emotional support, and collaborative problem-solving.	Hitt et al. (2002)	Social ties act as informal safety nets during disruptions.
Organizational Learning	Learning before, during, and after disruption institutionalizes resilience; supports innovation and real-time strategy adjustment.	Duchek (2020); Teixeira & Werther (2013)	Continuous learning is key to resilience-building and competitive renewal.
Resource Management & Bricolage	Strategic resource use, maintaining slack, and creatively recombining limited resources enable continuity.	Vogus & Sutcliffe (2007); Baker & Nelson (2005)	Entrepreneurial bricolage enhances responsiveness

			and innovation under constraint.
Cognitive & Behavioral Adaptability	Traits like cognitive flexibility, goal commitment, and stress management contribute to resilience and decision agility.	Luthans et al. (2007); Hayward et al. (2010)	Personal adaptability of entrepreneurs influences organizational outcomes.
Cultural and Institutional Context	Cultural values (e.g., uncertainty avoidance, collectivism) and institutional norms shape resilience behaviours.	Hofstede (2001); Pathak & Muralidharan (2016)	Resilience is context-sensitive and socially constructed.
Entrepreneurial Ecosystems	Support structures like accelerators, mentorship, policy support, and finance ecosystems bolster organizational resilience.	Isenberg (2010); Korber & McNaughton (2018)	External ecosystem resilience complements internal organizational capabilities.
Digital and Technological Readiness	Digitization enhances continuity, customer engagement, remote working, and supply chain optimization; cybersecurity boosts digital resilience.	Seetharaman (2020); van der Vegt et al. (2015)	Tech-readiness is now integral to organizational resilience.
Ethical Orientation & Value-Driven Leadership	Ethical leadership strengthens stakeholder trust, employee morale, and social responsibility, reinforcing resilience during crises.	Freeman et al. (2007); Maak & Pless (2006)	Values-based leadership is a crucial yet often underemphasized driver of resilience.

2.3 Women Entrepreneurship in Kerala: Challenges and Opportunities

While women's entrepreneurship in Kerala has become one of the important contributors to the socio-economic development of the state, it operates under a unique blend of cultural, institutional, and economic factors. Kerala is a state with a high literacy rate, progressive gender indices and has matrilineal cultural legacies in

certain communities of the state, which enable facilitation of women's empowerment. However, even though these are considerable positive indicators, women entrepreneurs in Kerala still have to combat the systemic factors that curtail their potential to start a venture. For instance, (Koneru, 2017) pointed out that bearing the weight of patriarchal norms, societal expectations, and familial obligations, women tend to venture out in the form of home-based or small-scale businesses with less or no options for scaling. Despite access to education, the gendered expectations of women as caregivers and providers of household duties often constrict them from entering into active business, which leads to the creation of an entrepreneurship gap. One of the most prominent challenges for women entrepreneurs in Kerala is financial constraints. Women still face difficulties attaining credit, even through the existence of government-backed financial schemes and micro credit programs, because of the lack of collateral, low financial literacy, and risk-averse lending practices by financial institutions. (Sharma & Gupta, 2024) state that banks and NBFCs consider women entrepreneurs to be high-risk clients who either get their credit denied or are charged with a high interest rate. Women 's operational capacity and growth potential are constrained by dependence on informal financing from family members or community-based lending. In turn, this financial marginalisation prevents them from investing in innovation, marketing, and technology adoption, all of which are drivers of sustainable entrepreneurship.

The second barrier is sheltering access to entrepreneurial training and mentoring. Although Kudumbashree and the KIED of Kerala have run several women-oriented skill development programs, there is a gap in the provision of sector-specific and tailored mentorship to women (Devika, 2016). In addition, women entrepreneurs lack role models and networks, especially in rural and semi-urban areas. Thomas and Paul (2019) state that many women never know about such schemes as they either cannot access them or pass on them because of bureaucratic red tape, digital illiteracy or lack of mobility. However, because of such asymmetries in knowledge between entrepreneurs and formal institutions, this curtails their ability to scale and professionalise their business ventures, and many of the 'naby means' enter into informal or subsistence level entrepreneurship'. However, women's entrepreneurship

is opening up opportunities in Kerala with the advent of the digital revolution, e-commerce, and changing consumer behaviour. However, with the emergence of digital platforms such as Instagram and WhatsApp, women can bypass market entry barriers, interact directly with customers, have flexible working hours, and low-cost business models. (Ambika & Nair, 2022) state that digital entrepreneurship is enabling a new wave of women entrepreneurs, especially in fashion, crafts, home baked goods and wellness products in Kerala. Additionally, the Startup Mission Kerala and Women Startup Network nurture a conducive environment for tech-enabled women entrepreneurship, but this work needs further research on the outreach and impact.

Kudumbashree and other cooperatives and community-based organisations have played a transformative role in bringing together collective strength of women entrepreneurs in Kerala. The mobilisation of rural women by SHGs and the microenterprises it will create and the other government schemes by which its access shall be facilitated is what the model of Kudumbashree's self-help groups is. (John, 2013) Via participatory governance, skill development, and microfinance, Kudumbashree has carved a way for the economic self-reliance of women from various marginalised sections. Nevertheless, as Ferreira et al. (2024) warn, many of these enterprises are located in the informal sector, lacking value addition, market access, or innovation; therefore, capacity building and forward linkages to mainstream markets are necessary. Women's entrepreneurship in Kerala has a bright future with sociocultural transformation and increasing policy attention. However, recent examples of the Kerala Gender Budget and Women Industrial Park indicate a shift in the paradigm towards institutional support for women-led enterprises. Nevertheless, inequalities in property rights, decision-making power, and digital inclusion must still be addressed through structural reforms. (Nguyen et al., 2024) point out that women's intersectional challenges (e.g. caste, religion, and geographic location) need to be taken up with inclusive and localised policy frameworks. It is also necessary to conduct rigorous impact evaluations of state-sponsored entrepreneurship schemes to guarantee an equitable distribution of benefits. Essentially, Kerala offers some distinct socio-economic opportunities for women entrepreneurs, but realising their full

potential requires a top-down transformation of institutional, financial, and other cultural ecosystems.

Kerala's socio – economic conditions provide a unique platform to study women's contribution to entrepreneurship. The achievement of Kerala as a progressive gender state with high female literacy and health indicators has not proportionately translated into higher participation by female entrepreneurs. In Kerala, as per a report by the National Sample Survey Office (NSSO, 2019), the proportion of these women-owned enterprises is considerably lower than that of male-held enterprises due to deep-seated structural and cultural barriers. According to Kumar and Nair (2021), even after gaining educational attainment, societal conditioning, and very little exposure to entrepreneurial role models, keep many women away from the business domain. This disjunction between education and entrepreneurial participation necessitates a closer examination of the non-economic factors shaping women's career decisions in Kerala. Women's entrepreneurial choices in Kerala are significantly influenced by social norms and mobility restrictions. In addition, once women are confined to a particular sector based on cultural traditions, they are usually confined to low-risk low-revenue sectors, such as tailoring, beauty services catering, or handicrafts (Joseph & Ramachandran, 2020). Although the initial entry points in these sectors offer a promising beginning, they are generally not scalable and are not integrated into formal value chains. Additionally, safety issues, gendered division of labour, and dependence on male family members to enable logistical exercises also lower the space for women entrepreneurs' operational freedom (Dutta & Bose, 2017). Region-specific variations in women's entrepreneurial engagement in the rural parts of Kerala due to the intersection of caste, religion, and patriarchal values have worsened these challenges.

Even in the presence of these constraints, Kerala has witnessed an increase in collective entrepreneurial efforts in the form of cooperative and SHG-based models. Group-based approaches provide women with an opportunity to pool resources and share risks and social capital, particularly in rural and semi-urban areas. According to (Subramaniyan, 2024), women-led cooperatives in Kerala's dairy, coir, and handloom sectors have increased household income and social cohesion. However, these models

have limitations such as limited access to modern technology, poor branding, and access to appropriate marketing linkages. Hierarchical power structures and unequal voice distribution in SHGs can take advantage of the benefits of marginalised women. As a result, although collective entrepreneurship is promising, it must be supplemented by public policy aimed at integrating the market and modernising technology. A similarly overwhelming amount of research also exists on the psychological and motivational factors that impact women's entrepreneurship in Kerala. Self-efficacy, family support, and entrepreneurial orientation are factors closely related to the decision to initiate a business and continue to maintain business operations. (Nasima & Shalini, 2019) found that family encouragement motivates women entrepreneurs in Kerala to be more risk-taking and business innovative. Those who encounter familial resistance or societal ridicule choose conservative business models that hinder business growth. These findings are consistent with the social cognitive theory of entrepreneurship, in which social and environmental factors impact entrepreneurial behaviour.

Women entrepreneurs in Kerala face both opportunities and barriers, such as technological literacy and access to digital media. Though it is increasingly becoming a popular medium of work by urban and semi-urban entrepreneurs, making use of e-commerce platforms, digital payments, and social media for their business promotion among few others, rural women are still deprived of all these benefits as they do not have access to reliable Internet and digital skills (Lekshmi & Haridas, 2020). During the COVID 19 pandemic, many small businesses had to pivot online, and this digital divide widened. Women who did not make this transition lost their income or closed their businesses. In short, there is a glaring need for policy intervention in targeted digital literacy programs for women, particularly for less-educated and older entrepreneurs. Finally, a review was conducted on state-level programmes and initiatives to support women entrepreneurs in Kerala. Some of the programmes offering financial or advisory support to women, like the "Entrepreneur Support Scheme" and "WE-Mission Kerala" have poor awareness and access by the intended beneficiaries (Kumar & Shobana, 2024). Usually, these schemes are hampered by bureaucratic procedures, delays in fund disbursals, and ineffective monitoring.

Moreover, many women entrepreneurs complained of a lack of market access, mentoring, and business training after funding. This suggests that a more integrated policy framework is required to promote financial inclusion, coupled with capacity building and institutional support which addresses the concerns of women's specific contexts.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Cultural and Social Context	Patriarchal norms, gender roles, caregiving responsibilities limit entrepreneurship scope; preference for home-based/small-scale ventures.	(Koneru, 2017); Joseph & Ramachandran (2020); (Dutta & Bose, 2017)	Societal expectations lead to entrepreneurship gap despite high literacy.
Financial Constraints	Difficulty accessing credit, lack of collateral, low financial literacy, high interest rates from NBFCs/banks.	(Sharma & Gupta, 2024)	Dependency on informal financing limits scalability and innovation.
Training & Mentorship Gaps	Inadequate sector-specific training, limited access to mentors, awareness gaps about government schemes.	Devika (2016); Thomas & Paul (2019)	Need for targeted mentorship and outreach in rural areas.
Digital Entrepreneurship	Growth in Instagram/WhatsApp-based businesses in fashion, food, wellness; enables flexibility and low-cost models.	(Ambika & Nair, 2022)	Digital platforms reduce market barriers but rural digital divide persists.
Role of SHGs and Cooperatives	Kudumbashree SHGs and cooperatives improve access to finance, skills, and governance participation.	Narayanan et al., 2023); Ferreira et al. (2024); (Subramaniyan, 2024)	Many SHG enterprises remain informal and lack forward linkages.

Institutional Support & Policy Environment	Gender Budget, Women Industrial Parks, and StartUp Mission Kerala offer promising support.	(Nguyen et al., 2024); (Kumar & Shobana, 2024)	Needs intersectional and localized policy reforms and monitoring.
Educational vs. Entrepreneurial Participation	High education doesn't translate to high entrepreneurship due to lack of exposure and role models.	Kumar & Nair (2021)	Disconnect between education and entrepreneurial entry needs attention.
Sectoral Constraints	Women confined to low-risk, low-revenue domains (tailoring, beauty, food), limiting growth.	Joseph & Ramachandran (2020)	Stereotyped sector engagement hinders value addition and innovation.
Mobility and Gendered Labor Roles	Safety, logistical dependency on men, and travel constraints limit business activities.	(Dutta & Bose, 2017)	Gendered mobility norms impact operational freedom.
Psychological and Motivational Factors	Family support, self-efficacy, and entrepreneurial orientation drive innovation and risk-taking.	(Nasima & Shalini, 2019)	Positive social reinforcement boosts business outcomes.
Digital Divide	Urban women adopt digital tools; rural women face lack of skills, internet access, and awareness.	Lekshmi & Haridas (2020)	COVID-19 worsened digital inequalities.
Gaps in Government Schemes	Low awareness, fund disbursal delays, and weak post-funding support in schemes like WE-Mission Kerala.	(Kumar & Shobana, 2024)	Need for integrated support including market access and training.

2.4 The Role of Resilience in Business Success

With increasing research interest in entrepreneurship as a factor that may lead a business to success, resilience, defined as 'the ability to recover from adversity and sustain performance under stress', has become a hot topic. Resilience is especially important for women entrepreneurs because the compounded challenges they face stem from both the uncertainties of running a business as well as constraints from a gendered society. Ayala and Manzano (2014) states that entrepreneurial resilience does not only aid in the perseverance and well being of the individual, but also help the individual in innovating, adapting and leading in an uncertain environment. Nevertheless, resilience is an important construct within women's entrepreneurship to overcome challenges such as lack of finance, gender discrimination, and work–family conflict which makes it difficult for women to sustain their business in the long run. Adversities in the entrepreneurial journey of women include the internal adversities within them and the external adversities in their environment, demand psychological strength and adaptive capacities. Bullough and Renko (2013) propose the notion of 'entrepreneurial resilience' as a dynamic capability that allows women to operate optimally in hostile environments. Research on female entrepreneurs in conflict zones showed that resilient women tend to recognise adversity as a chance for growth and thus maintain optimism and motivation when confronting difficulties. In the same fashion, Shepherd et al. (2020) echoed this notion in that resilience provides an opportunity for entrepreneurs to cognitively reappraise situations, particularly following business setbacks or failures, where they can make constructive decisions. Many women are expected to do anything from managing families to business, and that is where such adaptive thinking is most required. Resilience was also found to be highly correlated with business performance among Indian women entrepreneurs, as seen in empirical studies. For instance, Jain and Prabhu (2020) highlighted that female entrepreneurs have higher monetary earnings and customer retention rates, especially in the service industry, such as beauty, hospitality, and education. Adjustment of business strategy in the face of market disruptions, pursuit of new customer bases, and proactive problem solving were more likely to take place among such women. The study also pointed out that resilience is not innate but can

be built through mentorship, peer support, and entrepreneurial training, all of which are propositions that have not been adequately utilised in the present women focused on development programmes in India.

Women entrepreneurship in Kerala has played an exemplary role in making an identity resilient in the face of state-specific hazards such as floods, pandemics, and economic recessions. (Gergely et al., 2024) recorded how women led in enterprises in the coastal and agricultural sectors employed immense amounts of resilience by rerouting its supply chains, making digital operations, and utilising government schemes. Emotional regulation, self—the perceived ability to prevail despite adversity or setbacks in their business—the 'self' efficacy, and social connectedness—social resilience—helped these entrepreneurs not only recover from, but in fact thrive off of this disruption. In addition, this study stresses that resilience is a competitive advantage rather than a survival mechanism. Thus, there is another critical dimension of resilience in women's entrepreneurship, which is its association with social and cultural capital. Leung (2021) argues that if the women are immersed within a supportive network such as family, community and professional association, the probability of keeping resilience throughout turbulent times is high. However, through these networks, one obtains more than just emotional support: financial resources, mentorship, and market information are available. These networks potentially play a buffering role against external shocks, especially in collectivist societies such as Kerala, where interpersonal relationships and business functioning are important to society. In this regard, resilience is co-created and upheld by a fabric of sociality that enables women entrepreneurs to negotiate with complex settings.

Innovation and long-term stability have also been related in women-owned enterprises. According to Gundry et al. (2020), resilient women tend to take up innovative practices and change their business models throughout various forms of crises. Instead of the success of others, they focus on being proactive rather than reactive, always practising self-directed learning and skill development. This holds true in the case of women entrepreneurs devoted to e-commerce, renewable energy, and organic agriculture in Kerala, which demand adaptability and foresight. This

evidence not only echoes the concept that resilience is a form of protection against failure, but at the same time, it validates the role of resilience as a growth, innovation and sustainability driver for women entrepreneurs. It is well established in the literature that resilience is a determinant of entrepreneurial endurance, particularly as an important aspect of the gendered experiences of businesswomen. Youssef and Luthans (2007) argued that psychological resilience as a construct includes hope, efficacy, optimism, and flexibility features that are always tested in entrepreneurial settings. These psychological strengths are often mobilised not only for women to compete in a market, but also for women to pull back against patriarchal norms and gender expectations that limit their access to the entrepreneurial ecosystem. A woman entrepreneur's trail to long-term business viability and strategic growth lies in her ability to persist, revering an investor's rejection, restrictive credit policies, and lack of encouragement from society at large.

Within South Asia, specifically in India, studies have shown that women entrepreneurs' resilience sometimes develops from their lived experiences dealing with sociocultural barriers. According to Singh and Belwal (2008), Indian women entrepreneurs are multi-faced in the sense that they are expected to serve both as caregivers and income earners, which further aggravates emotional strain. Nonetheless, those who develop resilience through self-reliance, informal education, or support from the community are usually better off in resource-constrained environments. The psychological robustness of these companies, which makes them stable operators, customer loyal, and innovative even in the absence of institutional support, proves that resilience acts as the silent engine behind their business longevity. It also notes how past experiences of adversity shape the resilient behaviours of women entrepreneurs. According to McGowan et al. (2012), women who encounter child hardships or economic uncertainty early on tend to embrace risk-taking or opportunity identification. According to their findings, resilience is not simply a recovery mechanism but rather a forebearer of entrepreneurial orientation that allows women to artistically experiment with market segmentation, find comfort in financial challenges, and move through the mazes of regulations less sceptically. In aggressive rural, semi – urban Indian regions, these entrepreneurs frequently support frugality

and innovative problem-solving as key approaches to working and surviving in vacillating market atmospheres.

The common theme in resilience literature is how emotional intelligence and self-regulation can lead to women's business success. According to Caza and Milton (2012), emotional resilience provides women with tools to control their responses to failure, rejection, or poor performance, events that are particularly embodied by women owing to a higher degree of scrutiny in society. For instance, women who step out of their traditional roles, such as working in microenterprises or food-processing businesses, are ridiculed in Kerala. Those who develop coping options, such as mindfulness, peer dialogue, and reflective practice, can maintain customer service quality as well as product consistency, enabling them to protect their reputation and earn market credibility. Female entrepreneurs who have a support system and mentorships appear to be consistent factors in resilience building. According to Brush et al. (2009), mentoring networks play a significant buffering role in the psychological toll of entrepreneurial uncertainty. These other successful women and mentors normalised failure, built confidence, and provided practical working examples of how a business works. Such resilience has been promoted in Kerala by grassroots organisations such as Kudumbashree, which have established collective forums where women can share experiences, learn from fairs, and develop business models with the potential to be joint business models. These platforms enable financial resilience through shared risk but emotional and social resilience for sustainable entrepreneurial ventures.

Finally, ethical leadership and value-based business practices are found to be increasingly related to resilience building in women's entrepreneurship. Through research by Powley (2009), it is true that resilient entrepreneurs, particularly women, are more likely to integrate empathy, trust, and community welfare into their business models. These practices enhance customer loyalty, staff commitment, and long-term sustainability. For instance, women entrepreneurs in Kerala's artisanal and organic sectors frequently indicate that their hard work to practise ethics and be on moral high ground affords them better customer retention and patient referrals. As a result, resilience not only provides immediate survival in the crisis but also creates an identity-oriented way of doing business and ultimately leads to endurance.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Definition and Importance of Resilience	Resilience helps maintain performance under stress and recover from adversity; crucial for women entrepreneurs facing gender and business-related challenges.	Ayala & Manzano (2014)	Resilience is a foundational trait influencing success in women-led businesses.
Psychological Strength & Adaptive Capacity	Entrepreneurial resilience fosters optimism, motivation, innovation, and adaptive leadership in hostile or uncertain environments.	Bullough & Renko (2013); Shepherd et al. (2020)	Women often require psychological strength to juggle multiple roles.
Empirical Evidence from India	High resilience correlates with better financial outcomes, customer retention, and strategic adaptability in Indian service-sector businesses.	Jain & Prabhu (2020)	Emphasizes resilience as a cultivated skill via training, mentorship, and peer support.
Kerala-specific Context	Women entrepreneurs in Kerala displayed resilience during floods, pandemics, and economic downturns by digitizing, reorganizing, and leveraging state schemes.	(Gergely et al., 2024)	Resilience seen as a strategic advantage, not just a survival tool.
Role of Social and Cultural Capital	Supportive family, community, and professional networks enhance emotional and financial resilience; collectivist cultures aid in co-constructing resilience.	Leung (2021)	In Kerala, community and familial support serve as buffers during crises.
Resilience and Innovation	Resilient women are proactive, innovative, and willing to pivot business models; evident in sectors like e-commerce and organic farming in Kerala.	Gundry, Kickul & Posig (2020)	Links resilience to long-term sustainability and innovation.

Psychological Attributes of Resilience	Includes hope, efficacy, optimism, and flexibility; helps challenge gender norms and systemic barriers in entrepreneurial ecosystems.	Youssef & Luthans (2007)	Key psychological strengths tested in high-pressure entrepreneurial settings.
Socio-cultural Barriers in India	Women navigate dual roles as caregivers and entrepreneurs; those with self-reliance and community support show higher resilience and business success.	Singh & Belwal (2008)	Lived experiences shape resilience in Indian contexts.
Impact of Adversity and Past Experiences	Early-life hardship fosters risk-taking, opportunity recognition, and resilience-based entrepreneurial orientation in rural India.	McGowan et al. (2012)	Adversity is a precursor to entrepreneurial thinking and resourcefulness.
Emotional Intelligence and Self-Regulation	Emotional resilience enables coping with rejection, failure, and social scrutiny; improves customer service and business credibility in Kerala.	Caza & Milton (2012)	Emotional tools like mindfulness enhance performance under stress.
Mentorship and Peer Support	Mentoring networks help women normalize failure, foster confidence, and improve business management; organizations like Kudumbashree support emotional and financial resilience.	Brush, de Bruin & Welter (2009)	Peer support and mentorship are vital for building sustained entrepreneurial resilience.
Ethical Leadership and Value-driven Practices	Resilient women integrate empathy, trust, and community focus into businesses; leads to customer loyalty and staff commitment, especially in artisanal and organic sectors in Kerala.	Powley (2009)	Resilience drives ethical business strategies and sustainable growth.

2.5 Adoption of Resilience Strategies in Women-Owned Enterprises

Women entrepreneurs are increasingly being recognised as adopting resilience strategies to ensure the sustainability of their enterprises' growth and/or scale in challenging environments. Resilience strategies consist of proactive planning, innovation, risk management, and bouncing back from adversity (Ayala and Manzano 2014). With regard to women running businesses, these strategies are most frequently deployed differently because of the sociocultural position that, in most cases, denies them access to formal supportive resources. Informal coping mechanisms, such as utilising familial networks, community support, and local trade relationships, are more commonly used by women entrepreneurs, specifically in developing countries, including India, to create resilience. As such, these practices act as buffers in markets, institutional gaps, and gender bias in terms of access to capital and information, further illustrating that resilience for women is not simply psychological but rather systemic and relational. In addition, the literature has recognised that women entrepreneurs, especially in semi-urban and rural settings, develop adaptive resilience strategies by necessity and through contexts that have not undergone formal training strategies. Small enterprises owned by women, according to Bhamra et al. (2011), tend to apply flexible production, diversify their product portfolios, or go to other markets during crises such as economic downturns and pandemic-driven disruptions. For example, in Kerala, women-led enterprises in food processing, textiles, and handicrafts have sustained during the COVID 19 times by moving into digital platforms, direct to customer sales models, and collective supply chains through self-help groups. All of these actions are grounded, grassroots resilience strategies that make adaptiveness, frugality, and working together, central strategies.

In addition, digital tools and platforms have become a resilience-building strategy in women-led enterprises with existing digital literacy and access gaps. Martin, McNally, and Kay (2013) stated that entrepreneurial resilience is becoming increasingly related to technological adaptability, specifically after the pandemic. Many women entrepreneurs in Kerala, who had no idea about e-commerce or online promotion, had gone about it by adopting digital payment systems, social media

promotion, and customer engagement, virtually stabilising their businesses; they have, in fact, become confident enough to market products on these platforms. The use of local NGOs, government schemes, and peer networks to support the transition showed that resilience strategies are more sustainable when the pecan sheller has institutional and communal scaffolding to rely upon. Moreover, women entrepreneurs are required to innovate in the domain of financial resilience because they do not have access to formal credit systems. Studies conducted by Jamali (2009) show that women tend to be hindered from accessing loans and capital structured by collateral and gender discrimination. To counter this, women-owned enterprises have devised alternative strategies, such as rotating savings and credit associations (ROSCA's), micro finance schemes, and reinvestment of household savings in business activities. Many women associated with Kudumbashree units and cooperatives in Kerala have successfully used pooled resources and pooled resources to expand self-finance or alleviate cash flow disturbance. All these financial resilience mechanisms indicate deep foresight, the power of collaboration, and careful risk-taking that, in turn, foster business continuity.

Participatory leadership and flexible team structures, for instance, which are more common in women-led enterprises, contribute to organisational resilience. Based on Vogus and Sutcliffe (2007), resilient organisations are organisations that are able to learn from failures, decentralise decision-making, and maintain an awareness of the operating environment. These principles are often personified by women entrepreneurs in the form of an inclusive work environment, loyalty of employees, and an intense feedback culture with customers and suppliers. Small women–led enterprises in Kerala, especially in the agro-processing, tailoring, and health areas, show a strong propensity towards collectivism and shared leadership. Such a cultural orientation helps not only in navigating crises but also in sustaining the organisation in the long run through shared accountability and mutual growth. The literature is increasingly recognising entrepreneurial learning as a resilience strategy. Cope (2011) states that resilient entrepreneurs often engage in continuous learning through experience, reflection, and interaction with peers. Women entrepreneurs, in particular, who have neither formal training in business nor in marketing, depend on experiential

learning to improve decision making, problem solving, and strategic planning. The state of Kerala in India, for example, has created various state-sponsored programs and community-based training programs which focus on bookkeeping, customer relationship management, and legal compliance to help women entrepreneurs prepare better for disasters and recover if an operational shock occurs. Efforts such as these clearly demonstrate that resilience strategies are not only reactive, but also proactive, allowing women entrepreneurs to foresee future challenges and prevent them.

Women's adoption of resilience strategies in women owned enterprises largely depends on the interaction of multiple factors, such as socio-cultural norms, institutional support, and personal determination. Sheeran et al. (2016) study demonstrates that resilience in women entrepreneurs is entangled with their ability to adapt to external economic pressures as well as family and social responsibilities. Often, the approach taken by these women entrepreneurs tends to be incremental – to tackle business problems one by one, and frequently dependent on personal savings and funds from the community to provide the much-needed lifeline for their enterprises in crisis times. For this, while working in Kerala, women entrepreneurs depend on their informal social networks, for example, self-help groups and neighbourhood associations to provide them with both emotional and financial resilience. Such collaborative structures provide shared resources, collective problem-solving, and risk diversification, which enable resilience strategy adoption for women entrepreneurs whose access to formal capital and market information is limited. Reinforcing this, resilience strategies among women – owned enterprises often include the determination of innovation and diversification as measures of protection against shocks in the market. Baum and Locke (2004) reveal that resilient entrepreneurs develop a set of thoughts dominated by continuous innovation, new products, services, and business models. Women entrepreneurs in the agricultural and handicraft sectors of Kerala have displayed a high degree of adaptability in switching from traditional methods during the entire incubation period to adopt technological innovations. For example, women from the coir industry have implemented automation, whereas in the food processing sector, women have diversified into organic and value-added products. These thinking shifts guarantee security amid

exchange insecurity while offering strategic aggressive benefits amongst the seeds, as clearly the most cutthroat showcase. Reconciling innovation-driven resilience entails shifting business models to incorporate e-commerce platforms, social media for marketing, and digital payments, which have become the common resort by women entrepreneurs under innovation-driven resilience.

Apart from innovation, networking and mentorship are the primary enablers of resilient responses for women entrepreneurs in general. Deakins and Freel (2009) stated that just as entrepreneurial resilience is not about individual ability, it is also about tapping into external resources, such as advice, guidance, and peer support. However, women entrepreneurs in Kerala frequently enter into mentorship relationships within regional cooperatives and business associations. In addition to this business knowledge, these platforms offer emotional support, which is vital in overcoming the gender biases of the entrepreneurial ecosystem. The Kerala State Women's Development Corporation (KSWDC) with women's leadership sensitised such mentorship programmes to provide business advice, technical help, and orientation of financial literacy. These institutional resources equip women entrepreneurs with the skills and confidence to manage operational and financial uncertainties and make women entrepreneurs resilient. The literature also explores the importance of leadership and decision-making styles in adopting resilience strategies in women-owned enterprises. Typically, resilient women entrepreneurs have a transformational leadership style involving empowerment and adaptability, and focus on long-term growth rather than short-term survival. Based on the theories of Avolio and Bass (1991), transformational leaders do a good job of building team resilience by developing a vision of the common success of the team, which makes this process vital for business continuity. Women entrepreneurs in Kerala practising transformational leadership aim to create an environment of mutual support and empowerment of employees, who in turn assists them in the crises facing the organisation. For instance, women who own guesthouses and resorts in the hospitality industry usually have staff development programmes that focus on collaborative, adaptable, and shared ownership approaches of business outcome strategies.

Resilience is dependent on this type of leadership to build team cohesion and increase the ability of the organisation to address disruptions or external challenges.

Additionally, the role of emotional resilience in enabling women to do business in the face of challenges is becoming increasingly recognised in the context of women's entrepreneurship. Emotional resilience is required to overcome the inevitable personal and professional setbacks that are part and parcel of entrepreneurial ventures (Baron and Markman, 2000). Gendered expectations and double burden assumptions that women entrepreneurs, especially those in the microenterprise sector, experience tend to exacerbate emotional challenges that these women entrepreneurs face. The ability to bounce back emotionally allows women to maintain a positive spin, cope with stress, and keep going despite setbacks. Being a strong woman, of course, her softer side comes out too, especially in Kerala, where family responsibilities by and large land on women's shoulders. Women entrepreneurs can develop emotional resilience to strong personal crises and external disruptions in the best way to ensure the in-flight performance of their businesses. Optimism, perseverance, and perseverance are crucial for maintaining long-term business growth, even under the worst conditions. Finally, financial resilience strategies are an aspect of business sustainability adopted by women entrepreneurs. Access to formal credit and investment channels by women entrepreneurs in developing economies leads to financial exclusion. Coleman (2007) further reckoned that women encounter greater challenges than their men counterparts to source funds that include loans. In response to this challenge, women entrepreneurs have adopted financial resilience strategies, including bootstrapping, using family or community savings, and participation in microfinance programs. In Kerala, government schemes, microfinance institutions, and cooperative banks help women's enterprises obtain low-interest loans and relax their repayment terms. Through these financial tools, women entrepreneurs in Kerala can employ them to address cash flow problems, invest in business growth, and more importantly, build a safety net to help them not only grow their businesses but also ensure their resilience in times of crisis. Remain capable of prudently utilising financial resources and securing alternate funding options for long-term sustainability of the business.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Definition of Resilience Strategies	Encompasses proactive planning, innovation, risk management, and recovery from adversity.	Ayala and Manzano (2014)	Sets a foundational understanding of resilience strategies in entrepreneurship.
Socio-Cultural Coping Mechanisms	Women in India rely on informal networks—familial, community, and local trade relationships—to build resilience.	General literature	Reflects systemic and relational aspects of resilience, particularly in semi-urban and rural areas.
Informal and Contextual Adaptation	Resilience strategies arise from necessity and experience rather than formal training.	Bhamra, Dani, and Burnard (2011)	Highlights real-world adaptation in response to crises like pandemics.
Sectoral Resilience During Crises	Women in Kerala adapted by using digital platforms, direct sales, and collective supply chains during COVID-19.	Contextual Case (Kerala-based)	Showcases grassroots innovation and sectoral flexibility.
Technological Adaptability	Adoption of digital tools like social media, e-payments, and e-commerce post-pandemic.	Martin, McNally, and Kay (2013)	Bridging digital literacy gaps through NGO/government support.
Financial Resilience	Use of ROSCAs, microfinance, household savings, and Kudumbashree resources due to lack of formal credit access.	Jamali (2009)	Demonstrates resourcefulness and community-based financial strategies.
Organizational Resilience	Women-led enterprises adopt participatory leadership, decentralization, and inclusive work cultures.	Vogus and Sutcliffe (2007)	Enhances sustainability and team cohesion.

Entrepreneurial Learning	Reliance on experiential and community-based learning rather than formal education.	Cope (2011)	Government and community training programs build long-term capabilities.
Socio-Institutional Influences	Socio-cultural norms, family responsibilities, and institutional scaffolding shape resilience strategies.	Sheeran et al. (2016)	Incremental adaptation strategies supported by informal networks.
Innovation and Diversification	Adoption of new products, tech, and market channels to buffer market shocks.	Baum and Locke (2004)	Examples include automation in coir and diversification in food processing.
Networking and Mentorship	Access to external support systems through cooperatives, business groups, and mentorship programs.	Deakins and Freel (2009)	Emotional and operational support critical for navigating bias and uncertainty.
Leadership Style	Women often adopt transformational leadership fostering empowerment and long-term growth.	Avolio and Bass (1991)	Evident in sectors like hospitality where shared leadership enhances resilience.
Emotional Resilience	Emotional strength helps women manage stress, setbacks, and dual roles of business and family.	Baron and Markman (2000)	Especially relevant in Kerala's cultural context where women juggle multiple roles.
Financial Resilience (Reiterated)	Reliance on alternative financing (microfinance, co-ops, bootstrapping) due to gender bias in formal credit access.	Coleman (2007)	Financial prudence and creative funding approaches ensure business continuity and growth.

2.6 Resilience Strategies in Business: Practical Tools for Survival and Growth

Business requires resilience strategies to survive and grow, especially in conditions in which the market is dynamic and unpredictable. In particular, women entrepreneurs may have unique challenges in business that may require unique resilience strategies, which include both emotional and practical components of business. Nassif and Garçon (2024) argued that an entrepreneur who is resilient can respond to hardships such as financial instability, market swings, and operational challenges and revive through them. In the case of women entrepreneurship, these strategies do not just involve managing external challenges; they also involve managing internal barriers such as addressing gendered expectations, meeting demands of work-life balance, and having limited access to resources. As women entrepreneurs, they are almost always expected to build such multifaceted resilience in their character that it covers traditional business knowledge, emotional intelligence, and community systems. For instance, in Kerala, women entrepreneurs residing in rural areas adopt community-based resilience strategies such as cooperative groups and local business networks, wherein these groups are formed with the purpose of providing financial and emotional support when crises occur. The informal financial support provided by these networks allows women to survive lean days, and there are elements of shared learning and problem solving. A practical tool for resilience in women-owned businesses is the ability to cultivate strong networks of men and women, both formal and informal. Brush et al. (2009) explain that in the case of building resilience, networking is important as it allows for resources sharing, knowledge exchange as well as asking for advice during difficult times. Women's self-help groups (SHGs), cooperatives, and professional associations have been turned to an advantage by the networks of women entrepreneurs in Kerala. They provide access to markets, credit, and new business opportunities, and provide emotional support. It also helps women entrepreneurs identify gender biases, which can be present in business environments, and gain access to unheard resources. Therefore, for instance, a study by Terjesen et al. (2016) showed that women who are responsible for local business associations or who are a part of mentoring networks are more resilient because they have a support network of advice, support, and resources that can absorb market shocks. In Kerala,

women entrepreneurs in agriculture and handicrafts rely on SHGs to help them overcome liquidity crises and reinvest in their businesses during economic disturbance.

Diversification is another important resilience strategy for women entrepreneurs. Business stability and reduced exposure to external shocks can be attained by diversifying business operations in terms of products and markets. Walker et al. (2009) state that interest in business resilience is closely related to the capacity to adapt and diversify in a changing environment. Successful women in Kerala have shown adaptive resilience through the diversification of business models. While women in the traditional coir industry have diversified into the production of value-added products such as coir-based furniture and organic fertilisers, women in the food processing sector have switched to other product lines, including organic and gluten –free. Diversification helps shore up the business in the event of external threats, such as changing market trends or even environmental disruption, and contributes to better competitiveness in general. Women entrepreneurs can spread risks across various revenue streams with the help of diversification, making the business more resilient to market downturns or sudden changes in consumer behaviour. Moreover, emotional resilience is an important factor for women entrepreneurs to succeed in the realm of business. Emotional resilience is the ability to remain calm during difficult times and carry on sound decision-making in times of hardship and stress in your professional or personal life. Nagamuthu and Maheswari (2018) note that emotional resilience is important in countering the psychological hurdles associated with women entrepreneurship among other psychological hurdles such as gender biases, work life imbalance, social expectations etc. Women entrepreneurs in rural marginalised communities of Kerala have to manage business activities in tandem with household and family roles, which largely instil a high degree of emotional resilience. The strength of these emotions enables them to face stress and uncertainties in the business while keeping their personal well-being intact. For example, by staying adaptable in the face of challenges such as natural disasters, seasonality, and fluctuations in tourist arrivals, women working in Kerala's tourism sector have developed a good sense of emotional resilience. The ability of diaspora businessmen to remain enthusiastic, and

as other key factors, a strong support system from family and local communities, makes it possible for them to have the resilience to cope with setbacks and rebuild their businesses after a crisis.

Motivated by the need for practicality for women entrepreneurs and their businesses, financial resilience is another necessary resource beyond emotional and network-based resilience. Financial resilience refers to the capacity to use financial resources wisely to access funding and to keep businesses uninterrupted when the economy is down. In fact, as Coleman (2007) states, financial resilience is an important element in ensuring the business sustainability of women entrepreneurs, possibly for those who do not have access to traditional financing channels. Most Women entrepreneurs in Kerala have to depend on loans from microfinance institutions, cooperative banks, and government schemes to overcome financial challenges and manage cash flow. These include savings schemes, emergency loans, and flexible payback positions that offer room during difficult times. In addition, financial resilience is gained through the capacity to make smart financial choices, including minimising unnecessary expenses, reinvesting profits into the business, or searching for another stream of income during off-peak periods. For instance, when COVID-19 hit the shore, it codified many existing problems for women entrepreneurs in Kerala. However, because of the government's welfare schemes and microfinance institutes that provided financial support, businesses were able to withstand demand disruptions. An important resilience strategy is for businesses to adopt a strategy focus on business continuity planning (BCP) and crisis management in order to survive and grow in the long term. A BCP entails the development of plans and processes which ensure the continued operation of a business both during and after a crisis from natural disasters, shocks to the economy, or political instability. Resilience strategies associated with BCP aid firms in curtailing downtime and sustaining the state of revenue in the worst scenarios, as per Burnard and Bhamra (2011). As business disruptions continue, women entrepreneurs in Kerala have adapted to use more BCP practices to guarantee that their businesses are prepared for disruptions. For example, women in the agricultural sector have devised their own ways of mitigating the risks of climate change (e.g. droughts and floods) through crop diversification and investing in

sustainable agricultural practices. In addition, women entrepreneurs in the hospitality sector have introduced crisis management mechanisms to minimise the turbulence of external events such as political turmoil or worldwide pandemics in tourism revenues. Forward-looking strategies include proactive planning with flexible business models, which, in conjunction with proactive planning with flexible business models, have significantly contributed to the resilience and long-term growth of women-owned firms in Kerala.

While it is important for entrepreneurship to survive, resilience is also about being able to kill, even when facing adversities. For women entrepreneurs, resilience is also a way to deal with the particular hurdles faced no matter where they are in the market because of societal and gendered barriers. Mair and Marti (2009) define resilience in entrepreneurship as the adaptive capability of entrepreneurs to continue, adapt, learn, and develop from hard times. The realm of risk faced by women entrepreneurs is multifaceted, as they are often limited by society's stereotypes, resources, and equitable treatment in business transactions. To overcome these obstacles, they need to have strong internal resilience involving mental toughness, emotional intelligence, stress, and uncertainty savvy. Furthermore, (Isichei, Olabosinde, & Shaibu, 2024) argue that a specific form of emotional resilience plays a key role in keeping women entrepreneurs grounded during difficult times of balancing family, business, and community expectations. For instance, studies have revealed that while women in Kerala are more likely to succumb to gender-based business challenges and market shocks, women who have institutionalised emotional resilience tools, such as mindfulness practices and community support networks, have shown a higher degree of persistence in their entrepreneurial ventures. Furthermore, (Kadambari & Chanderjeet, 2019) research highlights that women entrepreneurs should imitate innovation and flexibility as key resilience strategies in their businesses. Innovation provides businesses with a way to differentiate themselves from their competitors and adapt to ever-changing market conditions, whereas flexibility facilitates fast decision-making and the ability to respond to any unforeseen situations. Women entrepreneurs that are flexible can adjust their business operations when it comes to business strategies, product lines, or even new markets depending on external changes. (Brush

et al., 2022) conducted a study regarding women entrepreneurs in Kerala that emphasises the importance of product, as well as process, innovation, in enhancing business resilience. For example, women operating in the textile industry have been using flexible strategies and shifting towards eco-friendly alternatives as well as digitally integrated designs to serve new market demands. Such innovation not only makes business relevant, but also enables women to capture new customer segments to ensure long-term survival and growth. In addition, flexibility in business operations, including scaling up and down production depending on demand, would protect women entrepreneurs from uncertainties in the business environment and market.

Another critical area in which resilience strategies play a vital role in achieving the sustainability of women-owned businesses is resource management. Many women entrepreneurs are constrained in resources, especially in terms of financial capital, skilled labour, and technology. However, to overcome these limitations, women entrepreneurs have devised creative methods to ensure efficiency in the management of available resources. Resource resilience, as described by (Sulaiman, 2014), refers to the ability to utilise current resources to continue doing business, as may be regular during crises. Women entrepreneurs in Kerala have accessed necessary financial resources through microfinance institutions, state-sponsored welfare programs, and community savings schemes. Such financial resilience strategies enable women business owners to weather short cash flow problems and keep running for as long as they do not necessarily require high-cost loans or unsustainable debt. In addition, women entrepreneurs in Kerala also regularly pool resources; they hold machinery, tools, and labour in common with other women entrepreneurs in that part of the world. This approach of collaboration protects individuals from financial risk and helps cultivate a spirit of solidarity and collective resilience in the entrepreneurial ecosystem. To ensure they maintain business longevity, the strategic planning and business continuity planning (BCP) are vital aspects of resilience for women entrepreneurs who are likely to experience challenges in personal life and external factors. Resilient organisations are those with well-prepared contingency plans that can easily bounce back from disturbances, as stated by Weick and Sutcliffe (2007).

For example, in the case of women entrepreneurs, this means having plans to deal with a crisis such as a natural disaster, economic slump, or supply chain difficulty. Odoch, Namono, and Wofuma (2025) found that women entrepreneurs who plan before starting the business and provide for contingencies are likely to quickly recover from business disruptions. For instance, women running tourism and hospitality businesses in Kerala have developed strategies to deal with the seasonal characteristics of their businesses, natural calamities such as floods, and global events like the COVID 19 pandemic. As most of these businesses have already been designed for flexibility, such as service diversification (online booking systems, a variety of accommodations, etc.), this gives them a chance to keep afloat during quiet times or after crises.

Another crucial resilience strategy is to develop leadership and team resilience in women owned businesses. During good or bad times, leaders who effectively lead employees can inspire, encourage, keep people moving, and create a culture that runs in resilience. Leadership resilience entails the ability to make sound decisions, make effective changes, and support team members during difficult times. For instance, (Acevedo-Duque et al., 2021) show that resilient leaders in female-led businesses are typically more collaborative and communicative, supporting the overall resilience of the business. Women entrepreneurs in agriculture, retail, and food processing in Kerala also play a leadership role by actively involving the team in decision-making and planning. Through this collective effort, ownership and shared responsibility are built upon, leading to a better performance of the business, keeping it motivated and geared toward the goals even during turbulent times. Furthermore, leadership resilience in women entrepreneurs also assists them in managing the emotional and psychological challenges they might face in bearing the responsibilities of the business and growing stronger in hard times. However, the last strategy for women entrepreneurs to adopt digital tools and technology as a key resilience strategy and ensure business continues to grow. The digital transformation of businesses has helped female entrepreneurs reach customers, manage operations in new avenues, and improve efficiency. According to (Bhatnagar & Yadav, 2023), e-commerce platforms, digital marketing, and customer relationship management (CRM) systems are digital

tools used by various businesses to remain competitive and resilient in the digital age. In Kerala, while handicrafts, textiles, and food processing are there, women entrepreneurs in these sectors have taken e-commerce routes to expand their market not only domestically but also internationally. Such a digital shift is not only a solution for keeping businesses afloat in the midst of crises like the COVID-19 pandemic, but also offers women entrepreneurs a second sphere through which to diversify their income streams and meet customers' new needs. Moreover, technology is used for data analysis, inventory manual, and customer engagement, such that women entrepreneurs make informed decisions and at times ahead of their competition. Thus, the integration of technology into business operations has become a practical strategy to business resilience that promote the long-term survival and growth of women-owned businesses.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Definition of Resilience in Entrepreneurship	Resilience involves adaptation, recovery, and growth from adversities like market and operational challenges.	Nassif and Garçon (2024)	Sets the foundational understanding of resilience for women entrepreneurs in dynamic market settings.
Gender-Specific Challenges	Women face internal barriers such as gendered expectations, work-life balance, and limited resource access.	Nagamuthu and Maheswari (2018)	Highlights the unique personal and societal pressures shaping women's entrepreneurial resilience.
Community-Based Resilience	Women in rural Kerala use SHGs, cooperatives, and local networks for financial/emotional support and shared learning.	Brush et al. (2009)	These informal networks serve as both safety nets and business growth platforms.

Importance of Networking	Formal and informal networking enables resource sharing, problem-solving, and navigating gender bias.	Terjesen et al. (2016)	Enhances access to credit, markets, and mentorship for women entrepreneurs.
Diversification of Business Operations	Women diversify products and markets (e.g., coir to furniture, food to organics) to stabilize income and reduce market dependency.	Walker et al. (2009)	Increases competitiveness and business survival rate during disruptions.
Emotional Resilience	Helps manage stress, social roles, and business uncertainties. Women maintain optimism and decision-making ability under pressure.	Nagamuthu and Maheswari (2018); (Isichei, Olabosinde, & Shaibu, 2024)	Key for navigating gender bias and societal expectations. Examples include tourism sector recovery after disasters.
Financial Resilience	Reliance on microfinance, government schemes, and prudent money management like cutting expenses, savings, and alternate income.	Coleman (2007)	Crucial during economic shocks like COVID-19. Government welfare schemes helped ensure continuity.
Business Continuity Planning (BCP)	Ensures ongoing operations during crises like floods and pandemics. Involves contingency planning and proactive crisis strategies.	Burnard and Bhamra (2011); Weick & Sutcliffe (2007)	Adopted particularly in agriculture and hospitality sectors in Kerala.

Innovation and Flexibility	Innovation in products and processes (e.g., eco-friendly textiles, digital channels) helps businesses adapt and remain competitive.	(Kadambari & Chanderjeet, 2019); (Brush et al., 2022)	Encourages responsiveness to market shifts and customer demands.
Resource Management Resilience	Women pool and share machinery, tools, labour, and rely on community savings and state support for operational continuity.	(Sulaiman, 2014)	Addresses resource scarcity and fosters solidarity among entrepreneurs.
Leadership and Team Resilience	Resilient leaders communicate well, involve teams in decision-making, and maintain morale. Collaborative leadership builds team confidence.	(Acevedo-Duque et al., 2021)	Enhances motivation and performance during adversity; observed in sectors like food processing and agriculture.
Digital Transformation as a Resilience Tool	Use of digital tools (e-commerce, social media, mobile banking) increases operational efficiency, market access, and customer engagement.	(Bhatnagar & Yadav, 2023)	Accelerated post-COVID; especially important for continuity and scaling.

2.7 Enterprise Performance in Micro, Small and Medium Enterprises

Micro, Small, and Medium Enterprises (MSMEs) perform differently depending on the internal and external factors that govern them, mostly managerial capability, financial management, access to the market, innovation, and resilience strategies. These factors are multiplied by women entrepreneurs, as they often have additional

gender-related barriers, such as accessing finance, weak networking opportunities, and social expectations. MSMEs as an important part of the backbone of several economies particularly in developing region like Kerala generate quite high level of employment and adds considerably to the local economy. As Hallward-Driemeier and Gajigo (2015) share, sometimes women-owned MSMEs encounter roadblocks, preventing them from realising their full growth potential, for example, limited access to credit, patriarchal norms of operating a business, and a lack of knowledge about the market. However, women entrepreneurs have been resilient and have devised adaptive strategies that have enhanced the performance of their enterprises. This means that the performance of women-led MSEs is directly connected to their ability to overcome those challenges and capitalise on all the possible opportunities available in the larger economic environment (Amin, 2018). Several studies have found that managerial capabilities and decision-making processes affect MSME performance, and that the same is more important for women entrepreneurs. In the management style, women entrepreneurs seem to favour a collaborative and inclusive style that boosts positive employee morale and performance outcomes (McAdam & McClelland, 2015). Although women entrepreneurs are often deprived of opportunities for leadership development, mentorship, and formal education on management, these channels their companies' performance towards a lower level. Chittenden, Kauser, and Poutziouris (2010) outlined that incorporating training programmes is valuable in improving the business performance of women led MSMEs. When women are trained in financial management, strategic planning, and leadership skills, businesses tend to grow and sustain themselves better. In the context of Kerala, several state-supported and non-governmental programs aimed at supporting the skills of women entrepreneurs to improve the performance metrics of women-owned MSMEs, particularly in the agriculture, textiles, and tourism sectors, however, proved effective.

Another critical factor that influences enterprise performance in MSMEs is financial access. Women entrepreneurs in India face difficulty in securing financial resources because of systemic biases, such as gender bias in lending institutions. Despite these differences, Eddleston and Powell (2012) note that women entrepreneurs are unable to scale their businesses, primarily because of the lack of access to capital. Studies

have shown that women running MSMEs in Kerala, especially in rural regions, find it more challenging to access loans and investments than their male counterparts (Geetha & Vijayachandran Pillai, 2021). Nevertheless, through the absorption of microfinance schemes, women-oriented credit programs, and other innovative financial solutions, many women entrepreneurs have been able to surpass their business financial performance. For example, Kerala State Women's Development Corporation (KSWDC) provides affordable credit and financial services to female entrepreneurs. Successful women entrepreneurs who utilise such resources often enjoy positive financial outcomes, stay afloat for their businesses, and foster business growth. Innovation in products or processes is very important for improving the performance of MSMEs, especially for women-led enterprises. A woman entrepreneur brings in different perspectives; therefore, creative problem solving and innovative product offerings are the outcomes. Mair and Marti (2009) have stated that innovation is a significant driving force behind MSME business performance and competitiveness. In its entrepreneurship, Kerala has been successful in getting women to enter areas such as handicrafts, food processing, and tourism, differentiating their products through innovation, and exploiting niche markets. For example, women in the handloom industry use eco-friendly and sustainable materials to make their designs demanded by the growing number of consumers. Another innovation that enhances performance is the introduction of technology into MSME operations. It has been found that in Kerala women entrepreneurs are increasingly using digital platforms, e-commerce and social media platforms to increase their market reach and to engage the customers and enhancing business performance.

In particular, market access and business networks matter for MSME firms, particularly for women entrepreneurs, who may traditionally operate within informal networks because of gendered norms in their society. As noted by Brush (2014), women entrepreneurs have less access to global and national markets, owing to a lack of exposure and networking. The literature on women entrepreneurship points out that women-owned MSMEs operate in local markets; therefore, growth and scaling opportunities are relatively low (Marlow and Patton 2005). Although initiatives such as trade fairs, business incubators, and government support programs for women

entrepreneurs in Kerala are trying hard to support such women, they have also helped them expand their market access. Women entrepreneurs have been supported by the Kerala State Industrial Development Corporation (KSIDC) in networking events and expos with increased visibility and new business partnerships. Existing studies show that if women are part of these initiatives, they have greater chances of growth in revenue and entry into new markets (Bhardwaj, 2023). The socio-economic factors that affect women's entrepreneurship are vital in determining the performance of women-owned and managed MSMEs. Gendered roles, family responsibilities, and societal expectations have a significant influence on women's dominance in the business landscape. According to (Acevedo-Duque et al., 2021), the socio-cultural environment within which women work most often blocks their entrepreneurial aspirations and affects their business performance. The increasing number of women entrepreneurs in Kerala are observed to lead both business and family lives, and this has led to poor time management and operational efficiency. Nonetheless, the state's progressive policies and social support structures have helped overcome some of these challenges. In Kerala, female entrepreneurs who receive family support or rely on government schemes which offer childcare or family leave have better prospects for the success of their ventures. Moreover, the growing number of women in leadership positions and the social acceptance of women entrepreneurship provide a more conducive environment for women-owned MSMEs to succeed in competitive markets.

Generally, resilience is a key determinant of the performance of businesses in Nigeria; the key to resilience is the survival of businesses, and the survival of those who run them. The ability of businesses to rebuff detrimental schemes is often understood in the terminology of resilience (Weick & Sutcliffe, 2007) as the ability of businesses to fall back from downturns and progress in their capacity to face adversity. For female entrepreneurs, resiliency is defined as the ability to withstand and conquer social, financial, and market-based obstacles. Pandy and Sharma (2019) did a study on the significance of resilience strategies like adaptive leadership, strategic networking and emotional resilience in improving the women's performance of MSMEs. Women entrepreneurs that are part of collaborative networks exchange resources and use

community-based support systems have been resilient during economic downturns and market disruption situations in Kerala. Through these strategies, women have been able to work through crises, keep businesses running, and at times find new growth opportunities. Women entrepreneurs in Kerala have managed to sustain their businesses and become successful in the long term by developing resilience in managing the MSME sector which is ridden by numerous challenges. Micro, Small, and Medium Enterprises (MSMEs) play a significant role in the economic development of developing and developed countries because their performance determines the economic development of the countries. In the case of women's entrepreneurship in MSMEs, a new set of challenges and opportunities particularly affects their performance outcomes; gender-specific barriers, or barriers unique to female entrepreneurs specifically include limited access to finance, few managerial trainings, and social norms that tend to restrict women's autonomy and, therefore, their decision-making power. Nevertheless, women with MSME have demonstrated resilience in coping with these obstacles and in applying strategies that help them overcome such hurdles and improve their business performance. One of the chief critical determinants of business performance in the work of Hossain and Islam (2018) is obtaining credit, and they assert that women entrepreneurs in Bangladesh face much difficulty in obtaining credit. In contrast, studies in India emphasise how women entrepreneurs, especially in Kerala, utilise microfinance and state-selected schemes to uplift their financial condition and make business feasible (Geetha & Vijayachandran Pillai, 2021). This, coupled with the efficient use of resources, has promoted women entrepreneurs in MSMEs to increase business success.

The adoption of technological innovation is one of the most critical determinants of performance in MSMEs, and this phenomenon is currently being witnessed in women entrepreneurs. Feranita et al. (2024) asserted that the use of digital tools, including e-commerce platforms, social media, and mobile technology, has facilitated women entrepreneurs to access wider markets, communicate with customers, and reduce operational costs. Technology, Kerala's women entrepreneurs use it in retail and handicrafts, diversify their products, and engage customers to improve business performance. For example, women in food processing and textile industries have used

digital marketing tools to increase market cover beyond local areas and tap into global markets. Innovative and digital technologies provide these women entrepreneurs with opportunities to scale up their business and, to a greater extent, to positively impact their performance and growth prospects (Luthfia et al., 2025). Properly channelled technology can also enhance operational efficiency, enabling women entrepreneurs to fulfil customer demand, which is likely to lead to higher business success rates. Financial management is the core area that affects the performance of women-owned MSME's. However, women entrepreneurs lack the necessary capital to launch and expand businesses. Pandy and Sharma (2019) refer to women in MSME as being conservative in the financial risk taking and however, are very resourceful in managing the limited funds that they have. Government initiatives such as the Kerala State Women's Development Corporation (KSWDC) provide loans to women entrepreneurs at low interest rates and business development schemes and financial literacy training that make their ventures financially stable in Kerala. Furthermore, it has been evidenced by Afolabi and Aghaunor (2024) that women entrepreneurs have higher levels of business performance and long–term sustainability when they plan for finances and budgeting the enterprise resources carefully. Financial management not only helps women entrepreneurs survive in a competitive market but also provides them with the skills to expand their businesses.

Human capital is one of the most decisive factors determining the success and performance of MSMEs. The business outcomes of women entrepreneurs hinge largely on their expertise, education, and experience. This is in line with Mordi et al. (2012), who urged women entrepreneurs to understand that education and professional training are crucial factors in the field of finance, marketing, and management. It is observed that women who are better educated and trained find results very high compared to those with restricted access and control of resources. For example, in Kerala, most women entrepreneurs' skills are developed through skill development programs run by state-owned and Non-Governmental Organisations (NGOs), which greatly improve their management capabilities. Improving women's human capital will not only help to enhance women's knowledge of a particular business operation but also give them confidence in their ability to make strategic

decisions, leading to enhanced enterprise performance (Amin, 2018). Education combined with practical skills helps women successfully run their businesses more efficiently, apply innovative solutions and appropriate actions, and improve their business performance. In addition, the social and cultural environment in which women operate influences the functions of women-owned MSMEs. Despite the progress that women and gender stereotypes have seen in many societies, women entrepreneurs still deal with gender-specific norms in their societies, such as India. Access to these social norms can restrict their entry into business networks, capital, and markets, thereby directly affecting their performance. Paoloni, Secundo, Ndou, and Modaffari (2019) conducted a study that states that women entrepreneurs are more likely to be successful in an environment where gender equity is prioritised and supportive policies are in place. As a state that currently has progressive gender policies, Kerala has also created a favourable space for women entrepreneurs to flourish. Government programs and family support systems provide for women in Kerala to overcome social obstacles, while a network of communities helps them overcome such obstacles. Based on the relatively gender egalitarian nature of the environment, women entrepreneurs in Kerala have the potential to realise better opportunities for business success and overcome the socio-cultural barriers which affect their performance (Chandran, 2017).

One essential attribute for MSMEs' long-term success and performance for female entrepreneurs, who always suffer more with the balancing constraint, is resilience. In relation to entrepreneurship, the concept of resilience means that entrepreneurs are able to recover from failure, adjust to change, and keep going through difficult times. For women entrepreneurs, resilience is important, as they encounter various unexpected challenges, including economic downturns, natural disasters, and societal biases (Acevedo-Duque et al., 2021). Some studies have shown that women entrepreneurs who took a resilient attitude and sought proactive ways to cope with external shocks were better able to maintain their business and improve business performance. For example, women in Kerala, faced with financial challenges or market volatilities, have been able to show resilience by choosing flexible business models, varying product assortments, and looking for other channels of funds.

McAdam and McClelland (2015) have mentioned that this resilience helps the businesses to overcome challenges, maintain their operations and then it also helps the businesses to grow. A number of factors, namely managerial capabilities, financial management, access to technology, human capital, social support, and resilience strategies, affect the performance of MSMEs, especially those of the female ones. Women entrepreneurs face many challenges in their MSME, but these are matched by opportunities for growth and success. Many women in Kerala have shown resilience and innovation to overcome barriers and achieve success in the course of business, in the context of both state and non-state initiatives. Women entrepreneurs effectively utilise technology, proper financial management, and constant knacks for skill improvement to improve the performance of their MSMEs which also helps add meaningfully to the local economy. Although they encounter a number of challenges, women entrepreneurs develop resilience that goes on to hand them a long-term competitive advantage in the MSME sector.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Managerial Capabilities	Women entrepreneurs often exhibit leadership styles that are collaborative and inclusive, which can enhance team morale. However, they frequently face challenges in accessing formal leadership training and mentorship opportunities.	McAdam & McClelland (2015), Chittenden et al. (2010)	Training in strategic planning and leadership improves MSME performance. Kerala initiatives support this.
Access to Finance	Gender bias in financial Barriers within institutions make it difficult for women entrepreneurs to access funding. Microfinance and credit programs specifically designed for women help to address this challenge.	Eddleston & Powell (2012), (Geetha & Vijayachandran Pillai, 2021)	KSWDC provides affordable credit, leading to better business outcomes for women.

Innovation and Technology Adoption	Women contribute innovation to both products and processes. Technological tools such as e-commerce and social media enable them to broaden their reach and enhance efficiency.	Mair & Marti (2009), Feranita et al. (2024), (Luthfia et al., 2025)	Kerala women use innovation to tap into niche markets like eco-friendly handicrafts.
Market Access and Business Networks	Women encounter challenges in accessing larger markets due to restricted networking opportunities. Government initiatives and trade shows assist in enhancing their visibility and fostering partnerships.	Paoloni, Secundo, Ndou, and Modaffari (2019), Marlow & Patton (2005), (Bhardwaj, 2023)	KSIDC and trade fairs help expand women entrepreneurs' reach in Kerala.
Socio-Cultural Barriers	Women's involvement in business and their ability to manage time are limited by family responsibilities and societal expectations.	(Acevedo-Duque et al., 2021), (Venugopalan, Bastian, & Viswanathan, 2021)	Kerala's progressive policies and family support systems ease these burdens.
Resilience and Coping Strategies	Women exhibit remarkable resilience by employing strategies such as adaptive leadership, community support, and networking..	Weick & Sutcliffe (2007), Pandy & Sharma (2019)	Kerala women show sustained performance and recovery post-crisis through resilience networks.
Education and Human Capital	Advanced education and skills development in areas such as finance, marketing, and management improve women's ability to make decisions and achieve success in business.	Mordi et al. (2012), (Bhakuni et al., 2023)	Kerala's state and NGO-led training programs significantly improve women's business outcomes.

Financial Management	Women tend to be prudent when it comes to taking financial risks, yet they excel in managing resources and planning effectively.	Pandy & Sharma (2019), Afolabi and Aghaunor (2024)	Access to financial literacy programs through KSWDC boosts performance and sustainability.
Social and Policy Environment	Policies that are inclusive of all genders and the cultural acceptance of women in entrepreneurship foster supportive environments.	Paoloni, Secundo, Ndou, and Modaffari (2019), (Venugopalan, Bastian, & Viswanathan, 2021)	Kerala's ecosystem supports women entrepreneurs with institutional, family, and community backing.

2.8 Socio-Economic and Demographic Factors in Entrepreneurial Success

Women entrepreneurs around the world function in the confines of the socio-economic environment that determines the level of their entrepreneurial potential and eventual success in business. In terms of starting and up-scaling enterprises, these socioeconomic factors include income levels, access to credit, potential for wealth, and economic classes to determine the extent to which resources for starting and scaling enterprises will be available. Women from higher socioeconomic backgrounds are generally likely to have access to financial capital, property rights, and broader support networks which aid business entry and survival. On the contrary, marginalised women have to face systemic discrimination and do not have the required collateral to avail formal loans; thus, they are dependent upon informal sources of credit which entail exploitative terms and cannot scale. According to Minniti and Naudé (2010), growth-oriented entrepreneurship by women in developing countries is significantly underrepresented because of various barriers based on economic exclusion. Gender inequality, on the other hand, does not have much to do with poor development in the Indian context but it continues to be more pronounced in states such as Kerala that are known for their relative progressiveness in development as far as gender indicators are concerned. Institutional schemes, markets, and support systems are available to

women entrepreneurs from urban centric belts, whereas women entrepreneurs from rural or tribal belts face mobility, infrastructure, and resource-related constraints. Sujisha and Biju (2019) pointed out that even in progressive states, class and economic stratification create barriers that affect women's ability to enter active domains of entrepreneurship, and there is a need to address structural inequalities which obscure the prospects of equitable entrepreneurial growth.

Furthermore, the level and quality of education women acquire is yet another major dimension that contributes to entrepreneurial outcomes, as this ability to locate, imagine, and plan for the business determines the efficiency in its conceptualisation, planning, and management. It increases the woman's confidence in taking decisions not only in education but also in making her cognitively capable of financial management, problem solving, and negotiation, all of which are essential in handling the business world. Furthermore, Gatewood et al. (1995) found a positive correlation between women entrepreneurs' higher education and good preparation and risk management to launch ventures. In Kerala, which has one of the highest female literacy levels in India, literacy alone does not make women entrepreneurial effective; it must be accompanied by vocational, digital, and financial training. A lack of exposure to an entrepreneurial ecosystem and mentorship means that women may have a degree, but their performance is below par in such instances. Mathew and Panchanatham (2011) assert that targeted entrepreneurial education that closes the gap between innate learning and existentialine acumen is necessary. Additionally, skill development programs and business incubators tend to be urbancentric, leaving aside a whole section of educated rural women. Therefore, while education ensures a good beginning, its value in entrepreneurship is determined to a great extent by the extent to which it relates to real business issues and functional environments, and has practical applications that empower women to shift from being employment seekers to employment generators.

Many demographic factors influence the way women seek and ultimately achieve entrepreneurial success, namely age, marital status, and family size. Women under the age of 30 have higher energy levels, creativity, and risk appetite, but less experience,

credibility, and financial independence, and usually have the lowest success rates in keeping a business going. On the other hand, more middle-aged women, especially those coming from the phase where the responsibility for child-rearing plays a major role in their lives, are more likely to embark on entrepreneurship which can be on the latter or when looking to be economically independent. Brush (1992) states the role of age in deciding the stage of entrepreneurship pursued by women. Marital status matters a great deal in entrepreneurial decisions, as married women may benefit from spousal support, but are constrained by household duties and social expectations. According to Bullough, Renko, and Abdelzaher (2014), business and family are the two greatest conflicts faced by women in patriarchal societies, which inhibits the productivity and growth of women-led enterprises. Even in Kerala, one of the more progressive gender norms, married women struggle to pursue entrepreneurial aspirations ahead of their familial obligations. However, Women entrepreneurs benefit from extended family support systems, where time-poverty lies in the inability to scale or innovate with business in the absence of support systems (nuclear or single-parent households). The demographic facts confirm that women's entrepreneurship cannot happen in a vacuum, away from the social and family fabric in which the women operate, and corresponding policies to support work-life integration are required.

In countries such as India, where caste and community continue to assert their influence on access to resources, social mobility, and credibility in public spaces, the trajectory of women entrepreneurs is further complicated by cultural and caste-based norms. As has been pointed out by Deshpande and Sharma (2013), women from scheduled castes and scheduled tribes carry additional layering of disadvantages—both caste and class based along with gender — which adds to their difficulties in accessing business networks, credit markets, and formal institutions. These women are often only allowed to open up low-margin businesses in the informal sector, where growth potential is also very limited. However, women from the upper caste and dominant economic groups enjoy social capital and have acceptance that enables them to operate with greater confidence in the formal market setting. While Kerala in general has a tradition of matrilineage in some communities, caste still affects

entrepreneurial outcomes via channelling mobility, ownership, and consumer trust. Next, Kabeer and Natali (2013) argue that even though Kerala has made all kinds of progress in social development, there has not yet been representation of women entrepreneurs from marginalised backgrounds, as despite having moved considerable distances in this regard, stigma and institutional biases still remain to play important roles. Additionally, it is also true that women are often discouraged by religious norms and cultural expectations from entering public business domains and aggressively managing enterprises, particularly in conservative part of the country. This is a rethinking of the current approach in the design of entrepreneurial support programs because the cultural prescriptions that act both as invisible barriers and overt controls on women's autonomy go deep into the fabric. Family support, particularly from spouses and extended kin, serves as a significant socio-demographic enabler or constraint on women's entrepreneurial success. A number of studies have found that spouses' encouragement, emotional support, and financial support increase the probability of continuation and resilience of women entrepreneurs to a large extent. Roomi and Parrott (2008) concluded that supportive spouses aid women in balancing business requirements with household responsibilities, which in turn increases women's overall performance and satisfies them. For example, in the case of India, where joint families still exist in rural and semi-urban areas, mothers in laws are part (if not the most) of extended family members who play a crucial role in either putting or not putting in place for entrepreneurship, depending on how ideologies about gender roles are. Programmes that provide family support often make the difference between whether or not women can participate in training programs, travel on business, or reinvest earnings in the enterprise (Dhameja, 2002). Despite having a high level of education, which is relatively high in Kerala compared to other states in India, this has not translated into business autonomy among women, unless there is support from the family. Bhat and Kaushal (2020) also point out that moral support from family is the make-or-break factor for women in the state in deciding whether to omit their ideas at the conceptualisation stage or commence a business operation. However, not all women have access to such support systems and those who do not find themselves ambitious or motivated to discontinue entrepreneurship altogether.

These insights indicate that, despite the individualised discussion of entrepreneurship, entrepreneurship is interwoven with relational and familial contexts.

In the regional context, the urban rural divide determines the type of infrastructure, institutional support, and market access available that affect women's entrepreneurial performance. Usually, urban areas are places of innovation; they have far better access to startup incubators, financial institutions, high-skill labour, and business networks than rural areas. Productivity-wise, women run more high-growth ventures (as stipulated by what they write on their business plan) and access more angel investors in the city compared to women in the county; urban women also participate more in business forums. According to Singh and Belwal (2008), women in rural areas are mostly involved in subsistence entrepreneurship, which is more of doing out of necessity than for business opportunity, and therefore leads to a lack of innovation and long-term sustainability in terms of profitability. Urban versus rural Kerala has been stark, with more exposure and connectivity for urban women, rural women having logistical hurdles, less Internet penetration, and lower financial inclusion. According to (Sharma & Gupta, 2024), rural women in Kerala mobilised through Kudumbashree programmes are constrained to scale up due to problems of transport, poor warehousing facilities, and poor links to larger markets. Additionally, rural women are rarely connected to digital payment systems and e-commerce platforms in today's entrepreneurial ecosystem, which is gaining access. The variation in these regional disparities calls for localised interventions that handle context-specific enablers as the main enablers that will level the playing field for women across geographic locations. The successful accomplishment of an entrepreneurial career for women is linked to a gamut of socioeconomic factors (income level, asset ownership, access to financial resources, etc.). There is still a huge capital access barrier for female entrepreneurs worldwide. Systemic gender biases in lending institutions, lack of collateral, and low financial literacy limit women's access to formal credit, and their financial resources are often fewer than those of men (Klapper & Parker, 2011). According to Brush et al. (2009), studies have shown that women are more likely to rely on personal savings and access informal borrowing, which limits their ventures' scale and sustainability. Moreover, associated with financial exclusion is the

discouragement of women to begin businesses and scale operations once they do, invest in technology, and employ proficient workers. For several years, the microfinance movement worldwide has sought to minimise these disparities by providing small loans to women, although it is unclear whether this contributes much to long-term entrepreneurial development in regions where microcredit is not accompanied by capacity-building initiatives (Ahl & Nelson, 2015). Consequently, a financial ecosystem that allows continued access to resources to enable growth is as important as the initial capital to determine entrepreneurial success.

Another key socioeconomic variable affecting women's entrepreneurial outcomes is their level of education and skill development. Through education, individuals are likely to have the ability to recognise business opportunities, understand market trends, and manage enterprises well (Minniti & Naudé, 2010). The empirical studies indicate that the higher the level of education, the better the performances of women entrepreneurs in terms of business profitability and innovativeness (Estrin, Mickiewicz, & Stephan, 2016). Unfortunately, many developing countries still face the constraints of sociocultural practices and early family responsibilities as barriers to women's access to higher education and technical training. In fact, there is a disconnect between junior high and high school education that many educated women receive, which does not necessarily translate into the practical skills required for entrepreneurship, such as digital literacy, business management, and leadership (Acs et al., 2008). Mentorship and community – based learning models of delivering entrepreneurship – specific training to women through vocational education have been found to have positive effects on business performance (Chliova, Brinckmann, & Rosenbusch, 2015). Therefore, providing education to women and developing their entrepreneurial skills in line with them is the most important aspect that would help the business succeed. Social capital and community support systems significantly contribute to the development of women's entrepreneurial paths. Unlike men, women are excluded from formal business associations and networks of men and therefore depend heavily on informal networks of family, friends, and women's cooperatives (Roomi & Harrison, 2010). Such networks provide emotional support, business advice, access to customers, and financial assistance. Lindh and Thorgren (2016) in

their research found that women who have supportive networks are much more likely to be able to enter the market with minimal barriers, ensure that they have clients, and be resilient in cases where a business faces a setback. Many women entrepreneurs in rural and traditional communities' resort to collective efforts such as the creation of self-help groups (SHGs) that act as learning platforms and mutual empowerment (Datta & Gailey, 2012). However, these networks may only be effective to the extent that they develop and sustain good interactions, trust, and connexions outside the network. It renders women entrepreneurial success in situations where social capital is strong and inclusive, specifically designed to offset the inadequacies of economic and institutional support.

Age, marital status, and family size are demographically significant factors in predicting women's entrepreneurial journeys. Younger women will have more energy and enthusiasm, and they may be more open to innovation, but they would not have business experience, and worse still will not have financial stability (Lévesque & Minniti, 2006). Older women, on the other hand, might have many experiences from life, better networks, and lots of capital accumulation at their disposal but might lack digital literacy or time to develop it due to household responsibilities. Another crucial determinant is marital status, as it is possible for married women to have financial and domestic duties assisted by their husbands, but they are also at a higher risk of facing restrictions from family obligations or societal expectations with respect to their roles (Jennings & McDougald, 2007). Likewise, women with more children have difficulty juggling caregivers' responsibilities and business affairs, especially in the absence of institutional childcare. Amine and Staub (2009) indicate that studies from South Asia and Sub-Saharan Africa prove that demographic constraints are socially entrenched in cultural norms, which promote gendered expectations that dictate the time and mobility of women entrepreneurs. Therefore, demographic factors must be understood in the context of interfacing structural and cultural variables that might help or hinder the success of entrepreneurship. The intersection of socioeconomic and demographic variables in women's entrepreneurship is also highlighted by rural urban disparities. On the other hand, according to Tambunan (2009), due to their better proximity to markets, financial institutions, infrastructure, and business services,

women in urban areas have relatively better access. Urban women are more likely to run high-growth or innovation-driven enterprises as opposed to rural women engaging in low-income generating activities such as handicrafts, food processing, and petty trade. Rural areas have limited transport, poor business training centres, absence of Internet connectivity, and weak institutional support. However, rural women have illiteracy, early marriage rates, social isolation, and other obstacles that negatively influence their ability to become entrepreneurs (Meunier et al., 2017). For instance, rural entrepreneurship development programs and mobile banking and digital literacy campaigns have exhibited the potential to reduce these urban rural gaps when applied specifically to the appropriate target population. Thus, it is not merely a geographic factor but includes an entire infrastructure, exposure, and systems of support on which women's entrepreneurial outcomes depend.

Finally, intersectionality should be considered when examining the socioeconomic and demographic characteristics that affect women's entrepreneurship. Caste, religion, ethnicity, and disability status interact with gender to build multiple layers of the disadvantage and privilege system (Crenshaw, 1991; Henry et al., 2016). For example, Dalit women entrepreneurs in India, who also have entrepreneurial dreams but who are not only Dalit but also female, are discriminated against both by their caste and by their gender and do not have access to finance, networks, and institutional support. Likewise, women from minority religious groups can be limited by community norms or political exclusion. Poverty, illiteracy, and social stigma often marginalise some sections of women to the informal and invisible margins of the informal and visible entrepreneurial ecosystem. An inclusive policy approach that does not fit all women into one size is required to address such entrenched disparities. These women are marginalised; therefore, programs need to be sensitive to local realities and design empowerment initiatives from the perspective of the unique experiences of disadvantaged women entrepreneurs (Marlow, Henry, & Carter, 2009). When women can fully contribute as entrepreneurs as an engine of inclusive and sustainable economic development, they can be harnessed only.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Socio-Economic Factors	Women entrepreneurs encounter obstacles related to their income, credit access, family wealth, and economic status. Those from more affluent backgrounds have greater access to resources, whereas women from marginalized groups experience systemic discrimination.	Minniti & Naudé (2010), Sujisha and Biju (2019)	Socio-economic disparities limit women's entrepreneurial potential, especially in rural and tribal regions, even in progressive areas like Kerala.
Education and Skill Development	Entrepreneurial success is shaped by the level and quality of education. Education enhances self-assurance, financial management abilities, and decision-making skills. The absence of vocational and entrepreneurial training hinders women's effectiveness.	Gatewood, Shaver & Gartner (1995), Mathew & Panchanatham (2011)	Education alone is not enough; practical business and skill development training are necessary to complement formal education.
Demographic Factors	Factors such as age, marital status, and the size of one's family play a crucial role in entrepreneurship. While younger women tend to be more innovative, they often lack experience; in contrast, older women possess valuable experience but may struggle with time limitations.	Brush (1992), Bullough, Renko, and Abdelzaher (2014)	Marital and family obligations, especially in patriarchal societies, influence women’s ability to sustain businesses.
Cultural and Caste Norms	Cultural and caste-based discrimination limits access to resources, networks, and markets. Women from marginalized communities face	Deshpande & Sharma (2013), Kabeer & Natali (2013)	Caste, culture, and religious norms shape women’s entrepreneurial opportunities,

	compounded disadvantages.		even in progressive regions like Kerala.
Family Support	Family support, especially from spouses and extended kin, is crucial for women entrepreneurs. Lack of support can limit business growth and resilience.	Roomi & Parrott (2008), Dhameja (2002), Bhat & Kaushal (2020)	The role of family, particularly spousal and extended family support, significantly influences women's entrepreneurial outcomes.
Urban-Rural Divide	Women living in cities benefit from easier access to markets, financial resources, and other assets, which gives them an edge. In contrast, women in rural areas encounter logistical and infrastructure obstacles that hinder their ability to expand.	Singh & Belwal (2008), (Sharma & Gupta, 2024)	Regional disparities highlight the need for targeted interventions, especially to address the challenges faced by rural women entrepreneurs.
Access to Capital	Women entrepreneurs frequently encounter challenges in obtaining formal credit and financial resources, which impedes their business expansion efforts. While informal borrowing is prevalent, it restricts their growth opportunities.	Klapper & Parker (2011), Brush, de Bruin & Welter (2009), Ahl & Nelson (2015)	Financial exclusion remains one of the key barriers to women's entrepreneurial growth, and microfinance alone is insufficient without capacity-building initiatives.
Social Capital and Networking	Women business owners depend on informal networks for emotional backing, business guidance, and customer connections. Robust social	Roomi & Harrison (2010), Lindh & Thorgren (2016), Datta	Social capital plays a crucial role in overcoming market barriers and fostering

	capital boosts their entrepreneurial resilience..	& Gailey (2012)	entrepreneurial success, especially in rural or marginalized contexts.
Intersectionality	Gender intersects with factors such as caste, religion, ethnicity, and disability status, creating extra challenges for certain women, like those from Dalit or minority backgrounds, in pursuing entrepreneurship.	Crenshaw (1991), Henry, Foss & Ahl (2016), Marlow, Henry & Carter (2009)	Policies must address the multiple layers of disadvantage and avoid one-size-fits-all solutions to empower marginalized women entrepreneurs.
Government and Institutional Support	Government schemes, financial institutions, and business incubators are often urban-centric, neglecting rural or marginalized women. Support systems need to be more inclusive.	Mathew & Panchanatham (2011), (Sharma & Gupta, 2024)	There is a need for region-specific policies that provide access to financial, educational, and infrastructural resources for rural and marginalized women.

2.9 Sectoral Insights: Industry-Specific Resilience in Kerala

Women entrepreneurs emerging in Kerala's agricultural and allied sectors — traditionally male-dominated sectors, including organic farming, food processing, and the allied cottage industry — have made a gentle yet empowering entry. Many rural women have been empowered by women's SHGs, such as Kudumbashree, who are involved in agri-business and value-added food production activities (Harilal & Eswaran, 2017). These enterprises are based on women's indigenous knowledge of farming and nutrition, from which they have developed highly locally resilient and ecologically sustainable business models. Overall, women's entrepreneurial initiatives in Kerala agriculture have demonstrated high adaptability in dealing with

the challenges of climate change, market price fluctuations, and access to land and capital. Joseph (2016) shows that units led by women that merge traditional knowledge with modern agro-technologies are more resilient to their share of shocks in the sector. Moreover, the change in the model of distribution of power and the availability of Panchayat-level planning have allowed many female farmers to receive public support in supporting micro irrigation, organic certification, and collective farming efforts. This sector has made notable participation of women entrepreneurs in Kerala, which is a major contributor to Kerala's GDP, particularly women entrepreneurs in homestays, traditional cuisine services, crafts-based souvenirs, and Ayurveda wellness centres. the ongoing COVID 19 pandemic has adversely affected many women entrepreneurs, but at the same time, they have shown exemplary resilience through various digital transitions and business model pivots (Subramaniyan, 2024). This included women-led homestay units in Wayanad and Alappuzha offering virtual cultural experiences and Ayurveda consultation while travel restrictions were in place. According to Nair and Menon (2020), women's community intrinsic linkages and the cultural capital built up by them endowed them to customise hospitality offerings, thereby continuing to develop the niche tourism experience even in crisis periods. The entrepreneurial responses illustrate powerful sectoral resilience, drawing on local networks, gendered social capital, and the meaning of cultural authenticity, which together help Kerala tourism in its post-crisis recovery stories.

The sectors of health and wellness in Kerala have evolved beyond the traditional healthcare services to alternative medicine, yoga, Ayurveda, and wellness coaching and this is an area where women entrepreneurs have come more alive. However, Kerala's public health legacy and its branding as a wellness hub have much to do with resilience in this domain. As mentioned by (Abraham, 2020), with the support of the state under the Department of Ayush and some entrepreneurial scheme for the promotion of natural health products, women led Ayurveda clinics, herbal product units, and wellness spas. In this way, these women entrepreneurs have sector-specific resilience and use traditional Ayurveda and adapt it to global wellness trends. However, their ability to build consumer loyalty through word-of-mouth and

community endorsements in creating trust helps them sustain themselves in a situation where markets are going through uncertainties. The way in which women in this sector have diversified income streams by integrating e-commerce platforms and health tourism marketing further shows the integration and impact of such undertakings on local roots. In the case of growing information technology and digital services in Kerala, women entrepreneurs are becoming gradually but steadily included in the overall transformation, particularly in digital content creation, online education, and IT-enabled services endeavours. Hence, in Kerala, Government promotes digital literacy programs and incubation centres such as the Kerala Startup Mission (KSUM) to provide an inclusive innovation ecosystem (Sam et al., 2024). Women entrepreneurs running small tuition centres or boutique services began providing online coaching, virtual design studios, and digital marketing consultancies. Specifically, sector-based resilience, which is adaptability, is associated with digital upskilling and platform-based entrepreneurship. According to Sivaraman and Neriamparampil (2024), owing to low capital intensity and scalability, women who lead digital startups in Kerala are likely to survive a period of economic downturn. These entrepreneurs also generally implement gender-sensitive practices at work, such as work-from-home options and flexible working hours which not only facilitate their business continuity but also enable other women professionals.

Long, an economically viable aspect of the cultural economy of Kerala, handicrafts, weaving, coir production, and other artisanal industries have been sustained by women as entrepreneurs until date. Even when faced with the threat of industrialisation and competition from machine-made goods, women entrepreneurs in these sectors have utilised resilience strategies, such as cluster-based production, cooperative marketing, and heritage branding (Aswani & Bhat, 2022). Kerala's cultural tourism and diaspora markets help these businesses due to the demand for authentic handmade products. Furthermore, they have partnerships with state agencies such as the Handicrafts Development Corporation and Coir Board, which facilitate women artisans to exhibit and export through their network and e-commerce platforms. Devi and Surendran (2022) conducted a study in which it was revealed that such support mechanisms have enabled women artisans to thrive despite market

saturation and labour shortage in the sector. However, women's emotional involvement in the preservation of heritage crafts is also a motivational anchor for long-term enterprise survival. In Kerala, in the retail and consumer services sector, such as tailoring units, beauty salons, grocery stores, and textile businesses, the sector has a high concentration of women entrepreneurs, mainly in semi-urban and rural areas. They are resilient on a day-to-day basis through customer loyalty, community embeddedness, and agility in response to seasonal and socioeconomic changes. The Kerala State Planning Board (2021) states that women entrepreneurs in these sectors face financial pressure and engage in informal borrowing, kinship-based partnerships, and flexible pricing strategies to circumvent them. Women's ability to multitask between domestic care and business operations, sometimes turning their homes into hybrid commercial spaces, also helps the sector survive (Kumar & Asha Kumari, 2022). Private and public spaces are allowed at this intersection, which gives rise to more autonomy as well as the mitigation of risk. In addition, the growing digitalisation of retail, for instance, through the use of WhatsApp for selling, UPI payment, and local models of e-delivery have allowed these women led retail businesses to flourish amidst economic disruptions such as demonetisation or a pandemic.

Women have shown a particular form of resilience in the food processing and culinary entrepreneurship sector in Kerala by adapting traditional culinary knowledge to changing consumer preferences for organic, home-based, and culturally rooted food experiences. For instance, micro entrepreneurs under the Pradhan Mantri Formalization of Micro Food Processing Enterprises (PMFME) scheme have taken advantage of government-subsidised inputs and training modules to scale up with the aim of maintaining quality and safety standards (Sontakki et al., 2016). Among women's cooperative kitchens located across the districts, including Thrissur and Malappuram, packaged traditional snacks, meals, and ready-to-eat food items served not only in the local markets but also catering to the migrant and diaspora markets. Such ventures have maintained economic viability by utilising hygienic processing methods, obtaining food safety certifications, and branding their products through local identity. Women's emotional labour and cultural continuity in these enterprises are often translated in the form of consumer trust and brand loyalty, leading to the

longevity of women-led food ventures, despite fluctuations in input costs, supply chain issues, and competition from larger players (Sulaiman, 2014). Another unique domain where women entrepreneurs, mostly from the fishing communities of coastal Kerala, are inching into being usually found in pre- and post-harvest activities, such as fish drying, pickling, and export-oriented seafood processing in the seafood fisheries and aquaculture sectors in Kerala are now coming out. Traditionally, they have been considered an ancillary workforce; however, with the help of microfinancing and community-based marine cooperatives, women are entering enterprise ownership (Shyam, Geetha, and Salim 2013). Women's groups in areas such as Kollam and Alappuzha have adopted solar drying and hygienic packaging technologies to scale production and meet export standards. Diversification in this sector includes integration in online seafood marketplaces and the development of direct consumer models, thus reducing the dependence on unstable auction-based systems. Additionally, community solidarity and adaptive learning practices that fisherwomen's groups share reinforce resilience to respond to seasonal disruptions, climate-related shocks, and export norms (Thomas & Rejimon, 2021).

Kerala could boast a growing number of women-led micro-enterprises in the garment and tailoring sector, especially in urban periphery areas in which home-based tailoring, embroidery, and boutique services are popular. Although adaptation to change is not new for these entrepreneurs, they have always adapted quickly to fashion trends as well as diversified their businesses (from school uniforms to even designer blouses) while making use of social media sites, which are becoming even more popular than ever, from advertising to order collections. Hence, profit margin effects were cushioned by a shift in production to PPE stitching, cloth mask-making production, and comfort wear during the COVID-19 crisis (Vinod & Kini, 2022). Women entrepreneurs in this sector can withstand economic stressors, as they possess the capability to run their businesses within their domestic spaces, with help from familial labour and flexible pricing models. Appealing to large manufacturers is often linked to personalised services, word-of-mouth marketing, and a deeper understanding of textile aesthetics in the local context, where larger companies find it difficult to recreate (Devaraja & Wickramasinghe, 2014). The education and edtech

sector in Kerala has also proven to be resilient to women entrepreneurs. Having high literacy rates and a strong demand for private coaching, early childhood education, and skill development, women have the opportunity to tap into this opportunity and set up tuition centres, Montessori schools, and online learning platforms. Digital adoption was accelerated during the pandemic as women have adopted the use of zoom, e-based classes, YouTube content creation, etc., and this included the use of e-learning apps that offer language learning and exam coaching (Nanda et al., 2023). However, with programmes that offer digital upskilling to women entrepreneurs, such as Digital Kerala and Mahila Samakhya, women entrepreneurs have also gained. In this context, sectoral resilience is defined as the entrepreneur's capacity to integrate traditional pedagogical approaches that address the emotional and cognitive needs of learners, together with the use of modern technology and given in local languages and culturally sensitive formats. Adaptability has enabled the maintenance of enrolment, income continuity, and scalable models to offer expansion to rural markets (Shahira & Devi, 2024).

While not well known, and maybe not even obvious as an area for women entrepreneurs in Kerala, in the environmental and waste management sector, it is an important domain where women have taken leadership as recyclers, composters, and developers of eco-products. Widespread initiatives like 'Haritha Karma Sena' and 'Suchitwa Mission' have institutionalised women's involvement for decentralised waste management activities such as gathering, separating, and processing of biodegradable and non-biodegradable waste in the neighbourhood, institutions (Manoj, 2020). There are also women entrepreneurs venturing into the production of reusable sanitary napkins, biodegradable packaging, and eco-friendly cleaning agents, using circular economy models. Strong community engagement, environmental consciousness, and decentralised governance systems reinforce resilience in this sector. These women led green enterprises not only to run as green enterprises, but they also necessarily function as social enterprises, where there is education and advocacy embedded into their business models, thereby gaining a partnership with schools, NGOs, and urban local bodies. The ecological necessity, as well as the gender-sensitive design, make these ventures long-term sustainable and resilient

Ameena (2023). Finally, entrepreneurship options in Kerala's arts, media, and creative industries have expanded in the form of digital storytelling and photography, handicraft-based installations, literature enterprises, and so on. Freelance- or gig-based models have often been the blood that has kept these ventures on the keep going. It provides creative autonomy and operational flexibility. Based on the fact that women content creators and cultural curators use sponsorship monetization, create robust personal brands by leveraging the multilingual storytelling aspect specifically for reaching niche audiences, (Waheed et al., 2022) attested. By showcasing feminist perspectives, local issues, and regional aesthetics, podcasts, indie films, and digital magazines run by women have gained some steam. Women's sectoral resilience is also evident in how they adopt algorithmic changes on various digital platforms, learn media tools in a continuous and ongoing manner, and create peer-support collectives that share resources. However, the pandemic accelerates digital consumption and provides more room to scale, and it is about the resilience of how content will be created on a particular scale, engaging with the audience and the well-being of entrepreneurs (Nisha& Balachandran, 2023). Apart from providing livelihood opportunities, these creative ventures are cultural interventions that change Kerala's public discourse on gender narratives.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Women Entrepreneurs in Agriculture	Women are playing a growing role in organic agriculture, food production, and agricultural business, blending age-old wisdom with contemporary technology.	Harilal & Eswaran (2017), Joseph (2016)	Women-led ventures are resilient to challenges like climate change, fluctuating prices, and limited access to land and capital.
Women in Tourism and Hospitality	During the COVID-19 pandemic, businesses led by women, especially those in homestays, Ayurveda, and food services, successfully	Thomas & Devi (2021), Nair & Menon (2020)	Gendered social capital and local networks contributed to their resilience

	transitioned to digital platforms by providing virtual cultural experiences.		and post-crisis recovery.
Women Entrepreneurs in Health & Wellness	Women-led Ayurveda clinics and wellness centres are adapting traditional knowledge to global trends, building consumer trust through word-of-mouth and e-commerce.	(Abraham, 2020)	These businesses are resilient due to the integration of traditional Ayurvedic practices and modern wellness trends.
Women Entrepreneurs in IT & Digital Services	Women are playing a growing role in creating digital content, participating in online education, and offering IT services, supported by government initiatives such as the Kerala Startup Mission (KSUM).	(Sam et al., 2024), Sivaraman and Neriamparampil (2024)	Digital literacy and incubation centres have fostered resilient women-led digital startups that are scalable and low in capital intensity.
Women in Artisanal Industries (Handicrafts, Coir)	Women sustain traditional crafts like weaving and coir production through cooperative marketing, cluster-based production, and heritage branding.	(Aswani & Bhat, 2022), Devi & Surendran (2022)	Sectoral support mechanisms, like partnerships with state agencies, help women artisans remain competitive.
Women in Retail and Consumer Services	Retail businesses led by women succeed by fostering customer loyalty, integrating into their communities, and utilizing hybrid business models. The shift towards digital	Kerala State Planning Board (2021), (Kumar & Asha Kumari, 2022)	Women entrepreneurs in retail manage dual roles and use digital platforms for marketing, ensuring

	retail is bolstering their resilience.		business continuity.
Women in Food Processing & Culinary Ventures	Enterprises led by women in the food processing sector integrate traditional culinary expertise with the growing consumer demand for organic, home-produced, and culturally significant foods.	(Sontakki et al., 2016), (Sulaiman, 2014)	Resilience stems from leveraging government subsidies, quality control, and brand loyalty through cultural identity.
Women in Fisheries & Aquaculture	In coastal Kerala, women are engaged in producing and exporting seafood products with added value, utilizing solar drying techniques and hygienic packaging to comply with export requirements.	Shyam, Geetha, and Salim (2013), Thomas & Rejimon (2021)	Micro-financing and community-based marine cooperatives support their resilience amidst climate-related disruptions and changing export norms.
Women in Garments & Tailoring	Women in home-based tailoring have shown resilience by diversifying services, utilizing social media for marketing, and pivoting to new production like cloth masks.	(Vinod & Kini, 2022), (Devaraja & Wickramasinghe, 2014)	Resilience comes from adapting to new trends, flexible pricing models, and leveraging home-based operations.
Women in Education & EdTech	Female entrepreneurs in the education and edtech sectors are broadening their influence by utilizing online platforms, integrating conventional teaching methods with digital technologies.	(Nanda et al., 2023), (Shahira & Devi, 2024)	Digital upskilling and culturally sensitive educational models help maintain enrollment and income continuity.

Women in Environmental & Waste Management	Women are leading initiatives in recycling, composting, and eco-product development, supported by decentralized governance and community engagement.	(Manoj, 2020), Ameena (2023)	Resilience is supported by ecological awareness, gender-sensitive design, and partnerships with schools and NGOs for broader impact.
Women in Arts, Media & Creative Industries	Female content creators and cultural curators are establishing robust businesses by leveraging digital platforms for monetization, cultivating niche audiences, and engaging in storytelling.	(Waheed et al., 2022), Nisha & Balachandran (2023)	The creative sector's resilience is tied to the ability to adapt to digital algorithms, audience engagement, and self-sustaining creative models.

2.10 Gender and Crisis Management: Resilience Through a Gendered Lens

More recently, the convergence of gender and crisis management in entrepreneurship has become increasingly important given the ever-increasing disruption across the globe that may cause women entrepreneurs to be more vulnerable under crisis conditions than their male counterparts, yet these same women entrepreneurs also possess their own ‘adaptive strengths’. The gendered dimensions of crisis resilience in the form of Brush et al. (2009) indicate that women business owners resorted to greater use of social capital, relational networks, and collaborative mechanisms to cope with crises than their male counterparts. Evidence reveals that women entrepreneurs frequently adopt flexible business models, diversified product lines, or have stronger customer connexions in the face of economic downtimes or health crises (other than COVID 19) (Alon et al., 2020). The strategies show resilience based on community-focused and emotionally intelligent leadership, where strength lies in

compensating for structural hindrances such as access to credit, lack of training, and neglect from institutions that disproportionately impact women Ishikawa and Matsumoto (2024). Therefore, as approached from a gendered perspective, crisis management orients us toward an undervalued but not necessarily less impactful form of entrepreneurial resilience. Among women entrepreneurs in Kerala, the local sociocultural fabric has served dual purposes in forming resilience strategies during crises. On the one hand, gendered expectations of domestic responsibilities limit women's businesses in terms of mobility and scalability during natural disasters, pandemics, or economic shocks (Aswani & Bhat, 2022). However, Kerala boasts a robust tradition of women's collectives, including Kudumbashree, which provides institutional scaffolding that enables women to do much better in crisis responses. The micro-entrepreneurship model exemplified through the Kudumbashree units has facilitated the coalescence of resources, knowledge sharing, and access to state support during emergencies, thus nurturing a community-driven resilience model (Devika & Thampi, 2020). Such mechanisms help women weather closures in the supply chain, down demand, and labour shortages better than stand-alone enterprises. Nuancing gendered resilience in Kerala, women's higher education participation helps with education crisis communication and planning for contingency in their employment.

During a crisis, gender-based financial exclusion becomes acute for women entrepreneurs in doing business and in regaining the ability to recover and rebuild. It has been reported that when economic crises occur, women-led businesses are often deprioritised in formal credit channels because they have less asset base and are assumed to be highly risky and operate informally (UN Women, 2020). Despite the availability of cooperative banks and women-specific financial schemes in Kerala, access is not uniform, and this is worse in the case of Dalit and tribal women entrepreneurs. These constraints emphasise that crisis impacts are not gender neutral and, therefore, call for gender-specific financial resilience strategies, such as collateral free loans, emergency credits, and interest subventions to women (Nair & Antony, 2021). This is underscored by the success of microfinance models through peer-guaranteed credit systems adopted by Kerala's self-help group (SHG) networks. As a

result, gender issues should be addressed in financial resilience policies to ensure the ability of women's enterprises to continue through difficult periods. Another important component of gendered crisis resilience is emotional labour and caregiving burden slugging on women entrepreneurs. It has been found that during health-related crises, such as the spread of COVID-19, women face a double crisis of managing their businesses and taking on expanded roles of caregiving, educating, and providing emotional support at home (Power 2020). Often, this situation causes their business to be de-prioritised, reduces work hours, and affects mental health, which in turn affects enterprise performance. In the deep patriarchal practice of matrilineal household structures, such as Kerala, women entrepreneurs saw increased levels of burnout and decision fatigue when the crisis hit (Lakshmi & Thomas, 2022). Yet, some studies show that women's emotional intelligence and capability of empathetic leadership strengthened workforce and customer loyalty, and support relationships with stakeholders during a crisis, demonstrating that a few 'soft' traits were also crucial in crisis leadership (Eagly & Carli, 2007). Consequently, entrepreneurs need psychosocial support systems and gender-sensitive health interventions.

The digital resilience dimension has become a gendered phenomenon throughout crises when it comes to the use of technologies. Joesph and George (2021) mention that women entrepreneurs in Kerala who were quick to pivot to digital platforms for sales, marketing and service delivery most importantly fared better during the COVID -19 pandemic and the recent natural disasters like the floods and landslides. However, the digital gap is still huge: women experience boundaries such as devices' scarce access, lack of digital literacy, and patriarchal filtering of a woman's online visibility. Women often face the problem of not being displayed in public online places; as a result, they do not manage to confidently use social media or e – commerce platforms (Sharma, 2020). However, some women led businesses that adopted WhatsApp Business, Instagram, and YouTube to keep their businesses running, while many women did not adopt such technologies, demonstrating that digital tools supported with training and social acceptance can empower women during crises. For this reason, closing the gendered digital gap is not only a technological challenge but also a socio-cultural challenge, which can only be answered through targeted policy level

and grassroots level trends. When delving into a gendered analysis of crisis management in entrepreneurship, intersectionality, or how caste, religion, age, marital status, and rural or urban settings combine to compound or reduce resilience capacities, must be considered. For example, single women entrepreneurs or widows in Kerala often have fewer opportunities to take the support of the spouse or social protection network, but can be more vulnerable (Kulshrestha & Sahay, 2025), yet also thrive with their exceptional resiliency by taking bold decisions in business without any limitations from family. Minority women entrepreneurs, especially those from Muslim and Dalit backgrounds, continue to be excluded from mainstream entrepreneurial ecosystems, and this exclusion grows with crisis. However, they have managed to build niche markets and community credibility through sector-specific interventions, such as women-specific cooperatives in textiles and food processing. All these lead to underlining that gender is not a monolith and that in order to be effective and inclusive, crisis resilience strategies should be tailored to each female entrepreneur's socio-economic positionalities (Crenshaw, 1991). Therefore, any meaningful intervention in crisis management must operationalise, prioritise, and empower gender beyond tokenism.

Systemic inequalities in the resilience of women entrepreneurs in the face of disruptions have been increasingly taken up in the crisis management literature, with gender being used as a lens to explore the phenomenon. In business environments that continue to have a strong embedded nature towards gender roles in developing countries like India, gender roles affect how women respond to economic, environmental, and health-related crises. According to Rao and Kelleher (2005), access to information, institutional support, and coping resources is mediated by gender-power relations, resulting in an inequitable burden on women during emergencies. Women are entrepreneurs working in micro or small ventures which in most cases are non-formal and fragile to the impact of economic shocks. Ahl and Nelson (2015) derived findings based on studies that highlight the fact that female entrepreneurs are often resilient by improvising and fostering collaborations in communities but are frequently ignored in macroeconomic recovery policies. Despite the proven capacity for business continuity in the face of adversity, women are not

given the opportunity to share their perspectives and show their capacity to lead post-crisis rebuilding efforts due to this oversight. Women entrepreneurs are naturally good at risk mitigation and contingency planning based on their lived experience of walking through the conundrum of patriarchal restrictions and resource constriction. Jamali (2009) concludes that women-led enterprises in the Middle East and South Asia show a high level of adaptive capacity despite institutional and cultural barriers. However, traditional metrics (including methods) for assessing resilience fail to consider this capacity because they press for economic contributions to social and emotional contributions when considering resilience. Women entrepreneurs in the cottage, handicrafts, and food processing sectors of Kerala, for instance, have survived floods and pandemics through cooperative marketing, shared logistics, and digital pivoting (Kevane et al., 2024). The gendered dimension of women's ability to leverage both familial and neighbourhood networks as economic assets in such crises also warrants academic and policy focus.

Furthermore, institutional trust and perceptions during crises contribute to how women entrepreneurs approach crises, which have gendered implications. According to Kapasi and Galloway (2015), women are more disinclined to trust formal institutions and prefer informal networks or self-help mechanisms, especially when the formal institutional response is sex blind. Poor implementation of government relief packages and lack of gender sensitive support was what several women entrepreneurs who interviewed for this paper in Kerala relied on Kudumbashree and local women's collectives in Kerala for survival during the COVID 19 pandemic (Thomas and Thomas (2022)). These insights show the need for relevant participatory policy frameworks that include women entrepreneurs' voices in disaster preparedness and crisis management systems. Such integration is required for resilience to be both collective and supported rather than individual and self-imposed. Resilience and crisis management have highly gendered psychological dimensions. During periods of stress, female entrepreneurs engage in emotional labour not only in the household but also within the community and in managing employees and customers. McGowan et al. (2012) assert that female entrepreneurs embody more in terms of social responsibility and are more inclined to engage in relational methods of problem

solving relative to male entrepreneurs during business downturns. Loyalty to the customer and team is a positive characteristic, although burnout ensues if it is not reinforced by adequate institutional and familial support. Women managing small enterprises in Kerala reported extreme emotional stress, especially through the strain of managing their caregiving responsibilities with plummeting income from their small business and health anxieties (Nanda et al., 2023). In fact, much of their resilience was not supported by structural support but by self-discipline, peer solidarity, and spiritual cultural coping mechanisms, pointing to yet more evidence for the deep contextual and multifaceted nature of resilience among women entrepreneurs.

In addition, the gendered disparity in accessing and using technology during crises affects the resilience trajectory of women entrepreneurs. Digital tools provide great possibilities for business as usual during disturbances, but such possibilities are not available to women due to the barriers of digital literacy, device ownership, and online safety. Hilbert (2011) states that gender-based digital divides can severely jeopardise crisis responses in rural and semi-urban areas. Women in the production sectors in Kerala, who had earlier exposure to digital marketing and e-commerce platforms, exhibited a very high post-crisis survival and recovery rate (Nair and Chandran 2024). However, people without access to digital tools or training were left behind and must urgently be equipped to participate in the ICT world through gender-sensitive training and infrastructure development. The matter is beyond accessibility, providing women with adequate tools so they can use digital platforms with confidence and in a safe environment without worry about harassment or cultural critiques online. Finally, there are aspects of gendered crisis management regarding intergenerational knowledge transfer and mentoring that are essential yet rarely discussed. Those who have inherited businesses or entrepreneurial experience learned from family mentorship are able to have more suppleness during a crisis as a result of embedded knowledge and social learning. Sullivan and Meek (2007) indicate that women who have come from a family business background will more readily think long term and have greater feel for swings within a sector, providing the ability to react much more effectively to a market undergoing disruption. In the State of Kerala, a new wave of

women's ventures in the traditional sector of coir, spices, and Ayurvedic products has successfully integrated modern practices with inherited business acumen to prove their intergenerational resilience (Mohan, 2020). Many of these women are community role models who take on mentor roles and help younger mentors who then become mentors for the next generation. Building crisis-ready communities will rely on such forms of gendered entrepreneurial leadership, and thus must be recognised in policy and academic discussions regarding sustainable recovery and resiliency.

Theme/Aspect	Key Findings/Issues	Supporting Studies	Remarks
Gendered Crisis Resilience in Entrepreneurship	During times of crisis, women entrepreneurs exhibit distinct adaptive capabilities, including emotional intelligence, adaptability, and active involvement in their communities.	Brush et al. (2009); Alon et al. (2020); D'Agostino et al. (2020)	Highlights undervalued but potent forms of resilience that deserve more policy and academic attention.
Socio-Cultural Influence in Kerala	While gender roles limit women's ability to move freely in entrepreneurship, organizations like Kudumbashree bolster their resilience.	(Aswani & Bhat, 2022); Devika & Thampi (2020)	Kerala's mixed socio-cultural context acts both as a barrier and as institutional scaffolding.
Financial Exclusion During Crises	Women face reduced access to credit and formal financial support; microfinance and SHG models offer alternatives.	UN Women (2020); Nair & Antony (2021)	Financial resilience needs to be gender-targeted with policies like collateral-free loans and emergency funds.
Emotional Labor and Double Crisis	Women encounter a "dual challenge" in balancing business responsibilities with caregiving duties,	Power (2020); Lakshmi & Thomas (2022);	Emotional intelligence aids in business survival but

	which impacts both the continuity of their businesses and their mental well-being.	Eagly & Carli (2007)	contributes to burnout—needs institutional support.
Digital Resilience and Gendered Digital Divide	Women who adopt digital tools thrive in crises; barriers include lack of access, literacy, and online visibility.	Manoj et al. (2023); Sharma (2020)	Digital upskilling and safe access for women are critical for inclusive crisis response strategies.
Intersectionality in Crisis Resilience	Factors like caste, religion, and marital status compound resilience or vulnerability; minority and single women show distinct patterns.	(Kulshrestha & Sahay, 2025); Crenshaw (1991)	One-size-fits-all resilience strategies fail; intersectional approaches are necessary.
Underrepresentation in Crisis Recovery Policy	Despite their significant resilience at the micro level, women's crisis responses are often overlooked in broader macroeconomic recovery strategies.	Ahl & Nelson (2015); Jamali (2009); (Kevane et al., 2024)	Suggests a mismatch between ground-level realities and top-down policy frameworks.
Institutional Trust and Informal Support	In times of crisis, women frequently lack trust in formal institutions and instead turn to groups like Kudumbashree for survival strategies.	Kapasi & Galloway (2015); Thomas & Thomas (2022)	Participatory policy frameworks should integrate women's voices in crisis management.
Psychological Resilience and Social Responsibility	Women often take on the roles of social responsibility and emotional labor in the workplace, which helps maintain	McGowan et al. (2012); (Nanda et al., 2023)	Policies must provide psychosocial and emotional support

	operations but can negatively impact their mental well-being.		alongside financial aid.
Technology and Online Safety	Although digital tools hold promise, women's ability to respond to crises is limited by a lack of digital literacy and cultural barriers.	Hilbert (2011); Nair and Chandran (2024)	ICT training and safe digital spaces must be prioritized for women entrepreneurs.
Intergenerational Knowledge and Mentorship	Women who come from family business backgrounds demonstrate increased resilience by employing strategic thinking and utilizing ingrained knowledge.	Sullivan & Meek (2007); (Mohan, 2020)	Promoting mentorship and community leadership among women can foster long-term resilience.

2.11 Research Gaps

Additionally, the research on women entrepreneurship, crisis management, organisational resilience, and Kerala-specific sector insights reviewed in this body of literature points to a major research gap that relates to the integrated understanding of how organizational resilience affects the performance of women-led enterprises through the perspectives of resilience strategies and socio-demographic influences is an important subject to study. However, although, multiple studies like Jamali (2009), (Kevane et al., 2024), McGowan et al. (2012) are already in existence that acknowledged the adaptive capacity and informal coping attitudes of women entrepreneurs towards crises, these insights remain anecdotal or qualitative without robust empirical framework that actually quantifies the relationship, if any, between organizational resilience and enterprise performance. Additionally, almost all research on resilience to date views it in a general way and rarely differentiates between the organizational level in terms of core structures (e.g. leadership, agility, planning) or the individual level in terms of dealing with issues by making

adjustments. Owing to this ambiguity, we can understand how formal organizational resilience mechanisms (i.e. diversification, technological adoption, and resource redundancy) translate into measurable performance outcomes in women-owned MSMEs. In addition, socio-economic and demographic variables, including education, age, income level, and type of family support, tend to be mentioned as major factors influencing entrepreneurship success (Ahl & Nelson, 2015; Thomas & Thomas, 2022), yet barely can be found in studies that have statistically analysed their moderating effect in relation to the resilience-performance framework. However, this creates a notable gap in evidence-based knowledge regarding how these background factors either enhance or hinder the utility of resilience efforts in real business practice.

A second gap worth mentioning is how little attention has been paid to the mediating effect of resilience strategies used as a tool between organizational resilience and enterprise performance in the context of Kerala, specifically in terms of its social, cultural, and economic characteristics. Some studies have discussed resilience strategies in isolation with the use of digital platforms Nair and Chandran (2024) , community networks (Mohan, 2020), and cooperative models (Nanda et al., 2023); however, they have failed to produce enough empirical work that could structurally position these strategies as mediators which help translate resilience into sustainable outcomes such as profitability, market growth, and employment retention. This opens up an opportunity to probe into which of those resilience strategies are most impactful for delivering performance and how much it varies across different sectors that are led by women in Kerala. Moreover, the differential effects of socio-demographic variables on the relationships identified have not been investigated in the local entrepreneurial ecosystem. Due to the rich institutional landscape of women sensitive institutions like Kudumbashree and the high literacy rate in Kerala, I have tried to understand how factors such as marital status, educational level, age, and type of industry mediate the link between organizational resilience and performance outcomes. Addressing this gap not only enriches the theoretical understanding of gendered entrepreneurship and resilience, but also lays a strong foundation for the following research objectives: (1) to assess the impact of organizational resilience on

women-led enterprise performance in Kerala, (2) to examine the mediating role of resilience strategies, (3) to identify the most effective resilience strategies, and (4) to analyse the moderating effects of socio-demographic variables in this context.

CHAPTER 3
THEORETICAL FOUNDATIONS

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3.1. Introduction

With organizational resilience being a less frequently discussed topic that has grown in importance within the discourse on entrepreneurship, it has only recently started to attract attention. Resilience in entrepreneurial contexts is more than mere survival, but also the ability to respond to disruptions, absorb shocks, and then reconfigure the operations so that we can continue to operate and grow. To shed light on organizational resilience in entrepreneurship, drawing from the confluence of the resource-based view (RBV), dynamic capabilities theory, and complexity theory, theoretical perspectives are identified from the perspectives of entrepreneurial ventures facing structural challenges in managing organisational resilience, specifically taking into account entrepreneurial ventures led by women. These theories not only describe the incidence of internal capabilities, such as leadership, innovation, and prudence of finance, but also stress external responsiveness to market trends, policy, shifts, and sociocultural dynamics. Specifically, the socioeconomic milieu of Kerala constitutes constraints based on gender, maturing institutional support mechanisms, and growing digital transformation of the state, rendering the discussion of women entrepreneurs in Kerala both theoretically applicable and rich in its context. The entrepreneurial resilience literature also relies heavily on psychological capital theory (hope, efficacy, resilience, and optimism) to confirm the strategic nature of individual mindsets and emotional intelligence as it relates to attenuating entrepreneurial adversity.

Based on this theoretical framework, theories, such as strategic management theory and systems theory, are used as interpretative lenses to develop the relationship between resilience, enterprise performance, and sustainability. Resilience participates operationally in decision-making, networking, innovation, and business model flexibility and is linked to strategic adaptation and, ultimately, organisational success. Gender roles and access to resources are among the factors that support the mobilisation of resilience, and there are specific theoretical underpinnings specific to women enterprises. Furthermore, theories anchored in social capital theory and institutional theory help the author emphasise the role of community support

structures, regulatory frameworks, and sociocultural recognition as shapers for resilience. Furthermore, socio-demographic variables such as education level, marital status, age, and having experienced entrepreneurship played an important role as moderators that affect how resilience shows in different contexts. A model can be constructed by integrating the entrepreneurial variables as mediators and moderators. In addition to identifying the determinants of resilience, the framework describes resilience impact pathways for strategic execution and business outcomes. This bridging of a resilient orientation to entrepreneurship with empirical enquiry provides a sturdy base to contemplate how women entrepreneurs in Kerala continue and build their undertakings in the midst of countless difficulties and changing perspectives.

3.2. Theoretical Perspectives on Organizational Resilience in Entrepreneurial Settings

Organizational resilience has become a significant construct in comprehending how entrepreneurs react to uncertainties, absorb shocks, and ensure the existence and growth of their ventures in the long run. Rather than operational stability, resilience in the context of women's entrepreneurship in the socially and culturally distinct region of Kerala encompasses emotional, strategic, and institutional resilience. Several overlapping theoretical perspectives have gone into the conceptualisation of resilience in entrepreneurial settings, starting from the dynamic capabilities approach. Teece, Pisano, and Shuen (1997) state that dynamic capabilities refer to a firm's ability to integrate, build, and reconfigure internal and external competencies to match the rapidly changing environment. The theory is particularly applicable to female entrepreneurs, who often work in conditions marked by gendered access to resources, institutional support, and family obligations. The enablers of resilience are dynamic capabilities such as innovation capacity, learning orientation, and reconfiguration ability in the sense that they not only enable resilience to negative shocks but also allow adaptation and evolution to those shocks (Ambrosini & Bowman, 2009).

The dynamic capabilities perspective is complemented by the Resource-Based View (RBV), whereby the former states that resilience is derived from the firm's possession and strategic use of valuable, rare, inimitable, and non-substitute resources (Barney,

1991). Nonetheless, access to such resources tends to be limited to women entrepreneurs, particularly in terms of financial capital, technological infrastructure, and formal mentorship (Blood & Lucker, 2002; Brush et al., 2009). For this reason, an alternative resource strategy is necessary in which intangible assets such as emotional resiliency, community embeddedness, and social capital matter more than anything. According to Nahapiet and Ghoshal (1998), social capital (leading to trust-based networks) increases knowledge sharing and collaborative capacity which are important for resilience because they offer timely information, moral support, and business opportunities. Social capital is a valuable asset in Kerala, as SHGs and Kudumbashree units are vast and support collective resilience and peer-based adaptation which offers empirical evidence to support social capital theory in this setting (Chathukulam & John, 2002).

In parallel, the theoretical development of resiliency as a psychological dimension has been propagated most clearly by psychological capital theory (PsyCap), which includes hope, efficacy, resilience, and optimism as theoretical core constructs (Luthans, Youssef, & Avolio, 2007). Entrepreneurs' personal attributes have a considerable impact on how they interpret challenges and move internal resources. Bullough and Renko (2013) concluded their study based on the idea that high levels of psychological capital not only shield the emotional impact of adversity but also boost the ability to identify opportunities, better decision-making quality, and more perseverance. As in places such as Kerala, which gives itself a high female literacy, and other social indicators, and yet where the patriarchal tradition is deep, the role of psychological capital is vital. In addition, women entrepreneurs face subtle socio-cultural constraints that limit their autonomy and how legitimate they are to lead. As a result, psychological resilience functions as an intrinsic enabler, facilitating the management of stress, staying motivated, and drafting strategic vision despite structural constraints (Ayala & Manzano, 2014).

From a macro-organizational perspective, Systems Theory offers a useful lens for exploring how women-owned firms change to environmental challenges by means of feedback loops and systemic realignment (Katz & Kahn, 1978). Organisations are

considered open systems interacting with other actors from the environment, including customers, suppliers, institutions, and regulators. For women entrepreneurs in Kerala, environmental scanning, stakeholder engagement, and supply chain adaptation are the key mechanisms of resilience. Furthermore, systems thinking produces a pivotal outcome: strategic flexibility or the ability to reconfigure the firm's activities in response to dynamic conditions (Sanchez, 1995). Women led enterprises are able to show such flexibility by digitisation (hence on to digital platforms) during the disruption, having a multi-channel marketing strategy, or diversifying the product portfolio to mitigate revenue loss. Discussed in prior literature (Duchek, 2020) and Bhamra, Dani, and Burnard (2011), these adaptive strategies, though they are responses to risk, are also proactive capabilities and define organizational resilience in a volatile context.

Furthermore, strategic management theories specify the function of resilience in gaining a competitive advantage and long-term performance. According to Porter (1985), the alignment of business strategy with a competitive environment is central to sustainability. Strategic resilience, in turbulent environments where most actions are required, is seen in the capacity to adapt business models, manage risk portfolios, and continuously innovate based on feedback from the customer and the market. This is especially relevant to women entrepreneurs, who must integrate their personal, social, and business goals with the business in a context marred by systematic inefficiencies. According to Hamel and Valikangas (2003), in research on strategic resilience, resilient firms are those that have the capability to continuously reconstruct themselves so as to harness crises into growth opportunities. The experiences of those entrepreneurs in Kerala resonate with how women entrepreneurs have adjusted their businesses to disruptions, such as the COVID19 pandemic, by shifting to e-commerce, local sources of supply, and collaborative ventures, and demonstrate both operational and strategic resiliency.

The Institutional Theory also helps us to understand the nature of resilience because it explores how formal structures, rules, and norms influence the conduct of entrepreneurial behaviour (Scott, 2005). In particular, women entrepreneurs operate

in institutional frameworks that may promote their enterprises in some dimensions (access to microfinance or policy support) but undermine their enterprises in others (gender normative behaviour or bureaucratic red tape). Gender Park and the Kerala Startup Mission are instruments of the government in Kerala which have helped to create institutional spaces for women-led entrepreneurship; however, the translation of policies into resilience mechanisms is dependent on the entrepreneur's ability to negotiate and use institutional relationships. In particular, North's (1990) distinction between formal institutions (laws and policies) and informal institutions (norms and traditions) is particularly relevant. This interplay of these institutional forces determines whether resilience is encouraged or discouraged, and the key role is played by policy responsiveness and gender-sensitive institutional design.

The socio-demographic factors of age, education, family support, marital status, etc. are critical mediators and moderators of the resilience–performance relationship. Manzano-García and Ayala (2013) research tells that demographic attributes don't only place influence on the understanding of adversity, yet besides, on methodologies for fighting it. Women entrepreneurs in Kerala present a wide demographic profile, from digitally savvy young graduates in the start-up segment to older women operating traditional trades. Newer entrepreneurs can take advantage of their technological fluency and global outlooks, while older women may have accumulated experience and access to networks. However, these demographic influences are shaped by the unique sociocultural landscape of Kerala and a high human development index, which results in the expression of resilience occurring in several nuanced ways. Assimilating Crenshaw (1991), intersectionality theory further argues that caste, religion, and class intersect with gender and determine an individual's trajectory. Hence, it is recommended to consider the dimensions of these factors to scrutinise resilience in a local entrepreneurial ecosystem.

Organisational resilience, especially related to women entrepreneurs, is becoming an increasingly pertinent field of study. In entrepreneur-based settings, the environment is often volatile, uncertain, and complex, therefore, it is essential that an organisation be resilient, defined broadly as organizational ability to anticipate, adapt to, and

recover from disruptions. There are a number of theoretical models proposed by scholars on how organisations, particularly women, develop resilience to challenges. Resilience theory can also be considered one such theoretical lens because it was generated from ecology and psychology and later expanded to organisations in the fields of business and management. Resilience theory orients our attention toward an organisation, resulting in its ability to absorb shocks and bounce back from adversity (Wildavsky, 1988). Resilience is defined as a firm's capacity to continue operating in the face of disruptions in the environment and to use those disruptions as opportunities for growth (Lengnick-Hall, Beck, & Beck, 2011).

Resilience among female entrepreneurs in Kerala results from the interaction of different personal, social, and organisational factors. From a sociocultural point of view and based on existing research, one of the main contexts that affects women entrepreneurs' resilience is represented by gender-specific barriers such as access to finance, societal expectations, and limited business networks (Ahl, 2006). Gendered institutional theory also explains how institutional norms and practices may hinder or otherwise support female entrepreneurship. Even in Kerala, where a state's policies abide by policies of progressive gender, these institutional factors continue to have direct implications for the entrepreneurial experiences of women in that state. Although institutional theory argues that organisations are formed by market forces, they are also formed and shaped by formal and informal rules (Scott, 2005). Given that there are many women-led enterprises in Kerala, it is important for them to understand these gendered institutional forces to develop resilience strategies. However, women entrepreneurs often have to bear more stringent scrutiny and cultural expectations, thereby affecting their ability to better navigate adversity.

Additionally, strategic management theories consider sustained adaptation by entrepreneurs and their strategic choices to be closely associated with the development of resilience in organisations. Organizational resilience depends on the firm's ability to innovate and strategic adaptability. Women entrepreneurs sometimes apply their capacity to combine multiple types of social and economic capital, such as community relationships, customer loyalty, and network-based collaborations, to stay flexible and

run their business(es) through the crisis (Xiao & Cao, 2017). Dynamic capability theory (Teece et al., 1997) emphasises that a firm's ability to reconfigure resources and capabilities in response to environmental changes is most relevant for women entrepreneurs in Kerala. It is observed that women who led businesses in the state have been quick to pivot in the middle of challenges such as market and regulatory changes, financial crises, and so on, showing a resilience approach.

Additionally, psychological capital theory provides useful information regarding resilience from an individual-level perspective which includes cognitive and emotional traits that affect an entrepreneur's response to adverse situations. Luthans, Youssef, and Avolio (2007) suggested that psychological capital, comprising hope, self-efficacy, optimism, and resilience, is necessary for entrepreneurial success. This theory helps women of Kerala, and particularly women entrepreneurs, understand how individual resilience is needed to overcome barriers such as gender bias, lack of access to resources, and feelings of social isolation. These entrepreneurs' possession of psychological capital allows them to rethink setbacks as learning opportunities and to preserve a positive outlook in the face of adversity. In another example, Bullough and Renko (2013) demonstrate that women with high levels of psychological capital have the ability to perceive a challenge as an opportunity, and thus improve their resilience and capacity for innovation.

Social capital theory provides a structure for how networks, relationships, and trust within communities lead to organisational resilience. Women entrepreneurs in Kerala often forge strong local networks that provide both emotional support and business resources. The presence of social capital, facilitated by bonding and bridging networks, helps the flow of information, resources, and opportunities which are essential for building resilience. (Nahapiet & Ghoshal, 1998). Grassroots organisations like Kudumbashree in Kerala, which provide strong support to women entrepreneurs, boost the latter's ability to adapt to economic and market challenges due to the sense of community that women entrepreneurs feel. In addition, in high-stress entrepreneurial environment, these social networks serve not only as practical business solutions, but also as emotional resilience (Burt, 2000).

In addition, transaction cost theory helps explain the resilience of an entrepreneurial setting by pointing out the significance of cost-effective decision making in uncertain settings. From this perspective, resilience is defined as the capability to reduce the expense of uncertainty and risk through appropriate resource allocation, partnerships, and risk-management strategies (Williamson, 1981). In Kerala, women entrepreneurs generally have to work in a cost-conscious environment where financial constraints and limited access to formal funding channels are serious problems. Hence, the resilience of women in Peri Urban areas is also a function of strategies women adopt to mitigate these financial risks, for example, entering informal lending networks and joining alliances with local businesses, or alternatively, as in the case of microfinancing institutions.

The perspective of resilience provided by the organisational learning theory is concerned with the ability of organisations to learn from both success and failure. Argyris and Schön (1978) argued that organisations adapt their practices and structures continuously to their environment and, hence, become resilient. Informal networks, market feedback, and time-based knowledge accumulation facilitate organisational learning among women entrepreneurs in Kerala. Women entrepreneurs learn from successes and setbacks to improve their strategies, learn new skills, and adjust to shifting market conditions. This also reinforces that resilience is iterative in nature, that is, businesses are constantly changing and bettering themselves through experience.

Based on the synthesis of these theoretical perspectives, it is apparent that organizational resilience in women entrepreneurship is a multilevel, multidimensional construct grounded in psychological, strategic, institutional, and contextual theories. Such a model should integrate micro-level (psychological capital), meso-level (strategic assets and social networks), and macro-level aspects (institutional frameworks and cultural norms) of resilient entrepreneurial activity among women in Kerala. In addition, opportunity recognition and digital literacy or spousal support moderate the relationship in the model, serving as explanations of entrepreneurs' asymptotics and enhancing the explanatory and predictive power of the model. An

integrative approach such as this contributes as much to the academic understanding of entrepreneurial resilience as it does to the robust development of gender-sensitive interventions and capacity-building programs, as well as entrepreneurial policies oriented towards resilience. It fills the gap between theory and practice by generating insights relevant to scholars and practitioners working in similar regional contexts (such as Kerala) to fortify women-led enterprise ecosystems.

3.3. Exploring Entrepreneurial Resilience through Established Theories

Several theoretical lenses on entrepreneurial resilience in women-owned enterprises have been used to explore how entrepreneurs and organisations survive and prosper amid adversity to greater long-term sustainability. In the entrepreneurial context, resilience does not simply refer to bouncing back after adversity, but to flourishing in an uncertain, adverse, and changing environment. Theories such as the resource-based view (RBV) and dynamic capabilities theory offer critical insights into entrepreneurs' resilience. Drawing on the RBV, particular emphasis will be placed on the role of the firm's internal resources (knowledge, capabilities, social capital) to address environmental challenges (Barney, 1991). Regarding women entrepreneurs, the use of these resources, the ability to mould them to meet dynamic circumstances, and maintaining long-term success have become synonymous with resilience. This is further extended in dynamic capabilities theory, which emphasises the need for firms to have the ability to reassemble (reconfigure) resources and capabilities to gain competitive advantage (Teece, Pisano, and Shuen, 1997). The ability of women entrepreneurs, as compared to other entrepreneurs, especially from Kerala, to face internal and external challenges and adapt their strategies and resources to address such challenges, make them resilient.

Entrepreneurial orientation (EO) is yet another theory that helps explain entrepreneurial resilience, as it concerns the entrepreneurial strategic posture pertaining to innovation, proactiveness, and risk-taking (Lumpkin & Dess, 1996). High-EO entrepreneurs are more adaptive and resilient when uncertainty is brought forward. According to this theory, resilience comes not from the ability to navigate a crisis but from an entrepreneurial disposition that uses challenges to find

opportunities. Women entrepreneurs in Kerala show very high entrepreneurial orientation which is characteristic of innovating in response to market fluctuations and facing economic challenges. The EO framework emphasises how an entrepreneur's proactive behaviours and willingness to take calculated risks affect strategic decisions aimed at building redundancy in case of adversity.

Additionally, the social capital theory provides a theoretical basis for understanding the contribution of social networks and relationships to entrepreneurial resilience. Resources embedded in social networks, such as trust, mutual understanding, and access to information and resources, are called social capital (Burt 2000). This theory advises that women who are entrepreneurs and forge close social bonds possess better resilience against interruptions and tend to recover from letdowns. In Kerala, where women run businesses, they benefit much from social capital through community support and collective networks providing critical resources to women entrepreneurs, such as financial capital, knowledge, and emotional support. Based on social capital theory, these networks help with resilience by having entrepreneurs obtain the ability to resume financial setbacks, find new business opportunities, and build strength for coming challenges.

Institutional theory is another source of great value as it discusses how the behaviours and resilience of entrepreneurs are influenced by the regulatory, cultural, and societal norms of their community. Institutional theory posits that resilience is not limited to internal capacities and relies on entrepreneurs' capacity to mesh their strategies with dominant institutional frames of reference, which can either facilitate or restrict their way to thrive under harsh environmental conditions (Scott, 2005). Starting and managing a business in Kerala is influenced by the institutional environment related to gender policies, access to government programs, and societal attitudes towards women in the business. However, although Kerala's relatively progressive gender policies constitute a supportive framework for women entrepreneurs, patriarchal norms and lack of access to institutional resources continue to pose challenges which characterise women entrepreneurs' coping strategies to adversity.

Furthermore, psychological resilience theory provides a thorough probe of the personality aspects that make up entrepreneurial resilience. Psychological resilience is related to a person's mental and emotional strength to overcome stress and adversity. Resilience is important for women entrepreneurs, and psychological factors such as self-efficacy, optimism, and emotional regulation are key factors. Luthans, Youssef, and Avolio (2007) emphasise that psychological capital (PCL), consisting of hope, resilience, optimism, and self-efficacy, helps entrepreneurs surmount the challenge and persevere on a long-term goal. In Kerala, the psychological resilience of women entrepreneurs is very high and they tap their own inner resources in order to continue despite adversity. This is the factor that ensures how women led enterprises can survive financial, social, or operational setbacks and cope with them effectively.

Life cycle theory is another relevant theoretical perspective because it analyzes the development of a business over time and how resilience is revealed in different stages of enterprise development (Kazanjian & Drazin, 1990). This theory explains that the resilience strategies used by businesses as they follow the entrepreneurial life cycle (i.e. the periods of inception, growth, maturity, and possible decline) also need to evolve. Women early-stage entrepreneurs in Kerala are equally resilient in overcoming the initial stage of business startup, such as getting financing and the customer base. However, as businesses become more mature, the forms of resilience necessary for managing operations, scaling, and innovating in the face of competition also emerge. Life cycle theory explains that resilience is not static and changes with each stage of a business's growth.

Additionally, resilience, as perceived in crisis management theory, studies how entrepreneurs react to unexpected destruction, such as economic crises, natural disasters, or pandemics. The assumption underlying these ideas is that organizational resilience through crisis management theory comprises preparedness, rapid response, and recovery strategies. Women entrepreneurs in Kerala face challenges in resilient times, be it economic downturns or any society upheaval. However, studies indicate that resilient entrepreneurs manage a crisis involving proactive crisis management

strategies, including diversification of their business models, reduction of dependence on a single market, and investment in long-term sustainability measures (Coombs, 2007). This resilience that is commonly exhibited by women entrepreneurs is through the adoption of flexible business models that are able to steer in and manage crises, a trait that was well displayed during the COVID-19 pandemic, for instance, when small businesses quickly went online.

The entrepreneurial ecology theory indicates that broad environmental and ecological factors affect entrepreneurial ventures' resilience. Stam (2015) proposed that, based on this theory, the resilience of these individual entrepreneurs is highly correlated with the overall health and vibrancy of the broader ecosystem on which they operate. Within Kerala's entrepreneurial ecosystem consists of government policies, financial mechanism, technological infrastructure and community support. The emphasis is that resilience is not simply an individual attribute, but a collective process of various actors, such as government agencies, financial institutions, educational bodies, and social networks, to build the resilience of women entrepreneurs. Thus, the resilience of women Entrepreneurs in Kerala can be conceptualised as a function of the interaction between the entrepreneur and the ecosystem, where mutual support leads to well-adapted and stronger enterprises.

This enables us to perceive the ways in which women entrepreneurs in Kerala traverse challenges through these established theories of entrepreneurial resilience. Referring to the resource-based view, entrepreneurial orientation, social capital, institutional theory, psychological resilience, life cycle theory, crisis management theory, and entrepreneurial ecosystems, we provide a completely remoulded view of the various forces that constitute entrepreneurial success. Beyond increasing the level of academic knowledge, these theoretical perspectives also provide practical insights into the practical nature of topics to aid policymakers, business leaders, and support organisations to assist women entrepreneurs in developing antifragility and prosperity under adverse circumstances.

3.4. Linking Strategy and Performance: A Theoretical Interpretation

The behavioural theory of the firm can be used to further interpret the relationship between strategy and performance in an entrepreneurial context, particularly for female entrepreneurs. The following propositions: firms are coalitions of individuals; Individuals within these coalitions possess bounded rationality; Decision making is executed under uncertainty with incomplete information, are posed by Cyert and March (1963). In particular, in the case of women entrepreneurs operating in socioeconomically constrained environments, strategic choices are often formed via incremental learning, problemistic search, and adaptive routines, rather than through the use of perfect rationality. The formulation of these entrepreneurs, or discovery of their strategies, is iterative and experiential in nature, and the outcomes for performance cannot be attributed to formal strategic planning alone, but also to emergent behaviour driven by experiential learning and processes of trial and error. Evolutionary economics offers another important perspective, particularly the evolutionary theory of the firm. Nelson and Winter (1982) in their argument proposed that organisational capabilities develop over time as a result of routines and innovation and hence firms that are able to adapt to the environment more systematically perform better. The capacity for continuous adaptation and knowledge accumulation is a characteristic of many women-led enterprises, and in the context of women-led enterprises, is often a way to achieve strategic success. In developing adaptive routines and exploiting opportunities for incremental innovation, as these entrepreneurs deal with changing markets, regulatory landscapes and social expectations are far better able to sustain performance. Many resilient women entrepreneurs move through strategic evolution, not revolution, as a part of their pathway.

Stakeholder theory also provides an alternative framework for interpreting the link between strategy and performance. According to Freeman (1984), organisations will be able to achieve long-term success and must take care of the interests of all stakeholders, which includes not being focused only on shareholders. Stakeholder relationships have become a central entry point in strategic decision making for

women entrepreneurs in Kerala, who usually operate in community environments and are closely tied. While the inclusion of stakeholders in the strategic process is seen as adding legitimacy and access to other key resources, increasing, in percentage terms, the number of key stakeholders would suggest that legitimacy and the ability to gain access from those stakeholders is relatively easy to accomplish. Moreover, a strategy that is congruent with stakeholder expectations will not only help increase reputational capital but also elicit sustained performance by fostering trust and cooperative networks. Alternatively, from another perspective of strategic flexibility that contributes to organizational performance, we have the real options theory. Firms can exercise the option to delay, expand, contract, or abandon business initiatives as conditions in the market (Dixit and Pindyck, 1994). Real options can assist women entrepreneurs, especially in the context of working in uncertain or uncertain environments, to manage strategic risk and capitalise on emerging opportunities. Their entrepreneurs are able to protect their ventures by moving incrementally rather than making irreversible choices and populating their commitments for gains conditioned by favourable environments.

The knowledge-based view (KBV) of the firm draws from which can be considered the most strategically significant resource. According to Grant (1996), organisational performance is predicated on the creation, integration, and application of knowledge assets. Leveraging multiple levels of personal possessions and ties with others, women entrepreneurs build such knowledge configurations through peer support, experiential learning, informal networks, and collaborative ecosystems, which underpin their strategic effectiveness. In terms of knowledge sharing, continuous learning, and innovation, those who follow strategies focused on these are more likely to generate superior performance outcomes than those who do not, especially when the companies are dynamic and competitive and adaptability is key. These mechanisms can be understood from an overarching theoretical viewpoint provided by systems theory. Von Bertalanffy (1968) argued that organisations are open systems, operating in environment, and achieving a strategic coherence across subsystems, for example leadership, operations, finance and human resources is essential for performance of whole organisations. Systems thinking is a more integrated way for women

entrepreneurs to engage in a strategic formulation process that is consistent with the context of women and women entrepreneurship, where each function of the enterprise adds together and supports the realisation of overall objectives. Thus, performance can be seen as the result of strategic congruence and alignment through the whole system of the organisation.

The theory of agency can also help explain the internal governance mechanisms that affect the successful implementation of a strategy. Jensen and Meckling, (1976) stated that conflicts between principals and agents can result in suboptimal outcomes unless they are aligned via monitoring and incentives. Even though most women entrepreneurs in Kerala are engaged in small-scale (or sole proprietor) enterprises, the clarity of strategic vision and the alignment of goals become crucial for performance once businesses get to involve external agents. These entrepreneurs can help the organisation by designing incentive structures and governance mechanisms that ensure that employee and stakeholder goals are aligned with the organisation's strategy and that execution is aligned with intent, thereby helping improve the organisation's performance. According to strategic fit theory, there must be a match between the internal capabilities of an organisation and the external environment. Firms that use strategies that are consistent with their context of the environment, such as prospectors, defenders, analysers, and reactors, have a higher chance of performing well (Miles & Snow,1978). In the pursuit of strategic fit for women entrepreneurs, market dynamics, customer preference, resource availability, and regulatory constraints are appraised to devise strategies that utilise their strengths to capitalise on external conditions. Performance is not something that exists in isolation, but rather the product of how internal competencies are well aligned with environmental opportunities and threats.

Alignment between the conceptual and operational levels is a fundamental element of strategic management, which is understood to align with operational design and performance. Contingency theory provides one of the principal crossroads through which transactions between strategy and performance are interpreted. According to the above theory, no one time, there is no single strategy to fit all since only the

combination of factors from both the internal environment and the external environment of the business said factors that influence them (Donaldson, 2001). For women entrepreneurs in Kerala, strategic decisions need to be formulated in the context of their realities of local demand, sociocultural norms, policy environment, and capital access. This, in turn, means that performance outcomes are not the direct result of strategy but are acted upon through its mediatory effect resulting from the degree of strategic alignment with external contingencies. The contingency framework claims that successful women entrepreneurs perform in real-time in response to variable environments, giving them the advantage of performing in context. Dynamic capabilities theory compliments this view by broadening the strategic-performance link by focusing on the organisation's ability to integrate, build, and reconfigure internal and external competences to respond to changes in its environment (Teece, Pisano, & Shuen, 1997). Given that women entrepreneurs often operate in volatile markets with limited institutional support and uncertain funding streams, dynamic capabilities such as sensing new opportunities, manufacturing, gaining access to necessary resources, and transforming routines are essential. According to this theory, strategy is not only static planning but also a fluid capability that aids firms to change. Thus, performance is associated with how well an entrepreneur can repeat and adjust strategic assets according to emerging challenges and opportunities.

Another powerful framework for understanding how societal norms, cultural expectations, and regulatory frameworks affect strategic behaviour and performance outcomes comes from institutional theory. DiMaggio and Powell's (1983) argument is that organisations may obtain legitimacy and thus survive as organisations by conforming to institutional pressures—normative, coercive and mimetic. The strategic choices of women entrepreneurs must operate within patriarchal or male-dominated business ecosystems, and diplomacy is inevitable in dealing with institutional forces. Strategies for adapting to accepted norms or policies— that is, by leveraging government schemes for women and government collaborations with self-help groups—enhance perceived legitimacy and thus improve access to the market and capital which also affects enterprise performance through institutional

conformity. Another lens for interpreting is using another framework, entrepreneurial orientation (EO), which relates to firm performance based on posture and performance in terms of innovativeness, proactiveness, and risk-taking (Lumpkin & Dess, 1996). From this viewpoint, women who are high EO entrepreneurs are more likely to pursue aggressive growth strategies, adopt new products or procedures, and exploit first-mover benefits. These orientations can result in higher performance, particularly in environments with highly competitive or constrained resources. As a result, EO becomes a mediator between strategic intent and performance as it relates to generating performance outcomes in settings where conventional strategies may not work to generate performance in the presence of systemic gender or resource disadvantages.

In configuration theory, strategy and performance are not seen as separate strategic variables, but as system fit among all the elements of the strategy, structure, and process set. This method assumes that in all situations only some 'configurations' of organisational elements result in high performance (Miller, 1986). For instance, a women-owned enterprise that settles to adopt a differentiation strategy must design and operate its systems, lead it, and its human resources for innovation and quality enhancement. When the elements of strategic choices and organizational design are internally coherent, performance is optimal. This is explained by configuration theory which states that cases of isolated strategic moves can fail unless they are embedded within a larger, well-aligned system. This theoretical interpretation is further deepened by the strategic cognition perspective in terms of the role played by cognitive frameworks in strategic decisions. Thus, according to Narayanan, Zane, and Kemmerer (2011), managers' mental models and beliefs are highly influential in managerial decision-making because they direct how managers perceive opportunities and threats as well as strategy choice. When it comes to women entrepreneurs, their strategic cognition may be influenced by what they have experienced in the past, socialisation, and identity constraints that they perceive. These cognitive maps dictate the ways in which performance outcomes are determined by the breadth of strategic alternatives that are actually considered, the depth of processing that is pursued, the

speed and accuracy of decisions in the face of uncertainty, and confirm the notion that strategy is a fundamentally social process.

Another pertinent theory is upper echelons theory, which associates strategic outcomes with the traits of chief executives (Hambrick & Mason, 1984). The ideas under this theory dictate that strategic choices, and therefore performance, are simply a reflection of the backgrounds, experiences, values, and personalities of those in leadership. In the case of women entrepreneurs, their personal attributes, such as education, risk-taking ability, leadership style, and socio-political awareness, largely influence the manner in which strategy is fashioned and executed. These characteristics moderate the strategy–performance link, as more experienced or skilled entrepreneurs may have a better ability to transform strategic ideas into concrete products. This is the reason why the balance scorecard framework is often perceived as a managerial tool, as it provides a link between strategy and the performance metrics of trade-offs in the other dimensions (Kaplan & Norton, 1996). It emphasises that organisational performance comprises the strategic alignment between the financial, customer, internal process, and learning and growth dimensions. In the case of women-led businesses, successful strategies all concern revenue generation, customer satisfaction, operational efficiency, and employee development. In small companies, performance cannot be judged only based on financial outcomes, as intangible assets such as customer loyalty and employee commitment are what will separate a business from bankruptcy.

3.5. Theoretical Underpinnings of Resilience in Women-Owned Enterprises

Resource dependence theory (Pfeffer and Salancik, 1978) illustrates how women-owned enterprises may be studied in relation to their ability to be resilient through how an organisation can be influenced by its dependence on external resources and strategies that can be utilised to handle and request such dependence. Women entrepreneurs, especially Kerala, are constrained in their access to financial capital, markets, networks, and skilled labour owing to gendered institutional barriers. In this context, securing and controlling critical resources is a hallmark of this ability. The strategic formation of relationships, institutional linkages, and adaptive procurement

have been identified as key enablers that resource-dependent women owned enterprises can learn to develop and use to cope with uncertainty and remain sustainable in resource-scarce environments. Another valuable theoretical foundation for understanding resilience in women owned enterprises comes from the social capital theory. This theory highlights networks, trust, norms, and social relationships as means of enabling economic action (Bourdieu, 1986; Coleman, 1988). Social capital for women entrepreneurs is often derived from informal networks, community-based groups, and family systems. These networks provide emotional support, market access, credit facilitation, and knowledge sharing and can compensate for formal institutional gaps. High levels of bonding and bridging social capital among women entrepreneurs assist them in navigating challenges and sustaining business continuity under adverse circumstances and during market disruptions. Thus, this is not about individual toughness but is socially embedded in relational structures.

From a feminist theory perspective, this perspective investigates the articulation of every aspect, including gender, power, and structure, in entrepreneurial ecosystems (Ahl, 2006). However, feminist theory contests the conventional, masculine notion of entrepreneurship that fetishises risk-taking, profit-wangling, and fierce competition instead of preaching inclusivity in conceptualising enterprise development in a relational, communal, and synergetic manner. I apply this to resilience in women-owned enterprises, demonstrating that for women, entrepreneurial response is framed by cultural expectations of women's behaviour, the responsibilities of care, and the negotiation of different identities. Thus, resilience is not merely about economic survival but also a transformative engagement of the gendered structure of business environments. The psychological underpinning of resilience also lies in the basis of self-efficacy derived from Bandura's social cognitive theory (1997). It also refers to self-efficacy, which is the belief in one's capacity to execute behaviours necessary to produce the desired performance attainments. Likewise, in an entrepreneurial context, high self-efficacy results in persistence, coping with failure situations, and problem-solving. In societies where societal stereotypes and internalised doubts undermine women's entrepreneurial engagement, women entrepreneurs would need to develop

self-efficacy. When women have abundant self-efficacy and take initiative in the face of systemic disadvantages, they become resilient.

In addition, the sense-making theory offered by Weick (1995) helps understand how women entrepreneurs interpret and respond to unexpected challenges. Resilience, conceived in this theoretical context, is contained in this capacity of reframing adverse experiences, taking meaning out of ambiguities, and acting purposefully in the context of complexity. Kerala has undergone sudden regulatory shifts, supply chain disruptions, and even resistance from society to women entrepreneurs. They demonstrate their resilience via a dynamic sensemaking process of repurposing (reinterpreting) these shocks to be used instead as opportunities for transformation, repositioning, or learning. From this perspective, resilience is a mental and story act, as opposed to behavioural endurance only. In investigating the resilience of women-owned businesses, role identity theory also serves as a theory on how to understand resilience. It assumes that people absorb various social roles and that their behaviour is determined by the prominence and practice of these personal identities (Burke and Tully, 1977). Most of the time, the role of 'business owner' needs to be negotiated by women entrepreneurs in addition to their traditional roles such as care giver, household officer or community member. Women accidentally tap into resilience as they manage to merge or sort out these identities in a way that serves their entrepreneurial commitment. In conflict of role scenarios, those who have a stronger entrepreneurial identity will show more resilience in cases where this aspect of role conflict is overwhelming by mobilising resources and social strategies for business continuity.

A second layer of understanding is also provided by narrative theory in terms of resilience as the process of storytelling that individuals use to provide coherence and continuity in the face of adversity (Polkinghorne, 1988). Narratives about women entrepreneurs' journeys, struggles, and triumph act as means of providing resilience to women entrepreneurs as sense-making tools, but also as a means of inspiring stakeholders, calling in community support, and forming identity. Many such narratives tend to incorporate issues such as surmounting gender discrimination,

failing and building, and alienation from institutions. For women entrepreneurs, framing adversity as part of a positive story constitutes resilient organizational cultures that are based on meaning, purpose, and legacy. Antonovsky (1979) proposed a salutogenic model of health to explore ways women maintain and promote well-being under chronic stress in the entrepreneurial context, and its origins are in the health sciences but can be theoretically extended and used in the entrepreneurial context. The theory is that it locates a sense of coherence (comprehensibility, manageability, and meaningfulness) as the way in which stressors may be broken successfully. When applied to female entrepreneurs, the model signifies resilience as an orientation to life that can assist in coping with entrepreneurial stress through the use of optimism, perceived control, and purposeful action. Women with a strong sense of coherence are more likely to perceive difficulties as manageable and meaningful and consequently admit high levels of entrepreneurial resilience.

3.6. Resilience and Enterprise Success: Insights from Organizational Theory

The foundation for exploring the role of resilience in enterprise success is contextualised with organisational learning theory. Originating from the work of Argyris and Schön (1978), this theory asserts that organisations develop resilience by learning from their past and, in particular, learning from failure, and then use learning to adjust their strategies and structures. In culturally nuanced places, such as Kerala, women-owned business firms may rely on experiential learning to cope with institutional gaps and systemic inequities. These enterprises learn through the iterative process of single-loop (incremental change) and double-loop (strategic transformation) learning so that they can build adaptive capacities, improve decision-making, and institutionalise the practice to improve long-term success and sustainability. Finally, contingency theory helps further understand resilience by claiming that the importance of organisational success depends on matching the internal structure of an enterprise with its external environment (Donaldson, 2001). In the case of women entrepreneurs, resilience is not a stable attribute; it is a process of adaptation that depends on environmental volatility, stakeholder expectations, and socio-political restrictions. Here, resilient women owned enterprises are those that can

sufficiently respond to changing external conditions by adapting their structural flexibility, responding to market cues, and being able to customise their operational models. Hence, to achieve enterprise success, the organisation, efficiency, configurational fit, and alignment with external demands are more important than strict adherence to universal best practices.

Resilience in entrepreneurial ecosystems can also be understood compellingly through complexity theory. Taking into account the works of Stacey (1996) and Uhl-Bien and Marion (2008) on complexity theory, resilient organisations are characterised as complex adaptive systems that exhibit non-linear interaction, self-organisation, and emergent behaviours. Therefore, many women entrepreneurs who operate in uncertain and fluctuating environments adopt experimentation, iteration, and collaborative learning strategies. By adapting to these behaviours, they can innovate and survive disruptions over time. From this theoretical perspective, enterprises must thrive in unpredictability as they are not sufficient to be efficient. It is also necessary to dynamically interact and opportunistically adapt. Teece, Pisano, and Shuen (1997) introduced dynamic capabilities theory by focusing on a firm's ability to utilise its existing and continually developing internal and external resources to address a rapidly changing environment in the context of future strategies and goals. Dynamic capabilities represent knowledge required for transforming resilience into competitive advantage and, most importantly, for women entrepreneurs, particularly in resource-constrained settings. They can sense market shifts, catch new openings, and restructure their resources. Therefore, a resilient enterprise is one which is agile in its capacity to innovate, respond to external shocks, and, if required, realise its strategy. On this basis, success stems from resilience, which can be operationalised by the entrepreneur through continuing capability development and global renewal.

The theoretical discourse can be deepened through institutional theory, which would help show how organizational behaviour and resilience can be influenced by institutional norms, regulations, and cultural expectations (DiMaggio and Powell, 1983). Studies reveal that societal gender biases have institutionalised into women's enterprises and outsiders, as they influence capital access, regulatory support, and

legitimacy. Resilience refers to strategic compliance, resistance, and innovative action within institutional voids. In doing so, enterprise success is linked to market outcomes, institutional embeddedness, and the entrepreneur's mobilisation of legitimacy and support from institutions. Another appropriate lens of view is relational coordination theory (Gittell, 2002), which concentrates on the contribution of high-quality communication and relationships to organizational resilience and performance. Consequently, for female entrepreneurs, effective coordination among suppliers, customers, employees, and other stakeholders is essential for achieving service continuity and operational stability. According to this theory, a resilient organisational system is one in which shared goals and mutual respect for each other are strong backbones supported by frequent problem-solving dialogue. If these relational mechanisms are strong, they increase a woman's probability of high performance under stress and recovery from disruptions, boosting the resilience and performance of the enterprise.

According to von Bertalanffy (1968), organisations are viewed from a system theory perspective and are seen as open systems in continuous interaction with their surroundings. Resilience is defined as the capability of a system to maintain equilibrium through feedback loops, boundary management, and systemic integration. Women entrepreneurs usually rely on trade in open systems with interdependencies with families, communities, and markets. Resilience in their enterprises manifests when they can process external feedback, allow themselves to be internally restructured, and continue to function uninterrupted despite external disturbances. These enterprises succeed only if they can work as whole adaptive, coherent, and responsive systems. The addition of the human-based paradigm to agency theory comes from the stewardship theory, which focuses on intrinsic motivation, trust-based governance, and pro-organisational behaviour (Davis, Schoorman, and Donaldson, 1997). Women entrepreneurs, especially in close-knitted communities, adopt a stewardship mindset based on social responsibility, ethical leadership, and long-term value creation. These crises express resilience through a commitment to employees, customers, and communities. In contrast to agency theory, which posits that success comes from control and incentives, stewardship theory advocates success because of

trust, loyalty, and collective well-being. Therefore, entrepreneurs who consider themselves stewards instead of just owners help strengthen enterprise resilience, because stewardship links business performance with the goals of society and other businesses.

3.7. Socio-Demographic Influences on Resilience: A Theoretical Discussion

To fully understand the resilience of women owned enterprises, we cannot isolate it from the broader socio-demographic contexts impacting the behaviour and capabilities of adaptation as entrepreneurs. Social identity theory (Tajfel & Turner, 1986) provides an important basis for understanding how gender, caste, ethnicity, and gender influence the construction of entrepreneurial identity and responses to adversity. According to this theory, individuals develop a self-concept based on perceived membership in social groups, and group identity impacts how they interpret challenges and engage in resilient behaviours. Dominant social categories may give rise to either strength or barriers among women entrepreneurs in Kerala, who exhibit alignment or divergence with such categorisation, ultimately influencing their responses to stressors and their legitimacy to function in the business ecosystem. Life course theory (Elder, 1994), which is rooted in sociology, includes the temporal and experiential dimensions of the analysis of resilience in entrepreneurship and includes dimensions of age, life events, and transitions in roles. From this perspective, socio-demographic features, such as marital status, caregiving, etc., or life stage transitions (maternity, widowhood) have a profound impact on the exposure of an entrepreneur to risk and her ability to bounce back. Through the entry of women into network structures, life course trajectories have been seen to affect access to networks, financial resources, and emotional support, which are also determining factors of resilience in women owned enterprises. An older woman entrepreneur may have developed much more operating capital on social networks, whereas a younger woman may exhibit, for example, greater resilience in digital fluency and agility.

Ajzen's (1991) theory of planned behaviour provides an additional useful vantage point linking attitudes, subjective norms, and perception of control towards an intention and action. The theory argues that women across socio-demographic social

backgrounds have different interpretations of entrepreneurial opportunities and barriers depending on the social environment and internalised beliefs regarding capability. For instance, women from educated urban backgrounds may perceive fewer constraints and therefore exhibit more proactive resilient behaviours than women from rural or low-status communities, where the latter may have to work hard to overcome their internalised limitations as well as the scepticism of close social groups. Sociodemographic characteristics determine how resilience is transformed into business continuity and success. The ecological systems theory (Bronfenbrenner, 1979) offers a multilevel analytical framework for relating resilience to the interaction between individual characteristics and systems at the microsystem (family), mesosystem (community), exosystem (media, policy), and macrosystem (culture) levels. Concerning women entrepreneurs' crisis resource availability, this perspective is particularly appropriate for comprehending the role of socio-demographic variables such as household structure, education level, and related cultural norms. For instance, supportive familial relationships may contribute to micro-level resilience; however, unfavourable cultural expectations may negatively impact risk-taking behaviour. This theory provides insight into how demographic factors affect enterprise resilience by studying the embeddedness of female entrepreneurs in nested systems.

To explain how women entrepreneurs negotiate multiple social roles as mothers, wives, caregivers, and business leaders, and how these role configurations result in stress or support, role theory was used. Typically, it is also conditioned by age, marital status, and familial expectations, and significantly influences how resilience is mobilised. Role demands that conflict with one another may cause role strain, which diminishes emotional and operational resilience. Alternatively, role accumulation (Sieber, 1974) can have positive psychological benefits and increase an entrepreneur's social capital, thus improving the entrepreneur's capacity to withstand external shocks. Consequently, socio-demographic positioning directly leads to the complexity and success of these negotiations. Acculturation theory (Berry, 1997) is useful for explaining how these women, especially migrants and minorities from different cultural or linguistic backgrounds, adjust their entrepreneurial strategies to environmental incongruities. The theory differentiates between integration,

assimilation, separation, and marginalisation strategies when facing cultural stress. The existence of linguistic or religious minorities and women entrepreneurs in Kerala may be found to exhibit resilience in response to identifying, inventing, and creating entrepreneurship opportunities that include drawing their cultural identity to dominant market practices and/or niche enterprises that serve culturally specific needs. Consequently, their resilience strategies are closely related to their sociocultural location and the broader acceptance of diversity in their entrepreneurial ecosystems.

Francis Fukuyama (1992) cites the capability approach as developed by Sen (1999) and extended by Nussbaum (2000) as the appropriate normative framework, which is based on individual freedom and the opportunity for action. This approach emphasises the importance of sociodemographic factors, such as gender, education, and health conditions, for individuals to be able to substantively do or be. Within this paradigm, resilience is not only about bouncing back, but also about having a proclivity of genuine capability to pursue meaningful entrepreneurial goals in spite of structural constraints. Thus, resilience can be conceptualised for women entrepreneurs, particularly in the case of women with a low socio-economic status, such as the realisation of agency and freedom within the constraints of socio-demographic contexts. Drawing from the critical framework of the intersectionality theory created by Crenshaw (1989), the means of overcoming identities, such as gender, caste, class, religion, and location, can be captured with models that can be utilised to create a unique experience of disadvantage or empowerment. Through this theory, we state that women entrepreneurs' resilience is not similar but is influenced by interlocking systems of power that enable different access to resources, networks, and institutional support. For example, for a Dalit woman entrepreneur in rural areas, the forms of marginalisation she faces are compounded, and the resilience strategies she requires may be different from that required by an upper-caste women urban entrepreneur. Hence, enterprise success and resilience can only be understood through the conjunction of socio-demographic structures.

3.8. Strategic Adaptation and Resilience: Theories Supporting Enterprise Survival

The concept of organizational resilience centres on the strategic adaptation of enterprises, particularly when they are led by women in a dynamic and uncertain environment. Dynamic capability theory (Teece, Pisano, & Shuen, 1997) is a theoretical framework that provides a strategic adaptation structure. This theory asserts that firms must have the means through which they can integrate, build, and reconfigure internal and external competencies to match the pace of environmental change. Dynamic capabilities are expressed as rapid learning, innovation, and resource reallocation of the entity, such that it can respond to market disruptions, social pressures, or policy changes for women entrepreneurs in Kerala. This is critical for creating threats to opportunities and ultimately prolonging long-term survival and growth. Dynamic capabilities combine the notions of strategic flexibility, and it is this strategic flexibility that becomes a resilient female entrepreneur's mechanism that allows them to keep evolving their business models to remain competitive. The second essential theoretical framework is the resource dependency theory, which states that organisations are dependent on external parties for basic resources (Pfeffer and Salancik 1978). Within the realm of enterprise resilience, strategic adaptation in volatile markets means being able to deal with dependencies (both financial, supply chain, and institutional) to manage the overall cost of rehabilitation. Women entrepreneurs have unequal access to funding and networks (dependencies) and need to develop alternative strategies to work around these – for example, in the form of community-based partnerships, microfinance, or leveraging social capital. Finally, resource dependency theory postulates that strategic actions such as diversification, alliances, and vertical integration contribute to resistance because they resolve uncertainty and increase organisational autonomy.

According to Lawrence and Lorsch's contingency theory (1967), it is impossible to have one strategy to fit all situations, as a firm's internal organizational structure and processes must be matched with external needs. The main focus area is the manner in which women led organisations in different sectors to adapt their strategy to local

market conditions and customer preferences, and the regulatory climate is highly relevant to this perspective. Resilience permits the careful choice of suitable organizational forms (formal or informal, hierarchical or flat, etc.) according to the circumstances, with the aim of obtaining an enterprise–operational environment fit that improves the resilience of the enterprise. External variables determine strategic decisions, such as product diversification, pricing, and workforce structure, and require adaptive alignment to keep the enterprise afloat. It is also important to understand strategic resilience through the complexity theory of organisations. This theory considers organisations as complex adaptive systems that behave in an emergent manner and nonlinearly with respect to change (Stacey, 1995). Resilience is accomplished through decentralised decision making, innovation, and experimentation, instead of through control and anticipation. A context in which centralised leadership and employee empowerment are highly relevant includes the case of women entrepreneurs, who have to work in very complex environments, such as cultural norms, oscillating demand, and informal competition. Complexity theory argues that reducing uncertainty by embracing it rather than resisting it is essential to strategic resilience, of which adaptability at the enterprise level is merely one level.

A strategic decision-making model for valuing flexibility under uncertainty is provided using the real options theory, first developed in financial economics (Dixit & Pindyck, 1994). According to the theory, in the same way that financial options allow investors to have the right but not the obligation to invest in a future moment, real options enable entrepreneurs to postpone, discount, expand, or abandon business activity as the events unfold. At an operational level, embedding real options in their strategic planning is a way for women entrepreneurs to build resilience (e.g. piloting a new product in a local market before scaling or variable costs to absorb demand shocks). With real options thinking, organisations can be proactive in their risk stance and make decisions with a view to maintaining strategic agility even if the conditions are unclear. Cohen and Levinthal (1990) developed a theory referred to as absorptive capacity theory, which defines the capability of an organisation to identify the importance of new external information, assimilate it, and apply it for commercial use. At the micro level, absorptive capacity is vital to women-owned enterprises,

particularly in resource-poor environments, to acquire market knowledge, regulatory information, and technological innovations. In this respect, strategic resilience comes down to a firm's prior knowledge base, learning orientation, and internal routines supporting knowledge transfer and use. Women entrepreneurs build their absorptive capacity to help them build better strategic foresight and respond more quickly to environmental disruptions, which are essential for sustaining performance in changing business environments.

In doing so, organisational survival is shaped not only by internal capabilities but also by the extent to which an organisation conforms to institutional norms, rules, and expectations (Scott, 1995). Strategic resilience in volatile policy environments or patriarchal socioeconomic systems relates to proceeding along the pressure – legitimacy spectrum while maintaining operational legitimacy. As women entrepreneurs, the authors show that they may strike a balance between conformity (e.g. compliance with licencing regulations) and innovation (e.g. incorporating informal practices into formal business models). Hence, Institutional theory asserts that cultural and normative alignment, as strategic for women, leads to enterprise continuity and resilience. The behavioural theory of the firm (Cyert & March, 1963) focuses on how firms adjust, given that firm decisions are made in an environment of bounded rationality with satisficing tendencies and experienced learning. This theory states that resilient organisations prefer/support incremental adjustments and adaptive learning over the optimisation of outcomes in the context of uncertainty. For women entrepreneurs, strategic decisions may come from experiential insights which over time become trial and error decisions and feedback loops versus analytical optimisation. Using the behavioural approach to explain how knowledge resides in routines, experiential knowledge and learning from setbacks are embedded in organisations, providing a basis for explaining resilience to cumulative adaptation rather than singular transformations.

3.9. Understanding Mediating and Moderating Variables in Entrepreneurial Resilience Theory

To gain an understanding of entrepreneurial resilience, one must go beyond the linear relationship between adversity and entrepreneurial performance outcomes. Therefore, it is necessary to explore mediating and moderating variables which influence how resilience manifests itself in an entrepreneurial setting. Self-determination theory (Ryan & Deci, 2000) is a key theoretical lens that researchers use to examine mediating variables between environmental stressors and resilient behaviours, while one of these mediating variables is intrinsic motivation based on the concepts of autonomy, competence, and relatedness. Intrinsic motivation becomes the internal fuel to turn negative experiences into proactive adaptation for women entrepreneurs running businesses in limited or patriarchal contexts that mitigate the effect of contextual barriers on enterprise survival and innovation. This discussion is also closely related to the broaden-and-build theory of positive emotions proposed by Fredrickson (2001), which provides a basis for explaining how psychological resources mediate entrepreneurial resilience. Following this theory, positive feelings, such as confidence, pride, and thankfulness, broaden a person's instantaneous thought action admission and develop lasting personal assets. These emotions are mediators of adversity in opportunistic action, and in cases involving women, navigating uncertainty and systemic challenges in entrepreneurial contexts. Such psychological resources accumulate over time and contribute to an entrepreneur's sustained resilience and growth; thus, emotional states do not reflect resilience and shape resilience development.

Second, the mediating mechanisms within resilience are further elaborated by the notion of psychological capital, gleaned in particular from the same work of Luthans et al. (2007). Psychological capital consists of four key aspects known as HEROs: hope, efficacy, resilience, and optimism. Psychological capital operates as a core internal mechanism that transmits the effects of external shocks (e.g. economic downturns or policy changes) on business outcomes in an entrepreneurial setting. The psychological capital of women entrepreneurs who are more persistent in goal pursuit,

more creative, and more perseverant is described as how internal cognitive and emotional resources transform environmental stimuli into resilient actions. Whereas mediators tell us how or why resilience arises, moderating variables tell us under what conditions or when resilience tends to emerge more or less. Locus of control (Rotter, 1966) is a highly powerful moderating factor. People who are marked with an internal locus of control believe it is possible to alter outcomes through their own efforts, and having an external locus means believing that outcomes are a matter of fate and not in one's control. With regard to women entrepreneurs, an internal locus of control can mitigate the association between environmental volatility and strategic resilience. The more one has a sense of internal control, the more likely he/she is to perceive crises as manageable challenges rather than insurmountable obstacles, and hence, to adopt more effective adaptive strategies under pressure.

Another moderating framework comes from social network theory, as articulated by Burt (1992), who argues that the conditions under which it is (or is not) effective for an entrepreneur to seek resilience differ according to the structure and quality of an entrepreneur's network. Information advantages, emotional support, and resource opportunities from access to diverse and non-redundant social ties (structural holes) mitigate the impact of adversity on enterprise performance. Supportive networks are an important buffer against the negative impact of isolation or discrimination on women entrepreneurs, who also tend to face gendered barriers in accessing financial and institutional resources. In addition to increasing information flow, these networks increase legitimacy and market access, and the former acts as a moderator of the relationship between environmental turbulence and organisational resilience. To help understand how self-perception and role identities act as moderators of entrepreneurial resilience, identity theory is also relevant. Stryker and Burke (2000) state that based on their salient identities, individuals behave in a manner that is congruent with their identities. Women are more likely to engage in behaviours related to persistence, innovation, and self-efficacy in crises when their entrepreneurial identity is central to their selves. Thus, the salience of entrepreneurial identity can, in turn, moderate the degree to which setbacks are disruptive to long-term goals; hence, the construction of identity is a vital determinant of the resilient response to adversity.

In this context, another moderating perspective comes from social comparison theory, and specifically from the study by Festinger (1954). According to this theory, people measure themselves by referring to others in their situations. When it comes to entrepreneurial ecosystems, women tend to look to peers or mentors for cues regarding what is an acceptable way to respond to failure or uncertainty. Are these comparisons empowering or demoralising? They can either increase or lessen someone's resilience if they spark motivation or make someone feel inadequate. For instance, a woman entrepreneur might be inspired to keep fighting her challenges after seeing a peer persevere or be disheartened from feeling incompetent based on unfavourable comparisons with similar peers. Therefore, the effect of business stressors on behaviour is psychically moderated by social comparison. The theory of conservation of resources developed by Hobfoll (1989) assumes that individuals in general put effort into obtaining, preserving, and maintaining resources, and stress occurs when these resources are threatened or lost. The availability of personal, social, and material resources moderates the impact of adversity on resilience within this framework. With access to supportive families, reserves of money, or other community resources, female entrepreneurs may be under less stress and suffer less burnout. In contrast, having limited access to basic checks and services can cause more damage and make recovery more difficult. This further strengthens the notion that resilience is context-specific and that having resource endowments matters a lot in determining the ability to adapt and continue entrepreneurial efforts when the context is unfavourable.

3.10. Theoretical Models Guiding the Study of Entrepreneurial Resilience

Entrepreneurial resilience is an inherently multidimensional construct for which there is a real need to understand the complex interrelationships between the various factors contributing to an entrepreneur's capacity to deal with adversity to support organisational success. A few theoretical models have been proposed to explain and direct research on resilience in the entrepreneurial context. The foremost one of these is the dynamic capabilities theory mentioned in Teece (2007), which focuses on the capacity of an organisation to coordinate, develop, and rearrange internal and external

abilities so that it can adjust to an environment changing at a high pace. Resilience is the ability of a firm to be in a state of permanent change, learn from past errors, and capitalise on its competencies in a situation of uncertainty. By highlighting the significance of attributes such as strategic flexibility, resource reallocation, and innovation, particularly in the context of unanticipated challenges and disruptions of business, this model turns out to be an important verification of the reality-model mismatch. In the case of women entrepreneurs, Kerala has provided this dynamic flexibility, where women entrepreneurs survive regional economic shifts, technological changes, and gender-specific barriers that would put their survival at stake without this. The resource-based view (RBV) is another exemplary theoretical model in the literature on the study and development of entrepreneurial resilience, particularly developed by Barney (1991). From this perspective, a firm's resources and capabilities that are specific to the firm can help it obtain a competitive advantage despite adversity. Having resources is not the only thing, but how one uses those resources during a crisis is also important for an enterprise to be resilient. These resources, such as human capital, financial capital, social capital, and knowledge networks, facilitate the sustainability of operations in hard time. The accessibility and ability to appropriately employ these resources can have a known influence on the strength of the business for women entrepreneurs. This model emphasises that in such dynamic business contexts, intangible assets, including entrepreneurial mindset and social capital, provide businesses with resilience building and resilience maintenance abilities.

There is another way to see resilience through its lens, which is in relation to organizational decision-making and adaptation to external shocks using the transaction costs economics framework (Williamson, 1981). Transaction cost economics emphasises the cost of coordinating and controlling resources, especially when a level of uncertainty exists. Therefore, in the market, resilient enterprises are those that are able to minimise transaction costs by optimising supply chain relationships, strategic partnerships, and governance structures. This is a crucial area for women entrepreneurs to manage their costs well and survive complex market conditions. In addition, this theory assumes that more resilient firms may gain lower

transaction costs because they run more smoothly and more efficiently in terms of redundancies to increase their overall chances of surviving and thriving in an adverse situation. Apart from the resource-based view and transaction cost economics, institutional theory (DiMaggio & Powell, 1983) contributes to understanding how the resilience of entrepreneurial ventures is shaped by external institutional pressures (e.g. regulations, societal norms, and industry standards). This theory states that resilience is not simply an individual premise, but also a premise of how firms adapt to and exploit the institutional forces of the outside world. Pressure on space and land for such activities in common suggests that these pressures create both challenges and opportunities, especially in entrepreneurial ecosystems, particularly in developing economies. For instance, women entrepreneurs encounter institutional barriers in the form of gendered norms and access to finance, yet they are able to capitalise on institutional changes, such as government policies geared towards the advancement of women's entrepreneurship or gender equality, which bolster their resilience. This ability to react to institutional changes and remain competitive and resilient over the long run is dictated by entrepreneurs' adaptability.

Another important view regarding resilience is provided by contingency theory (Fiedler, 1964), which stresses that there is no one truth to lead or deliver in an organisation. However, the most potent resilience strategies vary with the different environments in which an enterprise functions. This model posits that women entrepreneurs in entrepreneurial settings should customise their resilience strategies, given the context within which they operate (cultural, economic, or regulatory challenges). Therefore, contingency theory emphasises matching organisational structures and leadership styles to the external environment in order to enhance resilience. In the case of women entrepreneurs in Kerala, this theory indicates the need to assess the local market, available resources, and potential risks before making any decision that can affect their power of adaptation and prosperity. The second important model in the study of entrepreneurial resilience is (Masten et al., 2011) psychological resilience framework. Instead, this framework centres only on individual-level factors, such as psychological traits, coping mechanisms, and the ability to bounce back after failures. Psychological resilience in managing a business

is of primary importance, especially for women entrepreneurs, when all the stress and psychological problems of the venture are confronted in entrepreneurial endeavours. Entrepreneurs who have been shown to have higher psychological resilience are generally more effective in dealing with stress, uncertainty, and failure, and in using challenges as a means for growth, not as an obstacle to success. This model indicates that by training and mentoring employees to build psychological resilience and providing workers with emotional support, we can build resilience wholly throughout the enterprise. As for women entrepreneurs, psychological resilience is also important for charting a way through gender-specific hurdles and redefining the norms surrounding women's entrepreneurial capabilities.

A second dimension is added to the theoretical understanding of resilience in the entrepreneurial ecosystem model (Stam, 2015) as it extends the environment in which entrepreneurs operate. The concept of this model is that resilience does not exist in isolation as it is dependent on the availability of resources, networks, and opportunities present within the ecosystem. Such an entrepreneurial ecosystem contains support systems that help entrepreneurs recover from adversity. A supportive entrepreneurial ecosystem that includes government programs, access to finance, peers, and institutional support can make all the differences in the resilience of women entrepreneurs in Kerala. Entrepreneurs are connected to external actors and are viewed through an ecosystem that fosters the importance of social capital and collaborative relationships in building resilience. Holling (2001) proposed the adaptive cycle theory as a framework for understanding the dynamic process of resilience, especially in complex systems such as entrepreneurial ventures. This theory proposes that resilience can be represented by cycles of growth, conservation, release, and reorganisation. These phases are germane to entrepreneurial epochs in the ebb and flow typical of the development of entrepreneurial businesses, whereby periods of stability are interrupted by disorder and disconnection in the change of business, requiring firms to reorganise. The adaptive cycle framework is most useful for understanding how entrepreneurs, including women entrepreneurs, survive and sustain their business through evolution in light of internal and external pressures of the business environment. For female entrepreneurs, being able to navigate these

cyclical transitions through business model innovation, adapting to the market, or resource reallocation is critical to resilient long-term success.

3.11. Foundations of Resilient Entrepreneurship: Bridging Theory and Practice

Entrepreneurial resilience is the capacity of entrepreneurs to suffer and thrive in adverse conditions, as well as innovate during those conditions. Understanding the theoretical explanation of how entrepreneurs deal with setbacks, disruptions, and crises and the resilience of their businesses is the basis for a resilient entrepreneur. An important component of this field is entrepreneurial orientation (Lumpkin & Dess, 1996) theory, which states that an entrepreneur has a predisposition to risk, proactiveness, and innovativeness. Resilient entrepreneurs have high levels of entrepreneurial orientation, which helps them adapt and seize new opportunities in an emergent environment. Resilient entrepreneurs who are proactive will be able to visualise possible disruptions and potential actions that can be taken to minimise their damage. In addition, their risk-taking propensities make them experiment with alternative strategies and shift when required, keeping the business moving, surviving, and thriving, even in the face of adversity. Apart from entrepreneurial orientation, the theory of social capital constitutes an essential root of resilient entrepreneurship. Social capital consists of the networks, relationships, and social links that entrepreneurs rely on to acquire resources, information, and support. Social capital use in the context of resilience allows entrepreneurs to create partnerships, obtain the resources needed, and share knowledge, which is important for navigating through crises. According to Putnam (2000), social networks can be strong and provide crucial support in difficult times that give selected entrepreneurs the ability to adapt. Social capital plays an important role as a key resource for women entrepreneurs doing business to overcome obstacles, such as limited finance access and male-dominated business networks. Women entrepreneurs can improve resilience by being able to access support systems, build relationship networks, and, therefore, contribute much more to building business sustainability and benefit business growth.

Psychological capital theory (Luthans et al., 2007; self-efficacy, optimism, hope, and resiliency) is another important theoretical base for resilient entrepreneurship. In the

presence of adversity, it has been shown that psychological capital positively contributes to entrepreneurial success. Mentally resilient entrepreneurs can keep going through a setback, keep their chin up, and keep working towards their goals when confronted with obstacles. Self-efficacy, an individual's belief about their ability to complete tasks and conquer threats, is especially necessary. Entrepreneurs with high psychological capital are more likely to bounce back from failure and maintain the desire to take on new possibilities needed for continuing long-term business operations. Notably, this theory applies well to women entrepreneurs who consider this a necessity for successfully navigating the challenges posed by gender barriers that exist in the entrepreneurial ecosystem. Moreover, complexity theory provides useful insights into resilient entrepreneurship. According to complexity theory (Snowden and Boone 2007), businesses are dynamic, adaptive, and interconnected like ecosystems; thus, entrepreneurs need to manoeuvre complex and unpredictable environments. Successful entrepreneurs select patterns, adapt to change, and respond to new opportunities in real time. It highlights the significance of flexibility and the ability to test different strategies to adapt to changing situations. In the event of an entrepreneurial setting, marked by uncertainty and rapid change wherein entrepreneurs operate in the evolving business environment of Kerala, they must possess a mindset of continuous learning and adaptation. Being resilient entrepreneurs means that they find opportunities to innovate in the face of complexity, respond to market changes, adapt to change, and offset setbacks.

The foundations of resilient entrepreneurship are also provided by the dynamic capabilities theory (Teece, 2007). This theory concentrates on the ability of an organisation to integrate, reconfigure, and renew its resources and capabilities in the changing market environment. Resilient entrepreneurs' dynamic capabilities exhibit continuous innovativeness in their business models to ensure competition. Rather than just responding to the effects of changes in their environment, they are able to predict disruptions to their business and adapt their strategies to the new market conditions they see approaching. The ability of resilient entrepreneurs to reconfigure resources (human capital, technology, and financial assets) allows them to build resilient competitive advantages in the face of such challenges. In particular, dynamic

capabilities are especially important for women entrepreneurs, as they help them circumvent gendered challenges, including restricted access to capital and networking opportunities, by finding innovative ways to utilise existing resources. Transformational leadership theory (Bass, 1985) is another foundation for resilient entrepreneurship, premised on how leadership styles enforce organisational resilience. Transformational leaders transform people, inspire them through creative visionaries, and encourage them to be innovative. In the case of women's entrepreneurial ventures, transformational leadership plays a central role in building a resilient mindset within the organisation. With the right leadership in place, these teams are galvanised to see challenges for what they are, roll with the punches, and band together for the sake of overall business resilience. Transformational leadership is especially important for women entrepreneurs as it enables them to break barriers of stereotypical gender roles and turns out to be an invaluable asset in comparison to the traditional leadership styles, power over employees, and imparting a resilient culture to their organisations.

Another theoretical foundation from which to understand resilient entrepreneurship is the resource-based view (Barney 1991). This theory views a firm's unique resources and capabilities as a source of competitive advantage. Resilient entrepreneurs use resources, such as knowledge, capital, and networks, to survive and thrive in an uncertain environment. In the context of female entrepreneurs in Kerala, the resource-based view is significant in the development of both tangible and intangible resources, including technological expertise, social capital, and entrepreneurial networks. With proper use of these resources, women entrepreneurs can maximise value creation, reduce the chances of failure, and increase their ability to re-bounce when challenges arise. Representing a practical framework to explain how entrepreneurs can foster resilience within their organisations, the concept of adaptive leadership (Heifetz et al., 2009) can be used. Adaptive leadership looks at leadership in terms of the capacity of leaders to navigate their organisations through change and uncertainty, encouraging flexibility, innovation, and learning, among other things. Some resilient entrepreneurs have adaptive leadership that entails reacting to challenges with agility and inspiring their teams to devise solutions and embrace innovation. In female entrepreneurship, this leadership style is especially important as it leads the organiser to develop inner

resilience, responsiveness, courage, and toughness, and develops the entrepreneur as well, all of which lead to global sensibility. Adaptive leadership allows women entrepreneurs to overcome the challenges they face and transform them into opportunities for growth and innovation.

3.12. Conclusion

This theoretical framework provides a comprehensive understanding of different forms of resilience in the entrepreneurial setting of women owned enterprises. This study examines resilience in organisational systems by examining the roles of socio-demographic factors, entrepreneurial strategies, and organizational resilience as the prevailing mechanisms of companies in dealing with uncertainty. Taken together, these theories identify strategic adaptation, entrepreneurial orientation, social capital, and psychological capital as important drivers of resilience and business success. This framework integrates theoretical perspectives to show that resilience is multifaceted and not a static trait but a dynamic process dependent on internal capabilities and external factors. Interconnecting strategy, performance, and resilience have also unlocked the possibility of how a firm can survive crises and spring back with resilience. In addition, the main future research avenue for entrepreneurial resilience development lies in examining the mediating and moderating variables. Strategic adaptation and the role of leadership are included in that they demonstrate how women entrepreneurs draw on both individual and organizational strengths to flourish in the challenge space. This framework bridges theory and practice, provides actionable information for practitioners and researchers, and can guide future studies on resilience in entrepreneurship. Ultimately, it is possible to understand how complex interactions between various theories of resilience imply that a holistic approach is required to promote business sustainability, innovation, and growth in the context of uncertainty and adversity.

CHAPTER 4
CONCEPTUAL FRAMEWORK

4.1 Introduction

4.2 Defining Organizational Resilience and its Dimensions in Women Owned Enterprises

4.3 Dissecting Enterprise Performance: Indicators in the Context of Women Entrepreneurs

4.4 Exploring the Influence of Organizational Resilience on Enterprise Performance

4.5 Components of Resilience Strategies Adopted by Women Entrepreneurs

4.6 Mediating Role of Resilience Strategies Between Organizational Resilience and Enterprise Performance

4.7 Moderating Effect of Socio – Demographic Factors on Organizational Resilience and Enterprise Performance Relationship

4.8 Conclusion

4.1 Introduction

A dynamic model for the organizational resilience of women entrepreneurs in Kerala and its influence on enterprise performance was presented through the conceptual framework (Figure 3.1). Organizational Resilience in the model constitutes the five critical dimensions of adaptability, proactiveness, resourcefulness, crisis management, and innovation. This reflects women-led enterprises' ability to foresee, plan, and respond to incremental changes and sharp fluctuations. The hypothesis assumes that Resilience Strategies underlie organizational resilience and comprises the most important items, such as digital transformation, financial planning, employee engagement, networking, partnership, and market diversification. These serve as actionable pathways to translate resilience into practice, so that women entrepreneurs can maintain operational stability while demonstrating strategic agility in unforeseeable environments.

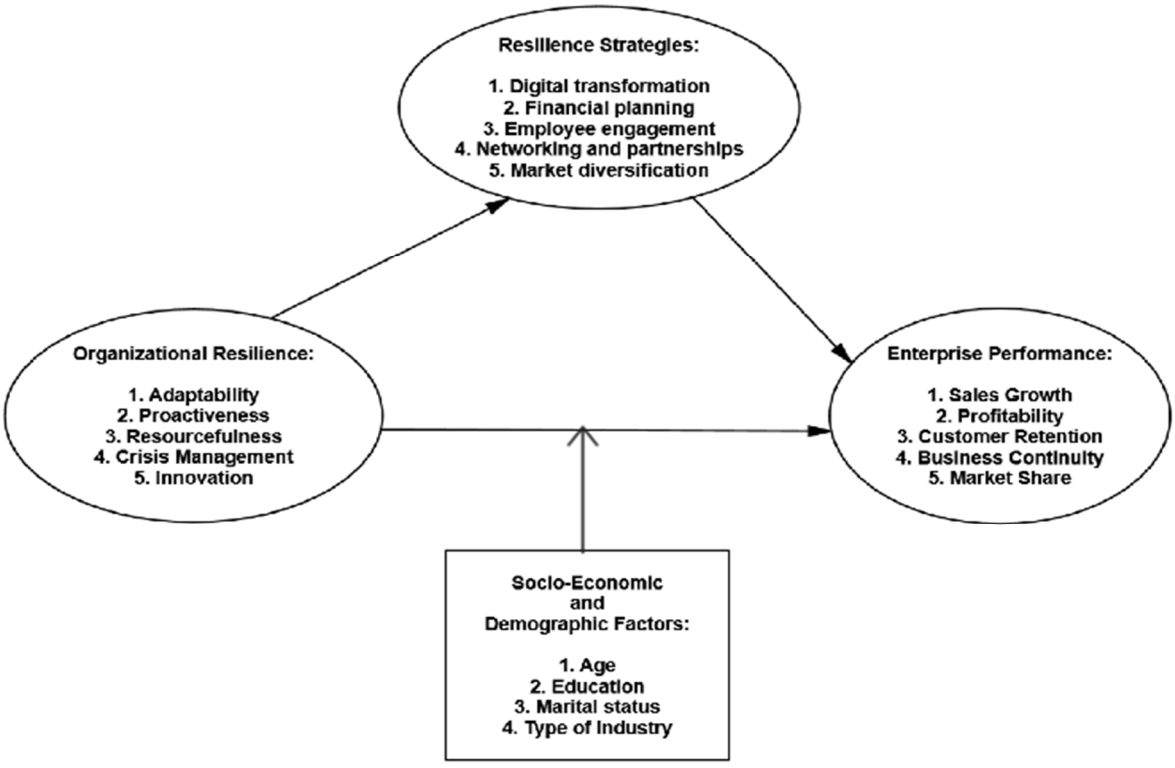


Figure 4.1: The Dimensions of Organizational resilience and Resilience strategies contribute to enterprise performance

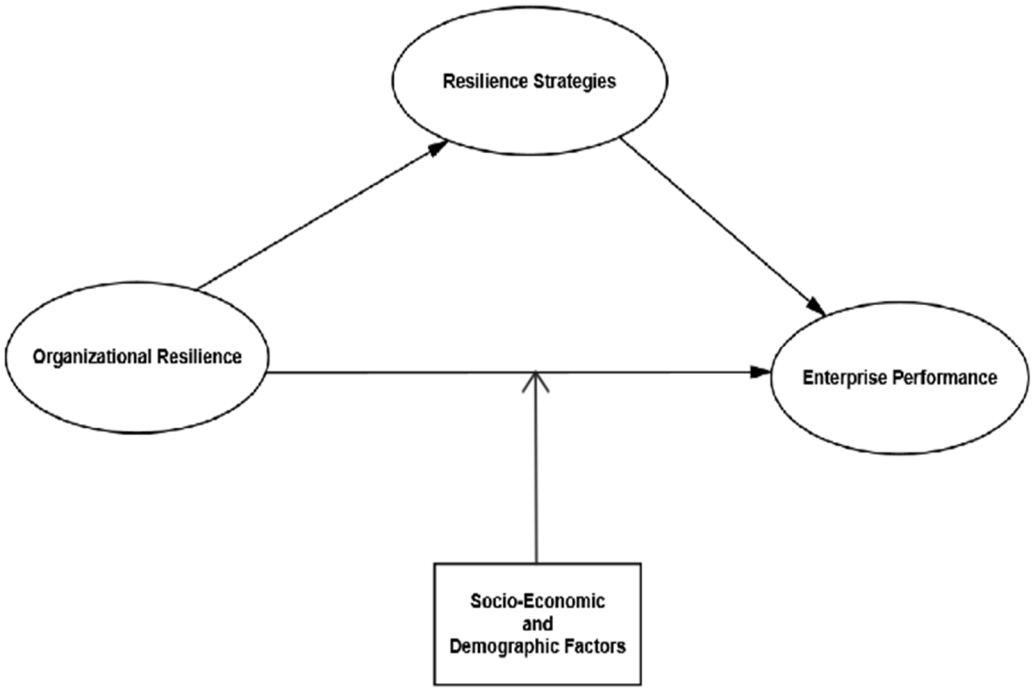


Figure 4.2: The Hypothetical Model of Organizational resilience and Resilience strategies contribute to enterprise performance

Another way that the framework (Figure 3.2) examines the extent to which organizational resilience and resilience strategies lead to enterprise performance, specifically measured through such performance indicators as sales growth, profitability, customer retention, business continuity and market share, all of which paints a vivid picture of the sustainability and success of women-owned businesses can be sustained. Significantly, resilience strategies mediate between resilience and performance; therefore, the mere existence of resilience is insufficient without implementing these strategies through strategic actions. Furthermore, socioeconomic and demographic factors are proposed as moderators of the relationship between the strength and direction of the relationship between organizational resilience and enterprise performance. This results in the development of such unique women and, as per the result, factors such as education level, income, age, family responsibilities, and regional disparities blend and enhance the resilience of women and add complexity and contextual depth to the entrepreneurial landscape of women in Kerala (interview). Thus, this integrated model provides a holistic view of the capabilities

that resilient enterprises use to exploit the potential opportunities that emerge from volatility and deliver superior enterprise outcomes.

4.2 Defining Organizational Resilience and Its Dimensions in Women-Owned Enterprises

Organizational resilience is increasingly being conceived as a dynamic capability that helps an enterprise survive, moderate, and thrive in adversity. For women owned enterprises, this resilience is tested owing to constrained access to finance, institutional support, and persistence of gender-biased barriers. Burnard and Bhamra (2011) define resilience in organisations as the ability to foresee disruptions, deal with adversity, and absorb them as a means of improving their long-term performance. Resilience, hence, becomes the key to business continuity of women entrepreneurs, especially in developing areas such as Kerala, who struggle to work in complex sociocultural and economic contexts. As suggested by Lengnick-Hall, Beck, and LengnickHall (2011, p. 33), resilience was found to be deeply ingrained in the strategic posture and leadership mindset of the organisation, and in women-led enterprises, it was a blend of personal tenacity, social ingenuity, and unique adaptive strategies to resource-constrained organisational venues. The ability to remain flexible and change operations is known as adaptability. In particular, women entrepreneurs have experienced great importance in this attribute due to sudden shifts in market dynamics or consumer behaviour. According to Sutcliffe and Vogus (2003), adaptability is an important trait for organisational survival and implies that adaptive firms can sense weak signals and adaptive process adjustment. Kantur and İşeri-Say (2015) state that women-led businesses manifest higher adaptability by changing business models, implementing new technologies, or even shifting product offerings to overcome crises like the COVID 19 pandemic. Studies in India (Mishra & Kumar(2021) highlighted that small women-owned businesses that show adaptive responses to moving to digital selling platforms improved the possibility of survival of such enterprises during economic slowdowns.

Another important dimension of organizational resilience is proactiveness, which is defined as anticipatory, change-oriented, and self-initiated behaviour in search of new

opportunities (Lumpkin & Dess, 1996). This applies to women entrepreneurs, as being proactive involves scanning the external environment, anticipating obstacles, and having contingency plans in place well ahead of time. As proactive behaviour reduces response time to threats, it allows prompt recovery, which is why proactive behaviour has been linked to higher resilience (Teixeira & Werther, 2013). Therefore, according to Bullough et al. (2014), proactive female entrepreneurs tend to create strategic networks, attend industry forums, and disrupt markets that are more likely to innovate before the disruptions. Proactive women entrepreneurs in Kerala, facing local constraints of infrastructural limitations and gender norms, employ cooperative societies and self-help groups to be ahead of market trends and receive early warning signals of potential risks. The third dimension is resourcefulness which implies the creative and efficient application of scarce resources to solve challenges. It specifically pertains to women entrepreneurs who encounter structural hindrances in acquiring formal financing, property rights, and institutional support (Brush et al., 2009). According to Stevenson and Jarillo (1990), resourcefulness is part of the entrepreneurial mindset, which they view as the ability to recombine available assets creatively. Women in small enterprises' bootstraps have reciprocal relationships with suppliers and make use of informal labour to meet output in these small enterprises. (Manimala et al., 2006) According to Pathak, Goltz and Buche (2013), Indian women entrepreneurs heavily depended on personal networks and community-based resources during hard times to continue running or even to expand into new markets. In this sense, resourcefulness is not the only compensatory mechanism; a strategic capability with the ability to enhance resilience and business continuity is strengthened.

Crisis management is critical to comprehend the resilience of women-led businesses amid systemic shocks. It identifies, prepares, and executes strategies to minimise the impact of crises and recover from them. According to Herbane (2010), resilient organisations make strategic management processes function with crisis planning by forming flexible structures which can quickly mobilise resources during emergencies. For a female entrepreneur, crisis management may require effective emotional regulation, stakeholder communication, and the auxiliary mobilisation of social

capital (Alon, 2001), and for women entrepreneurs who need to take care of their personal and family responsibilities during crisis times. The availability of networks of peer, mentor; and familial support is termed as the key factor by Alam, Jani, and Omar (2011) in the ability to overcome crisis management in women owned SMEs. George and Kumar (2019) found that women entrepreneurs in Kerala leverage Kudumbashree networks and women-specific coops for local disruptions, such as pandemics, floods, or policy shifts; thus, collective action and social embeddedness play a role in crisis resilience. Innovation is an essential, if not transformational, role in building organizational resilience and helping companies reinvent themselves, differentiate themselves in the marketplace, and create value in the face of constraints. In Schumpeterian terms, innovation is the source of entrepreneurial success, and empirical research shows that in a system of exclusion, women entrepreneurs practise 'necessity driven innovation ' (DeTienne & Chandler, 2007). Not all innovations are high-tech; they can be service innovations, business model pivots, and informal marketing strategies. Rao and Krishna (2013) state that women owned enterprises in Kerala innovate in customer service practices, such as home delivery or personalised services, that build customer loyalty and retention. As Ahl and Marlow (2012) state, women certainly do not have the same access to formal R&D structures as men, but they are highly innovative in the use of tacit innovation gained through customer interaction, community knowledge, and their own intuition. Therefore, innovation also provides women entrepreneurs with an alternative to transcending survival and attaining competitive resilience, and hence their contribution to inclusive economic development.

Women's organizational resilience is not only but rather a group of interrelated capabilities that include adaptability, proactiveness, resourcefulness, crisis management, and innovation. All these dimensions individually contribute in different ways to women entrepreneurs managing uncertainty, responding to shocks, and maximising growth opportunities. The existing literature supports the argument that resilient women entrepreneurs are better placed to maintain enterprise and business performance, continuity, and socio-economic development. Integrating these resilience dimensions into policy frameworks, training programs, and ecosystem

development can help make way for the incorporation of women enterprises in Kerala and elsewhere. The findings highlight the gendered nuances of resilience and reinforce the need for contingence-sensitive strategies to empower women entrepreneurs in different settings.

4.2.1. Adaptability

As a pillar of organisational resilience, adaptability is widely known, and women entrepreneurs work in multilayers of socio-cultural and economic boundaries; therefore, one of these fundamental pillars may hamper their success. In the case of women owned enterprises, adaptability refers to the capability to dynamically reconfigure business operations as a response to the changing environment of challenges (Peck, 2011). While a very brief synopsis, this information is accurate enough to let you know that women entrepreneurs in Kerala (as in other places) encounter a unique set of structural challenges when it comes to access to finance, societal expectations, and gender-specific barriers to starting and sustaining their ventures. Women entrepreneurs who were successful in keeping their business going and relevant in the COVID19 period, had adaptive capabilities to shift to online platforms as well as product offering alterations (Patra & Lenka, 2024). In particular, digital adaptability has proven quite empowering for women led businesses. With the increasing penetration of digital infrastructure, many women entrepreneurs in Kerala have been able to leverage digital tools to reinvent their business models, manage supply chains, and interact with customers in unfamiliar ways. Digital adoption among Kerala-based startups has been studied by (Khurana et al., 2022), who found that the use of digital technologies aided the incorporation of adaptive behaviour to a great extent, with resilience as a mediating factor. However, the digital adaptability of this digital world not only kept businesses during the height of the pandemic but also opened its market reach, service, and even its decision-making process to data that is necessary for long-term sustainability.

In addition, community-based structures such as self-help groups (SHGs) and women's cooperatives in Kerala have also significantly contributed to the development of adaptability among women entrepreneurs. These networks create

scenarios in which collaboration, knowledge sharing, and collective problem solving for learning are encouraged. As (Steffy, 2008) noted, women's participation in SHGs helped build women's entrepreneurial resilience through the platforms it provided for adaptive strategy formation (e.g. market diversification and local sourcing alternatives). In economic, natural, and other crises, community support is critical because women can rely on shared experiences and make strategic pivots based on what they have seen their peers. The adaptive resilience of women entrepreneurs during natural disasters, such as the 2018 Kerala floods, was witnessed. The supply chains of many women led businesses, restructured them, made hyper-local delivery models, and collaborated with local panchayats to re-establish their operational functions (Joseph & Mathew, 2020). These were not rapid adaptations resulting from access to capital or other resources, but from the necessity to survive and the ability to leverage past experiences. Adaptability in such a context-specific manner is of particular importance in disaster-prone areas such as Kerala, where unpredictability is an ever-threatening reality. Adaptability and work-life balance are also important, but particularly for women entrepreneurs. Managing household responsibilities together with business commitments is a challenge which requires the development of flexible strategies suited to them and their timing. Adaptive time management practices, such as mobile work stations, family supported childcare, and segmented work hours, enabled women entrepreneurs in the Thiruvananthapuram district to continue with productivity and mental health during business disruptions, as stated by (Prabhakar et al., 2023). At the micro level, the ability of an enterprise to adjust to a changing business environment ensures that personal constraints do not fail to align with enterprise performance, thus reinforcing organisational resilience.

As a dynamic capability, adaptability in female MSMEs helps entrepreneurs overcome uncertain and volatile environments. Women entrepreneurs in MSMEs must rely more on fast and smart adaptation to keep running and survive competition in cases of scarce resources. In Kerala, economic fluctuations, sociocultural expectations, and even climatic uncertainties loom significantly, which is especially critical. There is a unique adaptive behaviour (as stated by (Gergely et al., 2024) of women entrepreneurs in MSMEs by reconfiguring their business processes (such as

sourcing, pricing, and logistics) to meet market variations and customer expectations. The changes highlighted in the study stated that women's adaptability in MSMEs is not just reactive, but also anticipatory, which is vital for long-term resilience. Further research has established that sectoral flexibility contributes to adaptive capacity for women entrepreneurs. Women entrepreneurs in sectors such as agriculture, textiles, handicrafts, and food processing, diversifying their activities in this ecosystem in Kerala, are more resilient to sector-specific shocks (Anna & Chandrasekharan Pillai, 1989). To survive the economic downturns, the capacity to adapt in the low-and high-demand sectors or working in a brand-new hybrid business model is large. For example, during the pandemic, when restaurant services were no longer viable, women entrepreneurs in food turned to delivery and cloud kitchens and survived economic shocks because of sectoral adaptability.

Additionally, technological adaptability contributing to the enhancement of resilience among women-led MSMEs is transformative. (Hamid et al., 2020) also notes how many women entrepreneurs in Kerala, like many other entrepreneurs around the country, have incorporated affordable digital solutions, such as WhatsApp Business, Google Forms, and UPI-based payments, to streamline their operations, improve customer communication, and expand their footprints in the digital world. These micro-adaptations are hardly discussed in the formal literature but are evidence of agile thinking and contextual adaptability. In addition, they are better able to use digital literacy processes sponsored by the government, such as the Digital Kerala program, to continue and sustain their businesses. Another crucial layer in women's adaptive behaviours is social adaptability (the ability to adapt to varying societal roles and expectations). In patriarchal societies, in which women are confined to certain degrees of mobility and economic function, this type of adaptability requires the management of family responsibilities, social stigma, and professional duties. In other words, (Wang et al., 2020) found that women entrepreneurs who had effectively negotiated with domestic support systems and retrofitted gender roles were more likely to be in a situation to maintain the business during testing times. They concluded that adaptability is both an economic and an operational process as much as a sociocultural process, calling for personal resilience and community negotiation.

An important subtheme is institutional adaptability. Often, women entrepreneurs in MSMEs adjust their practices to comply with new regulatory and compliance frameworks. Adaptability with passing government formalities such as government tax structures, subsidies, and environmental regulations has become important. (Langevang et al., 2018) further contended that women-led MSMEs, which maintained flexible documentation, digital records, and multiple banks, emerged as winners in securing funding and were in a better position to adhere to legal requirements. By its ability to adapt to institutional change, the legal survival of women entrepreneurs is ensured, and they become eligible for growth opportunities, such as public procurement and export promotion. Recently, emotional and psychological adaptability have been highlighted as a force behind entrepreneurial persistence in the literature. Women MSME entrepreneurs in the post-flood and post-pandemic Kerala economies have adapted very well to trauma, uncertainty, and business loss. According to (Chadwick & Raver, 2020), emotional adaptability which is the ability to identify and respond appropriately to the emotional context, is shown by self-motivation, optimism, and coping mechanisms, which are important in how women entrepreneurs reinvented their goals and strategies after crisis events. However, informal peer networks, mentoring platforms, and self-help groups, where emotional counselling is offered along with economic advice, nurture adaptive capacity.

4.2.2. Proactiveness

As a behavioural orientation, proactiveness refers to the entrepreneur's capacity and willingness to be ahead in anticipation of future demands, to act before potential threats or opportunities develop, and to act before satisfying and initiating change instead of responding to it. Widely understood in organisational resilience, proactiveness is crucial in women's entrepreneurship to help women leaders not only survive, but also thrive in a continually changing environment. MSME women leaders in Kerala, for instance, tend to run their businesses in resource-constrained as well as socially restricted areas. Therefore, their proactive behaviour comes from opportunity scouting, trend monitoring, and pioneering innovations. (Zighan et al., 2022)

also argue that proactive entrepreneurs are more likely to do this on the basis that they purposely prepare themselves for the future, entertain lofty aspirations, even before having the means to materialise them, foresee the future demands of customers, and pre-emptively rearrange their strategies, a type of advancement likely to improve both firm adaptability and competitiveness in an uncertain market. In the Indian context, proactive women demonstrate a resilient posture of initiating outreach at the community level, policy engagement, and pre-emptive diversification in the market. (Steffy, 2008) observed several women in Kerala's MSME sector actively searching for new customer bases and technological solutions, even before crises such as the COVID pandemic. This enabled such anticipatory behaviour to transition to digital platforms, revamp product portfolios from traditional to digital, and restructure supply chains. The early preparedness of these companies helped reduce their dependence on traditional sales channels, reduced operational downtimes, and were early movers in recovering from economic disruption. The success they achieved illustrates that proactiveness is not a personality trait but rather a strategic capability that builds from the resilient thinking base.

This research also shows that mentorship, training programs, and institutional support systems play a significant role in prompting women entrepreneurs to be proactive. Entrepreneurs with capacity-building workshops or networks tend to be able to forecast market trends, interpret early warning signals, and implement preventive measures. (Senapati et al., 2024) in their study showed that women entrepreneurs in MSMEs organised in proactive business planning workshops were 35% more likely to release new products or enter new markets within a year. However, this shows the worthiness of structured intervention in promoting a proactive mindset that is inhibited by social constraints and low confidence levels usually observed in women's entrepreneurial ecosystems. Women entrepreneurs employ proactiveness at another level in managing risk and contingency planning. Women entrepreneurs in the MSME sector who do not have formal frameworks developed for risk management proactively devise informal means of managing risk, including maintaining emergency funds, developing alternate suppliers, or creating additional revenue streams. Drawing on the notion of transcendence, (Kinoti, 2024)

suggested that this kind of forward thinking was particularly present if a woman had previously experienced business or personal struggles in life which may reinforce prosocial and resilience. Entrepreneurs such as these do not sit idly by waiting for threats to occur; they anticipate the possibility of a threat arising and, therefore, prepare organisational stability and enhance long-run performance.

However, resilient women-led enterprises are becoming increasingly technological precatives. Entrepreneurs who experiment with new technologies gain early accessibility to efficiency, data insights, and customer engagement tools (and essentially always beat their competitors). (Purty et al., 2025) reported that women entrepreneurs who adopted e-commerce platforms, social media marketing, and customer relationship management tools proactively prior to the pandemic were significantly more likely to keep the customer as well as revenue streams intact during the lockdowns. These findings demonstrate that proactive resilience based on technological foresight is not only an important source of adaptability but also fundamental to strive in an environment of institutional and infrastructural constraints. Women entrepreneurship also comprises proactiveness and social environmental consciousness which are of great value in the resilience and sustainability discourse. Women who consciously integrate the green or sustainability aspect into their business model, along the lines of zero-waste packaging or fair-trade practices, are not only able to meet the shifting demand of customers, but at the same time, future-proof their enterprises. (Lorenzo, 2024) further state that women-led MSMEs who started integrating eco-friendly operations in view of environmental regulations or changing consumer values gained more brand trust and better market differentiation. This approach to resilience for women entrepreneurs is proactive resilience that transforms women entrepreneurs into economic agents, not only through their entrepreneurial endeavours but also through visionaries of change for inclusive and sustainable growth.

By being proactive, women entrepreneurs in MSMEs expand the horizon of conventional reactive behaviour and establish a capability to envision the future, respond to weak signals, and take strategic actions in anticipation of threats. For

socioeconomic reasons, women have limited access to capital, networks, and market information, such as in the state of Kerala, and proactive behaviour becomes a strategic level. Entrepreneurial foresight plays an invaluable role in volatile business environments in which women can use it to implement pivot strategies or diversify product offerings before negative conditions worsen. According to (Kovid et al., 2024), proactive decision-making among women entrepreneurs is based on lived experiences in gendered markets and on contextual awareness from which they are able to circumvent systemic constraints through a process of strategic pre-emption. In addition, proactiveness involves anticipating customer needs and innovating solutions accordingly. For MSMEs, especially those in service or artisanal sectors led by women, anticipating consumer shifts has made it possible for entrepreneurs to be relevant without big marketing budgets or scale of operation. For instance, women's tailoring units that foresaw the demand for reusable cloth masks during the Covid 19 pandemic were quick to capture local markets. (George, 2022)

It show that such proactive moves were not only driven by what was visible in trend but also by strong community engagement, listening, a gendered entrepreneurial skill demonstrating forward looking resilience.

Therefore, it is equally important to consider whether proactiveness intersects gender-based social capital. In general, women entrepreneurs apply informal support systems for families, peer entrepreneurs, or community organisations. These networks are early warning systems, sources of business intelligence, and opportunities for proactive responses regardless of whether formal data are present. Women's businesses in Kerala's cooperative and Kudumbashree networks used strategies to see market disruption and strategically adopt risk-mitigation strategies (Chandran, 2023). This proactiveness is also rather collective, based on a unique resilience pattern that rests in social embeddedness, far removed from the classic individualistic models, each so dear to the male-dominated entrepreneurial literature. Digital literacy and technology exploration also serve as indicators of proactive resilience among female entrepreneurs. Online platforms in the MSME space have the potential to become cost-effective customer engagement, payment interfaces, and operational analytics

tools. Looking at competition requirements and taking action before facing business pressures, women tend to maintain continuity in the use of these tools and create a business competitive advantage. For instance, (Khandelwal & Priya, 2024) note that, registered as female entrepreneurs in the rural retail sector of Kerala, women entrepreneurs' proactive adoption of mobile-based POS systems helped to sustain transparency in the nature of transactions and retain customer loyalty despite periods of restricted movement and digital disruptions.

Leadership and emotional intelligence also overlap with proactiveness. Women entrepreneurs who are highly emotionally and socially aware are more likely to predict interpersonal and team-related challenges. For example, they claim that such entrepreneurs proactively shape the organisational culture, reduce employee turnover, and implement policies for psychological safety, which are essential for long-term resilience, as elaborated by (Dixit & Moid, 2015). Retention of talent is a big challenge in MSMEs, and proactive leadership fuelled by emotions can be a differentiator. Women's relational leadership style allows them to create trust-based workplaces, identify morale issues, and intervene before disengagement becomes evident. These new domains of proactive resilience include women entrepreneurs' policy engagement and institutional alignment. In essence, being able to access timely support is easy for people who follow up with government programs, regulatory shifts, and institutional funding avenues. This reactive regulation is not only a buffer from the shocks of legal or compliance-ill purposes but also a new mode of scaling. According to (Amrita et al., 2022), women entrepreneurs who have associations with industry associations or MSME councils are more likely to alter business structures to eke out the benefits of newly launched emerging schemes, subsidies, and expenses. Doing so in a proactive and strategic alignment with the policy environment raises the institutional legitimacy of women-led firms and puts them on a growth trajectory that should endure beyond the initial policy environment.

4.2.3. Resourcefulness

Organizational resilience involves how an organisation withstands adversities and manages challenges so that it becomes stable and continues to grow. Resilience has

multiple perspectives when it comes to women entrepreneurs in the context of shaping their business trajectories. As an inherent component of organisational resilience, resourcefulness refers to the capacity of being able to mobilise available resources, adjust to different situations, and enable the organisation to remain operative in the face of challenges (Matharu & Juneja, 2024). In the home of women entrepreneurs, resourcefulness is even more valuable, as women entrepreneurs are challenged more when it comes to conducting business, including limited access to financial capital, gender biases, and trying to balance taking care of their family with work (Brush et al., 2019). Acting resourcefully, women entrepreneurs can display great agility in overcoming these barriers, and therefore increase their own organisational resilience. Therefore, resourcefulness is not strictly obtaining, accessing, or purchasing resources; rather, it is a mental shift or adapting resources to foster sustainable business practices or pursue long-term growth. Innovation under constraints is one of the key aspects of women entrepreneurs' resourcefulness. However, women entrepreneurs usually face various systemic problems such as a shortage of funding and a smaller social network (Eddleston et al., 2016). As a result, these constraints call for greater mind and creativity, so that women have the least dependence on the traditional means of obtaining resources. In accordance with (Rezaei-Moghaddam et al., 2023), multiple studies have demonstrated how women use creative and problem-solving skills by drawing on social capital, fostering strong community ties, and incorporating resourceful business models which can withstand external shocks. For instance, women in micro- and small-enterprise sectors are often engaged in informal networks and barter systems, where they are capable of coping with resource shortages and ensuring continuity in business. These new ways of doing things show how resourceful and resilient women entrepreneurs develop solutions to minimise risks and deal with changing business environments.

Furthermore, the ability of women entrepreneurs to establish strong social networks and collaborative partnerships is closely related to their resourcefulness. Recent research shows that, because women entrepreneurs tend to look for mentors and partnerships with other women, they are more capable of sustaining their businesses (Carter et al., 2020). One of the benefits of these networks is that they provide

emotional support and access to necessary resources such as information, expertise, and money. Women entrepreneurs can pool resources, share risks, and divide challenges that would be impossible to overcome individually through collaboration. For example, women entrepreneurs in rural or underserved communities may join cooperatives to pool resources, reduce operation costs, and enhance their market strength. Collective resilience is this type of resilience, in which mutual support expresses resourcefulness in cooperative strategies; it is how resourceful women entrepreneurs build sustainable businesses through mutual support. Leadership and decision-making also contribute greatly to women entrepreneurs' resourcefulness. Women leaders show an adaptive leadership style, inclusive and empowering, and collective decision making (Harrison & Mason, 2020). This type of leadership approach fosters a resilient organisational culture that does well when there is adversity, and does not only encourage the exchange of resources among team members. Additionally, women entrepreneurs tend to have a participatory decision-making method that allows the sharing of multiple points of view during decisions under pressure (Baughn et al., 20). Women entrepreneurs can adapt through and beyond crises by involving their teammates and stakeholders in decision-making processes, as this will help them to identify resources better and swiftly depending on available resources, as well as remain resilient in the face of uncertainty. Another important element of women entrepreneurs' resourcefulness is their perspective on managing their finances. Women entrepreneurs lack financial resilience as they have limited access to traditional financing options, and are therefore forced to get resourceful in managing their cash flow, reducing their cost, and optimising their use of available capital (Gundry & Welsch, 2001). Many women use alternative financing models to keep their businesses sustainable, ranging from crowdfunding and microfinance to self-financing. Additionally, they tend to focus on long-term financial planning by balancing short-term cash flow management with long-term strategic investments. Studies prove that women entrepreneurs are better capable of making accurate financial decisions during a pressure-laden condition that helps their organisation's resilience by making their business financially viable even during a downturn (Alesina et al., 2013).

Organizational resilience is a necessary hedge with regard to long-term business sustainability in an already volatile environment, as it is typically for women entrepreneurs. Unlike traditional resilience models, women entrepreneurs show resourcefulness through the use of their social, cultural, and economic contexts, which are different from men. The ability to identify, manage, and reconfigure available resources to overcome problems and enhance the continuity of business in this regard is resourcefulness (Benjamin, 2020). This skill is very critical to women entrepreneurs when they are confronted by gender-specific barriers such as society setting high expectations on them, restricted access to capital, and lack of female entrepreneurial role models (Sajjad et al., 2020). Women entrepreneurs exercise resourcefulness in weathering economic storms by implementing business strategies that help them thrive in the face of major systemic barriers. Similarly, organizational resilience is often mixed with the resourcefulness of women's use of both personal and professional networks to overcome crises. In particular, how women entrepreneurs manage the risk of entering risky businesses is where gender, resourcefulness, and resilience come together. Any business is only as resilient as its approach to risk management, and women entrepreneurs, hampered by the lack of financial access and the prejudices involving women in society, choose to manage their risks using conservative and logical analysis (Hisrich & Öztürk, 1999). A study has shown that women entrepreneurs demonstrate resourcefulness through ingenious risk management techniques such as partnership, leveraged revenues, and the fluid designs of business models (Langowitz & Minniti, 2007). For instance, in the case of scarcity of financial resources, women may rely on informal lending networks and crowdfunding platforms to maintain their ventures and establish relationships with local businesses to share risks. The risky behaviour is not just to live in a tough environment, but to establish a solid foundation for further business success. By choosing these strategic and resourceful decisions, women entrepreneurs display a rather high degree of resiliency, since their management of the risks helps them quickly recover from setbacks and place their businesses for growth.

On the other hand, resourcefulness in the adaptive capacities of women entrepreneurs who always remodel their business models in accordance with shifting market

dynamics. One of the main factors of this adaptability is the capability to quickly turn around and make data-driven choices determined by market input and transforming patterns. By being more in line with the demands of their surroundings, women entrepreneurs exploit this fact to modify, improve, or even start up a new product or service that meets the new demand (Shane & Venkataraman, 2000). A high degree of responsiveness in these situations is important in industries where there are constant disruptions, such as retail, hospitality, and technology. For example, during the COVID 19 pandemic so many women owned businesses that easily opted to move to digital platforms by making use of e-commerce and the likes to reach new audiences. This flexibility proves that resourcefulness allows female entrepreneurs to have more robust businesses that constantly adjust what they are offering to the market's needs, thus staying competitive and responsive within a changing climate. Among women entrepreneurs, this unique element of resourcefulness is weaving EI for organisational resilience. Female entrepreneurs particularly depend on their ability to have emotional intelligence, such as self-awareness, empathy, and social skills (Goleman, 1998). In contrast to women entrepreneurs, those with high EI are expected to cope with stress, maintain proper communication flow, and build and maintain quality collaborative relationships between them and those involved in the team and community (Carmeli et al., 2009). The most important aspect of these relationships is to leverage tangible and intangible resources such as knowledge, advice, and emotional support in tough times. Women entrepreneurs tend to build collaborative and empathetic business environments in which everyone talks to each other freely, solves problems, and adapts accordingly. Emotional intelligence helps increase a woman's entrepreneur's organisational resilience, which helps their business endure a crisis and bounce back from blows.

In addition, social capital is a prerequisite for the resourcefulness and resilience of female entrepreneurs. Coleman (1988) defined social capital as the networks and relationships, which the entrepreneurs develop and offer access to resources, opportunities and information. Limited access to formal business networks and finance sources (e.g. banks and venture funds) forces women entrepreneurs to depend on family, friends, and local community groups (as informal networks) (Verheul et al.

2006). These social networks not only offer emotional support, but also critical business resources, such as advice, leading to market insights and potential customers. These networks can be a key resource for women entrepreneurs to adopt their business models in different directions or overcome hurdles in times of crisis. For instance, there are women entrepreneurs who, in the period of financial setbacks, can easily obtain social network loans or partnerships for operations and recovery from such setbacks. Social networks — who know who and how strong and deep these networks are — play a crucial component in women's small and medium business resiliency. By means of their resourcefulness, women entrepreneurs can make use of technology in a strategic manner, which can enhance their organisational resilience. An increasing number of women are utilising digital tools and platforms to run their businesses more efficiently, access wider markets, and improve efficiency. Historically, women have been at a disadvantage, and women entrepreneurs are closing the digital divide by using technology for accounting and marketing, supply chain management, and customer engagement (Marlow and Patton 2005). For example, the use of cloud-based tools enables women entrepreneurs to access real-time data, collaborate with remote teams, and streamline their business operations, considerably improving their ability to adapt to unforeseen situations. In addition, the use of e-commerce platforms enables women entrepreneurs to transcend geographical limitations and mix their revenue streams to guarantee business continuity in the face of disruptions in traditional selling channels. Therefore, technological resourcefulness is an improved organisational challenge that allows women to run their businesses in more effective and flexible ways and prepare for further success.

For women entrepreneurs, resourcefulness is critical in enabling an organisation to become more resilient. As women entrepreneurs constantly adapt to challenges through innovative strategies, creative risk management, social networks, and effective application of technology in their businesses, they exhibit great efficiency in building resilient businesses. However, systemic barriers such as gender bias, lack of access to capital, and the way society expects a woman to behave in her personal and professional life remain a huge hurdle. Policy support, subsidised financial interventions, and entry into formal networks can amplify women's resourcefulness to

the further benefit of women entrepreneurs and enhance business organisational resilience. There is a need for more research on the intersectionality of gender, resourcefulness, and resilience in various cultural and economic contexts and what policy interventions could help women overcome structural obstacles.

4.2.4. Crisis Management

Organizational resilience is a crucial element for women entrepreneurs who confront gender-specific challenges and systems in place. Running a business as a female entrepreneur in resource-constrained environments makes them more vulnerable to crises, such as financial downturns, pandemics, and sociopolitical instability. In the context of crisis management, it is to predict and adapt to, as well as to cope with, and return from damaging episodes so that normal business may continue as usual, yet with ongoing sustainability (Herbane, 2013). Bullough and Renko (2013) show that women entrepreneurs do not absorb the effects of crises because of their specific leadership strategies, which emphasise proactive planning, emotional intelligence, and community engagement as part of their crisis management toolkit. In addition to improving their chances of enduring a crisis, these attributes also make it possible for them to use adversity to drive innovation and growth, thus strengthening organisational resilience. The key point in the literature is the positive and participatory style of leadership applied by women entrepreneurs during crisis situations, where they can invite employees and stakeholders to make decisions. An inclusive approach can help increase resilience by creating a sense of trust, a sense of shared responsibility, and greater response speed to rapid change (Millar et al. 2015). Women entrepreneurs, like other women at these times, were observed in crisis situations, for example, the COVID pandemic as possessing empathetic leadership and rapid adaptation to new norms such as remote work, digitisation, and supply chain reconfiguration (Manolova et al., 2020). This tendency to protect human-centric values during crises and find a way to keep the priorities of economics, while addressing employee well-being, is crucial to maintaining morale and creating a culture of resilience. This predisposes these leadership traits to enhancing crisis

readiness and fast recovery, as women-led businesses are ready to endure external shocks.

The issue related to resource constraints is a major bottleneck faced by women entrepreneurs during crises; however, their approach to creative problem-solving is distinctive. According to the literature, women entrepreneurs utilise their improvisation and frugal innovation to make the most of the few resources in hostile conditions (Linnenluecke, 2017). When faced with economic or natural crises, many women entrepreneurs pivot their business models by inventing a new product, service, or method of distribution, or by working with other small businesses and calling on each other to share assets. Such practises match with what scholars label as 'entrepreneurial bricolage' or 'recombination'- entrepreneurs combine existing resource in a new way to cope with unexpected challenges (Baker & Nelson, 2005). Not only do these actions alleviate the effects of emerging crises, but they also prepare the company for certain cases, increasing the organisation's long-term resilience. EI and psychological resilience are vital aspects of crisis management in women-led enterprises. Female entrepreneurs can control stress, remain composed, and arrive at the right decisions under pressure, as emotional intelligence does (Goleman, 1998). Women score higher in emotional awareness and empathy (important skills in times of crisis when morale and trust are both at risk) in other studies (Carmeli et al., 2009). Repeated exposure to challenges — many women entrepreneurs experiencing systemic barriers — can lead to the psychological development of resilience, the ability to bounce back from setbacks, something that may help build up mental fortitude over time. These psychological assets strengthen both the entrepreneurs themselves but aid in stabilising team dynamics and communication between the team and different stakeholders, and promote the culture of collective resilience inside the organisation.

Social networks and community embeddedness are also relevant to women entrepreneurs' crisis management. During times of crisis, timely information, emotional support, and collaboration with peers can contribute to the survival of a business. In the case of women entrepreneurs, the formality of embeddedness is often

low, with network members being informal (family, friends, local organisations, women's associations, etc.) and used more or less heavily to mobilise support and resources during disruptions (Coleman, 1988; Brush et al., 2009). These networks serve as buffers allowing the exchange of knowledge and emotional reassurance and as mechanisms for establishing strategic alliances to maintain firm operations. In underserved regions and sectors, this ability to reach out to social capital when confronted with a crisis is therefore a distinguishing factor that improves resilience among women entrepreneurs. However, the role of digital transformation in tackling the adverse effects of these crises to enhance the resilience of women entrepreneurs has been a pivotal crisis management strategy. The COVID-19 pandemic has proven crucial to the switchover of digital tools for business continuity. For women entrepreneurs to be agile in adopting online platforms for sales, they communicate with their customers online (Kuckertz et al., 2020). Many women navigate the digital divide through upskilling, seeking peer support, and mobile technologies. With digital technology, businesses managed to survive immediate disruptions, but more aptly opened up new markets and efficiencies, integrating resiliency into core operations. As a result, digital adaptability assisted by crisis learning and knowledge management is becoming increasingly viewed as a strategic pillar of enterprises' ability to manage crises.

Nevertheless, one intersection that is becoming increasingly relevant, especially in the case of women entrepreneurs who lead businesses within vulnerable ecosystems, is crisis management and organisational resilience. Unlike their male counterparts, women entrepreneurs run in the micro or informal sector; as a result, they have limited access to formal finance, mentorship, and market, thus increasing their vulnerability to crisis – induced disruptions (Jamali, 2009). In this case, crisis management is not only about being able to minimise current risks, but also about having the power of strategic thinking to manage uncertainty and adversity. According to scholars, the resilience of women-led ventures is formed as a function of contextual and gendered experiences that affect how ready they are to respond to crises (Henry et al., 2016). Not just a trait but also an experientially learned, risk, and relational strength building capability that they have developed. It is well documented in the literature that women

entrepreneurs tend to devise informal and personalised risk-mitigation strategies. During crises—recessions, political unrest, pandemic—or any time of crisis— these entrepreneurs use contingency planning techniques that are not formal training but learned in life (Itani et al., 2011). This form of crisis management approach is therefore bottom-up in that small family run enterprises in which women operate as business leaders and caregivers are very evident. Typically, cash flow is prioritised, informal credit terms are renegotiated, and the allocation of resources in the household is restructured. These actions reflect pragmatic resilience, which is never reflected in formal organizational theory, yet plays a key role in an enterprise's survival and continuity.

The availability (or lack thereof) of institutional support significantly shapes the resilience capacities of female entrepreneurs during crises. Government policies, financial aid access, and business networks too frequently are not sensitive to the gender perspective and do not bother with how vulnerable women's enterprises are in times of crisis (Brush et al., 2006). For example, many women entrepreneurs were left out of formal relief programmes during the COVID-19 lockdowns because of the informality of the business or lack of digital documentation (UN Women, 2020). As a result, women must create parallel support systems, such as women's cooperatives or self-help groups that offer support in terms of both finances and emotions. Moreover, these mechanisms of collective responses are not only a supplement to defective institutional responses but also incubators of collective learning and mutual resilience. Another understudied area of resilience among women entrepreneurs is crisis communication. Leadership communication during a crisis matters much, as it shapes employee morale, stakeholder confidence, and the reputation of the market. Women entrepreneurs often utilise empathetic and transparent communication, which supplies confidence, augments communication, and creates a protected emotive atmosphere in establishments (Dyke & Murphy, 2006). Clearly, compassionate communication of this kind proves vital, even in the highest-stress scenarios, to keep operations calm and to preserve attrition. Additionally, women entrepreneurs foster a spirit of open dialogue and participative problem solving that helps to promote

diversity of perspectives integrated inside their crisis recovery strategy, and, ever, jointly managing the outcomes of said efforts.

Additionally, resilience in women-led businesses has emerged from crisis-induced innovation. Adversity has been proposed in the literature as a catalyst for creativity, through women entrepreneurs exploring new business models, diversifying income streams, and entering previously untapped markets (Kelley et al. 2016). For instance, women, led textile companies in India, repurposed production lines to manufacture face masks when they were hit by COVID 19 or other women textile companies moved to online marketing to keep their customers engaged. Pivots of these terms also point to the function of adaptive innovation as a buffer to shocks over the entire system. Moreover, rather than merely bringing their operations back to business as normal, many women entrepreneurs adopt crises as a moment to strategically transform and embed resilience in post-crisis operations. Long-term resilience depends on post-crisis learning and organisational memory. Entrepreneurial women embody learning from experience and experience sharing, and institutionalise such lessons from previous crises as standard operating procedures for subsequent disruptions (Gibb, 1997). Turning individual resilience into collective organisational knowledge occurs through mentoring younger entrepreneurs, documentation of recovery strategies, and involvement in community-learning forums. In addition, this post-crisis sensemaking is notably gendered; for instance, women are more likely to place crises in a wider socioeconomic discourse, thus producing more holistic and involving resilience strategies (Marlow & McAdam, 2013). In this sense, women entrepreneurs not only recover from the crisis, but also reinterpret their strategic posture to value sustainability, stakeholder well-being, and community resilience.

4.2.5. Innovation

The organizational resilience of women entrepreneurs in volatile situations and the absence of institutional support are closely related to innovation. This definition of resilience is not simply the ability to sponge up shocks but rather the capability to turn, adjust, and convert these shocks into novel opportunities for practice. It has been found that women entrepreneurs have to face certain hindrances, which include

limited access to a supply of capital, networks, and formal mentoring, and many of them have to adopt a set of creative and frugal innovations to address those hindrances (Brush et al., 2009). Such necessity-driven innovation becomes a basic enabler of resilience that enables women-led firms to not only survive but also remain competitive against structural disadvantages. According to empirical studies, female entrepreneurs normally trade resource constraints on innovation. However, instead of taking limitation as a setback, they usually spend on 'jugaad', the practice of improvisational innovation which involves the creation of functional solutions with a minimal amount of resources (Radjou et al., 2012). For instance, women headed businesses in developing countries operating mostly in the textile, food processing, and handicraft industries, innovating when it comes to product design and marketing using locally available material and workforce. By being frugal, these innovations help firms solve immediate market shifts, provide diversity to income streams, and enhance long-term sustainability. Additionally, the more adaptive form of ingenuity detailed in this paper also misses the mark on the theory of resilience, which emphasises flexibility and responsiveness in organisational systems (Lengnick-Hall et al., 2011).

Women entrepreneurs help improve the resilience of organisations by enhancing digital innovation as a key domain. With mobile technology and social media at their feet, many women are now using digital tools to market products, reach a larger audience, or automate business activities. For instance, women entrepreneurs in the context of the COVID 19 pandemic quickly adopted digital payment systems, online marketplaces and remote working tools in order to sustain their ventures as the lockdown was announced (ILO, 2021). Apart from ensuring business continuity in crises, these digital transformations have created new ways to grow in the post-crisis period. This shift highlights the role of technological innovation in cementing women-led ventures' resilience. Another dimension is that women entrepreneurs show resilience to innovation in business models. Due to gendered barriers in traditional sectors, many women are creating social enterprises, cooperatives, and home-based businesses that integrate social impact and economic goals (Jamali, 2009). Together, they use innovative models to merge personal values with market objectives, making

it possible for entrepreneurs to be not only profitable but also to engage in the community and environmental sustainability. In addition to developing adaptive capacity, these hybrid models further develop stakeholder commitment and prevent operational risk which increases an organisation's level of resilience (Sullivan–Taylor & Branicki, 2011).

Attention should be paid to the role of network-based innovation. Women entrepreneurs develop many informal, trust-based networks that they use for shared learning and co-creation. They learn, innovate products or services jointly, or pool resources in crises with women's self-help groups or sectoral collectives or via peer networks (Manolova et al., 2007). These collaborative forms of innovation are designed to create social capital and resilience through mutual support, faster recovery, and collective bargaining. Such networks also act as critical infrastructures where entrepreneurs can try out new things with little risk, since they are resource-constrained. For the long-term resilience of women-led enterprises, creating a culture of innovation in the organisation is integral. Women entrepreneurs who have supported experimentation, learning from failure, and cross-functional teamwork are likely to develop an adaptive capacity to deal with future uncertainties (Vogus and Sutcliffe, 2007). The combination of this internal culture with a leadership style that emphasises inclusivity, empathy, and continuous improvement means that it is an enabling environment that fosters sustainable innovation. In this sense, the capability of innovation is not about a one-time response to a crisis, but rather it is about continuous practice that thrives resilience. Therefore, supporting women entrepreneurs through targeted policy interventions, specifically dedicated innovation grants and training programs, can be used to increase the effects of their resilience and entrepreneurial creativity.

Innovation is increasingly being considered a strategic mechanism for women entrepreneurs to construct and sustain organisational resilience. With the business environment moving fast, resilience is not about how to endure adversity but how to create change out of it. By embedding innovation, female entrepreneurs think ahead of their vulnerabilities in terms of market fluctuations, gender bias, and financial

exclusion (Henry et al., 2015). Instead, these innovations appear as proactive adaptations, that is, product redesign, new service offerings, or revised distribution strategies, through which enterprises are able to stay relevant and competitive in uncertain times. Opportunity recognition is one of the key innovation drivers in resilience building. Specifically, the characteristics of resilient women entrepreneurs tend to include scanning their environments for unmet needs or changing consumer behaviour and displaying higher levels of resilience (Fisher, Hurley., Pillai Riddell, & Kim, 2016). In short, they have entrepreneurial alertness, which is closely linked to innovation abilities around the edges, especially when the traditional pathways for success are closed. For instance, in patriarchal or economically depressed areas, women have established micro-franchising types or mobile-based businesses to overcome past infrastructural and social difficulties. Using these micro-innovations, they have not only been able to earn income but also to inspire and empower other women in their communities to practice resilience through shared economic empowerment.

The mode of response to challenges by women entrepreneurs is also influenced by cognitive innovation, as evidenced by mindset shifts and leadership behaviour. Women adopt growth-oriented thinking and an agile decision-making method, which helps them respond to crises creatively and reasonably (Shepherd et al., 2020). Accelerators of team learning, women leaders who create cultures of psychological safety and who promote experimentation on the part of their teams, recover faster from failure and adapt more quickly in response to looming threats. In sectors where disruptions occur frequently, such as retail, hospitality, and services, this internal organizational culture of innovation acts as both a shield and a springboard for resilience. In addition, women entrepreneurs tend to practice sustainability-oriented innovation as a way towards long-term resilience. There are more than the hallmarks of women-led ventures, including eco-conscious product design, ethical sourcing, and circular business models (Pettersson et al., 2017). The advantage of these practices is that, in addition to differentiating their offering in the marketplace, they help the policies align with global sustainability goals and regulatory expectations, thereby increasing stability and reducing risk exposure. Such innovations have a particular

ring in regions where women's businesses serve as major representatives of community well-being and conservation.

The relationship between innovation and resilience among women entrepreneurs is also mediated by institutional support. However, access to innovation incubators, grants, mentorship programs, and training programs will help increase their capacity to respond creatively to adversity. For example, women who innovate using programmes like 'SheTrades' by International Trade Centre have been integrated into global value chain, becoming more resilient due to market diversification (ITC, 2020). These interventions show that when external ecosystems place money in women's innovation potential, these businesses are inherently much more resilient. Social innovation and community engagement are yet to be a forceful avenue for realising resilience. In addition to profit, many women entrepreneurs innovate to bring about social change, such as ending gender violence, youth unemployment, or rural isolation through their ventures. By having this dual focus on business and impact, they can build strong stakeholders and collective resilience. Women entrepreneurs create social value and are supported, loyal, and flexible from their communities to be a solid and informal buffer in periods of economic or social stress (Datta & Gailey, 2012). Therefore, a greater propensity to innovate derives from the interplay between strategic acumen and social consciousness, which is the foundation of organizational resilience in women-led enterprises.

4.3 Dissecting Enterprise Performance Indicators in the Context of Women Entrepreneurs

The performance indicators of enterprises provide a significant touch on the state, growth, and sustainability of the business. Hence, in the case of women entrepreneurs, these indicators need to be analysed in a gender-sensitive manner by disaggregating them with reference to the specific socio-economic, cultural, and institutional challenges faced by women in enterprise development. The currently used performance metrics of women's enterprises, such as profitability, revenue growth, and market share, are often inadequate to capture the full scope of the value that women's enterprises bring. According to Brush et al. (2009), women often make

trade-offs between financial and non-business performance metrics in their entrepreneurial endeavours, including those related to employee well-being, customer satisfaction, and community or social capital development. The holistic nature of this perspective is specific to women's entrepreneurship and reflects the multifaceted nature of this subject, coupled with the need to utilise diversified tools for its assessment. Return on Investment (ROI), Net Profit Margins, Cash Flow Stability are the financial indicators which are still the basic factors for measuring enterprise performance. However, research findings suggest that female entrepreneurs are confronted with systemic barriers that impair their ability to achieve growth in terms of finances, such as issues surrounding lack of access to credit, gender bias from venture capital, or limited ownership of productive assets (Robb & Watson, 2012). However, as the performance of conventional methods is measured, these constraints influence their operations' ability to scale or reinvest profits. Therefore, scholars advise embedding financial outcomes within structural constraints rather than using them as disconnected yardsticks of entrepreneurial competence or the success of the enterprise (Jennings & Brush, 2013). This nuanced approach does not bring equitable value to business-owned women.

In today's business world, innovation capacity and adaptability have become increasingly observed as the main indicators of performance for an organisation. Stats show that women entrepreneurs are known for their high degree of innovation, particularly in constrained environments, where they come up with frugal need-based solutions (Brixiová et al., 2020). Their innovative practices, whether through digital transformation, product diversification, customer engagement strategies, and so on, help organisations to be resilient and have longer durations. Additionally, women-run businesses have been particularly good at responding to such crises (e.g. the impact of COVID-19) by shifting to online platforms, changing their business models, and relying on social entrepreneurship. The existence of such indicators means that adaptability and innovation should be included as dynamic qualitative indicators that measure enterprise success. Human resource indicators, including employee retention, leadership development, and work culture are particularly significant in women-led enterprises. Participatory leadership, inclusive decision-making, and

emotional intelligence are characteristics of female entrepreneurs that comprise healthier organisational climates and less turnover (Eddleston & Powell, 2012). While intangible in comparison with balance sheet numbers, these play an important part in increasing productivity and loyalty to the organisation. Furthermore, such women's leadership styles are more transformational than transactional; they prefer mentoring and the long-term development of their team — attributes that should be incorporated in enterprise performance assessments.

Therefore, it is important to evaluate women entrepreneurs' social performance indicators, such as community development, environmental stewardship, and corporate social responsibility (CSR). Profitability is not the only target for many ventures led by women; other objectives include the empowerment of marginalised groups, education of the disadvantaged, and sustainable practice (Datta & Gailey, 2012). These enterprises typically inhabit embedded networks of reciprocal aid and trust which generate social value that is not easily quantifiable but sacred to their business identity. As such, the impact and value of women-owned businesses should be measured using metrics such as stakeholder satisfaction, community engagement scores, and sustainability outcomes. Scholars and practitioners are increasingly considering that the performance measurement of female entrepreneurs should move from unidimensional to composite models. The ideal model should include both quantitative metrics (profit and growth) and qualitative metrics (innovation, impact on management, and creation of social value). Such a framework would be more inclusive, fair, and representative of women in business realities and aspirations (Ahl and Nelson, 2015). This broader approach must be adopted by institutions, policymakers, and other financial agencies to promote women entrepreneurs and create a firm investment environment for gender-inclusive economic development. Dissecting enterprise performance through this enriched lens gives stakeholders a better ability to perceive and improve the profile of women entrepreneurs.

4.3.1 Sales Growth

Growth in sales occupies the privileged position of a critical indicator of women entrepreneurs' success, since women entrepreneurs must surmount several levels of

societal and structural obstacles to succeed. Whereas male entrepreneurs often have access to more capital, biased perceptions about leadership abilities, and access to high-growth sectors, female entrepreneurs often have limited capital, outdated views about leadership abilities, and access to some sectors of the economy. Despite these barriers, there is ample evidence from numerous studies that women-led enterprises have the potential to achieve significant sales growth when employing resilience, community-based business models, and adaptive strategies. According to Robb and Watson (2012), although the rate of initial growth of women-owned firms may be low, their long-term sustainability and customer loyalty both lead to a steady increase in sales volume. This implies that investigating businesses operated by women entrepreneurs to determine the degree of sales growth requires an appreciation of the particular circumstances in which such businesses work. Financial capital is undoubtedly critical to enable sales expansion for any entrepreneur, but even more so for women, because of the historical and ongoing lack of access to finance and financial services for women. Small loans that these women get are smaller and are scrutinised more closely, and the under-representation in venture capital funding curtails their capacity to scale and invest in generating revenue. According to Brush et al. (2006), gendered financing gaps substantially hinder the sales growth of these enterprises. Despite this, studies have found that women are very efficient at capital deployment when they receive funding, realising strong returns per investment dollar (Coleman & Robb, 2009). This underscores the need for inclusive financial systems and gender-sensitive lending frameworks to yield higher untapped sales in women-led enterprises.

Consequently, women entrepreneurs prefer differentiated marketing and customer engagement strategies to enhance steady and continual sales growth, specifically in niche and underserved markets. More women entrepreneurs tend to practice emotional intelligence in their business dealings, relational marketing, and customer-centric approaches, and these tend to have longer brand loyalty and better retention rates. According to Eddleston and Powell (2008), relational tactics may not provide instantaneous spikes in revenue; however, they may contribute to long-term sales sustainability. In addition, women are more willing to exploit community branding

and social networks to promote it through word of mouth. Particularly for small- and medium-scale enterprises, these strategies pay, as customer relations tend to be of higher importance than volume-based marketing techniques (Eliashberg, 1996) p.4. Therefore, this personalised touch that women usually bring to and with their businesses means that they play a critical role in driving repeat sales and offering a stable growth trajectory. Digital technologies have brought about drastic changes in how women entrepreneurs grow their sales, with cost-effective marketing, customer engagement, and e-commerce platforms. Women who use digital tools, which include but are not limited to mobile payment systems and social media marketing and go all the way to e-commerce portals, are in a better position to scale their businesses and have access to wider markets. As a result of profound changes in consumer behaviour (a sharp shift to online shopping), Brixiová et al. (2020) found that women entrepreneurs using digital platforms have a higher chance of recovering sales post-pandemic. Nevertheless, the provision of access to such digital infrastructure and the necessary skills to effectively use digital infrastructure remain uneven. Digital illiteracy and connectivity problems remain major problems in rural and poor settings. Digital literacy and affordable technology access are key targeted interventions to maximise the benefits of digital channels.

Sectoral differences also exist in the sales performance of women-led enterprises. Traditionally, many women tend to work in the sector that are traditionally 'feminised', such as in food services, education, in fashion and in handicrafts; which can be considered as industries where the competition is very high and the margins are very low. Using a lower barrier to entry sectors such as mobile apps does not always have a structure to scale rapidly or generate large-scale revenue. On the other hand, women who pursue high-growth and high-risk sectors such as technology, manufacturing, and finance see much higher sales growth for the most part, but with much more upfront challenges accessing and obtaining that support. Klapper and Parker (2011) further express that sales potential is largely dependent on sectoral distribution and hence they suggest to policymakers and institutions to assist women to enter high returns sectors. This entails providing sector-specific training, an incubator programme, and mentorship to increase competitiveness and scalability.

Female entrepreneurs can improve sales performance with the help of policy support. Support for women can improve their market positioning and competitiveness through government schemes, financial literacy programs, and business development services. For example, the MUDRA scheme in India has supplied microcredit to millions of women entrepreneurs that has aided in their operations, thereby boosting their sales revenue (Datta & Gailey, 2012). However, such initiatives can only have an impact if they are designed, delivered, and respond to the real needs of women entrepreneurs. Further strategies should not focus on providing funds, but also comprehensive business support and services: accessing the supply chain, technology integration, and being exposed to international markets. Each of these elements by itself is likely not sustainable or inclusive for women-led enterprises, but together, they greatly help ensure sustainable and inclusive sales growth for women-led enterprises, being key drivers for overall economic development.

4.3.2 Profitability

The key indicator or sign of women's business sustainability and economic empowerment is profitability in women's entrepreneurship. Interestingly, women-led enterprises have drawn increasing attention because of their capacity to play a role in inclusive economic growth, particularly in emerging economies. However, after accounting for the size of the business, industry, and investment in capital, research finds that women entrepreneurs tend to produce lower profits than men (Fairlie & Robb, 2009). There is a large discrepancy that can be explained by a number of structural and systematic impediments, for instance, gender discrimination in the financial markets as well as in high growth sectors, and disproportionate responsibility for household needs. Minniti and Naudé (2010) note that women entrepreneurs usually have to start with necessity-driven as opposed to opportunity driven ventures with lower profit margins when compared to male-owned ventures. Further, they tend to be more inclined to channel earnings back to family welfare and community development rather than to business expansion (Brush et al., 2009), which stipulates that profitability is more broadly conceived to include both economic and social returns.

Regarding women-owned businesses, financial access and literacy are the most crucial enablers of profit. The provision of easy credit to women through MFIs has improved over the years, yet many women still cannot access formal credit institutions because they have no collateral, credit history, or gender bias in lending (Coleman, 2000). In addition, even in areas with access to credit, where loans are not too small or too heavy, they may be inadequate for investment in production assets that would increase profitability. According to Van Staverens (2001), financial exclusion remains a significant obstacle to the entrepreneurial performance of women in rural and developing areas. Several studies have also highlighted the role of financial literacy in handling cash flows, pricing strategies, and budgets (Mitchell, 2008). For instance, India's Stand-up India and MUDRA schemes offer targeted loans to women entrepreneurs that, if given adequate capital and guidance, women can earn competitive profits (GoI, 2022). This underscores the need to link access to finance to training and mentorship for profit enhancement.

The profitability outcomes are greatly influenced by the sectoral distribution of female entrepreneurs. Typically, women are concentrated in traditionally low-margin sectors, such as textiles, beauty services, food processing, and informal retail, which are overcrowded and return low (Kelley et al., 2017). The focus arises from historical standards, low technical education, and a lack of contact with high-growth industries. According to the studies cited by Amine and Staub (2009) and De Vita et al. (2014), integrating women entrepreneurs into high-value sectors such as manufacturing, ICT, and professional services enhances business profitability and scalability. However, getting into these sectors means access to networks, mentorship, and higher startup capital, something most women entrepreneurs lack. Upskilling programs and sectoral diversification initiatives can also support women in closing the gender profitability gap, as can be done by increasing profitability both directly and indirectly. Nevertheless, women living in marginalised communities continue to face access disparities, and such interventions must consider intersectional factors, such as caste, class, and rural urban divides.

Technological innovation and digital inclusion have proven to be strong enablers of women entrepreneurs' profitability. With digital platforms applied to marketing, inventory management, and mobile payments, women are able to expand their customer base and eliminate some operational inefficiencies (UNCTAD, 2020). Brixiová et al. (2015) have conducted research which has indicated that when African women use mobile money platforms, they showed increased profitability and have developed better financial management. In addition, studies in South Asia indicate that women who adopt e-commerce platforms can break geographical and societal barriers that prevent them from reaching wider markets (World Bank, 2020). However, this has not been equally applied by women in rural and low-income groups, as they still face digital literacy gaps that hinder them from fully realising these opportunities. This has led to the rise of cybersecurity programs such as Google's Women Will and Facebook's #SheMeansBusiness to help bridge such gaps by providing digital skills training; however, more encouraging public-private dynamic partnerships are required for the scale of such efforts to boost profitability outcomes through technology-enabled entrepreneurship.

Another variable along the profitability line is work-life balance, societal roles, and business focus among women entrepreneurs. Similarly, Jamali (2009) and Al-Dajani and Marlow (2010) have conducted research that demonstrates that female entrepreneurs are multitasking in their roles between household management and business operations that cause limited time limits as well as business limitations which directly impact profitability. In patriarchal societies, the challenge is even more pronounced as expectations are usually high and the level of support by spousal relations or the community is low. Therefore, entrepreneurial time allocation is a crucial issue—with or without the resources that businesswomen require to help them manage familial responsibilities, they will restrict their business expansion to avoid stepping away from family communal responsibility duties while cutting potential profit. Programs supporting access to childcare, flexible working arrangements, and family engagement have been successful in dealing with these stresses. Governments and NGOs can recognise unpaid care work and develop policies to support women to

participate in more profit-generating work in entrepreneurship programs, thus creating conditions that help women focus less on unpaid work.

Enabling policy frameworks and ecosystem supportive structures is extremely important and indispensable in shaping profitability in enterprises led by women. The profitability of women entrepreneurs is better in environments which support gender equality in entrepreneurship (through favourable tax policies, inclusive procurement policies, and specific business support services) (OECD, 2017). According to the Global Entrepreneurship Monitor (GEM), institutional support is one of the factors that narrow the performance gap between male and female entrepreneurs. In addition, Estrin and Mickiewicz (2011) reveal that a country's legal and institutional framework strength has a significant and positive effect on women entrepreneurs' returns. Such policies aim to facilitate women's access to international markets, increase networking opportunities between members of associations, and ensure women's participation in trade associations, which can further amplify profitability. Women entrepreneurship growth hinge on integrated policy solutions that are inclusive of financial inclusion, skill development programs, as well as social support programs.

4.3.3 Customer Retention

Keeping customers for the long term is probably the most important variable to help improve enterprise performance, particularly for women entrepreneurs who operate in such competitive, resource constrained environments. A loyal customer base sustains business profitability and growth and helps in creating and sustaining business market share. Reichheld and Sasser (1990) report that a 5% customer retention will result in a boost of 25% to 95% increase in profits, which implies that the retention of customers increases from strategic viewpoint. Specifically, as women entrepreneurs are located within tight networks of family, friends, neighbours, and relatives, who have typically played central roles in the socialisation process, such women entrepreneurs are able to forge long term customer relationships marked by personal service, emotional engagement and ongoing value delivery. Nevertheless, it stands to the question of why the systematic retention strategies of education remain blocked by structural bottlenecks such as a lack of marketing budget, digital illiteracy,

and operation hindrances (Brush et al., 2006). As a result of this, it is necessary for women led businesses to place an investment in customer relationship management (CRM) tools and loyalty programme.

Customer satisfaction is elementary to customer retention and women entrepreneur are found to be adept at this area as they possess empathetic communication and more emphasis towards quality of service. Therefore, as shown earlier, trust, commitment and service quality are the most significant factors that predict customer loyalty (Ndubisi and Wah 2005), which are sometimes entwined in the practises of women entrepreneurs. Three such areas are food services, fashion, wellness, and retail, in which many women entrepreneurs work, and customer repeat patronage of these businesses is dependent, in large part, to how they think customers will perceive the service experience. Jamali (2009) and Field et al. (2010) support that women business owners stress relationship building instead of aggressive sales tactics and have stronger emotional connexions with their customers. Yet, formalising these interactions through the structured feedback loop, the follow up mechanisms and the digital engagement isn't always prioritised as the customer grows old, because we simply don't find enough time and resources to do so.

Women owned businesses are one of the successful entrepreneurs to use digital transformation to improve customer retention. WhatsApp Business, Instagram and Facebook have allowed women entrepreneurs, especially in developing economies, to keep a continuous conversation open with customers, market new products and offer personal experiences at very low costs. Digital engagement, as pointed out by the UNCTAD (2020), enhances the reiteration of the quality of brand recall and customer loyalty as a result of it increasing customer engagement frequency. Women who adopt CRM software or e commerce tools like Shopify and WooCommerce can follow a customer's preferences and answer their questions in real time which helps them to maintain higher customer satisfaction and retention rates (World Bank, 2021). However, digital skills and the digital divide are still barriers for most women, especially in rural and marginalised regions (OECD, 2017). Closing this gap through digital literacy programs, programs that focus on raising a new generation of women

entrepreneurs, especially women-focused tech accelerators, can have a huge impact on improving customer retention and the overall performance of the enterprise.

Other factors that support customer loyalty in women-led enterprises are brand authenticity and ethical behaviour. Research suggests that in today's world, consumers are becoming influenced by brands that operate with integrity, inclusivity, and social consciousness (Bhattacharya & Sen, 2004). Women entrepreneurs tend to incorporate a social mission into their companies' business model, which can be anything such as selling eco-friendly products, developing a community, or empowering other women, which in turn can result in stronger brand affinity and customer advocacy. Studies by Brush et al. (2019) and Bastian et al. (2018) state that by entering entrepreneurship based on authenticity, entrepreneurs can offer greater differentiation to their customers, which in turn induces repeat purchases and word-of-mouth referrals. In addition, most women leaders exhibit transparent and emotionally aware characteristics and thus build higher levels of trust, which is critical for long-term customer engagement. By doing so, ethical practices can become a powerful marketing strategy for enhancing customer retention in women-owned enterprises.

Another critical aspect of customer retention is after-sales service and complaint resolution, where women entrepreneurs are relatively successful as they adopt a relational approach and are oriented in detail. Parasuraman, Zeithaml, and Berry (1988) identified service recovery as a key determinant of repeat patronage. Women entrepreneurs, especially in service – based sectors, tend to handle complaints on a personal level, so that customers feel heard and feel respected and valued. With this high degree of personalised care, not only does it lessen the negative impact of service failure, it will also turn dissatisfied customers into loyal advocates. Nevertheless, scalability and responsiveness could be constrained in expanding companies, as there may be a lack of formal complaint-handling systems and analytics capabilities. When women entrepreneurs increase their business operations, putting money into more structured customer service systems (e.g. automated chat bots, feedback analytics,

customer service training) allows their customer retention levels to remain high while ensuring that the quality of service is not compromised.

In summary, customer retention is a reflection of business maturity and a key element of the profitability and growth of brands among women-led enterprises. Although women entrepreneurs have these inherent advantages in developing trust-based relationships, customer-centric communication priorities and ethical brand identities, structural and systemic constraints hinder these advantages from scaling the retention effort. The integration of technological tools, formal customer relationship strategies, and institutional support has a significant positive impact on retention outcomes. Thus, policymakers and business development services should design training programs targeting women entrepreneurs' contexts and needs with a focus on retention. Empirical studies (Kelley et al., 2017; Estrin & Mickiewicz, 2011) have shown that enterprises outperform other companies in terms of revenue growth, cost efficiency, and market expansion by achieving customer retention. As a result, increasing customer retention strategies that are focused on women entrepreneurs can be a foundation for economic empowerment and women's entrepreneurial success.

4.3.4 Business Continuity

For female entrepreneurs, business continuity is an important part of enterprise performance and can be an insuperable hurdle if faced with unpredictable hurdles such as economic crises, natural disasters, or sudden changes in the market. According to Teece (2014), organizational resilience or closely related business continuity is strongly correlated with the long-term success and growth of organisations. As women entrepreneurs are relatively vulnerable with limited access to financing, networks, and influence over decisions in the entrepreneurial ecosystem, business continuity is particularly important for them. Women led enterprises, especially in developing economies, frequently use informal networks of personal relations that may not always provide structural support in cases of crises. Therefore, the ability to ensure business continuity can only be delivered via a proactive approach that integrates risk management, contingency planning, and flexible operations within a firm's everyday business practices.

However, as studies indicate, women-led businesses typically provide greater instability compared to men-led businesses by factors such as limited access to capital, fewer mentorship opportunities, and an interruption of responsibility for family care (Coleman & Robb, 2012), and such robust business continuity plans (BCPs) are more relevant to women entrepreneurs. Contingency planning is important in this context. (Mazzarol & Reboud, 2008) conducted a study and found that if a business is not prepared for disruption, recovery time is extended and painful missed market opportunities occur, which can ultimately result in shutting down the business. For instance, women entrepreneurs, especially in SMEs, need to build business continuity strategies that go beyond financial and operational risks to include people-related risks such as employee well-being and customer loyalty which are core to their businesses. Due to the limited financial buffers and risk-averse nature of many women entrepreneurs, they are compelled to use more adaptive and strategic approaches for long-term sustainability.

The integration of technology and innovation in business also plays an important role in the continuity of business in women's entrepreneurship. Bhattacharya and Sen (2004) suggest that apart from enabling the smooth functioning of a business, digital tools and technologies can help in times of crisis. Post the pandemic, women entrepreneurs who took advantage of the digital front, with e-commerce, customer relationship management, and financial planning on their quest to survive, managed to bounce back faster and be resolute. Technological inclusion supports the smoothing of operational activities to a great extent, refutes dependency on physical infrastructure, and guarantees the continuity of services during interruptions. Despite this, the acquisition of such technologies is not easy; many women entrepreneurs face challenges, such as limited access to training, financial resources, and technological infrastructure (OECD, 2018). However, targeted capacity-building initiatives are essential for building bridges of the digital divide to increase the business continuity of women-led businesses.

Another critical element of business continuity for women entrepreneurs is to sustain strong supplier and customer relationships during crisis times. In a research report

conducted by Brush et al. (2006), women entrepreneurs tended to focus more on the relationship-based approach as a business strategy, which can be used as an advantage to manage the crisis. Customer loyalty and supplier networks can serve as safety nets that enable businesses to flexibly change business operations or change courses to alternative products and services in turbulent times. Nevertheless, the informal nature of many women entrepreneurs' networks might reduce their ability to formalise contracts or agreements to guarantee continuous support during crises. More formalised and diversified relations with customers, suppliers, and financial institutions can thus enhance the robustness of women's business continuity plans. In addition, women entrepreneurs can improve business continuity through a diversified business model, as they provide several revenue streams, thereby minimising the chances of relying on a single source of income.

Having family and social obligations in the business is one of the challenges for ensuring the continuity of business for women entrepreneurs. Alsos et al. (2006) mention that in developing countries, women entrepreneurs often juggle multiple responsibilities, for example, they are involved in caregiving, household management and also in running businesses. During times of disruption, dual roles can also result in higher stress and make business failures more likely. To make matters more complicated, gender, family expectations, and entrepreneurship intersect and moderate the adoption of business continuity strategies. Nevertheless, economically more resilient women entrepreneurs have been able to adapt their lives and balance professional and personal life via flexible work schedules, supportive family networks, and partnership or shared leadership models. According to Lee et al. (2018), family friendly policies and a culture of shared responsibility in business can increase women entrepreneurs' ability to deal with business disruptions while protecting continuity.

Especially, the role of leadership plays quite significant role in the area of business continuity for women entrepreneurs. In addition, collaboration, empathy, and the feeling of community all come from leadership styles, which have been proven to increase resilience in times of adversity (Field et al., 2010). They can create a

supportive organisational culture in which women leaders who tend to use transformational style and participative leadership can build strong teams. The leadership style of women entrepreneurs, as mentioned in Brush et al. (2009), promotes a collective sense of purpose as well as commitment from employees at critical times when a company faces a crisis. However, women entrepreneurs find it difficult to enforce their leadership because of societal beliefs and gender stereotyping. The importance of defeating these barriers cannot be underestimated, as it proves to be essential in delivering strong, decisive leadership in place that ensures businesses remain operational, and hence, highly effective during times of instability. As such, the strategic thinking, decision-making, and crisis management skills enhancement is, therefore, a core purpose of gender programs and educational programs to enhance leadership skills aimed at improving women entrepreneurs' long-term business task continuity and performance.

In today's rapidly evolving and unpredictable business climate, business continuity is a vital determinant of women entrepreneurs' enterprise performance. Moms who want to connect with fellow moms who are working towards their goals by launching their own business, moms who are women entrepreneurs constructing their own ambitions, and moms struggling to accomplish a life they desire while keeping their prosperity and kids in mind. However, for women entrepreneurs to be resilient and guarantee business continuity sustainably, they need to apply strategic contingency planning, technological integration, relationship building, leadership development, and address social factors. Women entrepreneurs can overcome these barriers and prepare their businesses for long-term success by using community networks that leverage flexible business models and embrace digital transformation. Additionally, supportive policies, training programs, and access to finance will help women entrepreneurs develop capabilities to ride the storm and keep their businesses in business during challenging times.

4.3.5 Market Share

Market share is an important indicator of enterprise performance for women entrepreneurs insofar as the market share of a business in its industry or market. It is

commonly recognised as a way to measure competitiveness and the business's ability to continue keeping its position in its market. However, achieving and maintaining a strong market share is particularly difficult for women entrepreneurs because of various structural, social, and economic barriers. In research regarding women entrepreneurs Carter and Shaw (2006) state that women entrepreneurs have made great strides in diversifying and extending their businesses, but women entrepreneurs have unique difficulties obtaining resources, networks and markets that inhibit future growth and market share. Moreover, these barriers have been accompanied by gender bias in society and institutional discrimination which might make it challenging for women entrepreneurs to compete with their male counterparts on fair terms, restricting them to a non-competitive market. Nevertheless, they are able to build more robust, nimble, and competitive companies, which gives them a better market share.

Women entrepreneurs need to utilise effective market-positioning strategies to achieve a significant market share, which entails a difference in their products or services to cater to certain consumer needs. Another school of study According to Brush (1992), women entrepreneurs depend on their awareness of consumer behaviour and tastes which gives them an advantage if they deal in niche markets, where they can exploit their knowledge and experience based on sex. Women entrepreneurs can create and capture large market segments if their offerings closely match unmet market demand. However, this is premised on the need for careful market research, branding, and customer relationship management functions which are areas in which women entrepreneurs find difficult to operate due to lack of information or access to resources. Here, mentorship and peer networks play a crucial role in the development of strategies, competitive analysis, and building a brand by women entrepreneurs. Furthermore, the increasing number of women entrepreneurs in social and ethical enterprises is an advantage because of research evidence that customers are demanding to buy more from businesses with strong social and environmental commitments (Sen & Bhattacharya, 2001).

Securing money to grow my business and market share is central to helping women entrepreneurs expand their businesses. As highlighted by Watson and Robinson (2003), women entrepreneurs face distinct challenges in raising capital, which directly influences their capacity to invest in scaling businesses. Although more people seem to support their female counterparts, venture capital and business loans continue to pose difficulties. Usually, this limitation puts women's business maters from seeking aggressive expansion strategies that promise to increase market share. According to Coleman and Robb (2012), research suggests that women have smaller loan sizes, higher interest rates, and worse credit terms overall compared to men. Women who want to become entrepreneurs have to overcome barriers such as lack of funds that limit possible expansion and increase their market share; thus, alternative financing options such as crowdfunding, angel investors, and government grants are a way to go. In addition, women entrepreneurs may be required to establish relationships with financial institutions and investors dedicated to placing their bet on gender-diverse businesses.

Strategic alliances and collaborations with both the commercial and public sectors also help to boost the market share of women entrepreneurs. Second, women entrepreneurs can acquire new markets and enhance their supply chain efficiency as well as be credible through alliances with other businesses. According to (Bogren et al., 2013), strategic partnerships with larger firms provide smaller businesses with access to resources, networks, and expertise out of reach to the smaller organisations. They are especially beneficial for female entrepreneurs with limited scale or financial resources, which allows them to compete. Liquidating their resources and sharing them with other businesses will enable women entrepreneurs to enjoy economies of scale, improve their product offerings, and increase market visibility. Nevertheless, when women are involved in partnerships, they need to carefully negotiate power imbalances because gender dynamics can lead to differences in negotiation outcomes and allocation of resources. According to previous studies, women entrepreneurs should focus more on building partnerships from mutual respect and shared goals in order to reduce them from experiencing exploitation or being treated unfairly (DeTienne & Chandler, 2007).

The increasing digital age has the potential to increase the market share of women entrepreneurs through technological advancements. Through the Internet and digital tools, small businesses are now able to enter the global market, previously restricted by geographic and operational hindrances. According to Etemad and Wright (2003), women entrepreneurs who use e-commerce, digital marketing, and customer relationship systems can greatly expand their customer base and, therefore, market share. Additionally, technology, if appropriately utilised, helps women entrepreneurs to cost less, operate more efficiently, and innovate faster than a standard business model. However, this comes with a caveat of technical challenges, along the lines of infrastructure access, technical skills, and financial limitations (Molla & Licker, 2001) state that, although the digital divide is still a major hurdle for female entrepreneurs in developing economies, where technology access may be difficult. By improving digital literacy programs, affordable tech solutions, and policies that are targeted at empowering women entrepreneurs, these barriers can be overcome and women entrepreneurs will be able to compete in the digital marketplace and increase their market share.

Women entrepreneurs' leadership and management styles can play a significant role in how much market share they have as well as the performance of employees, customer loyalty, and brand reputation. Fielden et al. (2003) claim that women entrepreneurs prefer transformational leadership which concentrates on collaboration, employee empowerment, and long-term organizational growth. Such a leadership style generally leads to more innovation, increased customer satisfaction, and increased employee turnover which results in a larger market share. However, these biases detract from the effectiveness of women entrepreneurs' ability to lead, as they can effectively deny these women's leadership positions and large enterprise leadership possibilities. As (Gupta et al., 2004) suggest, to enhance their market share, women entrepreneurs must overcome these biases in order to build leadership capabilities. With women continuing to question traditional leadership norms and proving that they are indeed capable of leading, they may strengthen their competitive positioning and generate businesses with sustainable, increasing market shares.

For women entrepreneurs, market share matters a lot, as it indicates their power to compete, innovate, and keep growing in a highly competitive environment. Establishing a strong market share must overcome high barriers, as well as limited access to financing, networks, and strategic resources. Yet, it is women entrepreneurs that deploying strategic partnerships, technological developments, and transformational leadership can use their unique market insights to increase the market share and performance of their firms. With some funding, technology acceptance, and gender bias solvable, women entrepreneurs can establish themselves for long-term success and growth in the marketplace.

4.4 Exploring the Influence of Organizational Resilience on Enterprise Performance

Owing to the possibility of affecting enterprise performance, the concept of organizational resilience has attracted much attention in academic research and practical applications. Organizational resilience refers to an organisation's capacity to anticipate, absorb, affect, respond to, and recover from adverse situations, such as economic downfalls, technological dislocations, and social schisms. Vogus and Sutcliffe (2007) found that resilient organisations are more likely to outperform in times of uncertainty. This has a lot more to do with thriving and innovating after the fact, rather than just surviving crises. From the perspective of enterprise performance, resilience is the ability of a firm to continue, or perhaps even increase, its productivity, profitability, and market position when external or internal shocks occur. (Peck, 2011) maintain that resilient organisations tend to create adaptive capacities, that is, capacities to exploit the opportunities offered by the period of tough times, and thereby, the organisations are able to realise long-term sustainable performance.

Organizational resilience may have a direct impact on the financial performance, customer satisfaction, or operational efficiency of an enterprise. Holling (2001) referred to resilient organisations as being able to handle change and uncertainty better, which in most cases leads to more stable and consistent performance outcomes. A firm's ability to quickly rebound from disturbances not only safeguards it from financial disasters but also strengthens its competitive advantage. To continue

business operations and minimise the negative impact of unexpected events on customers, it is essential to establish a strong relationship with customers, suppliers, and other stakeholders as a resilient organisation (Gittell et al., 2006). In addition, resilient organisations put money into innovation and employee improvement, with a direct effect on productivity and operational effectiveness, and instantaneously upgrade performance. Thus, resilience becomes a key driver of sustainable competitive advantage, as it enables organisations to achieve it and adapt to changes in their external environment.

Organizational resilience is related to enterprise performance, partly depending on the leadership style within the organisation. According to Duchek (2020), effective leadership is often stated as one of the most important factors in building and sustaining organisational resilience. Proactive, flexible leaders and those able to make decisions under pressure can guide their organisations through turbulent times with the firm focused on its goals and objectives. There are reasons for women leaders to create resilience in an entrepreneurial context, where leadership style matters most for women entrepreneurs as they are most likely to face discrepancies in gender bias, lack of resource access, and social expectations (Brush, 1992). There are women entrepreneurs, however, who adopt the transformational leadership practices of collaboration, communication, and empowerment, and are therefore better positioned to create a resilient organisational culture. Instead, transformational leaders encourage their employees to become self-responsible for challenges and, hence, create innovative and adaptable solutions. Consequently, this enables the organisation to perform well in situations of stress.

Furthermore, organisational culture has a significant impact on enterprise performance in addition to leadership. For organizational resilience to be built, a culture oriented towards adaptability, learning, and continuous improvement is fundamental (Sutcliffe and Vogus 2003). A culture like that does not only make an organisation crisis ready, but it also motivates them to react not only with speed but also creatively. O'Reilly and Tushman (2004) found that organisations that focus on cultural flexibility are in a good position to leverage their resilience capability to

advance short- and long-term performance. Women entrepreneurs ' setting up a resilient organisational culture comes as a result of the particular leadership qualities they carry like empathic characteristics, emotional intelligence, and focus on collaboration (Fielden et al., 2003). The possession of these qualities can encourage the formation of an environment that makes employees willing to come up with solutions to issues collectively, affirming the good performance of a firm in trying time.

In addition, the key enablers of organizational resilience are technology and innovation which have a well-known impact on enterprise performance. The need for adaptation to technological change in this digital age is high because firms must keep pace with the ever-changing digital front. Organisations tend to be resilient to the implementation of technologies that increase operational efficiency, improve customer experience, and generate new sources of revenue (Bharadwaj et al., 2013). However, as a tool for women entrepreneurs, technology plays a remarkable role; it can provide new avenues for such women to access markets while also reducing costs through the adoption and mainstreaming of technology. However, technology adoption is often characterised by the presence of considerable entry barriers, such as lack of technical skills, access to capital, and limited networks. Women entrepreneurs, however, may face difficulties accessing the same technological resources as men entrepreneurs, and hence face challenges in building resilient organisations, as indicated by Molla and Licker (2005). Hence, supporting female entrepreneurs when adopting technology will help them enhance their business performance.

Additionally, factors such as currency, location, and other environmental impacts on the enterprise are also taken into consideration in relation to the influence of organizational resilience on enterprise performance. This prepares these organisations to respond quickly and with minimal damage to these external pressures, as the organisations are proactive with their risk management skills and can exhibit flexibility (Sheffi, 2005). External factors can be especially challenging for women who are entrepreneurs, for example, when operating in industries where male competitors hold a strong presence, or in a regulatory environment that does not

support female ownership of businesses. According to Carter and Shaw (2006), women entrepreneurs face greater risk, as measured by volatility in the market and regulatory challenges. Nevertheless, women-led organisations that invest in risk management practices, market intelligence, and regulatory compliance are more ready to overcome the effects of these external pressures and continue their operational performance either as always or even better. It is highlighted here that, in addition to internal resilience building strategies, women entrepreneurs need external support mechanisms, that is, mentorship and policy advocacy that can strengthen their performance in harsh markets.

4.5. Components of Resilience Strategies Adopted by Women Entrepreneurs

Women entrepreneurs are in great need of resilience strategies, such as survival and success strategies, particularly when interacting with the dynamic challenges emerging from the modern world business environment. Indeed, Digital transformation has been one of the key strategies adopted by women entrepreneurs to guarantee that their businesses will continue to be competitive and sustainable. Today, digital technologies, such as e-commerce platforms, social media marketing, and cloud-based tools, must have tools in the contemporary business landscape to reach wide markets, efficiency of operation, and good customer engagement (Brynjolfsson & McAfee, 2014). According to Kraus et al. (2020), female entrepreneurs can use digital tools to overcome geographical limitations, gain access to resources, and find a balance within industries which are normally dominated by men. Digital transformation also provides women with the possibility of building a strong and resilient business model, which can resist external shocks such as economic crises, pandemics, and market fluctuations. Led by women, small businesses that were willing to embrace digital transformation outperformed those that did not, by facilitating higher growth and better resilience during and after COVID. In addition, (Jawad, Naz, & Maroof, 2021). Therefore, digital transformation is not only a growth enabler, but also a decision to design resilience in the longer run of business.

Financial planning is another resilience strategy critical to the sustainability of women-owned businesses. However, in many instances, women entrepreneurs

struggle with access to finance due to gender bias, lack of connexions, and poor ability to serve as collateral (Allen et al., 2020). This leads to financial planning becoming a strategic instrument for addressing these barriers and achieving financial sustainability. Careful management of cash flow, budgeting, and forecasting can help reduce the risks of economic uncertainty and help women entrepreneurs make appropriate decisions regarding resource allocation. In addition, it helps them identify areas for cost cutting, which improves profitability during financial stress (Beck et al., 2008). According to Brush et al. (2009), female entrepreneurs who strategically planned their financials were able to manage their businesses during periods of volatility. On these grounds, financial planning also helps businesses make plans to tackle unexpected financial downturns, such as sudden decreases in revenue or temporary snags in supply chains.

A second strategy to build resilience is employee engagement, in which women entrepreneurs focus on sustaining their businesses in the long term. Harter et al., (2002) have shown consistently that engaged employees produce more, are more loyal, are more motivated, thus affecting business performance. When these women entrepreneurs concentrate on creating an employee engagement culture, they can strengthen defences for the organisation in terms of employee commitment to the organisation's goals and willingness and the ability to adapt when challenges are ironed out. By creating a strong organisational culture of communication with the workers, giving them opportunities for professional development, and acknowledging their efforts, it can help build a strong organisational culture that provides support to an organisation (Gallup, 2020). In addition, engaged employees are more inclined to give suggestions and find innovative solutions; therefore, they are essential to any company that requires adaptation to changes in the market or industry. As cited by Cummings and Worley (2014), employees in companies with a high degree of employee engagement are more inclined to make tough choices that would enable the business to not only survive during the crisis, but also thrive.

Networking and partnerships have also become important means for building women entrepreneurs' resilience in an ever-more globalised economy. Having a strong

network of contacts, mentors, and collaborators can give them access to useful resources, knowledge, and other opportunities. Women entrepreneurs benefit from networking because they can build connexions with other business owners, investors, and industry leaders, who can support, direct, and even provide opportunities for partnerships (Aldrich & Cliff, 2003). Additionally, strategic partnerships can assist women entrepreneurs in the challenges of insufficient resources, entry barriers to the market, and distribution channels. Blanchflower (2004) showed that women entrepreneurs involved in networking and partnering were better prepared to withstand periods of economic stagnation or other forms of interruption. These can be in many forms (e.g. joint ventures, cooperation with other entrepreneurs, cooperation with industry organisations). Partnerships can provide women entrepreneurs access to expertise and capital, without which they may otherwise lack resilience in competitive markets.

Market diversification is yet another resilience strategy that women entrepreneurs use to avoid risks resulting from market dependency. Using one market or a single customer group as a basis for business can be unreliable and leave the opportunity to be exposed to external shocks; for example, when consumers start to have different preferences, there is an economic recession, or whenever there is a change in regulation. Another way women entrepreneurs can reduce the risk of business failure due to market upheaval is by branching into new markets, whether geographically, with new products or services. According to Freeman et al. (2010), firms that expand their range of offerings have better risk profiles and survive better during periods when the economy is shaky. In addition, market diversification helps women entrepreneurs access new customer bases, leads to new revenue streams, and improves overall business performance. For example, women entrepreneurs in the retail sector have moved their business out of a single product line into a multi-product line or exited into new geographic markets, thus spreading their business risk and improving their chances of long-term business success (Brush et al., 2014).

4.5.1 Digital transformation

In today's dynamic business environment, women-led and owned enterprises require digital transformation as an indispensable resilience strategy. Using digital technologies, business processes can be integrated into entrepreneurial tools to improve operational efficiency, customer interactions, and innovation. For women entrepreneurs, digital transformation offers a chance to sidestep many of the usual challenges that they have to contend with, including a lack of access to resources, funding with a gender bias, and geographical constraints. E-commerce platforms, social media to promote products or business, and cloud-based services help to balance the field and the playing field and help women entrepreneurs reach the market with improved customer engagement and improved sustainability of the business (Brynjolfsson & McAfee, 2014). Digital transformation has helped women-led businesses remain agile and competitive because they have had to keep pace with the volatile, uncertain, complex, and ambiguous (VUCA) world in which they operate.

Digital technology represents a critical component of women entrepreneurs' resilience, by virtue of its key role in adopting transformational strategies to adapt to evolving market conditions. According to research, businesses that understand the value of digital tools are better prepared to deal with disturbances such as the recent COVID 19 pandemic, which caused hundreds of businesses to shift to digital platforms only to stay afloat (Jawad, Naz, & Maroof, 2021). Digital technologies, in turn, are beneficial to women-led businesses in that they provide the ability to work flexibly, connect with customers directly, and build upon the current momentum of online markets that enables control over revenue generation (Bharadwaj et al., 2013). For instance, many women entrepreneurs in the retail industry have been able to use social media and e-commerce to break into other product categories which in turn helps deal with the vulnerabilities of relying solely on in-person retailing (Kraus et al., 2020). It makes businesses more flexible and able to continue with the business despite the shocks, and therefore, more capable of growing the business.

Additionally, they can make better decisions and improve the strategic capabilities of women entrepreneurs through digital transformation. Real-time data, customer

insights, and business analytics for women entrepreneurs provide them with more informed decision-making and efficient resource management. Data analysis and customer feedback using digital tools to analyse data are being used by businesses that study data and feedback in digital format, as reported in previous studies (Davenport, 2013), which are better placed to identify new opportunities and mitigate risk. Digital transformation in the context of women entrepreneurs allows them to adopt data-driven techniques for financial planning, marketing, and operations, as opposed to relying on intuition or gut feelings, and hence increases reproducibility, resilience, and consequently business performance. Moreover, women entrepreneurs who are early adaptors of digital transformation can scale the business much better, as they can reach new customers without limits of physical places which also makes them more competitive in global markets (Lee et al., 2021).

Digital transformation offers advantages, but it also includes challenges that must be navigated properly. Some barriers to uptake by women entrepreneurs include the cost of technology adoption, technical expertise, and the digital divide. According to the International Finance Corporation (2021, p. 4), women-led businesses face challenges in obtaining sufficient capital to invest in digital tools which prevents them from accessing the full potential of digital transformation strategies. Additionally, women entrepreneurs do not possess the plentiful digital literacy and technical skills which support the proper integration of digital tools (Gaglio, Kraemer-Mbula, & Lorenz, 2022). Additionally, women are underrepresented in the technology industry, restricting their exposure to new technologies and the possibility of innovation. An estimated 28.8 percent of US Hispanics, 26.4 percent of Blacks, and 6 percent of Asian Americans use the Internet, compared with 71.2 percent of Whites (Krieger-Boden & Sorgner, 2018). These barriers can be overcome only if women entrepreneurs are trained adequately and provide affordable digital resources to ensure equal access to digital transformation opportunities, along with government and organisational support.

Innovation is equally important in women-led businesses but with digital transformation. Therefore, organizational resilience is related to the ability to

continuously innovate because, by doing so, businesses remain in competitive markets. With digital tools, women entrepreneurs can experiment with new business models, products, and services at lower cost and risk (Gans, 2016). For instance, women entrepreneurs in the beauty and wellness industry have used digital transformation to launch virtual consultations and product customisation services, which have become extremely trendy with customers during social distancing (Aldrich and Cliff, 2003). Additionally, as part of the digital platforms for collaboration, women entrepreneurs can access a global community of innovators, partners, and customers to co-create ideas and solutions for business resilience. It is necessary for women-led enterprises to innovate in response to changes in consumer demands and market conditions to sustain in the long run.

In addition, how the organisational culture of women-led businesses is influenced by digital transformation brings cultural changes in terms of flexibility, transparency, and ease of collaboration. Women entrepreneurs who embrace digital tools work to create an environment that facilitates communication and collaboration among team members, resulting in better employee engagement and performance. Gallup (2020) also states that companies that embrace digital communication tools have more engaged employees, which translates into higher productivity and good business performance. Moreover, digital transformation promotes greater transparency as it allows entrepreneurs to monitor real-time business metrics, share them with stakeholders, and make data-driven decisions (Davenport & Harris, 2017). An additional benefit of this openness is that it fosters trust between female entrepreneurs and their employees, customers, and investors, which is needed for developing long-term relationships and long-term business growth. Hence, digital transformation primarily impacts the operational side of the business, but it also contributes towards instituting the required organisational culture that would make the business more semantic in the face of future challenges.

4.5.2 Financial planning

The importance of the resilience strategy for women-led and owned enterprises occurs through financial planning, which ensures that women-led businesses can survive in

the midst of economic uncertainty and increase their long-term success. Given the financial challenges associated with the economy, market, and other unforeseen problems, businesses need to have a good financial plan. Access to finance is one of the greatest challenges to starting businesses and ties into financial planning for any entrepreneur in general; however, women entrepreneurs have some additional unique barriers to overcome (De Bruin et al., 2017). Women entrepreneurs can foresee possible financial setbacks, efficiently utilise resources, and make informed choices regarding financial investment, operation, and growth through financial planning. By developing a holistic and thorough, thought-out financial plan, women-led businesses would protect themselves from market interruptions and keep running smoothly in harsh times, and so will stay resilient in case of any tragedy (Klapper & Love, 2011).

By benchmarking against similar craftsmen and becoming aware of their competitors, craftsmen can set targets for the bench work portions of their businesses and become comfortable with bench work profitability measurements. According to previous research, women entrepreneurs usually choose more conservative financial management strategies and tend to focus on stability and risk aversion to aggressive expansion or high-risk investments Asghar et al. (2022). At times, however, this financial prudence can be considered a disadvantage for high-growth sectors, but it greatly contributes to resilience in volatile environments. Focusing on liquidity management enables women-led businesses to maintain adequate cash flow to cover operating costs and invest in innovation, which helps them respond to unexpected economic shocks. In addition, women entrepreneurs can use financial planning to create emergency funds and contingency reserves as financial cushions in case of unlikely events (Dantin, 2023).

Access to capital is one of the most important aspects of financial planning in women-led enterprises. Gender bias in the financial sector means that female entrepreneurs are viewed as high-risk borrowers when seeking funding compared to male entrepreneurs (Coleman, 2007). Consequently, women-led businesses may have to depend more on personal savings or family funds or seek non-traditional sources of finance, and financial planning must ensure the proper utilisation of terms of these

limited resources. Moreover, having a solid financial plan enables female entrepreneurs to speak more convincingly about their business value proposition to potential fund providers or lenders, facilitating access to cash. The pursuit of financial planning also constitutes a way for women to lead businesses to tackle the complexities of external financing in financial decisions by devising precise cash flow projections, growth plans, and risk management strategies to appeal to potential investors (De Bettignies, 2008).

Additionally, financial planning is a tool for strategic decision-making in which women entrepreneurs set their business goals in such a way that they match available resources. In the context of enterprise resilience, financial planning provides opportunities for women entrepreneurs to order their investments to maximise their return on investment (ROI) and minimise their risks. As a case in point, women entrepreneurs are able to expand their market reach, thereby enhancing customer retention and competitive advantage by strategically allocating resources to marketing, innovation, and talent acquisition (Moriano et al., 2012). Women entrepreneurs can take advantage of financial forecasting techniques to determine the viability of different strategies and allow them to make informed decisions that promote long-term growth. The ability to strategically align financial resources with the business and align them with objectives is an important part of constructing a resilient set of businesses that can sustain change.

Second, financial planning promotes transparency and accountability within women-run businesses. Detailed financial statements, measurable financial goals, and tracking of performance results against these goals create a culture of accountability that is necessary for real long-term success. According to research, businesses with well-organised financial plans usually exhibit a high level of organisational efficiency, good internal control, and enhanced financial health (Mazzarol & Reboud, 2011). Women entrepreneurs who practice good financial planning are more apt at cutting costs, deriving most from their profit margins, and scaling their businesses while ensuring sustainability. Moreover, financial planning for women entrepreneurs facilitates the identification and rectification of financial inefficiencies or

underperforming areas before the problem becomes out of scale (St-Pierre & Rivard, 2006). By being proactive in financial management, women-led enterprises become more resilient because they ensure continuous monitoring and adjustment based on how the financial circumstances evolve.

Financial planning in women-led enterprises yields long-term benefits, that is, one through which wealth is created, and one that ensures financial independence. A well-planned financial plan does more than just improve the daily business operations; it assists women entrepreneurs in acquiring a thriving financial legacy for generations to follow. These studies have revealed that women-led businesses which engage in financial planning perform financially better; that is, they have higher profitability, higher revenue growth, and higher asset accumulation than businesses which do not engage in financial planning (Orser et al., 2010). Succession planning is also dependent on financial planning, enabling women entrepreneurs to leave their business in the hands of the next generation or sell the same at a profitable value when a need arises. Women entrepreneurs can use financial planning to play a core role in creating an economically resilient enterprise, personal financial security, and the economic empowerment of themselves, their families, and broader society (Brush, 2006).

4.5.3 Employee engagement

Employee engagement is a critical resilience strategy to optimise women-led and owned enterprises and is key to maintaining higher productivity, greater job satisfaction, and long-term sustainability. Given the challenges the company finds itself in, employees who are engaged are more committed, more in line with the organisation's vision, and more motivated to help the organisation’s success. As it turns out, employee engagement is even more important in women led businesses because it can create a powerful organisational culture, drive innovation, and encourage group problem solving. Research shows that women entrepreneurs frequently concentrate on the development of inclusive and encouraging working conditions, and they often favour a relational management style in which employee well-being and emotional intelligence are prioritised (Eagly, 2005; Powell, 2014).

These leadership attributes foster a more engaged workforce, the success of which is imperative for the resilience of enterprises faced with variations in external disturbances and changes in the market (Alfes et al., 2010).

Employee engagement is a concept that includes different dimensions such as emotional commitment, discretionary effort, and alignment of employees' objectives with organisational goals. Such flatter organizational structures and open communication channels of women's businesses further cultivate a connection that allows transparency and trust. Not only are the workers in these enterprises more productive, these workers are more inclined to help the process of innovation and suggest improvements to the process (Saks, 2006). Since women entrepreneurs' face resource constraints, they have become an effective strategizing tool to attain maximum productivity and to keep in-sync within the competitive race. It has been demonstrated through research such as Harter et al. (2009) that in cases where employee engagement is regarded as important, such organisations possess the ability to operate with greater efficiency and resilience through challenging or crisis-affected periods.

In addition, women led enterprises in which employee engagement helps to foster an adaptive and flexible workforce, which has been linked to greater organisational resilience. In the face of uncertainty, such as an economic downturn or unforeseen disruption, an engaging workforce is more likely to stay committed and motivated to help recover and eventually succeed in the long run. According to Gallup's (2013) studies, businesses with high levels of employee engagement have low turnover rates, lower absenteeism levels, and higher morale, which in turn build a stronger organizational culture and enhance resilience. In addition, fostering engagement can also be advantageous for women-led businesses to create an environment that is supportive and nurturing employees, producing a sense of worthiness and empowerment to contribute to the strategic objectives of the enterprise, especially during transition periods (Bakker et al., 2011).

In women, the ability to link individual and organisational goals is a critical element in promoting employee engagement. Often, women entrepreneurs tend to be more

holistic in their approach to leadership by taking into account the personal and professional aspirations of employees. This creates a culture of professional growth, learning, and career progression from the entrepreneur to their employees so that by creating such a culture, they practise employee motivation towards time and effort that will be invested in the business or success of the business (Smith & Hitt, 2005). Employee engagement in enterprises extends beyond performance improvement to retaining the best talent and lowering expenses for employee turnover. This alignment has long term implications for resilience as it contributes to employees' resilience to external challenge (as those that are 'engaged' have a shared purpose with their organisation and are underpinned by feeling important to their organisation and its success) (Macey & Schneider, 2008).

Women entrepreneurs also use employee engagement to foster organisational flexibility and resilience. Employees who are engaged are more likely to accept responsibility for their work, embrace change, and are an important factor in the business ability to pivot when there is a crisis. This flexibility is important in women-led businesses because it can help the firm innovate, be acutely sensitive to changes in the market, and pursue growth opportunities. Women entrepreneurs that maintain high levels of engagement tend to build a culture that empowers staff to accept new concepts and take action to solve problems, and this will promote long-term business resilience (Kahn, 1990). Organisations with engaged employees tend to respond better to competitive pressures from the market, technological disruptions, and changes in consumer demands (CIPD, 2016).

4.5.4 Networking and partnerships

Networking and partnership are important strategies for women's resilience to access resources, knowledge, markets, and market opportunities that may sustain or scale a business. For women, networking has even greater value because it may help them overcome some unique barriers they face, such as limited access to financiers, mentors, and connexions in the industry. Strategic partnerships and strong networks are required for these entrepreneurs to create strategic alliances with the entities they rely on, such as suppliers, customers, and even their competitors, to sustain and

maintain a stable market position and mountain of sustainability (Brush et al., 2009). Through successful networking, women entrepreneurs can learn useful information about emerging tendencies, consumer preferences, and business practices, as well as navigate uncertainties (Aldrich & Cliff, 2003).

In addition, partnerships are essential when addressing the challenge of working with resource constraints faced by women-led enterprises. Access to financial capital, skilled labour, or technical expertise might be a challenge for these businesses, especially young ones. Leveraging partnerships, women entrepreneurs can develop a pool of resources, share risks, and draw upon special knowledge that may not be under their purview within their organisation. Strategic alliances with larger firms, government bodies, or even non-governmental organisations (NGOs) can be the key support for receiving funding, new markets, or prospects of joint product development (Rothaermel and Boeker, 2008). Moreover, collaborating with external partners reduces the risk of failure of women-led businesses (Korber & McNaughton, 2018), thus increasing their overall resilience to economic turbulence or market disruptions.

In addition, social capital developed as a result of networking is a key determinant of business resilience among women entrepreneurs. It appears that social capital relates to relationships, trust, and norms which affect cooperation between individuals and organisations. Building long-term relationships based on trust and reciprocity sounds nice, and this also helps to ease pressure in times of adversity, as women entrepreneurs tend to value this. According to Hughes (2012), women usually participate in informal networks, including family, friends, and sometimes women-specific business groups, providing emotional and practical assistance. Not only do these networks help women deal with personal and professional challenges, but they also lend them confidence and resources to work on market challenges. In addition, such networks linked with women entrepreneurs can assist in attracting investors, mentors, etc. that are aligned with their values and goals, thereby enhancing their resilience capabilities.

Besides, it is equally beneficial to build partnerships with other women-led businesses, as it brings a sense of solidarity and shared experience for women entrepreneurs. In many cases, women-led networks function as mentorship,

collaboration, and knowledge exchange platforms, and can result in improved business performance and network resilience. Collaborating with these organisations gives women entrepreneurs not only access to women-focused venture capital firms but also business development programs designed specifically for them. Gathering economies of scale with other women-owned enterprises also serves them in leveraging distribution channels and dealing with power to secure good deals from their customers, thus improving their market entrainment and ability to cope with external challenges (Brindley, 2005). Adhering to other women-led businesses joins them in synergies and helps construct a more inclusive and resilient entrepreneurial ecosystem.

In addition, a female entrepreneur also has the opportunity to widen her market reach, which is vital to the survival of a business in the long term through networking and partnerships. Therefore, it is important for B2B companies to tap into new markets or diversify their product offerings in response to industry-specific downturns or external shocks. Cross-sector partnerships or international networks are a way for women entrepreneurs to gain a competitive edge in terms of global competitiveness, and therefore, innovation and growth. In addition, these partnerships provide avenues for diversification of their customer base, reducing the dependence on a single market segment and hence mitigating risk (Jones et al., 2016). Such collaborations enable women to extend their reach to new customers and benefit from new technologies or marketing strategies to make their enterprises more resilient to changing market dynamics and economic pressure.

4.5.5 Market diversification

Diversifying from single markets is a crucial strategy of resilience for women-led and owned companies to disperse risk, develop revenue prospects, and sustain fiercer competition in changing business environments. In many cases, women entrepreneurs face tough challenges such as gender bias, hard access to capital, and weak networks compared to their male counterparts. By diversifying the markets, they limit their dependency on a single customer base or geographical area, making it easier for their businesses to adapt and resilient to external shocks (Carter & Shaw, 2006). With this

strategic step, the company can have a cushion against the effects of economic fluctuations in the economy, such as changes in consumer demand, political instability, and supply chain disturbances. Women entrepreneurs can stabilise their revenue streams and improve their long-term sustainability in the market by exploring new markets (i.e. geographic expansion, product diversification, and new customer segments) (Brush et al., 2009).

Market diversification can provide a way for women led enterprises to grow and develop visibility in the market. Women entrepreneurs operate in traditionally female-dominated sectors such as retail, education, and hospitality, where market conditions are extremely competitive. Such diversification has occurred by introducing new products, services, and digital channels, allowing such enterprises to differentiate themselves from each other and gain new revenue streams (Brush et al., 2009). Moreover, innovation can occur by tapping into new markets or customer segments that are typically excluded, thus allowing women entrepreneurs to build or add portfolios with unmet needs. This demonstrates how the capacity to innovate and diversify has been associated with the development of enhanced organisational resilience, which implies that firms are better able to adapt to market particularities and consumer behaviour (Kraus et al., 2017).

Market diversification also promotes long-term resilience through a wider network of partnerships, both locally and internationally, which gives communities access to these wider networks. The growth of women entrepreneurs in new markets requires building relationships with new customers, suppliers, and business partners, thus expanding their social capital. These new connexions may be a valuable source of resources, including knowledge, financing, and technical expertise, which is essential in leveraging resilience to effectively deal with problems and achieve sustainable growth (Marlow & Patton, 2005). In addition, diversifying into the market allows women entrepreneurs access to global networks which helps them venture into volatile markets and seize new opportunities in hitherto untapped markets (Jones et al., 2016). They also access global markets, which give them economies of scale,

strengthen their competitive advantage, and provide them resilience against local economic fluctuations (Rothaermel & Boeker, 2008).

Another important reason for market diversification is to strengthen financial stability, as it is known that women entrepreneurs face challenges in accessing appropriate financing for their businesses. Women led businesses can broaden their market base, reducing their dependence on only selecting clients, which in turn minimises the risk of becoming financially unstable when major customers take time to clear bills or miss deals. Given the close relationship between market diversification and improved financial performance and profitability (Marlow & Patton, 2005), studies show that market diversification allows better absorption of financial disruption. It also helps women entrepreneurs with flexibility in managing cash flow because it allows them to weather low-demand periods in one market more easily by accessing higher demand opportunities in another (Korber & McNaughton, 2018).

While these are benefits, women entrepreneurs may encounter resource constraints, as well as limited experience in entering unfamiliar markets. Expansion into new markets involves huge investments in research, marketing, and changes in operations. This can be a bit scary if one does not have the required resources or support. Second, women entrepreneurs may find market diversification risky because a unit that works in one market does not often perform in the same way as another because of the complexity of managing diverse customer needs, compliance with foreign regulations, and logistical challenges of an organisation operating in new regions. However, these challenges still reflect the courage of women business owners, as they prove that they can innovate and adapt to any situation. These challenges can be lessened by leveraging support from networks, mentors, business development organisations, and other firms, which can help women entrepreneurs gain the tools needed to transition into a new market (Aldrich & Cliff, 2003).

4.6. Mediating Role of Resilience Strategies Between Organizational Resilience and Enterprise Performance

Much of the attention on the mediating role of resilience strategies between organizational resilience and enterprise performance has been done in regard to the

women led enterprises. Resilience in the organisation means the organisation can adapt, recover and thrive in the light of adversities like financial crisis, market shift and natural disaster. Resilience for women in business is often a leap over gender-based obstacles, such as lack of capital access, a bias society and the challenge to balance business and personal responsibilities. Research also suggests that strategic resilience mechanisms like digital transformation, employee engagement, networking, market diversification and financial planning are important for improving resilience in an organisation and consequently, influencing the whole enterprise performance (Ratten, 2020; Smith et al., 2020). As mediators, the resilience strategies act as buffers that cushion the challenges in women entrepreneurship and spring to greater business outcomes.

Ability to adapt to both external and internal challenges is a crucial part of organizational resilience and resilience strategies are vital in boosting the capability. Digital transformation can be critical for women entrepreneurs navigating the male pressed industries, or the ones that presented with unique socio-cultural challenges. Digital transformation makes possible for businesses to ease their operations, open up to new markets, and react speedily to consumer requirements (He et al., 2023). For instance, retail and service-based women entrepreneurs have taken to using e-commerce platforms, digital marketing and automation tools in order to optimise efficiency and outreach to a wider clientele. Through the adoption of those same digital tools women entrepreneur might be able to reduce some gendered challenges they face, limited physical access to resources or networks for instance, which will increase their organisational resilience. In turn, this enhances business performance at a global scale due to increase in sales, customer engagement, and market penetration facilitated by digital platforms (Nambisan et al., 2019). Hence, the relationship between organizational resilience and enterprise performance is mediated by digital transformation that allows women led enterprises to prosper in digital age.

Another resilience strategy, an employee's engagement is a strong mediator in the link between organizational resilience and enterprise performance. A review of literature repeatedly indicates that engaged employees are more productive, innovative, and

committed to their job which ultimately results in the success of the organisation (Saks, 2006). Employee engagement is key for women entrepreneurs because it can provide a supportive organisational culture that can act as a shield for the effects of external stressors facing both the entrepreneur and their employees. As women entrepreneurs often work with scant private human resources, a highly engaged workforce is more likely to present itself as the solution to increased problem solving, to greater adaptability, and to more innovative solutions (Macey & Schneider, 2008). Because of those women' s employees showing greater loyalty and commitment, women led enterprises with high employee engagement are more likely to withstand the external shocks like economic downturn or competitive pressure. Additionally, the feeling of empowerment and involvement of the employees develops a culture in the organisation that is resilient, which helps the enterprise to stay competitive and respond to the changes in the market (Gautam, 2024). Therefore, employee engagement acts hand in hand to mediate between organizational resilience and better enterprise performance.

Networking and partnership is another resilience strategy that has a powerful mediating role. Access to business networks, mentorship and industry connexions are pitfalls that women entrepreneurs have to avoid. Although women entrepreneurs face such barriers to growth, they can overcome these barriers through the establishment of strategic partnerships and networking (Kelley et al., 2016). Through networking, companies can connect with other organizations, the people working in them as well as their respective industries, in order to acquire capital, expertise and market intelligence that could improve a company’s ability to overcome adversity. There are partnerships with other businesses, NGOs or governmental agencies which act as a cushion during financial crises, assist businesses to identify opportunities and build high market visibility. The studies (Brigham et al., 2007) indicate that women led enterprises involving networking or partnerships possess greater innovative power, growth, and better performance when compared with such enterprises operating in isolation. Therefore, networking and partnerships play a critical mediating role in determining how organizational resilience affects enterprise performance and serving

to ensure that women entrepreneurs are supported to be successful in a competitive marketplace.

Another strategic resilience mechanism of mediating the link between organizational resilience and enterprise performance is market diversification. Women entrepreneurs explore ways to diversify their markets, products or service, thereby limiting their dependence on a solitary revenue stream, thereby guaranteeing protection from external shocks such as economic downturns, changing consumer tastes and preferences (Nath et al., 2010). For instance, women led enterprises operating in fashion, food and hospitality markets can diversify by venturing into new geographic markets or online platform to seize a more diverse market share. Thus, this diversification allows them to cushion the risks of price variations as well as offers them an opportunity to adjust to changes in the external environment. In addition, diversifying into different markets enhances the organisation's resiliency by distributing the risk across many revenue streams so that if one market declines, then other markets can still contribute to the business (Morris et al., 2020). As a result, market diversification acts as a mediator to build organizational resilience and enhance overall enterprise performance in which women entrepreneurs will be able to support and grow their businesses.

Organizational resilience and enterprise performance are mediated by a significant financial planning mediating role as one of the important banking services resilience strategies. There are barriers for women entrepreneurs to get financing because lending practises can be gendered and they may lack collateral. Nevertheless, with effective financial planning, women led enterprises can have enough cash flow, control on costs, and proper allocation of resources (Snider & Davies, 2018). Similarly, financial planning requires one, among other things, to develop strategies in risk management such as having an emergency fund, securing debt financing or seeking equity investment where needed. Women entrepreneurs who practise proactive financial planning suffer from less volatility in financial setbacks and keep growing better (Marlow & Patton, 2005). Additionally, sound financial management results to profitability which further leads to increase in enterprise performance.

Financial planning acts as a mediating factor in this way, linking organizational resilience to better performance through its ability to guarantee that women led business will be financially stable and able to seize the chance to grow or diversify.

4.7. Moderating Effect of Socio-Demographic Factors on Organizational Resilience and Enterprise Performance Relationship

Organisation resilience and their link to enterprise performance has started to attract more attention in the entrepreneurship literature, albeit primarily in reference to women led and owned enterprises. The ability of a business to predict, prepare for, react to, and adjust to incremental change and sudden change such as crises in order to not only survive but also thrive is organizational resilience (Peck, 2011). Vogus & Sutcliffe (2007) opined that resilient organisations are those which are adaptable, resourceful and strategically agile and necessary for business continuity where markets are turbulent. Being a woman entrepreneur or owned business comes with the fact that it often takes place in a systemically challenging environment characterised by limited access to capital, few market opportunities and sexist expectations that make resilience a vital factor for business success (Brush, de Bruin, & Welter, 2009). The influence of these socio-economic and demographic factors such as age, education, marital status on industry type will, however, significantly moderate the effect of the resilience on actual performance indicators including profitability, sustainability and growth.

It is evident that age has a significant causal factor in how much resilience is reflected in performance within women led enterprises. Because younger women entrepreneurs may be more willing to be innovative and to adopt technology, the effect of organizational resilience on performance is accentuated (Leitch, McMullan, & Harrison, 2013). On one hand, older women could be more likely to use the accumulated experience and social capital for forming the more cautious and consistent use of resilience capabilities (Cabrera & Mauricio, 2017). The risk tolerance, strategic orientation, and leadership style are also modulated by age (shape) in their effect on performance outcomes of resilient enterprises. Additionally, diversity in generation exposure to entrepreneurial education and digital skills means

that age could moderate the extent to which resilience increases enterprise performance (Urban & Naidoo, 2012). Therefore, thinking about age as a moderator gives further insights into the performance dynamics of women-owned enterprises.

Similarly, another socio demographic variable of education also moderates the resilience performance nexus. Cognitive flexibility, problem solving and ability to use the strategic planning tools pertain to educational attainment that determines it all in proffering organizational resilience (Perry, 2002). It has been proved by empirical studies that women entrepreneurs with higher education levels are more prone to engage in proactive and innovative behaviours, thus having a positive impact of resilience on firm performance (Bamiatzi et al.., 2015). Resilience can also be accessed through formal education, and this can increase access to networks, financial literacy, and institutional support systems that are important in translating resilience into measurable business success (Martin, McNally, & Kay, 2013). On the other hand, women with lower education may depend more on learning by doing and informal support mechanisms diminishing the effectiveness of resilience strategies under some market conditions (Giménez-Jiménez et al. 2014). As such, education is a key enabler, which reinforces or reduces the linkage of the organizational resilience to the enterprise performance.

In addition, marital status brings a complex layer of socio cultural and emotional factors that affect entrepreneurial behaviour and resilience outcome. As married women, deploy resilience strategies, however, may also involve dual roles, which if deployed women have to wear both hats of business and family responsibilities, which occupy time and energy differently (Shelton, 2006). Other studies suggest that spousal support facilitates resilience task performance and decision-making and risk taking, which may reinforce the resilience performance relationship (DeMartino, Barbato, and Jacques, 2006). According to others, marital status can limit the positive effects of resilience on enterprise outcomes because of societal expectations and caregiving responsibilities that are required in patriarchal settings (Díaz-García & Brush, 2012). In addition, being in the emotional and financial stability of a partner can buffer the market volatility to make resilience more influential in married women business

owners versus their single or divorced counterparts. Thus, marital status functions as a contextual moderator that moderates out or in the performance implications of resilience.

The other critical moderating variable in this regard is the type of industry in which women entrepreneurs operate. The resilience capabilities go hand in hand with issues such as empathy and adaptability, which are important in-service orientations such as retail, healthcare, and education, where women are often overrepresented, require a high level of interpersonal engagement and customer relationship management (Manolova et al., 2007). On the contrary, women working in male dominated industries such as manufacturing of technology might face additional systemic barriers and therefore need alternative configuration of resilience strategies for performance outcomes (Marlow & McAdam, 2013). Access to capital, supply chain and market opportunities also depends on the sectoral dynamics and determines how resilience turns into performance metrics like profitability and sustainability (Welter 2011). Because of that, the nature of industry specific challenges and opportunities therefore determine the effectiveness organizational resilience in terms of performance and therefore the type of industry is a highly significant moderator in this relationship.

There are also several studies that highlight the need to incorporate intersectionality into the examination of resilience and performance of women owned enterprises. The theory of intersectionality underlines how more than social category—which for instance can be age, marital status and educational background—add up and represent significant symbols in the entrepreneurial experience (Crenshaw, 1991). For example, a young, single low educated woman entrepreneurs may show resilience and performance dynamics different from an older, married woman postgraduate educated. By utilizing this intersectional lens, one can have a more robust and comprehensive understanding of how different demographic factors combine to adjust the influence of resilience in affecting enterprise outcomes (Marlow, Henry, & Carter, 2009). Acknowledging these interdependencies is important for designing policies, support systems and training programmes that seek to improve the resilience of

various groups of women entrepreneurs. Also, other contextual factors including regional economic development, cultural norms, and policy frameworks are interposed and play a role in the relation between socio economic demographics and the resilience-performance. For instance, in developing countries like India and sub-Saharan African countries, women led enterprise may have run an informal enterprise where structural barriers get in a way of building operational resilience (Amine & Staub, 2009; Roomi, Harrison & Beaumont-Kerridge, 2009). In such a context, the relative significance of these demographic moderators is highlighted because educational qualifications or marital ties may serve as an entry point to credit or mentoring or institutional support or act as a barrier to them. Additionally, cultural attitudes toward female entrepreneurship can either empower or constrain women's resilience building in order to create a positive impact on enterprise performance (Jamali, 2009). As a result, such a relationship can only be understood when both individual demographic variables and the broad range of socio-cultural variables are included in an integrated approach.

The call for disaggregated analyses that incorporate the heterogeneity among the group of women entrepreneurs is consistent in the empirical investigations of women entrepreneurship. There are general patterns to observe but the moderating effects of the socio-economic and demographic factors often depend on the institutional, cultural and economic environments (Brush, et al. 2009, Henry, et al. 2016). Among these moderating effects, quantitative studies in the form of structural equation modelling or multigroup analyses have been proven useful in outlining how policy and practise can be tuned to best foster women entrepreneurs (Pathak, Goltz, & Buche, 2013). Longitudinal research and mixed methods should represent future research, to document the continuously evolving dynamics of resilience and its effect on performance in different entrepreneurial ecosystems. The positive relationship between resilience and the performance of women-led and owned enterprises depends significantly on age, education, marital status, industry type.

4.8. Conclusion

The conceptual framework outlined provides a comprehensive understanding of how organizational resilience acts as a determinant of critical enterprise performance in women-owned businesses. The framework builds a solid basis for assessing how women entrepreneurs' internal capabilities, such as adaptability, proactiveness, resourcefulness, crisis management, and innovation enable them to probe volatility and uncertainty. The study further correlates these resilience attributes to key performance indicators, including sales growth, profitability, customer retention, business continuity, and market share, which represent direct and indirect paths through which resilience influences enterprise success. The model is then extended to the study of resilience strategies currently employed by women entrepreneurs, such as digital transformation, financial planning, employee engagement, networking, and market diversification. These strategies are mediators that enhance and bring to life the core dimensions of resilience which ensure that women-led enterprises are able to maintain their performance despite disruptions. The mediating layer introduces practical utility to the framework that identifies levers at the actionable unit of change-one with which to build resilience and increase performance.

In addition, the model considers the moderating role of sociodemographic variables, namely, age, education, marital status, and type of industry. Based on these factors, the relationship between organizational resilience and enterprise performance is complicated, perhaps explaining why resilience is not a universally positive asset in different kinds of entrepreneurial contexts. This finding indicates that to support the growth of women owned enterprises, policies and interventions must instead take individual and contextual diversity into account when being designed. The framework essentially provides researchers, practitioners, and policymakers with a multidimensional way to get to grips with the resilience performance nexus in women's entrepreneurship. It is a good tool for designing targeted strategies that can build business resilience and harness instruments to sustainably deliver business outcomes.

CHAPTER 5
DATA ANALYSIS AND INTERPRETATION

5.1 Introduction

5.2. Organizational Resilience and the Enterprise Performance of women-owned and led Enterprises

5.3. Model regarding the impact of Organizational Resilience on the performance of women-owned and led enterprises

5.4. Model regarding the mediating role of Resilience Strategies in the relationship between Organizational Resilience and Enterprise Performance

5.5. Resilience Strategies adopted by of women-owned and led Enterprises

5.6 Model regarding the Resilience Strategies contributing to Enterprise performance of women-owned and led enterprises

5.7. Model regarding the moderating role of Age in the relationship between Organizational Resilience and Enterprise Performance

5.8 Model regarding the moderating role of Marital Status in the relationship between Organizational Resilience and Enterprise Performance

5.9 Model regarding the Education moderate the relationship between Organizational Resilience and Enterprise Performance

5.10 Model regarding the Type of Industry moderate the relationship between Organizational Resilience and Enterprise Performance

5.1 Introduction

This chapter offers an in-depth examination and interpretation of data gathered from women entrepreneurs in Kerala, concentrating on how organizational resilience influences the performance of enterprises owned and led by women. It delves into the ways in which these entrepreneurs tackle the diverse challenges they encounter, ensuring their businesses' survival, growth, and adaptability in a constantly changing economic and social environment. In the realm of women entrepreneurship, organizational resilience is characterised as a company's capacity to foresee, prepare for, respond to, and recover from unfavourable situations, while also seizing opportunities for growth and development. This analysis evaluates the direct effects of organizational resilience on the performance of women-owned businesses in Kerala, highlighting the crucial factors that allow these enterprises to succeed despite obstacles. Furthermore, this chapter investigates the mediating role of resilience strategies such as digital transformation, financial planning, and strategic networking in enhancing the connection between organizational resilience and business performance. By examining how these resilience strategies lead to improved performance, this chapter identifies the most effective approaches employed by women entrepreneurs in Kerala.

Additionally, this chapter will explore how socio - demographic elements, including age, education, marital status, and industry type, influence the link between organizational resilience and business performance. By employing quantitative analysis techniques, this chapter reveals the patterns and connections that enhance the understanding of how resilience strategies affect the development paths of women-led businesses in Kerala. The results not only identify the most effective resilience strategies but also provide practical insights into the impact of socio-demographic factors on entrepreneurial success. Ultimately, this chapter adds to the broader comprehension of organizational resilience within the framework of gendered entrepreneurship, offering valuable recommendations for improving support systems and policies to empower women entrepreneurs in Kerala, thereby fostering sustainable economic growth.

Table 5.1

Demographic Profile of Women Entrepreneurs

Age	No. of Women Entrepreneurs	Percent
Below 25 years	82	20.5
25-35 years	38	9.5
35-45 years	147	36.7
45-55 years	56	14.0
Above 55 years	77	19.3
Total	400	100.0
Marital Status	No. of Women Entrepreneurs	Percent
Single	82	20.5
Married	201	50.3
Divorced	38	9.5
Widowed	79	19.7
Total	400	100.0
Religion	No. of Women Entrepreneurs	Percent
Hindu	165	41.3
Christian	152	38.0
Muslim	83	20.7
Total	400	100.0
Educational qualifications	No. of Women Entrepreneurs	Percent
School Certification	40	10.0
PDC/HSS	38	9.5
Degree	121	30.3
PG	77	19.2
Professional Degree	124	31.0
Total	400	100.0
Type of Family	No. of Women Entrepreneurs	Percent
Joint family	165	41.2
Nuclear Family	235	58.8
Total	400	100.0

Source: Primary Data

Table 5.1 presents a detailed demographic profile of the 400 women entrepreneurs, offering insights into their age, marital status, religion, educational qualifications, and

family type. In terms of age distribution, the largest group of women entrepreneurs falls within the 35-45 years range (36.7%), followed by those below 25 years (20.5%), and those above 55 years (19.3%). A smaller proportion of women was found in the 25-35 years (9.5%) and 45-55 years (14.0%) age groups. Regarding marital status, the majority of women entrepreneurs were married (50.3%), with single women comprising 20.5%, widowed women 19.7%, and divorced women 9.5%. The religious composition reveals that most women entrepreneurs are Hindus (41.3%), followed by Christians (38.0%), and Muslims (20.7%). In terms of educational qualifications, a significant proportion held professional degrees (31.0%) or bachelor's degrees (30.3%), with 19.2% having completed postgraduate education, 9.5% holding a Higher Secondary or PDC qualification, and 10.0% having only school certification. The family structure data showed that the majority of women entrepreneurs belonged to nuclear families (58.8%), while 41.2% came from joint families. This demographic profile provides a comprehensive understanding of the socioeconomic background of women entrepreneurs.

Table 5.2

Organization Profile of Women Entrepreneurs

District	No. of Women Entrepreneurs	Percent
Alappuzha	127	31.8
Kollam	82	20.6
Thiruvananthapuram	67	16.8
Thrissur	54	13.4
Malappuram	36	8.9
Wayanad	34	8.5
Total	400	100.0
Location of the Organization	No. of Women Entrepreneurs	Percent
Rural	154	38.5
Urban	162	40.5
Semi Urban	84	21.0
Total	400	100.0
Age of your organization	No. of Women Entrepreneurs	Percent
1-5 years	82	20.5
5-10 years	117	29.2
10-20 years	124	31.0

More than 20 years	77	19.3
Total	400	100.0
Size of Organization	No. of Women Entrepreneurs	Percent
Micro	91	22.8
Small	151	37.7
Medium	158	39.5
Total	400	100.0
Type of Industry	No. of Women Entrepreneurs	Percent
Manufacturing	65	16.3
Service	211	52.7
Trade	124	31.0
Total	400	100.0

Source: Primary Data

Table 5.2 outlines the organizational profile of 400 women entrepreneurs in Kerala, providing key insights into the geographical, structural, and operational characteristics of their enterprises. Alappuzha leads with the highest number of women entrepreneurs at 127, accounting for 31.8% of the total, indicating a strong presence of female-led enterprises in the district. Kollam follows with 82 entrepreneurs (20.6%), while Thiruvananthapuram and Thrissur have figures, with 67 (16.8%) and 54 (13.4%) respectively. Malappuram and Wayanad contribute the least, with 36 (8.9%) and 34 (8.5%) women entrepreneurs. In terms of location, 40.5% of the organisations operate in urban areas, while a significant portion function in rural (38.5%) and semi-urban (21.0%) settings, reflecting a balanced distribution across different geographic zones. The data on the age of the enterprises reveal that most organisations have been in operation for 10–20 years (31.0%) and 5–10 years (29.2%), suggesting a mature entrepreneurial base with sustained business activity, while 20.5% are relatively new (1–5 years), and 19.3% have been functioning for more than two decades. Regarding the size of organisations, medium-sized enterprises accounted for the largest share (39.5%), followed by small enterprises (37.7%), and micro-enterprises (22.8%), showing a healthy mix across different stages of business scaling. When analysing the type of industry, the majority of women-led businesses fall within the service sector (52.7%), with trade (31.0%) and manufacturing (16.3%) sectors trailing behind. This suggests that service-oriented ventures are the most preferred and accessible domains for women entrepreneurs in Kerala. Collectively,

this organizational profile highlights the diversity, sustainability, and sectoral preferences of women-led enterprises in the region, which play a vital role in assessing their resilience, performance, and potential for future growth.

Table 5.3

Management Autonomy and Nature of Premises

Are you managing the enterprise on your own	No. of Women Entrepreneurs	Percent
Yes	120	30.0
No	280	70.0
Total	400	100.0
If no, who is helping you	**No. of Women Entrepreneurs**	**Percent**
Not Applicable	120	30.0
Spouse	125	31.2
Parents	87	21.8
Siblings	68	17.0
Total	400	100.0
If helping, to what extent	**No. of Women Entrepreneurs**	**Percent**
Not Applicable	120	30.0
Fully managed by that person	45	11.3
Partly managed by me and partly by that person	79	19.7
To a certain extent	156	39.0
Total	400	100.0
Nature of Premises	**No. of Women Entrepreneurs**	**Percent**
Owned commercial	84	21.0
Owned home	83	20.7
Rent commercial	121	30.3
Rent home	71	17.7
Lease commercial	41	10.3
Total	400	100.0

Source: Primary Data

Table 5.3 provides an in-depth overview of the self-management status and workplace arrangements of women entrepreneurs, highlighting the extent of their autonomy and support in managing their enterprises. Only 30% of women entrepreneurs manage

their businesses independently, while a significant majority (70%) receive assistance in managing their ventures. Among those who received help, the primary support came from spouses (31.2%), followed by parents (21.8%) and siblings (17.0%), underscoring the crucial role of family in entrepreneurial endeavours. When examining the extent of involvement from these supporters, 39.0% of the respondents indicated that their enterprise is supported "to a certain extent" by others, while 19.7% manage it partially with others, and 11.3% report that the business is fully managed by another person. This indicates that while women entrepreneurs play a central role, many rely on varying degrees of shared management, which may influence decision making and operational control. In terms of workplace premises, 30.3% of entrepreneurs operate from rented commercial spaces, the most common arrangement, followed by owned commercial properties (21.0%) and owned homes (20.7%). Additionally, 17.7% used rented homes and 10.3% operated from leased commercial premises. This diversity in workplace ownership reflects both the financial capabilities and strategic choices of women entrepreneurs as well as the resource constraints they may face. Overall, this table sheds light on the collaborative nature of enterprise management among women entrepreneurs in Kerala, and the infrastructural contexts in which their businesses operate.

Table 5.4

Legal Form and operational Status of Women Entrepreneurs

Describe your firm's Legal status	No. of Women Entrepreneurs	Percent
Sole proprietorship	167	41.7
Partnership	61	15.3
S.H.G	85	21.3
Company	87	21.7
Total	400	100.0
Main activity of your firm	No. of Women Entrepreneurs	Percent
Argo Food based	38	9.5
Textiles & Garments	41	10.2
General Engineering	65	16.3
Service Activities	38	9.5
Wood Products	56	14.0
Cement Products	46	11.5

Printing & Allied	40	10.0
Paper Products	76	19.0
Total	400	100.0
Outsourcing any of your ancillary activities	No. of Women Entrepreneurs	Percent
Yes	309	77.2
No	91	22.8
Total	400	100.0
Major source of Funding	No. of Women Entrepreneurs	Percent
Personal savings	46	11.5
Household	45	11.3
Micro finance institutions	56	14.0
Borrowed from friends and relatives	38	9.5
Inheritance	38	9.5
Borrowed from bank and financial institutions	177	44.2
Total	400	100.0
Organization experienced a crisis or emergency	No. of Women Entrepreneurs	Percent
Yes	303	75.8
No	97	24.2
Total	400	100.0
The nature of crises your organization has experienced	No. of Women Entrepreneurs	Percent
Not Applicable	97	24.2
Covid – 19 Pandemic	38	9.5
Natural hazards (Kerala Flood 2018, Severe climate, etc.)	45	11.2
Financial crises	42	10.5
Major accident or fire	84	21.0
Loss of critical services, e.g., electricity	31	7.8
Regulatory issues	23	5.8
Failure of a key supplier or customer	40	10.0
Total	400	100.0

Source: Primary Data

Table 5.4 presents the legal and operational characteristics of women-owned enterprises in Kerala, shedding light on the formal structure, business activities, funding sources, and crisis experiences. A significant proportion of these enterprises operate as sole proprietorships (41.7%), reflecting the prevalent individual ownership model among women entrepreneurs. Other legal forms included companies (21.7%), Self-Help Groups (SHGs) (21.3%), and partnerships (15.3%), indicating a moderate level of diversity in organizational structure. In terms of primary business activity, paper products were dominant (19.0%), followed by general engineering (16.3%), wood products (14.0%), and cement products (11.5%). Other sectors, such as textiles and garments (10.2%), printing (10.0%), agri-food (9.5%), and services (9.5%) also contributed significantly, highlighting the sectoral dispersion of women-led enterprises. A vast majority (77.2%) of entrepreneurs outsource some of their ancillary activities, demonstrating reliance on external support to optimise efficiency. When examining funding patterns, 44.2% of the respondents relied on bank and financial institution loans as their major source of capital, followed by microfinance (14.0%), personal savings (11.5%), and household contributions (11.3%), indicating varied access to and dependence on formal and informal financial systems. A crucial insight from the table is that 75.8% of the enterprises have experienced a crisis or emergency, demonstrating the volatility that many of these businesses face. The most common crises included major accidents or fire (21.0%), natural hazards such as the Kerala floods (11.2%), financial crises (10.5%), and the COVID-19 pandemic (9.5%), while others reported issues such as regulatory challenges (5.8%), loss of critical services (7.8%), and supplier/customer failures (10.0%). These findings underscore the importance of resilience strategies and risk preparedness for enhancing the sustainability and performance of women-led businesses.

Table 5.5

Pearson Chi-Square Tests for Associations Between Managing the Enterprise and Socio-Demographic & Organizational Factors

Management Autonomy	Pearson Chi-Square	df	p-value
Age	265.824	4	0.000
Marital Status	400.000	3	0.000
Religion	75.249	2	0.000
Education	270.917	4	0.000
Type of Family	244.156	1	0.000
Location of the Organization	68.549	2	0.000
Age of your organization	277.818	3	0.000
Size of Organization	282.687	2	0.000
Type of Industry	49.365	2	0.000
Legal status of your Organisation	100.699	3	0.000

Source: Primary Data

Table 5.5 presents the results of Pearson Chi-Square tests examining the association between whether women entrepreneurs manage their enterprises on their own and a range of socio-demographic and organizational variables. All associations were found to be statistically significant, as indicated by a p-value of 0.000, confirming that the observed relationships were not due to chance. Age shows a strong association with enterprise management (chi-square = 265.824, df = 4), implying that managerial responsibility varies significantly across different age groups, with older or more experienced women possibly being more independent in managing businesses. Marital status yields a very high chi-square value of 400.000 with three degrees of freedom, indicating that marital commitment strongly influences the ability of women to manage their enterprises independently, with unmarried or widowed women potentially assuming greater self-management roles. Religion also showed a significant but comparatively lower chi-square value of 75.249 (df = 2), reflecting the role of cultural or religious norms in shaping managerial roles. Education displayed a strong association (chi-square = 270.917, df = 4), suggesting that higher educational attainment enhances women's capacity and confidence in managing enterprises independently. The type of family, with a chi-square of 244.156 and only one degree

of freedom, indicates a pronounced difference between women from nuclear and joint families in terms of management autonomy, possibly due to differing support systems or household roles. The location of the organisation was also significantly associated (chi-square = 68.549, df = 2), indicating that urban or semi-urban settings may provide more resources or confidence for independent management. The age of the organisation (chi-square = 277.818, df = 3) and size of the organisation (chi-square = 282.687, df = 2) both suggest that more established and larger enterprises are more likely to be managed independently, possibly because of accumulated experience and stable operational systems. The industry type (chi-square = 49.365, df = 2) further reveals that the nature of the business, whether manufacturing, service, or trading, influences the extent of women's managerial involvement. Lastly, the legal status of the firm (chi-square = 100.699, df = 3) shows that formal entities, such as companies and partnerships, may either necessitate or facilitate shared management responsibilities compared to sole proprietorships. Overall, the data revealed that women's self-management of enterprises is significantly shaped by a combination of personal, social, and business-related factors.

Table 5.6

Pearson Chi-Square Tests for Associations Between Nature of Premises and Socio-Demographic & Organizational Factors

Nature of Premises	Pearson Chi-Square	df	p-value
Age	587.097	16	0.000
Marital Status	546.984	12	0.000
Religion	467.854	8	0.000
Education	695.300	16	0.000
Type of Family	43.902	4	0.000
Location of the Organization	495.237	8	0.000
Age of your organization	485.720	12	0.000
Size of Organization	368.626	8	0.000
Type of Industry	345.754	8	0.000
Legal status of your Organisation	531.642	12	0.000

Source: Primary Data

Table 5.6 presents the Pearson Chi-Square test results analysing the association between the nature of workplace premises and various socio-demographic and organizational factors of women entrepreneurs. All variables demonstrated statistically significant associations, as reflected by p-values of 0.000, indicating strong evidence against the null hypothesis of independence. The chi-square value for age was 587.097 with 16 degrees of freedom, suggesting a strong association between age group and the type of workplace, such as whether owned or rented, home-based, or commercial. Marital status also showed a significant relationship (chi-squared = 546.984, df = 12), implying that marital conditions may influence workplace decisions, likely due to financial constraints or familial responsibilities. Religion was another influencing factor (chi-square = 467.854, df = 8), indicating that cultural or religious norms affect the selection of workplace settings. The highest chi-square value appears for education (695.300, df = 16), indicating that educational qualifications significantly impact workplace type; better-educated women might be more inclined to operate from commercial premises, whereas others might prefer home-based operations. The type of family structure was also significantly associated (chi-square = 43.902, df = 4), showing that women from joint or nuclear families may differ in their workplace choices due to available space and family support. The location of the organisation (chi-square = 495.237, df = 8) reflects environmental or geographical differences that influence whether women entrepreneurs operate on rented or owned premises. The age of the organisation (chi-square = 485.720, df = 12) also has a significant relationship, indicating that older businesses are more likely to transition into permanent commercial spaces. The size of the organisation (chi-square = 368.626, df = 8) suggests that larger enterprises often have the capacity to maintain rented or owned commercial premises compared to smaller or micro units. Similarly, the industry type (chi-square = 345.754, df = 8) reflects that manufacturing or service-oriented businesses might require more formalised workspaces, unlike trade or home-based services. Finally, the legal status of the firm (chi-square = 531.642, df = 12) shows a strong correlation, indicating that firms registered as companies or partnerships are more likely to operate from leased or rented commercial premises than sole proprietorships or SHGs. Overall, the results

statistically confirm that the nature of workplace premises is significantly influenced by both the socio-demographic characteristics and the organizational profile of women entrepreneurs.

Table 5.7

Pearson Chi-Square Tests for Associations Between Main activity of the firm and Socio-Demographic & Organizational Factors

Main activity of the firm	Pearson Chi-Square	df	p-value
Age	1341.767	28	0.000
Marital Status	1052.256	21	0.000
Religion	588.100	14	0.000
Education	1348.368	28	0.000
Type of Family	262.935	7	0.000
Location of the Organization	800.000	14	0.000
Age of your organization	925.002	21	0.000
Size of Organization	593.702	14	0.000
Type of Industry	705.993	14	0.000
Legal status of your Organisation	936.608	21	0.000

Source: Primary Data

Table 5.7 presents the results of Pearson Chi-Square tests examining the association between the main activity of the firm and various socio-demographic and organizational factors among women entrepreneurs in Kerala. The analysis revealed statistically significant associations across all variables, as indicated by p-values less than 0.05, for each test, all being 0.000. The high chi-square value for age (1341.767 with 28 degrees of freedom) suggests that different age groups are engaged in different types of business activities, with younger women possibly opting for service-based ventures and older women engaging in traditional industries. Marital status also plays a significant role, as shown by the chi-square value of 1052.256 (df = 21), indicating that single, married, divorced, and widowed women tend to be involved in different types of enterprises, potentially influenced by social and familial responsibilities. Religion, with a chi-square value of 588.100 (df = 14), implies that cultural and religious backgrounds may shape preferences in certain industries. Educational qualifications exhibit a strong association (chi-square = 1348.368, df =

28), suggesting that women with higher educational levels are more likely to engage in knowledge-intensive sectors such as services or general engineering, while those with lower qualifications may prefer simpler, traditional businesses. The type of family structure (chi-square = 262.935, df = 7) also influences activity type, as women from joint or nuclear families may have varying degrees of autonomy and support. The location of the organisation (chi-square = 800.000, df = 14) further indicates that urban, rural, and semi-urban settings offer different opportunities and constraints that shape the choice of industry. The age of the enterprise (chi-square = 925.002, df = 21) and size of the organisation (chi-square = 593.702, df = 14) are significantly related to business activity, suggesting that older and larger firms may expand into sectors such as engineering or trade, whereas newer and smaller firms may focus on textiles or food processing. The type of industry (chi-square = 705.993, df = 14) shows an expected association, as it overlaps with the main activity of the firm, and the legal status of the firm (chi-square = 936.608, df = 21) also has a strong association, indicating that firms structured as sole proprietorships, partnerships, SHGs, or companies differ in their preferred business domains. Overall, the data provide strong statistical evidence that the main activity pursued by women entrepreneurs is significantly shaped by a complex interplay of demographic characteristics and organizational features.

Table 5.8

Pearson Chi-Square Tests for Associations Between Outsourcing the ancillary activities and Socio-Demographic & Organizational Factors

Outsourcing the ancillary activities	Pearson Chi-Square	df	p-value
Age	116.952	4	0.000
Marital Status	116.627	3	0.000
Religion	93.997	2	0.000
Education	131.491	4	0.000
Type of Family	3.269	1	0.071
Location of the Organization	100.358	2	0.000
Age of your organization	131.491	3	0.000
Size of Organization	400.000	2	0.000
Type of Industry	32.187	2	0.000
Legal status of your organisation	156.153	3	0.000

Source: Primary Data

Table 5.8 presents the Pearson Chi-Square test results assessing the statistical associations between outsourcing ancillary activities by women entrepreneurs and various socio-demographic and organizational factors. The results reveal that all variables, except family type, show statistically significant associations with outsourcing decisions, as their p-values are less than 0.05, specifically 0.000 in most cases, indicating a high level of significance. Age was significantly associated with outsourcing (chi-square = 116.952, df = 4), suggesting that different age groups vary in their tendency or ability to outsource tasks, possibly because of differences in managerial experience or risk preferences. Marital status (chi-square = 116.627, df = 3) indicated that personal responsibilities linked to marital conditions influence the extent to which women delegate ancillary functions. Religion (chi-square = 93.997, df = 2) also exhibited a significant association, implying that cultural or religious norms might affect entrepreneurial behaviour regarding task delegation. Education is another important factor (chi-square = 131.491, df = 4), indicating that more educated women may be more inclined to outsource efficiency and focus on core activities. Interestingly, family type showed no significant relationship with outsourcing (chi-square = 3.269, df = 1, p = 0.071), suggesting that whether a woman belongs to a nuclear or joint family does not considerably affect her decision to outsource. The location of the organisation (chi-square = 100.358, df = 2) demonstrates that enterprises in urban or semi-urban areas are more likely to outsource because of better access to service providers. The age of the organisation (chi-square = 131.491, df = 3) indicates that older firms might have greater operational complexities, necessitating outsourcing. The size of the organisation shows a very strong association (chi-square = 400.000, df = 2), indicating that larger firms with higher workloads and more resources are more likely to outsource. The industry type (chi-square = 32.187, df = 2) reveals that certain industries may rely more heavily on external services. Finally, the legal status of the firm (chi-square = 156.153, df = 3) significantly affected outsourcing practices, suggesting that formal organizational structures such as companies or partnerships may institutionalise outsourcing to improve operational efficiency. These findings highlight that outsourcing behaviour

among women entrepreneurs is largely influenced by a combination of individual characteristics, organizational maturity, and contextual business factors.

Table 5.9

Pearson Chi-Square Tests for Associations Between Major source of Funding and Socio-Demographic & Organizational Factors

Major source of Funding	Pearson Chi-Square	df	p-value
Age	1141.296	20	0.000
Marital Status	798.989	15	0.000
Religion	594.854	10	0.000
Education	947.292	20	0.000
Type of Family	218.393	5	0.000
Location of the Organization	584.572	10	0.000
Age of your organization	680.222	15	0.000
Size of Organization	588.325	10	0.000
Type of Industry	364.664	10	0.000
Legal status of your Organisation	675.505	15	0.000

Source: Primary Data

Table 5.9 presents the Pearson Chi-Square test results for the associations between the major source of funding for women entrepreneurs and various sociodemographic and organizational factors. The results indicated statistically significant associations for all variables, with p-values less than 0.05, highlighting the strong relationships between funding sources and each factor. Age showed a significant association (chi-squared = 1141.296, df = 20), suggesting that different age groups may rely on distinct sources of funding, potentially reflecting varying levels of financial experience and resource access. Marital status (chi-square = 798.989, df = 15) is also significant, implying that marital circumstances influence the choice of funding, possibly because of differences in financial responsibility or access to family resources. Religion (chi-square = 594.854, df = 10) indicates that religious affiliations may play a role in shaping funding preferences or availability of financial support, possibly due to community ties or cultural norms. Education (chi-square = 947.292, df = 20) is another crucial factor, as more educated women entrepreneurs might have access to better funding opportunities such as formal financial institutions or investor networks.

Family type (chi-square = 218.393, df = 5) suggests that family structure can influence the availability of or reliance on particular funding sources, with different familial backgrounds affecting financial support. The location of the organisation (chi-square = 584.572, df = 10) shows that businesses in urban areas may have more access to formal financial sources than those in rural or semi-urban locations. The age of the organisation (chi-square = 680.222, df = 15) implies that older organisations may have established credit histories or stronger relationships with funding sources. The size of the organisation (chi-square = 588.325, df = 10) also plays a significant role, with larger organisations likely to secure varied or substantial funding. The industry type (chi-square = 364.664, df = 10) reveals that funding sources are industry-specific, as some sectors may attract more investor interest or have different financing requirements. Finally, the legal status of the firm (chi-square = 675.505, df = 15) significantly impacts funding decisions, with formal business structures such as companies or partnerships often having better access to external funding than informal structures. These findings collectively suggest that women entrepreneurs' funding choices are influenced by a complex interplay of personal, organizational, and contextual factors, highlighting the need for tailored financial support strategies.

Table 5.10

Pearson Chi-Square Tests for Associations Between Organization experienced a crisis or emergency and Socio-Demographic & Organizational Factors

Organization experienced a crisis or emergency	Pearson Chi-Square	df	p-value
Age	239.055	4	0.000
Marital Status	133.575	3	0.000
Religion	35.618	2	0.000
Education	85.253	4	0.000
Type of Family	89.909	1	0.000
Location of the Organization	188.127	2	0.000
Age of your organization	87.838	3	0.000
Size of Organization	196.132	2	0.000
Type of Industry	26.656	2	0.000
Legal status of your organisation	79.359	3	0.000

Source: Primary Data

Table 5.10 presents the results of the Pearson Chi-Square tests for associations between experiencing a crisis or emergency in an organisation and various sociodemographic and organizational factors. All variables show statistically significant associations, with p-values less than 0.05, indicating that the likelihood of experiencing a crisis is related to different sociodemographic and organizational characteristics. Age (chi-square = 239.055, df = 4) is significantly associated with crisis experiences, suggesting that certain age groups may be more prone to encountering crises, possibly because of different levels of experience or vulnerability in business management. Marital status (chi-squared = 133.575, df = 3) also revealed a significant relationship, indicating that marital circumstances may influence how women entrepreneurs manage or are affected by crises. Religion (chi-square = 35.618, df = 2) showed a significant association, suggesting that religious beliefs and community support systems may impact how entrepreneurs perceive and handle crises. Education (chi-square = 85.253, df = 4) was another important factor, as more educated entrepreneurs might have better crisis management skills or access to resources, which could influence their ability to navigate emergencies. The type of family (chi-square = 89.909, df = 1) indicates a significant relationship, with family structure possibly affecting the availability of support during crises, either through emotional or financial backing. The location of the organisation (chi-square = 188.127, df = 2) highlights that businesses located in different regions may experience different types of crises, with urban or rural settings affecting access to resources or exposure to risks. The age of the organisation (chi-square = 87.838, df = 3) suggests that older organisations may have developed strategies to handle crises better, while younger organisations may still be building resilience. Organizational size (chi-square = 196.132, df = 2) is significantly associated with crisis occurrences, with larger organisations possibly facing different types of challenges, such as operational scale or resource management during crises. The industry type (chi-square = 26.656, df = 2) further reveals that certain industries may be more vulnerable to specific crises, reflecting sector-specific risks. Finally, the legal status of the firm (chi-square = 79.359, df = 3) suggests that formal business structures, such as companies, may have better legal protection or crisis management frameworks than informal business

structures. Overall, these findings indicate that the likelihood of experiencing a crisis is influenced by a combination of personal, organizational, and environmental factors, which could affect the management and mitigation of crises.

5.2. Organizational Resilience and the Enterprise Performance of women-owned and led Enterprises

Organizational resilience is vital for the success of women-owned and women-led businesses, especially in ever-changing and demanding business landscapes. Resilience includes key traits such as adaptability, proactiveness, resourcefulness, crisis management, and innovation, which collectively empower organisations to handle uncertainties, recover from setbacks, and achieve sustained success. For women entrepreneurs, these elements are particularly important because of the unique challenges they face, such as restricted access to resources, gender bias, and market obstacles. Adaptability enables women-led businesses to adjust to market shifts, whereas proactiveness allows them to foresee and prepare for potential disruptions. Resourcefulness helps these businesses optimise available resources and ensure efficient operations despite limitations. Crisis management is crucial for dealing with unexpected events, such as economic downturns or supply chain issues, and innovation provides a competitive edge by introducing new products, services, or processes. These resilience factors directly impact business performance, which can be assessed using indicators such as sales growth, profitability, customer retention, business continuity, and market share. Sales growth demonstrates the ability to expand and attract new customers, while profitability reflects financial stability and sustainability. Customer retention is essential for long-term success because loyal customers offer steady revenue streams. Business continuity ensures that operations can continue despite challenges, and market share indicates the business's standing within the industry. Collectively, these aspects of organizational resilience and business performance underscore the importance of developing strong, adaptable, and innovative women-led enterprises that can succeed in adversity and contribute significantly to the broader economy.

5.2.1. Normality of the Dimensions related to Organizational Resilience and the Enterprise Performance

The normality of dimensions associated with organizational resilience and enterprise performance is vital for ensuring the reliability of statistical analyses when studying women-owned and led businesses. Organizational resilience is crucial for determining an enterprise's ability to endure challenges and maintain growth, encompassing adaptability, proactiveness, resourcefulness, crisis management, and innovation. Likewise, enterprise performance metrics such as sales growth, profitability, customer retention, business continuity, and market share offer insights into the effectiveness of business strategies. To validate these measures, it is important to ascertain whether the data follow a normal distribution, as most parametric statistical tests assume normality. The Kolmogorov-Smirnov (K-S) test, a non-parametric method, is frequently employed to evaluate data normality. By comparing the sample distribution to a normal distribution, the K-S test provides a statistical means to determine whether the observed data deviate significantly from normality. A significant K-S test result suggests that the data do not follow a normal distribution, which could influence the selection of statistical methods for further analysis. Therefore, performing the Kolmogorov-Smirnov test for normality in the dimensions of organizational resilience and enterprise performance ensures that subsequent analyses are based on valid assumptions, offering more accurate and reliable insights into the operation and sustainability of women-led enterprises.

Table 5.11

Normality of the data related to the Dimensions of Organizational Resilience

Variables	Kolmogorov-Smirnov Test (Test Statistics)	p-value
Adaptability	0.482	0.112
Proactiveness	0.655	0.108
Resourcefulness	0.755	0.147
Crisis Management	0.644	0.161
Innovation	0.871	0.155

Source: Primary Data

Table 5.11 presents the results of the Kolmogorov-Smirnov (K-S) test for normality of the data related to the dimensions of organizational resilience, namely adaptability, proactiveness, resourcefulness, crisis management, and innovation. The K-S test statistics for each of these variables, along with their corresponding p-values, were reported to assess whether the data for each dimension deviated significantly from a normal distribution. The test statistics for adaptability (0.482), proactiveness (0.655), resourcefulness (0.755), crisis management (0.644), and innovation (0.871) were followed by p-values above the commonly used significance level of 0.05 (ranging from 0.108 to 0.161). This indicates that for all dimensions tested, the null hypothesis, which states that the data follows a normal distribution, cannot be rejected. Therefore, we conclude that the data for each of these organizational resilience dimensions adhere to a normal distribution, suggesting that parametric statistical tests that assume normality can be appropriately applied for further analysis. The results of the Kolmogorov-Smirnov test for all five variables demonstrate that there is no significant deviation from normality, ensuring the validity of subsequent analyses and reinforcing the robustness of findings related to organizational resilience in the context of women-led enterprises.

Table 5.12

Normality of the data related to the Dimensions of Enterprise Performance

Variables	Kolmogorov-Smirnov Test (Test Statistics)	p-value
Sales Growth	0.576	0.274
Profitability	0.688	0.168
Customer Retention	0.513	0.159
Business Continuity	0.639	0.138
Market Share	0.762	0.146

Source: Primary Data

Table 5.12 provides the results of the Kolmogorov-Smirnov (K-S) test for normality applied to the dimensions of enterprise performance, which include sales growth, profitability, customer retention, business continuity, and market share. The K-S test statistics for these variables range from 0.513 to 0.762, with corresponding p-values between 0.138 and 0.274. The p-values for all five variables exceeded the common

significance threshold of 0.05, suggesting that there was no significant deviation from a normal distribution for the data in any of the dimensions of enterprise performance. Specifically, the p-values for sales growth (0.274), profitability (0.168), customer retention (0.159), business continuity (0.138), and market share (0.146) support the acceptance of the null hypothesis, which posits that the data follow a normal distribution. These findings indicate that the data for all enterprise performance variables can be considered normally distributed, which is an important prerequisite for conducting parametric statistical analyses. This assumption ensures the validity and reliability of the subsequent inferential statistical methods, further supporting the robustness of analyses regarding enterprise performance in women-owned and women-led enterprises.

5.2.2. Hypothetical relationship between Organizational Resilience and Socio-Demographic Factors

Organizational resilience is increasingly acknowledged as a vital factor for the success and longevity of women-owned businesses, particularly when facing challenges and external disruptions. Resilience involves several aspects, such as adaptability, proactiveness, resourcefulness, crisis management, and innovation, which collectively empower organisations to endure and prosper in unstable environments. Sociodemographic elements, such as age, marital status, education, and industry type, may affect an enterprise's resilience by shaping the leadership style, decision-making processes, and resource management strategies of women entrepreneurs. For example, the experience and maturity linked to different age groups might influence how entrepreneurs handle crises or changes, while marital status could impact their ability to balance work and personal life alongside organizational demands. Education level might affect entrepreneurs' capacity for innovation and adaptation, and industry type could dictate the challenges encountered and the resilience needed to overcome them. This study hypothesises that there is no significant difference in the organizational resilience of women entrepreneurs across various categories of age, marital status, education, and industry type. This hypothesis is examined to assess whether these sociodemographic factors have a tangible effect

on the resilience of women-owned businesses, providing insights into the elements that may support or hinder the growth and sustainability of such enterprises. By investigating this, this study aims to offer a deeper understanding of how these demographic factors influence organizational resilience, providing valuable implications for policymaking and entrepreneurship support initiatives.

Hypothesis 1: There is no significant difference in Organizational Resilience of women entrepreneurs across the different categories of Age, Marital Status, Education, and Type of Industry.

Table 5.13

ANOVA related to the Organizational Resilience and Age of Women Entrepreneurs

Variables	Age	N	Mean	Std. Deviation	Std. Error	F	p-value
Adaptability	Below 25 years	82	4.293	0.853	0.094	2.989	0.013
	25-35 years	38	4.184	0.801	0.130		
	35-45 years	147	3.054	1.045	0.086		
	45-55 years	56	4.179	0.811	0.108		
	Above 55 years	77	3.208	0.817	0.093		
	Total	400	4.163	0.913	0.046		
Proactiveness	Below 25 years	82	4.329	0.610	0.067	0.645	0.631
	25-35 years	38	4.184	0.692	0.112		
	35-45 years	147	4.313	0.729	0.060		
	45-55 years	56	4.179	0.741	0.099		
	Above 55 years	77	4.247	0.814	0.093		
	Total	400	4.273	0.721	0.036		
Resourcefulness	Below 25 years	82	4.195	0.935	0.103	3.732	0.010
	25-35 years	38	3.868	1.018	0.165		
	35-45 years	147	4.102	1.115	0.092		
	45-55 years	56	3.036	0.934	0.125		
	Above 55 years	77	4.039	1.019	0.116		
	Total	400	4.078	1.027	0.051		
Crisis Management	Below 25 years	82	4.256	1.016	0.112	4.512	0.007

	25-35 years	38	3.026	0.972	0.158		
	35-45 years	147	4.095	1.094	0.090		
	45-55 years	56	3.071	0.951	0.127		
	Above 55 years	77	4.156	0.947	0.108		
	Total	400	4.130	1.018	0.051		
Innovation	Below 25 years	82	4.402	0.967	0.107	1.774	0.133
	25-35 years	38	3.947	1.229	0.199		
	35-45 years	147	4.068	1.180	0.097		
	45-55 years	56	3.179	1.011	0.135		
	Above 55 years	77	4.247	0.962	0.110		
	Total	400	4.175	1.085	0.054		

Source: Primary Data

Table 5.13 presents the results of an ANOVA test conducted to assess the relationship between organizational resilience dimensions (Adaptability, Proactiveness, Resourcefulness, Crisis Management, and Innovation) and the age of women entrepreneurs. The analysis shows that there is a significant difference in the Adaptability dimension across different age groups, with a p-value of 0.013, indicating that age has an impact on how adaptable women entrepreneurs perceive their organizations to be. The highest mean adaptability is seen in the < 25 years category (4.293) and the lowest in the 35-45 years group (3.054). However, for Proactiveness, the p-value of 0.631 suggests that age does not significantly affect how proactive entrepreneurs are in their decision-making, as all age groups exhibit similar mean values of around 4.18 4.33. In terms of resourcefulness, a p-value of 0.010 indicates a statistically significant difference between age groups, with younger entrepreneurs (below 25 years) reporting higher resourcefulness (4.195), while those in the 45-55 years group reported the lowest (3.036). Crisis Management also showed significant variability across age groups (p = 0.007). Younger entrepreneurs (below 25 years) demonstrated the highest crisis management (4.256), while those in the 25-35 years category reported the lowest (3.026). For Innovation, a p-value of 0.133 indicates no significant difference across age groups, with all categories exhibiting relatively similar means. Overall, the ANOVA results highlight that, while age significantly influences adaptability, resourcefulness, and crisis management, it does

not have a strong impact on proactiveness and innovation among women entrepreneurs. This suggests that certain dimensions of organizational resilience may be more sensitive to the entrepreneur's age than others.

Table 5.14

ANOVA related to the Organizational Resilience and Marital Status of Women Entrepreneurs

Variables	Marital Status	N	Mean	Std. Deviation	Std. Error	F	p-value
Adaptability	Single	82	4.293	0.853	0.094	2.122	0.003
	Married	201	4.154	0.923	0.065		
	Divorced	38	3.974	0.944	0.153		
	Widowed	79	3.139	0.930	0.105		
	Total	400	4.163	0.913	0.046		
Proactiveness	Single	82	4.329	0.610	0.067	3.659	0.008
	Married	201	3.279	0.795	0.056		
	Divorced	38	3.132	0.578	0.094		
	Widowed	79	4.266	0.693	0.078		
	Total	400	4.273	0.721	0.036		
Resourcefulness	Single	82	4.195	0.935	0.103	1.191	0.313
	Married	201	4.035	1.079	0.076		
	Divorced	38	3.868	1.095	0.178		
	Widowed	79	4.165	0.940	0.106		
	Total	400	4.078	1.027	0.051		
Crisis Management	Single	82	4.256	1.016	0.112	4.279	0.021
	Married	201	4.119	1.032	0.073		
	Divorced	38	3.868	1.070	0.174		
	Widowed	79	4.152	0.949	0.107		
	Total	400	4.130	1.018	0.051		
Innovation	Single	82	4.402	0.967	0.107	2.301	0.177
	Married	201	4.159	1.088	0.077		
	Divorced	38	3.868	1.212	0.197		
	Widowed	79	4.127	1.102	0.124		
	Total	400	4.175	1.085	0.054		

Source: Primary Data

Table 5.14 presents the results of an ANOVA test examining the relationship between organizational resilience dimensions (Adaptability, Proactiveness, Resourcefulness, Crisis Management, and Innovation) and the marital status of women entrepreneurs. The analysis revealed that marital status had a significant effect on adaptability, with a p-value of 0.003, indicating differences across marital status groups. Single women entrepreneurs reported the highest mean adaptability (4.293), followed by married (4.154), and divorced (3.974) women. Widowed entrepreneurs reported the lowest level of adaptability (3.139). For Proactiveness, the p-value of 0.008 suggests a significant difference, with single women (4.329) and widowed women (4.266) demonstrating the highest levels of proactiveness, while married (3.279) and divorced (3.132) women exhibited lower proactiveness. The Resourcefulness dimension shows no significant differences, with a p-value of 0.313, indicating that marital status does not influence resourcefulness. For Crisis Management, the p-value of 0.021 suggests a significant difference between marital status groups, with single women reporting the highest crisis management (4.256), followed by married (4.119), and widowed women (4.152). Divorced women reported the lowest crisis management score (3.868). Finally, for Innovation, the p-value of 0.177 shows no significant differences, indicating that marital status does not significantly affect innovation among women entrepreneurs. In summary, marital status is significantly associated with the dimensions of Adaptability, Proactiveness, and Crisis Management, but it does not appear to have a meaningful impact on Resourcefulness and Innovation.

Table 5.15

ANOVA related to the Organizational Resilience and Education of Women Entrepreneurs

Variables	Education	N	Mean	Std. Deviation	Std. Error	F	p-value
Adaptability	School Certification	40	4.175	1.010	0.160	3.118	0.006
	PDC/HSS	38	4.184	0.801	0.130		
	Degree	121	4.165	0.934	0.085		
	PG	77	3.208	0.817	0.093		

	Professional Degree	124	4.121	0.959	0.086		
	Total	400	4.163	0.913	0.046		
Proactiveness	School Certification	40	4.325	0.616	0.097	0.403	0.807
	PDC/HSS	38	3.184	0.692	0.112		
	Degree	121	4.248	0.745	0.068		
	PG	77	4.247	0.814	0.093		
	Professional Degree	124	4.323	0.681	0.061		
	Total	400	4.273	0.721	0.036		
Resourcefulness	School Certification	40	4.050	1.108	0.175	4.567	0.017
	PDC/HSS	38	3.868	1.018	0.165		
	Degree	121	4.132	0.966	0.088		
	PG	77	3.039	1.019	0.116		
	Professional Degree	124	4.121	1.071	0.096		
	Total	400	4.078	1.027	0.051		
Crisis Management	School Certification	40	4.175	1.152	0.182	0.198	0.939
	PDC/HSS	38	4.026	0.972	0.158		
	Degree	121	4.165	1.028	0.093		
	PG	77	4.156	0.947	0.108		
	Professional Degree	124	4.097	1.031	0.093		
	Total	400	4.130	1.018	0.051		
Innovation	School Certification	40	4.250	1.127	0.178	4.574	0.012
	PDC/HSS	38	3.947	1.229	0.199		
	Degree	121	4.198	1.077	0.098		
	PG	77	4.247	0.962	0.110		
	Professional Degree	124	4.153	1.112	0.100		
	Total	400	4.175	1.085	0.054		

Source: Primary Data

Table 5.15 presents the results of an ANOVA analysis examining the relationship between organizational resilience dimensions (Adaptability, Proactiveness, Resourcefulness, Crisis Management, and Innovation) and the education level of women entrepreneurs. The analysis revealed significant differences in the adaptability dimension with a p-value of 0.006. Women with school certification (mean = 4.175) and professional degree (mean = 4.121) showed the highest levels of adaptability, whereas those with postgraduate education (mean = 3.208) reported the lowest adaptability. For Proactiveness, the p-value of 0.807 indicates no significant differences across education levels, as the mean scores are relatively consistent across groups, with women holding a degree or professional degree reporting the highest levels of proactiveness (4.248 and 4.323, respectively). In the case of resourcefulness, a significant difference was observed with a p-value of 0.017. Women with Degree reported the highest mean score (4.132), whereas those with postgraduate education showed the lowest (3.039). Crisis Management did not show any significant differences, with a p-value of 0.939, indicating that education level did not affect crisis management across groups. Finally, for the Innovation dimension, a p-value of 0.012 indicated a significant difference in innovation levels across education groups. Women with school certification (mean = 4.250) and postgraduate education (mean = 4.247) showed the highest levels of innovation, while women with PDC/HSS education reported the lowest levels of innovation (mean = 3.947). In summary, education level had a significant impact on adaptability, resourcefulness, and innovation, while proactive and crisis management did not show significant differences across educational categories.

Table 5.16

ANOVA related to the Organizational Resilience and Type of Industry of Women Entrepreneurs

Variable	Type of Industry	N	Mean	Std. Deviation	Std. Error	F	p-value
Adaptability	Manufacturing	65	4.277	0.893	0.111	3.444	0.017
	Service	211	4.190	0.846	0.058		
	Trade	124	3.056	1.023	0.092		
	Total	400	4.163	0.913	0.046		
Proactiveness	Manufacturing	65	4.385	0.578	0.072	1.128	0.325
	Service	211	4.232	0.736	0.051		
	Trade	124	4.282	0.760	0.068		
	Total	400	4.273	0.721	0.036		
Resourcefulness	Manufacturing	65	4.385	0.784	0.097	3.536	0.030
	Service	211	4.009	1.009	0.069		
	Trade	124	3.032	1.140	0.102		
	Total	400	4.078	1.027	0.051		
Crisis Management	Manufacturing	65	4.338	0.889	0.110	3.796	0.007
	Service	211	3.914	0.989	0.068		
	Trade	124	4.048	1.118	0.100		
	Total	400	4.130	1.018	0.051		
Innovation	Manufacturing	65	4.354	1.022	0.127	4.354	0.019
	Service	211	3.775	1.057	0.073		
	Trade	124	4.081	1.159	0.104		
	Total	400	4.175	1.085	0.054		

Source: Primary Data

Table 5.16 presents the results of an ANOVA analysis exploring the relationship between organizational resilience dimensions (Adaptability, Proactiveness, Resourcefulness, Crisis Management, and Innovation) and the type of industry in which women entrepreneurs operate (Manufacturing, Service, and Trade). For Adaptability, a p-value of 0.017 indicated a statistically significant difference among the three types of industries. Women in the Manufacturing sector reported the highest mean score (4.277), followed by those in the service sector (4.190), whereas women in the trade sector reported the lowest mean score (3.056). For Proactiveness, the p-value of 0.325 suggests no significant difference across the three industries, with all

industries showing relatively similar mean scores: manufacturing (4.385), service (4.232), and trade (4.282). In Resourcefulness, the p-value of 0.030 indicates a significant difference. Women in the Manufacturing sector reported the highest mean (4.385), while those in the trade sector had the lowest mean (3.032), with service sector women falling in between (4.009). Regarding Crisis Management, the p-value of 0.007 shows a significant difference, with women in the manufacturing sector having the highest mean (4.338), followed by women in the trade sector (4.048) and women in the service sector reporting the lowest mean (3.914). Finally, for innovation, a p-value of 0.019 indicates a significant difference among industries. Women in the Manufacturing sector again reported the highest mean (4.354), followed by those in the trade sector (4.081), with those in the service sector reporting the lowest mean (3.775). Overall, significant differences were observed in the dimensions of Adaptability, Resourcefulness, Crisis Management, and Innovation across the three industries, with manufacturing consistently showing the highest scores, while proactiveness remained similar across all industries.

5.2.3. Hypothetical relationship between Enterprise Performance and Socio-Demographic Factors

The performance of enterprises led by women entrepreneurs is shaped by a variety of factors encompassing both personal and contextual elements. Key socio-demographic aspects, such as age, marital status, education level, and industry type, significantly influenced the success of women-run businesses. These elements are often interlinked with the entrepreneurial path, impacting decision making, resource access, and business strategies. For example, an entrepreneur's age might affect their experience and willingness to take risks, while marital status could impact time management and business engagement. Education equips individuals with essential skills and knowledge, potentially boosting business insights, and the type of industry can present different growth opportunities and challenges. Recognising how these sociodemographic factors affect enterprise performance is vital for identifying the support systems necessary for women entrepreneurs to succeed. The hypothesis suggests that there is no notable difference in the performance of women

entrepreneurs' enterprises across various age, marital status, education, and industry categories, implying that these socio-demographic factors might not significantly impact the overall performance of women-led businesses. This hypothesis is examined statistically to determine whether these factors have any substantial effect on the business outcomes of women entrepreneurs.

Hypothesis 2: There is no significant difference in Enterprise Performance of women entrepreneurs across the different categories of Age, Marital Status, Education, and Type of Industry.

Table 5.17

ANOVA related to the Enterprise Performance and Age of Women Entrepreneurs

Variables	Age	N	Mean	Std. Deviation	Std. Error	F	p-value
Sales Growth	Below 25 years	82	3.866	1.274	0.141	1.726	0.143
	25-35 years	38	3.263	1.537	0.249		
	35-45 years	147	3.435	1.504	0.124		
	45-55 years	56	3.536	1.279	0.171		
	Above 55 years	77	3.416	1.516	0.173		
	Total	400	3.518	1.440	0.072		
Profitability	Below 25 years	82	3.512	1.416	0.156	1.338	0.255
	25-35 years	38	3.079	1.459	0.237		
	35-45 years	147	3.163	1.531	0.126		
	45-55 years	56	2.964	1.427	0.191		
	Above 55 years	77	3.221	1.536	0.175		
	Total	400	3.210	1.490	0.075		
Customer Retention	Below 25 years	82	3.866	1.120	0.124	3.945	0.002
	25-35 years	38	3.316	1.233	0.200		
	35-45 years	147	4.701	1.184	0.098		
	45-55 years	56	3.446	1.174	0.157		
	Above 55 years	77	3.714	1.255	0.143		
	Total	400	3.665	1.194	0.060		
Business Continuity	Below 25 years	82	3.915	1.113	0.123	2.317	0.017
	25-35 years	38	3.342	1.236	0.201		

	35-45 years	147	3.490	1.300	0.107		
	45-55 years	56	4.429	1.219	0.163		
	Above 55 years	77	3.610	1.183	0.135		
	Total	400	3.578	1.232	0.062		
Market Share	Below 25 years	82	3.768	1.289	0.142	2.360	0.153
	25-35 years	38	3.368	1.403	0.228		
	35-45 years	147	3.524	1.401	0.116		
	45-55 years	56	3.089	1.468	0.196		
	Above 55 years	77	4.675	1.390	0.158		
	Total	400	3.528	1.396	0.070		

Source: Primary Data

Table 5.17 presents the results of an ANOVA analysis examining the relationship between the enterprise performance of women entrepreneurs and their age. The table includes variables related to key performance indicators such as sales growth, profitability, customer retention, business continuity, and market share. For sales growth, the analysis shows no significant differences across age groups (F = 1.726, p-value = 0.143), suggesting that age does not have a significant impact on sales growth among women entrepreneurs. Similarly, profitability does not vary significantly across age groups (F = 1.338, p-value = 0.255), indicating that age does not substantially influence profitability. However, customer retention showed a significant difference (F = 3.945, p-value = 0.002), with the 35-45 years age group having the highest mean (4.701), suggesting that this group tends to have better customer retention than others. Business continuity also demonstrates a significant difference (F = 2.317, p-value = 0.017), with women entrepreneurs in the 45-55 years age group showing the highest mean (4.429), indicating that this group may have better business continuity. Finally, market share does not show any significant variation across age groups (F = 2.360, p-value = 0.153), suggesting that age does not significantly influence market share. Overall, the findings reveal that although age has little impact on most aspects of enterprise performance, it plays a significant role in customer retention and business continuity, with specific age groups demonstrating better performance in these areas.

Table 5.18

ANOVA related to the Enterprise Performance and Marital Status of Women Entrepreneurs

Variable	Marital Status	N	Mean	Std. Deviation	Std. Error	F	p-value
Sales Growth	Single	82	3.866	1.274	0.141		
	Married	201	4.333	1.537	0.108		
	Divorced	38	3.553	1.370	0.222		
	Widowed	79	3.608	1.325	0.149		
	Total	400	3.518	1.440	0.072	2.843	0.038
Profitability	Single	82	3.512	1.416	0.156		
	Married	201	3.159	1.518	0.107		
	Divorced	38	3.000	1.542	0.250		
	Widowed	79	3.127	1.453	0.164		
	Total	400	3.210	1.490	0.075	1.542	0.203
Customer Retention	Single	82	3.866	1.120	0.124		
	Married	201	3.642	1.233	0.087		
	Divorced	38	3.526	1.156	0.188		
	Widowed	79	3.582	1.183	0.133		
	Total	400	3.665	1.194	0.060	1.096	0.351
Business Continuity	Single	82	3.915	1.113	0.123		
	Married	201	4.468	1.253	0.088		
	Divorced	38	3.632	1.172	0.190		
	Widowed	79	3.481	1.280	0.144		
	Total	400	3.578	1.232	0.062	2.803	0.010
Market Share	Single	82	3.768	1.289	0.142		
	Married	201	3.532	1.411	0.100		
	Divorced	38	4.684	1.188	0.193		
	Widowed	79	3.190	1.511	0.170		
	Total	400	3.528	1.396	0.070	2.543	0.016

Source: Primary Data

Table 5.18 presents the results of an ANOVA analysis examining the relationship between enterprise performance and the marital status of women entrepreneurs. This table covers five key performance indicators: sales growth, profitability, customer

retention, business continuity, and market share. In terms of sales growth, a significant difference was observed between marital status groups (F = 2.843, p-value = 0.038), with married female entrepreneurs having the highest mean (4.333), suggesting that marital status influences sales growth, with married entrepreneurs performing better in this regard. Profitability did not show significant variation across marital status groups (F = 1.542, p-value = 0.203), indicating that marital status did not have a significant impact on profitability. No significant differences were found in customer retention (F = 1.096, p = 0.351), suggesting that marital status does not significantly affect customer retention. Business continuity shows a significant difference (F = 2.803, p-value = 0.010), with married female entrepreneurs having the highest mean (4.468), indicating that marital status may contribute to better business continuity. Market share also reveals a significant difference (F = 2.543, p-value = 0.016), with divorced women entrepreneurs having the highest mean (4.684), suggesting that marital status may influence market share, with divorced entrepreneurs performing better in this aspect. Overall, although marital status has a significant impact on sales growth, business continuity, and market share, it does not significantly affect profitability or customer retention.

Table 5.19

ANOVA related to the Enterprise Performance and Education of Women Entrepreneurs

Variables	Education	N	Mean	Std. Deviation	Std. Error	F	p-value
Sales Growth	School Certification	40	4.850	1.312	0.207	4.944	0.008
	PDC/HSS	38	3.263	1.537	0.249		
	Degree	121	3.554	1.449	0.132		
	PG	77	3.416	1.516	0.173		
	Professional Degree	124	3.516	1.394	0.125		
	Total	400	3.518	1.440	0.072		
Profitability	School Certification	40	3.275	1.450	0.229	3.236	0.016
	PDC/HSS	38	4.079	1.459	0.237		
	Degree	121	3.289	1.502	0.137		
	PG	77	3.221	1.536	0.175		

	Professional Degree	124	3.145	1.491	0.134		
	Total	400	3.210	1.490	0.075		
Customer Retention	School Certification	40	3.675	1.248	0.197	4.562	0.004
	PDC/HSS	38	4.316	1.233	0.200		
	Degree	121	3.826	1.085	0.099		
	PG	77	3.714	1.255	0.143		
	Professional Degree	124	3.581	1.217	0.109		
	Total	400	3.665	1.194	0.060		
Business Continuity	School Certification	40	3.775	1.165	0.184	1.215	0.304
	PDC/HSS	38	3.342	1.236	0.201		
	Degree	121	3.694	1.217	0.111		
	PG	77	3.610	1.183	0.135		
	Professional Degree	124	3.452	1.290	0.116		
	Total	400	3.578	1.232	0.062		
Market Share	School Certification	40	3.625	1.390	0.220	1.092	0.360
	PDC/HSS	38	3.368	1.403	0.228		
	Degree	121	3.636	1.335	0.121		
	PG	77	3.675	1.390	0.158		
	Professional Degree	124	3.347	1.454	0.131		
	Total	400	3.528	1.396	0.070		

Source: Primary Data

Table 5.19 presents the ANOVA results examining the relationship between enterprise performance and the education level of women entrepreneurs across five performance indicators: sales growth, profitability, customer retention, business continuity, and market share. For sales growth, a significant difference was found (F = 4.944, p-value = 0.008), with women entrepreneurs holding a school certification showing the highest mean (4.850), indicating that education level influences sales growth, with those having a school certification outperforming other education groups. Profitability also shows a significant difference (F = 3.236, p-value = 0.016), with women entrepreneurs holding a PDC/HSS qualification achieving the highest mean (4.079), suggesting that education level plays a role in profitability, with PDC/HSS graduates performing better than others. In customer retention, a significant difference is observed (F = 4.562, p-value = 0.004), with those having a PDC/HSS qualification showing the highest mean (4.316), indicating that education influences

customer retention, with PDC/HSS graduates excelling in this aspect. Business continuity did not show a significant difference (F = 1.215, p-value = 0.304), suggesting that education level does not significantly affect business continuity. Finally, market share does not reveal a significant difference (F = 1.092, p-value = 0.360), indicating that educational level does not have a significant impact on market share. Overall, while educational level significantly influences sales growth, profitability, and customer retention, it does not appear to affect business continuity or market share.

Table 5.20

ANOVA related to the Enterprise Performance and Type of Industry of Women Entrepreneurs

Variable	Type of Industry	N	Mean	Std. Deviation	Std. Error	F	p-value
Sales Growth	Manufacturing	65	3.846	1.314	0.163	3.361	0.016
	Service	211	4.502	1.426	0.098		
	Trade	124	3.371	1.511	0.136		
	Total	400	3.518	1.440	0.072		
Profitability	Manufacturing	65	4.662	1.395	0.173	3.638	0.027
	Service	211	3.137	1.472	0.101		
	Trade	124	3.097	1.538	0.138		
	Total	400	3.210	1.490	0.075		
Customer Retention	Manufacturing	65	4.000	1.031	0.128	3.352	0.004
	Service	211	3.564	1.230	0.085		
	Trade	124	3.661	1.189	0.107		
	Total	400	3.665	1.194	0.060		
Business Continuity	Manufacturing	65	3.892	1.214	0.151	2.711	0.268
	Service	211	3.545	1.200	0.083		
	Trade	124	3.468	1.278	0.115		
	Total	400	3.578	1.232	0.062		
Market Share	Manufacturing	65	3.738	1.361	0.169	1.032	0.357
	Service	211	3.455	1.425	0.098		
	Trade	124	3.540	1.364	0.122		
	Total	400	3.528	1.396	0.070		

Source: Primary Data

Table 5.20 presents the ANOVA results exploring the relationship between enterprise performance and the type of industry in which female entrepreneurs are engaged across five performance indicators: sales growth, profitability, customer retention, business continuity, and market share. For sales growth, a significant difference is observed (F = 3.361, p-value = 0.016), with women in the service industry showing the highest mean (4.502), indicating that industry type plays a role in sales growth, with the service industry outperforming manufacturing and trade. Profitability also shows a significant difference (F = 3.638, p-value = 0.027), with manufacturing entrepreneurs achieving the highest mean (4.662), suggesting that female entrepreneurs in manufacturing are more profitable than those in the service and trade industries. A significant difference was found in customer retention (F = 3.352, p-value = 0.004), with the service industry having a slightly lower mean (3.564) than manufacturing (4.000), suggesting that the manufacturing industry has better customer retention rates. Business continuity does not show a significant difference (F = 2.711, p = 0.268), indicating that industry type does not significantly affect business continuity. Finally, market share shows no significant difference (F = 1.032, p-value = 0.357), suggesting that industry type does not impact market share. Overall, industry type significantly influences sales growth, profitability, and customer retention but does not appear to affect business continuity or market share.

5.2.4. Hypothetical relationship between different levels of organizational resilience and the enterprise performance of women entrepreneurs.

Organizational resilience is the capability of a business to predict, plan, respond to, and adjust to both internal and external challenges, ensuring its survival and prosperity in an ever-evolving business environment. This resilience is particularly important for women entrepreneurs, who encounter specific challenges such as gender-based discrimination, limited access to resources, and changing market demands. Organizational resilience can be classified into three levels: high, medium, and low, which influence different aspects of business performance including sales growth, profitability, customer retention, business continuity, and market share. High resilience often reflects the ability to maintain or improve performance during uncertain periods, whereas low resilience may be linked to difficulties sustaining

critical business outcomes. Understanding the connection between various levels of organizational resilience and enterprise performance is vital for formulating strategies to enhance business success among women entrepreneurs. This study posits that there is no significant difference in the impact of different levels of organizational resilience (high, medium, and low) on the enterprise performance of women entrepreneurs. This hypothesis was evaluated using Multivariate Analysis of Variance (MANOVA) to determine if the varying resilience levels led to significant differences in the five performance indicators: sales growth, profitability, customer retention, business continuity, and market share.

Hypothesis 3: There is no significant difference between different level of Organizational Resilience and Enterprise Performance of Women Entrepreneurs

Table 5.21

Descriptive Statistics of Different level of Organizational Resilience towards Enterprise Performance

Organizational Resilience		Mean	Std. Deviation	N
Sales Growth	High	3.535	1.405	195
	Medium	3.513	1.479	127
	Low	3.508	1.484	78
	Total	3.518	1.440	400
Profitability	High	3.231	1.497	195
	Medium	3.228	1.492	127
	Low	3.128	1.489	78
	Total	3.210	1.490	400
Customer Retention	High	3.795	1.131	195
	Medium	3.651	1.217	127
	Low	3.487	1.297	78
	Total	3.665	1.194	400
Business Continuity	High	3.709	1.244	195
	Medium	3.544	1.176	127
	Low	3.449	1.286	78
	Total	3.578	1.232	400
Market Share	High	3.622	1.430	195
	Medium	3.482	1.357	127
	Low	3.487	1.384	78
	Total	3.528	1.396	400

Source: Primary Data

Table 5.21 presents the descriptive statistics for different levels of organizational resilience (high, medium, and low) in relation to the five key dimensions of enterprise performance: sales growth, profitability, customer retention, business continuity, and market share. The mean scores for sales growth were relatively similar across all resilience levels, with high resilience having a mean of 3.535 (SD = 1.405), medium resilience 3.513 (SD = 1.479), and low resilience 3.508 (SD = 1.484). These scores were close to the overall mean of 3.518 (SD = 1.440), indicating minimal variation in sales growth performance across different resilience levels. Regarding profitability, the high-resilience group had a mean of 3.231 (SD = 1.497), the medium-resilience group had a mean of 3.228 (SD = 1.492), and the low-resilience group had a mean of 3.128 (SD = 1.489), with a total mean of 3.210 (SD = 1.490). Again, the differences between the groups are minimal, suggesting that organizational resilience has a relatively small effect on profitability. The high resilience group exhibited the highest mean (3.795, SD = 1.131), followed by the medium resilience (3.651, SD = 1.217) and low resilience (3.487, SD = 1.297) groups, with a total mean of 3.665 (SD = 1.194). This shows a more noticeable variation, with high resilience correlating with improved customer retention. In terms of business continuity, the high-resilience group had a mean of 3.709 (SD = 1.244), medium resilience 3.544 (SD = 1.176), and low resilience 3.449 (SD = 1.286), with an overall mean of 3.578 (SD = 1.232). Similar to customer retention, high resilience was associated with better outcomes. Finally, for market share, the high-resilience group had a mean of 3.622 (SD = 1.430), medium resilience 3.482 (SD = 1.357), and low resilience 3.487 (SD = 1.384), with an overall mean of 3.528 (SD = 1.396). These results indicate that, while high resilience is generally associated with better performance across these dimensions, the differences are modest, especially in sales growth, profitability, and market share, suggesting that factors other than organizational resilience may also play a significant role in influencing these outcomes.

Table 5.22

Box's Test of Equality of Covariance Matrices of different level of Organizational Resilience towards Enterprise Performance

Box's Test of Equality of Covariance Matrices[a]	
Box's M	25.600
F	0.835
df1	30
df2	214532.438
Sig.	0.722

Source: Primary Data

Test the null hypothesis is that the observed covariance matrices of the dependent variables are equal across the group.

a. Design: Intercept + Different Level of Organizational Resilience

Table 5.22 presents the results of Box's Test of Equality of Covariance Matrices, which is used to test the assumption of equal covariance matrices across the different levels of organizational resilience (high, medium, and low) in relation to enterprise performance variables. The test statistic, Box's M, was 25.600 and the associated F-value was 0.835. The degrees of freedom (df1) were 30, and the degrees of freedom (df2) are 214,532.438. The p-value was 0.722, which is much higher than the conventional significance level of 0.05. This indicates that the null hypothesis, which assumes that the observed covariance matrices of the dependent variables are equal across groups, cannot be rejected. In other words, there is no significant difference in the covariance matrices of the dependent variables (sales growth, profitability, customer retention, business continuity, and market share) between different levels of organizational resilience. This result suggests that the assumption of homogeneity of covariance is valid for conducting further multivariate analyses, such as a MANOVA, and that the differences in performance outcomes observed across resilience levels are not due to unequal variances or covariances in the data.

Table 5.23

Multivariate Test of different level of Organizational Resilience towards Enterprise Performance

Multivariate Tests[a]							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Different Level of Organizational Resilience	Pillai's Trace	0.718	1.712[b]	3	78	0.014	0.179
	Wilks' Lambda	0.982	1.712[b]	3	78	0.014	0.179
	Hotelling's Trace	0.618	1.712[b]	3	78	0.014	0.179
	Roy's Largest Root	0.616	1.712[b]	3	78	0.014	0.179

Source: Primary Data

a. Design: Intercept + Different Level of Organizational Resilience

b. Exact statistic

Table 5.23 presents the results of the multivariate test examining the impact of different levels of organizational resilience (high, medium, and low) on enterprise performance across multiple dependent variables: sales growth, profitability, customer retention, business continuity, and market share. The test uses four multivariate statistics: Pillai's trace, Wilks' lambda, Hotelling's Trace, and Roy's Largest Root, all of which assess the overall impact of organizational resilience on performance metrics. The Pillai's trace statistic has a value of 0.718, with an F-value of 1.712 and a p-value of 0.014, indicating that the effect of organizational resilience is statistically significant at the 0.05 significance level. Similarly, Wilks' Lambda had a value of 0.982, Hotelling's Trace was 0.618, and Roy's Largest Root was 0.616, with all corresponding p-values being 0.014, reaffirming the significance of the relationship. The partial eta squared value of 0.179 suggests that approximately 17.9% of the variance in the enterprise performance variables can be explained by the levels

of organizational resilience. This indicates a moderate effect size, signifying that organizational resilience has a meaningful influence on the performance of women entrepreneurs, with higher resilience levels likely contributing to better outcomes in sales growth, profitability, customer retention, business continuity, and market share. The findings reveal the importance of fostering organizational resilience as a critical factor in enhancing business performance among women entrepreneurs.

Table 5.24

Levene's Test of Equality of Error Variances of different level of Organizational Resilience towards Enterprise Performance

Levene's Test of Equality of Error Variances[a]					
		Levene Statistic	df1	df2	Sig.
Sales Growth	Based on Mean	0.418	2	397	0.659
	Based on Median	0.106	2	397	0.899
	Based on Median and with adjusted df	0.106	2	396.102	0.899
	Based on trimmed mean	0.345	2	397	0.708
Profitability	Based on Mean	0.065	2	397	0.937
	Based on Median	0.042	2	397	0.959
	Based on Median and with adjusted df	0.042	2	372.617	0.959
	Based on trimmed mean	0.060	2	397	0.942
Customer Retention	Based on Mean	1.235	2	397	0.292
	Based on Median	0.952	2	397	0.387
	Based on Median and with adjusted df	0.952	2	390.817	0.387
	Based on trimmed mean	1.254	2	397	0.287
Business Continuity	Based on Mean	0.669	2	397	0.513
	Based on Median	0.325	2	397	0.723
	Based on Median and with adjusted df	0.325	2	390.751	0.723
	Based on trimmed mean	0.799	2	397	0.451
Market Share	Based on Mean	0.624	2	397	0.536
	Based on Median	0.346	2	397	0.708
	Based on Median and with adjusted df	0.346	2	395.670	0.708
	Based on trimmed mean	0.690	2	397	0.502

Source: Primary Data

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Different Level of Organizational Resilience

Table 5.24 presents the results of Levene's Test of Equality of Error Variances for different levels of organizational resilience (high, medium, and low) concerning five enterprise performance variables: sales growth, profitability, customer retention, business continuity, and market share. Levene's test is used to assess whether the variance of errors (or residuals) is equal across different groups, which is a key assumption in the analysis of variance (MANOVA). For all five variables, the p-values for the tests based on the mean, median, and trimmed mean were greater than the commonly used significance level of 0.05, indicating that the null hypothesis of equal error variances cannot be rejected. Specifically, for sales growth, the p-values ranged from 0.659 to 0.899; for profitability, from 0.937 to 0.959; for customer retention, from 0.287 to 0.387; for business continuity, from 0.451 to 0.723; and for market share, from 0.502 to 0.708. Since none of these p-values is below 0.05, this suggests that the error variances are homogeneous across the groups for all dependent variables. This indicates that the assumption of equal variances is met, allowing for the valid application of further statistical tests such as MANOVA without concerns about violating this assumption. Therefore, the results support the adequacy of the statistical model used to analyse the impact of organizational resilience on enterprise performance.

Table 5.25

Test of between subject effects of different level Organizational Resilience towards Enterprise Performance

Tests of Between-Subjects Effects							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Different Level of Organizational Resilience	Sales Growth	181.061	2	90.531	2.015	0.005	0.341
	Profitability	122.649	2	61.324	3.145	0.014	0.428
	Customer Retention	134.658	2	67.329	4.638	0.016	0.401
	Business Continuity	103.703	2	51.851	3.221	0.006	0.378
	Market Share	112.665	2	56.832	2.426	0.024	0.287

Source: Primary Data

Table 5.25 presents the results of the tests of between-subject effects for different levels of organizational resilience (high, medium, and low) on five enterprise performance variables: sales growth, profitability, customer retention, business continuity, and market share. The table provides the Type III Sum of Squares, degrees of freedom (df), Mean Square, F-statistics, and significance values (Sig.) and Partial Eta Squared values for each variable. The results show that organizational resilience significantly impacts all five performance variables, with p-values less than 0.05 for each. Specifically, for sales growth, the F-statistic is 2.015, with a p-value of 0.005, indicating a significant effect of organizational resilience on sales growth. Similarly, profitability ($F = 3.145$, $p = 0.014$), customer retention ($F = 4.638$, $p = 0.016$), business continuity ($F = 3.221$, $p = 0.006$), and market share ($F = 2.426$, $p = 0.024$) had significant effects on organizational resilience. The partial eta-squared values represent the effect size, with higher values indicating a stronger effect. For instance, customer retention (0.401) and profitability (0.428) have relatively high effect sizes, suggesting that organizational resilience has a substantial impact on these variables. Overall, the results indicate that different levels of organizational resilience are significantly related to enterprise performance across various dimensions, with organizational resilience explaining a moderate to large portion of the variance in these performance outcomes.

Objective 1: To assess the impact of Organizational resilience on the performance of women-owned and led enterprises in Kerala.

The objective of evaluating the impact of organizational resilience on the performance of women-owned and women-led enterprises in Kerala is crucial for comprehending how resilience affects key business outcomes. Organizational resilience is defined as a business's ability to adapt to and recover from various challenges, including economic fluctuations, technological changes, and unforeseen disruptions. For women entrepreneurs, cultivating resilience is particularly significant, as it can play a pivotal role in enhancing business performance across critical areas, such as sales growth, profitability, customer retention, business continuity, and market share. This study employs Structural Equation Modelling (SEM) to examine the direct

relationships between organizational resilience and the overall performance of these enterprises. SEM facilitates the simultaneous analysis of multiple variables, providing insights into how different dimensions of resilience such as adaptability, resourcefulness, and strategic foresight contribute to the success and sustainability of women-led businesses. This approach will aid in better understanding the role of organizational resilience in improving business performance and offer valuable implications for fostering more resilient enterprises in the future.

5.3. Model regarding the impact of Organizational Resilience on the performance of women-owned and led enterprises

The model that investigates the impact of organizational resilience on the performance of women-owned and led enterprises aims to elucidate how the principal dimensions of resilience affect critical business outcomes. Organizational resilience, encompassing adaptability, proactiveness, resourcefulness, and crisis management, is essential for the success of any business, particularly within a dynamic environment. Adaptability enables firms to adjust to changes in market conditions, technology, and regulations, while proactiveness facilitates the early identification of opportunities and threats, allowing businesses to maintain a competitive edge. Resourcefulness involves optimising available resources and innovating under pressure. Crisis management ensures that businesses can effectively handle disruptions, minimise downtime, and maintain stability. These resilience dimensions are hypothesised to influence various aspects of enterprise performance including sales growth, profitability, customer retention, business continuity, and market share. Sales growth measures a firm's ability to expand its revenue, whereas profitability assesses its capacity to convert sales into profit. Customer retention reflects a firm's success in maintaining loyal customers and is critical for long-term business success. Business continuity evaluates a firm's capacity to operate despite challenges, while market share indicates how well a business competes within its industry. Structural Equation Modelling (SEM) was employed to test this model, as it allows for the exploration of the direct relationship between resilience dimensions and business performance outcomes. The SEM provides a comprehensive understanding of how these resilience

factors collectively contribute to the success and sustainability of women-led enterprises, offering insights that can inform strategic decisions and support the empowerment of women entrepreneurs, particularly in Kerala.

Table 5.26

Univariate and Multivariate Normality of the Distribution related to observed variables of Organizational Resilience and Enterprises Performance

Variable	skew	c.r.	kurtosis	c.r.
ORES5	-0.657	-5.367	-1.035	-4.226
EPER5	-0.246	-2.009	-1.379	-5.631
EPER4	-1.466	-11.968	1.820	7.431
EPER3	-0.715	-5.839	-0.828	-3.379
EPER2	1.472	12.019	2.231	9.108
EPER1	0.560	4.571	-1.099	-4.485
ORES4	-0.536	-4.379	-1.319	-5.386
ORES3	-0.034	-0.282	-1.339	-5.465
ORES2	-0.029	-0.241	-1.449	-5.917
ORES1	0.642	5.240	-0.776	-3.166
MS4	-1.439	-11.749	1.251	5.106
MS3	-1.561	-12.744	1.766	7.209
MS2	-1.372	-11.199	4.283	17.487
MS1	-1.445	-11.799	3.613	14.750
BC4	-1.844	-15.055	4.912	20.053
BC3	-1.613	-13.174	3.470	14.167
BC2	-1.687	-13.772	2.405	9.819
BC1	-1.630	-13.306	4.475	18.267
CR4	-1.804	-14.732	2.808	11.465
CR3	-1.498	-12.231	3.398	13.872
CR2	-1.858	-15.173	5.786	23.620
CR1	-1.402	-11.446	3.607	14.726
PROFIT4	-1.071	-8.741	-0.073	-0.299
PROFIT3	-0.839	-6.853	-0.458	-1.869
PROFIT2	-0.742	-6.061	-0.714	-2.915
PROFIT1	-1.117	-9.124	0.364	1.486
SG4	-1.023	-8.354	0.325	1.327
SG3	-0.951	-7.767	-0.134	-0.546

SG2	-1.074	-8.771	0.080	0.326
SG1	-0.949	-7.751	-0.256	-1.046
INNOV4	-1.594	-13.014	2.778	11.342
INNOV3	-1.367	-11.158	1.767	7.215
INNOV2	-1.874	-15.302	5.895	24.068
INNOV1	-1.461	-11.929	3.794	15.488
CM4	-1.552	-12.673	2.912	11.889
CM3	-1.298	-10.599	1.580	6.449
CM2	-1.708	-13.942	5.010	20.453
CM1	-1.434	-11.710	2.996	12.230
RESFL4	-1.057	-8.634	-0.156	-0.637
RESFL3	-1.345	-10.979	1.225	5.000
RESFL2	-1.358	-11.087	2.983	12.176
RESFL1	-1.233	-10.066	2.624	10.713
PROACT4	-1.353	-11.051	2.810	11.471
PROACT3	-1.345	-10.984	1.839	7.508
PROACT2	-1.113	-9.092	0.422	1.724
PROACT1	-1.636	-13.360	2.762	11.278
ADAPT4	-1.340	-10.944	2.096	8.556
ADAPT3	-1.297	-10.592	1.738	7.097
ADAPT2	-1.139	-9.301	3.057	12.482
ADAPT1	-1.475	-12.044	3.009	12.284
Multivariate			93.432	12.957

Source: Primary Data

Table 5.26 provides a detailed examination of the univariate and multivariate normality of the distribution of observed variables related to organizational resilience and enterprise performance. The skewness (skew) and kurtosis (kurt) values along with their corresponding critical ratios (c.r.) are presented for each variable. Skewness measures the asymmetry of the data distribution, where values closer to zero indicate a more symmetric distribution, whereas kurtosis indicates the "tailedness" of the distribution, with higher positive values suggesting a more peaked distribution. A critical ratio (c.r.) is calculated by dividing the skewness and kurtosis by their respective standard errors, which helps assess whether skewness or kurtosis significantly deviate from normality. For skewness and kurtosis values to be

considered within a normal range, the skewness should generally fall between -2 and +2, and for kurtosis, it should fall between -7 and +7 (Kline, 2011). In this table, variables such as ORES5 (Organizational Resilience 5) and EPER5 (Enterprise Performance 5) show relatively moderate skewness and kurtosis values within this acceptable range, indicating a relatively normal distribution. However, other variables like EPER2 (Enterprise Performance 2) and INNOV2 (Innovation 2) exhibit higher skewness and kurtosis values, suggesting a departure from normality that could affect the robustness of the parametric tests. In such cases, bootstrapping techniques are often employed to address normality violations. Bootstrapping, a non-parametric resampling method, can be used to estimate the standard errors and confidence intervals for parameter estimates, allowing for more reliable results, even when the data are not perfectly normally distributed. This method compensates for non-normality, providing more accurate parameter estimates and significance testing in structural equation modelling (SEM) when the assumptions of normality are violated, as is the case with some of the variables in this study. Therefore, the combination of skewness, kurtosis, and bootstrapping offers a robust approach for handling non-normal distributions, thereby ensuring the validity of SEM analysis.

5.3.1 Bootstrapping of Organizational Resilience and Enterprise Performance Model

Bootstrapping is a resampling method that is particularly beneficial when the assumption of normality is not satisfied. This non-parametric approach does not depend on any assumptions regarding the underlying distribution of the data. Instead of presuming a normal distribution, it utilises observed data to empirically estimate the distribution of the statistic in question. In structural equation modelling (SEM), bootstrapping is frequently applied for model validation, such as evaluating the model fit and estimating confidence intervals for parameters. This technique allows researchers to make fewer assumptions about the distribution, thereby offering a more robust model evaluation.

In this framework, the researcher used the Bollen-Stine Bootstrap, also referred to as the Bollen-Stine bootstrap correction, a resampling method in SEM designed to

address potential bias in the chi-square test of the model fit. This is particularly useful when the distributional assumptions necessary for the chi-square test are not satisfied. The chi-square test presumes multivariate normality, and if this assumption is breached, it can result in misleading conclusions about the model fit. The Bollen-Stine Bootstrap addresses this issue by providing a correction to the chi-square test, making it less sensitive to distributional assumptions. This technique involves generating multiple resamples (bootstrap samples) from observed data. For each resample, the SEM model was estimated and the chi-square statistic was calculated. By repeating this process numerous times, a distribution of chi-square values was obtained, allowing for a more precise evaluation of the variability and potential bias in the chi-square test.

5.3.2 Model Fit of Organizational Resilience and Enterprises Performance model through Bollen-Stine Bootstrap

Evaluating the validity of a model using structural equation modelling (SEM) is essential to ensure that the proposed relationships among variables accurately represent the underlying structure of the data. Traditional approaches, such as the chi-square test for model fit, can face difficulties with small sample sizes or when normality assumptions are violated. To overcome these challenges, the Bollen-Stine Bootstrap offers a robust resampling method that enables a more precise assessment of model fit. In this context, the researcher utilised the Bollen-Stine Bootstrap to examine the validity of our SEM model. This bootstrap method involves resampling the observed data to create a distribution of the chi-square statistic under the null hypothesis that the model fits well. Consequently, the validity of the model was assessed using a 5000-bootstrap sample.

Table 5.27

Chi-Square Validation of Bollen-Stine Bootstrap of Organizational Resilience and Enterprises Performance Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	131	**1470.132**	1144	0.130	1.285
Saturated model	1275	0	0		
Independence model	50	17904.953	1225	0.127	14.616

The default model in Table 5.27 refers to the hypothesised model that is being tested for its goodness of fit with the observed data. In this case, the default model for Organizational Resilience and Enterprise Performance consists of 131 parameters, and its chi-square (CMIN) statistic is 1470.132 with 1144 degrees of freedom (DF). The associated p-value of 0.130 indicates that the model did not show a statistically significant departure from the observed data, which is a desirable result. A p-value greater than 0.05 suggests that the model fits the data well, and there is no significant misfit. Furthermore, the CMIN/DF ratio of 1.285 is well within the acceptable range (typically less than three or five), further confirming that the model fits the data appropriately. This default model is a starting point for testing the structural relationships and ensuring that the model parameters are appropriate for the data being studied. Because the default model fits well, it serves as the best representation of the data compared to other models (such as the independence model, which represents a poor fit). Therefore, the default model is considered optimal in this context, providing a solid foundation for further analysis.

Figure 5.1

Checking of Chi-square statistics range of Bollen-Stine Bootstrap of Organizational Resilience and Enterprises Performance Model

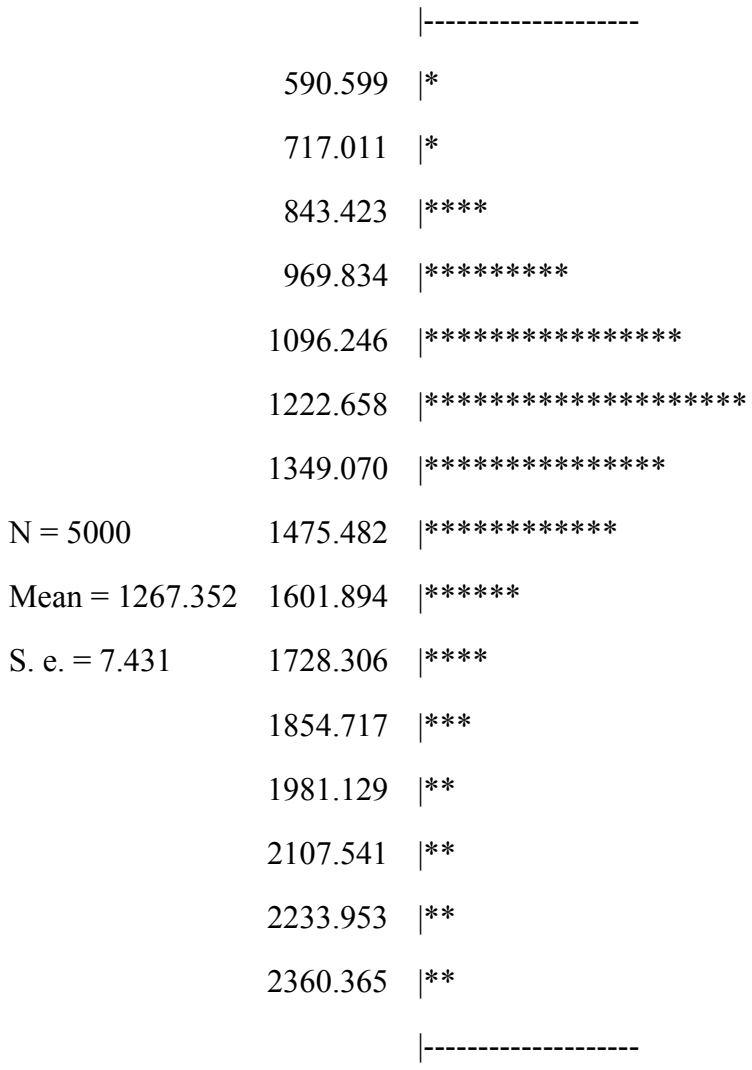


Figure 5.1 presents the chi-square statistics for the Bollen-Stine Bootstrap of the Organizational Resilience and Enterprise Performance model, with a focus on the distribution of chi-square values obtained through bootstrapping. The figure displays a range of Chi-square values that correspond to the resampled data, with the actual value of 1475.482 marked. The distribution of the chi-square values indicates how frequently different chi-square values occur within the bootstrapped samples (N = 5000). The values are plotted from smallest to largest, with each asterisk (*) representing a specific chi-square statistic. The figure shows that the observed chi-

square value (1475.482) lies within the distribution, around the higher range, but not at the extreme end. This suggests that while the model fit is acceptable, it is slightly above the mean of the bootstrapped values (1267.352), indicating that the model's fit to the data is not perfect but still reasonable. The standard error (SE) = 7.431) reflects the variation in chi-square values across the resampled datasets. The increasing number of asterisks toward the higher end of the chi-square range (for example, 1854.717, 1981.129) shows that these values are less frequent, which aligns with the fact that extreme chi-square values are rare. In general, the proximity of the observed chi-square value to the mean of the bootstrap distribution suggests a moderate fit between the model and the data. The results imply that the model is not overfitted, and the statistical test indicates a reasonable balance between the model complexity and data fit.

Table 5.28

Model fit of Bollen –Stine Bootstrap Sample Organizational Resilience and Enterprises Performance Model

Bollen-Stine Bootstrap (Default model)
The model fit better in 3848 bootstrap samples.
It fit about equally well in 0 bootstrap samples.
It fit worse or failed to fit in 313 bootstrap samples.
Testing the null hypothesis that the model is correct, Bollen-Stine bootstrap p = .211

Table 5.28 presents the results of the Bollen-Stine bootstrap model fit for the Organizational Resilience and Enterprise Performance model. The table outlines the performance of the model across 3848 bootstrap samples, showing that the model fits well in 3848 instances, which indicates a strong alignment between the model and the data in the majority of resamples. By contrast, the model fit equally well in the 0 bootstrap samples, which means that no resamples showed a neutral or balanced fit. Additionally, the model fit worse or failed to fit in 313 bootstrap samples, suggesting that, in a small number of cases, the model did not adequately represent the data. The p-value for the null hypothesis test, which evaluates whether the model is a good fit

for the data, is 0.211. This p-value is greater than the common significance threshold of 0.05, indicating that there is no significant evidence to reject the null hypothesis. In other words, the results suggest that the model fits the data well overall and the null hypothesis (that the model is correct) cannot be rejected. This finding further supports the adequacy of the model in explaining the relationship between organizational resilience and enterprise performance in the dataset.

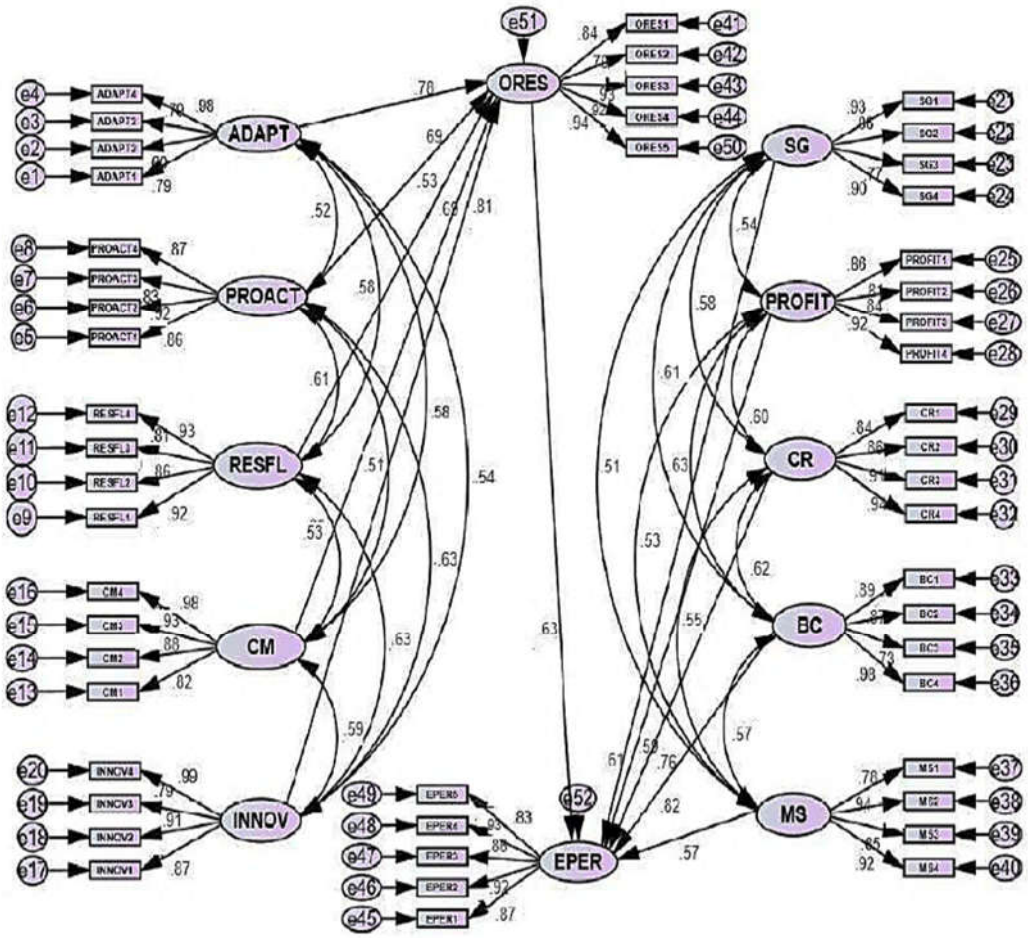
5.3.3 Model Validity of Organizational Resilience and Enterprises Performance Model

In the realm of Structural Equation Modelling (SEM), ensuring the validity of a model is essential to confirm that the proposed theoretical framework accurately depicts the underlying relationships among variables, particularly concerning Organizational Resilience and Enterprise Performance. Within SEM, validity is evaluated through various dimensions including construct validity, convergent validity, discriminant validity, and model fit. For a model focusing on Organizational Resilience and Enterprise Performance, construct validity verifies that the variables representing organizational resilience, such as adaptability, proactiveness, resourcefulness, and crisis management, truly embody the intended theoretical constructs. Meanwhile, variables for enterprise performance, such as sales growth, profitability, customer retention, business continuity, and market share, effectively capture the performance aspects of an organisation. Convergent validity is assessed by ensuring a strong correlation among the indicators for each latent construct, whereas discriminant validity confirms that these constructs are distinct from each other. Model fit indices, including chi-square statistics, Root Mean Square Error of Approximation (RMSEA), and Comparative Fit Index (CFI), were used to evaluate how well the model aligned with the data, verifying that the specified relationships in the model corresponded with the observed data. A well-fitting model indicates that the connections between the dimensions of organizational resilience and enterprise performance are solid, facilitating the extraction of meaningful insights from the data. The validity of this model through SEM offers a robust foundation for comprehending how various

aspects of organizational resilience impact different performance metrics within enterprises.

Figure 5.2

The impact of Organizational Resilience on the performance of women-owned and led enterprises



Source: Primary Data

Table 5.29

Model Fit Measures related to Organizational Resilience on the performance of women-owned and led enterprises

Model Fit Indices	Citation	Threshold Limit	Estimated Value	Interpretation
Normed Chi-Square	Jackson, J A. (1998)	< 3	1470.132/ 1144-CMIN/ DF = 1.285	Excellent
CFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	> 0.90	0.918	Acceptable
GFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.927	Good
IFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.937	Good
NFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.942	Good
RMSEA	Hooper, D., Coughlan, J. & Mullen, R M. (2008),	< 0.08	0.055	Acceptable
SRMR	Pavlov, G., Maydeu-Olivares, A. & Shi, D. (2020).	< 0.06	0.051	Excellent

Source: Primary Data

Table 5.29 presents the model fit indices for evaluating the fit of Organizational Resilience on the performance of women-owned and women-led enterprises using structural equation modelling (SEM). Each index provides a measure of how well the data fit the hypothesised model, and the results are compared with the threshold limits established by various scholars. The Normed Chi-Square (CMIN/DF) value was 1.285, which is below the threshold of 3, indicating an excellent fit between the data

and the model. This suggests that the complexity and fit of the model were balanced. The comparative fit index (CFI) value was 0.918, which exceeded the threshold of 0.90, indicating that it was acceptable. The goodness of fit index (GFI) is 0.927, surpassing the 0.90 threshold of and indicating a good fit, meaning that the model explains a high proportion of the variance in the data. The incremental fit index (IFI) is 0.937, again above the 0.90 threshold, suggesting a good fit in terms of improvement over the baseline model. Similarly, the NFI (Normed Fit Index) is 0.942, which was also above the threshold of 0.90, confirming a good model fit. For the Root Mean Square Error of Approximation (RMSEA), the value is 0.055, which is below the threshold of 0.08, indicating that the model has an acceptable level of error, and thus, fits the data well. Finally, the standardised root mean square residual (SRMR) was 0.051, well below the threshold of 0.06, which is considered excellent and suggests that the residuals of the model are small, indicating a high degree of fit. Overall, these model fit indices suggest that the Organizational Resilience and Enterprise Performance models provide a good fit to the data, with values indicating that the hypothesised relationships between variables in the model are well supported by the data.

Table 5.30

The relationship between Organizational Resilience and the Enterprises Performance

Dependent Variable	<---	Independent Variables	Estimate	S.E.	C.R.	P-value
ORES	<---	PROACT	0.818	0.087	9.402	0.001
ORES	<---	RESFL	0.702	0.087	8.069	0.014
ORES	<---	CM	0.807	0.088	9.170	0.019
ORES	<---	INNOV	0.781	0.101	7.733	0.003
ORES	<---	ADAPT	0.856	0.091	9.407	0.007
EPER	<---	SG	0.692	0.069	10.029	0.005
EPER	<---	PROFIT	0.991	0.078	12.705	0.016
EPER	<---	CR	0.839	0.088	9.534	0.007
EPER	<---	BC	0.994	0.081	12.272	0.016
EPER	<---	MS	0.835	0.076	10.987	0.008
EPER	<---	ORES	0.872	0.074	11.784	0.000

Source: Primary Data

Hypothesis 4: There is no significant relationship between proactiveness (PROACT) and Organizational Resilience (ORES) in women owned enterprises.

Based on the table, the estimate for the relationship between proactiveness (PROACT) and Organizational Resilience (ORES) is 0.818, with a critical ratio (C.R.) of 9.402 and a p-value of 0.001. The C.R. value significantly exceeded the threshold of 1.96, and the p-value was well below the common significance level of 0.05, indicating a statistically significant positive relationship between proactiveness and organizational resilience. Thus, the null hypothesis, which suggests no significant relationship, was rejected. The results show that higher levels of proactiveness in women-owned enterprises are strongly associated with greater organizational resilience.

Hypothesis 5: There is no significant relationship between resourcefulness (RESFL) and Organizational Resilience (ORES) in women owned enterprises.

The relationship between resourcefulness (RESFL) and Organizational Resilience (ORES) has an estimate of 0.702, with a C.R. value of 8.069 and a p-value of 0.014. With a C.R. value greater than 1.96 and a p-value below 0.05, the relationship is statistically significant. Therefore, the null hypothesis is rejected, indicating that the resourcefulness in women-owned enterprises has a significant positive impact on organizational resilience. This finding suggests that enterprises with more resourceful leadership and strategies tend to be more resilient.

Hypothesis 6: There is no significant relationship between Crisis Management (CM) and Organizational Resilience (ORES) in women owned enterprises.

The estimate for Crisis Management (CM) and Organizational Resilience (ORES) was 0.807, with a C.R. value of 9.170 and a p-value of 0.019. The C.R. value exceeds the 1.96 threshold, and the p-value was less than 0.05, indicating that the relationship was statistically significant. Consequently, the null hypothesis is rejected, suggesting that crisis management is an important factor in fostering organizational resilience in women-owned enterprises. This demonstrates that enterprises that excel in crisis management tend to show higher resilience.

Hypothesis 7: There is no significant relationship between innovation (INNOV) and Organizational Resilience (ORES) in women owned enterprises.

The relationship between innovation (INNOV) and Organizational Resilience (ORES) has an estimate of 0.781, with a C.R. of 7.733 and a p-value of 0.003. With a C.R. value greater than 1.96 and a p-value below 0.05, this relationship is statistically significant. As a result, the null hypothesis is rejected, and it can be concluded that innovation is a significant driver of organizational resilience in women-owned enterprises. Enterprises that embrace innovation are likely to build resilient structures and processes.

Hypothesis 8: There is no significant relationship between adaptability (ADAPT) and Organizational Resilience (ORES) in women owned enterprises.

Adaptability (ADAPT) had an estimate of 0.856, with a C.R. of 9.407 and a p-value of 0.007. The C.R. value was above the threshold of 1.96, and the p-value was less than 0.05, indicating a statistically significant relationship. Therefore, the null hypothesis is rejected, confirming that adaptability is a key factor contributing to organizational resilience in women-owned enterprises. Adaptable enterprises are capable of maintaining stability and thriving through changes and uncertainty.

Hypothesis 9: There is no significant relationship between Sales Growth (SG) and the Enterprise Performance (EPER) in women owned enterprises.

Sales Growth (SG) has an estimate of 0.692, a C.R. of 10.029, and a p-value of 0.005. The C.R. value significantly exceeded 1.96, and the p-value was well below 0.05, which indicates a statistically significant positive relationship. Therefore, the null hypothesis is rejected, and it can be concluded that sales growth positively influences WOE performance, suggesting that higher sales growth leads to better overall performance.

Hypothesis 10: There is no significant relationship between profitability (PROFIT) and Enterprise Performance (EPER) in women owned enterprises.

The relationship between profitability (PROFIT) and Enterprise Performance (EPER) is estimated to be 0.991, with a C.R. of 12.705 and a p-value of 0.016. Given that the C.R. value exceeds the threshold of 1.96 and the p-value is below 0.05, the relationship is statistically significant. The null hypothesis is rejected, indicating that

higher profitability directly improves the performance of women-owned enterprises. This finding suggests that more profitable enterprises perform better in terms of overall success and sustainability.

Hypothesis 11: There is no significant relationship between Customer Retention (CR) and Enterprise Performance (EPER) in women owned enterprises.

Customer Retention (CR) has an estimate of 0.839, with a C.R. of 9.534 and p-value of 0.007. Since the C.R. value exceeds 1.96 and the p-value is less than 0.05, the relationship is statistically significant. Thus, the null hypothesis is rejected, and it is concluded that higher customer retention positively impacts the performance of women-owned enterprises. Enterprises that successfully retain customers tend to perform better across various metrics.

Hypothesis 12: There is no significant relationship between Business Continuity (BC) and Enterprise Performance (EPER) in women owned enterprises.

The relationship between Business Continuity (BC) and Enterprise Performance (EPER) is estimated at 0.994, with a C.R. of 12.272 and a p-value of 0.016. The C.R. value was well above the threshold of 1.96, and the p-value was below 0.05, indicating a significant relationship. As a result, the null hypothesis is rejected, suggesting that business continuity plays a significant role in enhancing the performance of women-owned enterprises. Enterprises with strong business continuity plans are likely to sustain and improve their performance.

Hypothesis 13: There is no significant relationship between Market Share (MS) and Enterprise Performance (EPER) in women owned enterprises.

Market Share (MS) has an estimate of 0.835, with a C.R. value of 10.987 and a p-value of 0.008. Since the C.R. exceeds the critical threshold of 1.96, and the p-value is below 0.05, the relationship is statistically significant. Therefore, the null hypothesis is rejected, indicating that an increase in market share positively affects WOE performance. Enterprises with larger market shares typically enjoy better overall performance.

Hypothesis 14: There is no significant relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) in women owned enterprises.

The estimate for the relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) was 0.872, with a C.R. of 11.784 and a p-value of 0.000. The C.R. value is well above 1.96, and the p-value is significantly less than 0.05, indicating a statistically significant positive relationship. The null hypothesis is rejected, and it can be concluded that organizational resilience strongly contributes to WOE performance. Enterprises that are more resilient tend to have higher levels of performance, particularly when faced with challenges and uncertainties.

5.3.4 Model Validity and Reliability of Organizational Resilience and Enterprises Performance Model

The validity and reliability of models assessing organizational resilience and enterprise performance are essential to ensure the accurate measurement of the intended constructs and consistent results across various contexts. Model validity pertains to the degree to which the model accurately depicts the relationship between organizational resilience and enterprise performance, emphasising the alignment of variables, measurement instruments, and the overall structure with the theoretical framework. In this context, validity involves confirming both content and construct validity, ensuring that the model captures the core dimensions of organizational resilience, such as proactiveness, resourcefulness, crisis management, innovation, and adaptability, alongside enterprise performance indicators, such as sales growth, profitability, customer retention, business continuity, and market share. Conversely, reliability concerns the consistency and stability of the model's measurements assessed through techniques such as Cronbach's alpha for internal consistency, composite reliability for the constructs, and factor loadings to confirm that the items reliably represent the intended variables. The robustness of the model is further supported by statistical tests such as confirmatory factor analysis (CFA) and structural equation modelling (SEM), which evaluate both the measurement and structural paths for their soundness, ensuring that the model's findings are trustworthy and applicable across different sample populations and contexts. Thus, establishing the validity and reliability of this model not only enhances its theoretical contribution but also ensures its practical applicability in the study of women-owned enterprises and their performance outcomes.

Table 5. 31

Composite Reliability of the Model related to Organizational Resilience on the performance of women-owned and led enterprises

	CR	AVE	MSV	MaxR(H)
ADAPT	0.926	0.760	0.412	0.931
PROACT	0.912	0.722	0.482	0.922
RESFL	0.933	0.779	0.348	0.941
CM	0.947	0.819	0.379	0.951
INNOV	0.941	0.799	0.411	0.955
SG	0.924	0.753	0.352	0.931
PROFIT	0.919	0.740	0.314	0.924
CR	0.938	0.792	0.345	0.942
BC	0.925	0.757	0.412	0.931
MS	0.931	0.773	0.416	0.942
ORES	0.948	0.784	0.351	0.951
EPER	0.949	0.788	0.325	0.955

Source: Primary Data

Table 5.31 presents the composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), and MaxR(H) for the constructs within the Organizational Resilience and Enterprise Performance Model, specifically in the context of women-owned and led enterprises. The composite reliability (CR) values for all constructs exceeded the threshold of 0.70, ranging from 0.912 to 0.949, indicating strong internal consistency and reliability of the measurement model. The AVE values for each construct are also well above the recommended minimum of 0.50, suggesting that each construct captures a substantial portion of the variance from its indicators relative to the measurement error, with values ranging from 0.722 (for PROACT) to 0.819 (for CM). Furthermore, the AVE for all constructs is higher than the corresponding MSV values, thereby establishing discriminant validity; each construct is more strongly related to its own indicators than to those of other constructs. The MaxR(H) values, which represent the maximum reliability based on a factor model, were all slightly higher than their respective CR values, reaffirming the constructs' convergent validity and stability. For example, the ORES construct showed a CR = 0.948, AVE = 0.784, MSV = 0.351, and MaxR(H) = 0.951, indicating

high reliability, strong convergent validity, and appropriate discriminant validity. These results collectively confirm that the measurement model is statistically sound, reliable, and valid for assessing the underlying dimensions of organizational resilience and enterprise performance among women-led enterprises.

Table 5.32

Convergent Validity of the Model related to Organizational Resilience on the performance of women-owned and led enterprises

Indicator Variable	<---	Latent Variable	Standardized Loading	Square of Standardized Loading	Sum of Square of Standardized Loading	Number of Indicators	AVE
ADAPT1	<---	ADAPT	0.793	0.629			
ADAPT2	<---	ADAPT	0.901	0.812			
ADAPT3	<---	ADAPT	0.798	0.637			
ADAPT4	<---	ADAPT	0.982	0.964	3.042	4	0.760
PROACT1	<---	PROACT	0.864	0.746			
PROACT2	<---	PROACT	0.829	0.687			
PROACT3	<---	PROACT	0.834	0.696			
PROACT4	<---	PROACT	0.871	0.759	2.888	4	0.722
RESFL1	<---	RESFL	0.923	0.852			
RESFL2	<---	RESFL	0.857	0.734			
RESFL3	<---	RESFL	0.813	0.661			
RESFL4	<---	RESFL	0.931	0.867	3.114	4	0.779
CM1	<---	CM	0.819	0.671			
CM2	<---	CM	0.883	0.780			
CM3	<---	CM	0.931	0.867			
CM4	<---	CM	0.979	0.958	3.276	4	0.819
INNOV1	<---	INNOV	0.872	0.760			
INNOV2	<---	INNOV	0.911	0.830			
INNOV3	<---	INNOV	0.793	0.629			
INNOV4	<---	INNOV	0.989	0.978	3.197	4	0.799
SG1	<---	SG	0.928	0.861			
SG2	<---	SG	0.861	0.741			
SG3	<---	SG	0.772	0.596			
SG4	<---	SG	0.901	0.812	3.010	4	0.753

PROFIT1	<---	PROFIT	0.859	0.738			
PROFIT2	<---	PROFIT	0.811	0.658			
PROFIT3	<---	PROFIT	0.842	0.709			
PROFIT4	<---	PROFIT	0.924	0.854	2.958	4	0.740
CR1	<---	CR	0.839	0.704			
CR2	<---	CR	0.862	0.743			
CR3	<---	CR	0.913	0.834			
CR4	<---	CR	0.941	0.885	3.166	4	0.792
BC1	<---	BC	0.886	0.785			
BC2	<---	BC	0.871	0.759			
BC3	<---	BC	0.729	0.531			
BC4	<---	BC	0.977	0.955	3.030	4	0.757
MS1	<---	MS	0.782	0.612			
MS2	<---	MS	0.944	0.891			
MS3	<---	MS	0.853	0.728			
MS4	<---	MS	0.929	0.863	3.093	4	0.773
ORES1	<---	ORES	0.838	0.702			
ORES2	<---	ORES	0.793	0.629			
ORES3	<---	ORES	0.925	0.856			
ORES4	<---	ORES	0.922	0.850			
ORES5	<---	ORES	0.941	0.885	3.922	5	0.784
EPER1	<---	EPER	0.872	0.760			
EPER2	<---	EPER	0.919	0.845			
EPER3	<---	EPER	0.881	0.776			
EPER4	<---	EPER	0.929	0.863			
EPER5	<---	EPER	0.834	0.696	3.940	5	0.788

Source: Primary Data

Table 5.32 demonstrates the convergent validity of the model measuring the relationship between organizational resilience and enterprise performance in women-owned and women-led enterprises by assessing the standardised factor loadings, their squared values, the sum of squared standardised loadings, number of indicators per construct, and Average Variance Extracted (AVE). All standardised loadings exceeded the minimum acceptable threshold of 0.70, ranging from 0.729 (BC3) to 0.989 (INNOV4), indicating that each item was a strong indicator of its corresponding

latent variable. The squared standardised loadings reflect the proportion of variance in each indicator explained by the latent construct, with the majority of items exceeding 0.60, confirming substantial shared variance. The AVE values for all constructs were greater than the recommended minimum cutoff of 0.50, indicating that the latent variables explained more than half of the variance in their indicators. Specifically, constructs such as CM (AVE = 0.819), INNOV (AVE = 0.799), and EPER (AVE = 0.788) showed high convergent validity, demonstrating robust internal consistency and reliability. The construct of ORES, which includes five items, has an AVE of 0.784 and a high cumulative squared loading (3.922), highlighting its strong measurement quality. Similarly, the enterprise performance construct (EPER) shows a high AVE (0.788) and substantial factor loadings, indicating strong convergence among the indicators. Overall, the results statistically validated the measurement model, affirming that the observed variables meaningfully represented their respective latent constructs with high reliability and convergent validity.

Table 5.33

Discriminant Validity Fornell Larker Criterion related to Organizational Resilience on the performance of women-owned and led enterprises

	ADAPT	PROACT	RESFL	CM	INNOV	SG	PROFIT	CR	BC	MS	ORES	EPER
ADAPT	**0.872**											
PROACT	0.542	**0.850**										
RESFL	0.615	0.604	**0.882**									
CM	0.625	0.615	0.528	**0.905**								
INNOV	0.598	0.625	0.657	0.628	**0.894**							
SG	0.578	0.521	0.615	0.657	0.647	**0.868**						
PROFIT	0.628	0.574	0.624	0.597	0.528	0.613	**0.860**					
CR	0.614	0.526	0.647	0.628	0.611	0.618	0.569	**0.890**				
BC	0.721	0.584	0.587	0.613	0.674	0.574	0.614	0.628	**0.870**			
MS	0.598	0.535	0.578	0.578	0.522	0.605	0.667	0.597	0.622	**0.879**		
ORES	0.628	0.678	0.613	0.587	0.587	0.632	0.614	0.628	0.642	0.518	**0.886**	
EPER	0.577	0.611	0.614	0.633	0.625	0.574	0.711	0.618	0.577	0.615	0.676	**0.888**

Source: Primary Data

Table 5.33 presents the discriminant validity of the model using the Fornell-Larcker criterion, which is an essential statistical approach to assess whether the latent

constructs in a model are sufficiently distinct from each other. According to this method, discriminant validity is confirmed when the square root of the Average Variance Extracted (AVE) for each construct, shown on the diagonal of the matrix, is greater than the corresponding inter-construct correlations presented in the lower triangle of the table. For instance, the square root of AVE for ADAPT was 0.872, for PROACT it was 0.850, for RESFL it was 0.882, for CM it was 0.905, and so on, up to EPER which had a value of 0.888. These diagonal values are higher than the off-diagonal correlation values, indicating that each construct shares more variance with its own indicators than any other construct in the model. For example, the correlation between ADAPT and BC is 0.721, which is lower than the square root of the AVE for both constructs (ADAPT: 0.872, BC: 0.870), suggesting adequate discriminant validity. Similarly, although EPER and PROFIT showed a relatively high correlation of 0.711, it was still lower than the square root of EPER's AVE (0.888). This pattern was consistently observed across all constructs, confirming that the measurement model had acceptable discriminant validity. This ensures that the constructs related to organizational resilience and the performance of women-owned and led enterprises are statistically unique and reliably measured.

Table 5.34

Heterotrait-Monotrait (HTMT) criterion related to Organizational Resilience on the performance of women-owned and led enterprises

	ADAPT	PROACT	RESFL	CM	INNOV	SG	PROFIT	CR	BC	MS	ORES	EPER
ADAPT												
PROACT	0.324											
RESFL	0.478	0.547										
CM	0.349	0.648	0.618									
INNOV	0.541	0.711	0.458	0.332								
SG	0.371	0.318	0.418	0.417	0.325							
PROFIT	0.319	0.511	0.348	0.587	0.227	0.389						
CR	0.518	0.457	0.315	0.337	0.176	0.417	0.241					
BC	0.518	0.487	0.319	0.418	0.327	0.601	0.324	0.258				
MS	0.654	0.498	0.478	0.587	0.487	0.624	0.184	0.318	0.481			
ORES	0.615	0.387	0.541	0.715	0.513	0.347	0.348	0.487	0.518	0.397		
EPER	0.618	0.367	0.398	0.618	0.518	0.321	0.615	0.519	0.624	0.471	0.527	

Source: Primary Data

Table 5.34 provides the heterotrait-monotrait (HTMT) ratio of correlations, which is a modern and more stringent statistical method for assessing discriminant validity in structural equation modelling. The HTMT criterion evaluates the degree of similarity between constructs by comparing average correlations across different constructs with those within the same construct. Statistically, HTMT values below the conservative threshold of 0.85, or the liberal threshold of 0.90, in some cases, suggest that discriminant validity has been established, meaning that the constructs are empirically distinct. In this table, all pairwise HTMT values fell well below the 0.85 threshold. For instance, the HTMT between ADAPT and PROACT was 0.324, that between ADAPT and RESFL was 0.478, and that between ADAPT and EPER was 0.618. Even the highest values, such as those between CM and ORES (0.715), INNOV and PROACT (0.711), MS and SG(0.624) and BC and SG (0.601), remained within acceptable limits. This indicates that there is no serious issue of multicollinearity or conceptual overlap among latent variables. Therefore, the HTMT results confirm robust discriminant validity among the constructs related to organizational resilience and the performance of women-owned and led enterprises, reinforcing the validity of the structural model used in this study.

Objective 2: To examine the mediating role of Resilience Strategies in the relationship between Organizational Resilience and Enterprise Performance.

The second objective of this study was to investigate the function of resilience strategies as an intermediary between organizational resilience and the performance of enterprises led and owned by women. Organizational resilience is defined as an enterprise's capacity to anticipate, prepare for, respond, and adapt to both incremental and sudden disruptions, thereby ensuring survival and prosperity. In the contemporary dynamic business environment, women entrepreneurs frequently encounter unique challenges, including limited access to capital, sociocultural constraints, and market volatility. To address this adversity, it is essential to adopt resilience strategies. These strategies include proactive planning, innovation, resource flexibility, effective communication, and leadership agility. This objective aims to ascertain whether such strategic responses not only enhance the organisation’s resilience, but also contribute

to improved business outcomes, such as growth, profitability, and sustainability. By examining this mediating role, this study sought to underscore the practical significance of resilience strategies in transforming organizational strength into measurable enterprise success, particularly within the context of women-led businesses.

5.4 Model regarding the mediating role of Resilience Strategies in the relationship between Organizational Resilience and Enterprise Performance

The structural equation model (SEM) proposed in this study aims to explore how resilience strategies mediate the link between organizational resilience and the performance of enterprises owned and led by women. In this framework, enterprise performance is considered as the dependent variable, encompassing aspects such as profitability, sustainability, growth, and competitive positioning. Organizational resilience, acting as the independent variable, involves the capacity of enterprises to foresee, withstand, and adjust to internal and external challenges and uncertainties. The mediating factor, resilience strategy, pertains to the tactical and strategic measures employed by these enterprises to convert resilience into operational and strategic benefits. These measures include proactive planning, innovation, stakeholder engagement, flexibility, and continuity management. The SEM approach facilitates a comprehensive analysis of both the direct impact of organizational resilience on enterprise performance and the indirect impact mediated through resilience strategies. This modelling framework is particularly pertinent for understanding the dynamic capabilities of women-led enterprises in navigating complex environments, thereby providing valuable insights for academic, policy, and entrepreneurial communities focused on enhancing enterprise sustainability and performance.

Table 5.35

Univariate and Multivariate Normality of the Distribution related to observed variables of the Resilience Strategies Impacting Model

Variable	skew	c.r.	kurtosis	c.r.
EPER5	-0.246	-2.009	-1.379	-5.631
EPER4	-1.466	-11.968	1.820	7.431
EPER3	-0.715	-5.839	-0.828	-3.379
EPER2	1.472	12.019	2.231	9.108
EPER1	0.560	4.571	-1.099	-4.485
RSTR5	-0.198	-1.613	-1.380	-5.635
RSTR4	1.151	9.397	1.602	6.539
RSTR3	-0.924	-7.542	-0.168	-0.686
RSTR2	-1.240	-10.123	0.407	1.661
RSTR1	-1.029	-8.403	0.343	1.401
ORES5	-0.657	-5.367	-1.035	-4.226
ORES4	-0.536	-4.379	-1.319	-5.386
ORES3	-0.034	-0.282	-1.339	-5.465
ORES2	-0.029	-0.241	-1.449	-5.917
ORES1	0.642	5.240	-0.776	-3.166
Multivariate			9.251	4.097

Source: Primary Data

Table 5.35 presents the univariate and multivariate normality test results for the observed variables in the resilience strategies impacting the model, focusing on enterprise performance (EPER), resilience strategies (RSTR), and organizational resilience (ORES). The skewness and kurtosis values, along with their corresponding critical ratios (c.r.), are key indicators of the normality of data distribution. For univariate normality, skewness values ideally fall between -1 and +1 for a near-normal distribution, although values between -2 and +2 are generally considered acceptable in social science research. In this table, several variables such as EPER2 (skew = 1.472, c.r. = 12.019), RSTR4 (skew = 1.151, c.r. = 9.397), and RSTR2 (skew = -1.240, c.r. = -10.123) exceeded this range, indicating deviations from symmetry. Similarly, kurtosis values ideally fall between -3 and +3; however, variables such as EPER2 (kurtosis = 2.231, c.r. = 9.108), and RSTR5 (kurtosis = -1.380, c.r. = -5.635)

show non-normal peakedness or flatness. The multivariate kurtosis value of 9.251, with a c.r. of 4.097, confirms a violation of multivariate normality, suggesting that the dataset does not follow a multivariate normal distribution. Given this deviation from normality, especially in multivariate terms, it is necessary to apply robust estimation techniques such as bootstrapping during structural equation modelling (SEM). Bootstrapping provides bias-corrected confidence intervals and robust standard errors, compensating for the lack of normality and ensuring the reliability and validity of the parameter estimates within the model.

5.4.1 Bootstrapping of the Resilience Strategies Impacting Model

The current study employed bootstrapping as a robust resampling technique to explore the mediating role of resilience strategies in the connection between organizational resilience and enterprise performance. This method was deemed appropriate because the results of univariate and multivariate normality tests revealed significant deviations from normality, thus violating the key assumption of structural equation modelling (SEM). To address this, the researcher used the Bollen-Stine bootstrap procedure, specifically designed to adjust the chi-square test of model fit when multivariate normality was not assumed. This approach provides a more accurate and distribution-free assessment of the model fit by generating numerous bootstrap samples and recalculating the chi-square statistic for each sample.

In accordance with the best practices in mediation analysis, the researcher conducted 5000 bootstrap iterations, as recommended by Preacher and Hayes (2008), to empirically derive confidence intervals for indirect effects. This non-parametric approach is particularly advantageous for mediation analysis as it does not require the sampling distribution of the indirect effect to be normal, which is often problematic in small to moderate samples. By employing a 95 percent confidence level, the analysis ensured a high degree of reliability in estimating mediation effects. Overall, the application of bootstrapping, especially the Bollen-Stine correction, enhanced the robustness of the model's conclusions and lent greater credibility to the findings regarding the mediating role of resilience strategies.

5.4.2 Model Fit through Bollen-Stine Bootstrap in the Resilience Strategies Impacting Model

Evaluating model validity in structural equation modelling (SEM) is essential to ensure that hypothesised relationships among variables accurately represent the underlying structure of the data. Traditional methods, such as the chi-squared test of model fit, may be limited by small sample sizes or deviations from normality. To address these challenges, the Bollen-Stine Bootstrap offers a robust resampling technique that facilitates a more precise assessment of the model fit. In this context, the researcher utilises the Bollen-Stine Bootstrap to examine the validity of the SEM model. This bootstrap procedure involves resampling the observed data to generate a distribution of the chi-squared statistic under the null hypothesis that the model is a good fit. Consequently, model validity was assessed using a 5000-bootstrap sample.

Table 5.36

Chi-Square Validation of Bollen-Stine Bootstrap in the Resilience Strategies Impacting Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	33	**1390.733**	787	0.124	1.767
Saturated model	120	0	0		
Independence model	15	2411.847	105	0.174	22.97

Table 5.36 presents the chi-square validation results for the Bollen-Stine bootstrap in the Resilience Strategies Impacting Model. In particular, the focus is on the "Default Model", which is a model where the observed data is directly compared to the hypothesised relationships without any modification. The model has 33 parameters (NPAR), meaning that it involves 33 estimated parameters, including factor loadings, covariances, and variances. The chi-square statistic (CMIN) for the default model was 1390.733, with 787 degrees of freedom (DF), which yielded a p-value of 0.124. This p-value indicates that the model is not significantly different from the observed data at the 5% significance level, suggesting that the hypothesised model fits the data well. Additionally, the ratio of chi-square to degrees of freedom (CMIN/DF) is 1.767,

which is below the commonly accepted threshold of 3.0 for good model fit. A value of CMIN/DF less than 3 generally suggests a good fit between the model and data, meaning that the model adequately represents the underlying structure of the data. In summary, the default model demonstrates a satisfactory fit with the data, as evidenced by the non-significant p-value and CMIN/DF ratio below the threshold, providing support for the hypothesised relationships within the model.

Figure 5.3

Checking of Chi-square statistics range of Bollen-Stine Bootstrap in the Resilience Strategies Impacting Model

		|----------
	1147.258	|*
	1181.972	|*
	1216.685	|*
	1251.399	|**
	1286.112	|******
	1320.826	|**********
	1355.539	|**********
N = 5000	1390.253	|**********
Mean = 1396.437	1424.966	|**********
S. e. = .941	1459.680	|**********
	1494.393	|*******
	1529.107	|***
	1563.820	|**
	1598.534	|*
	1633.247	|*
		|----------

Figure 5.3 provides a visual representation of the chi-square statistics distribution for the Bollen-Stine bootstrap in the Resilience Strategies Impacting Model based on 5000 resampling iterations. The figure illustrates the range of chi-square values obtained from the resampled data, with each value representing a different iteration of model fit. The values ranged from 1147.258 to 1633.247, and the mean of the chi-square values was 1396.437, with a standard error (S.E.) of 0.941. The chi-squared statistic for the default model is 1390.253, marked with a larger number of asterisks, indicating that this value falls near the middle of the distribution. Asterisks represent the frequency of occurrence of particular chi-square values within the bootstrap resampling process. The greater the number of asterisks, the more often a specific chi-square value appeared in the resampling iterations, with the default model's chi-square statistic (1390.253) appearing relatively frequently in the bootstrap distribution. This suggests that the observed chi-square value for the model is plausible, given the underlying data distribution, and falls within the expected range. The distribution also provides an understanding of the variability in the chi-square statistics, helping to assess whether the model's fit is stable or likely to be influenced by sampling fluctuations. This approach of using bootstrap resampling helps to mitigate potential biases caused by violations of normality assumptions, reinforcing the robustness of the model's fit.

Table 5.37

Model fit of Bollen –Stine Bootstrap Sample in the Resilience Strategies Impacting Model

Bollen-Stine Bootstrap (Default model)
The model fit better in 3422 bootstrap samples.
It fit about equally well in 0 bootstrap samples.
It fit worse or failed to fit in 345 bootstrap samples.
Testing the null hypothesis that the model is correct, Bollen-Stine bootstrap p = .374

Table 5.37 presents the results of the Bollen-Stine bootstrap model fit for the resilience strategies impact model, which offers insight into the model's performance across multiple bootstrap resamples. The model was assessed using 5000 bootstrap samples, and the results showed that the model fit well in 3422 samples, indicating that a majority (approximately 68.44%) of the bootstrap iterations produced a satisfactory model fit. In contrast, the model fit equally well in none of the samples, indicating that there were no instances in which the fit was perfectly neutral. However, in 345 bootstrap samples (approximately 6.9%), the model fit was worse or failed to fit, suggesting that a small portion of the resamples did not support the model's structure. These variations highlight the sensitivity of the model to the underlying data and resampling process. Additionally, the p-value for the Bollen-Stine bootstrap test is 0.374, which is greater than the commonly used significance level of 0.05. This indicates insufficient evidence to reject the null hypothesis that the model is correct. In other words, the model's fit was not significantly different from what would be expected under the null hypothesis, supporting the conclusion that the model is a reasonable fit for the observed data. This result is crucial for confirming the robustness of the model fit after accounting for sampling variability through bootstrapping, suggesting that the model adequately represents the relationships between the variables in the study.

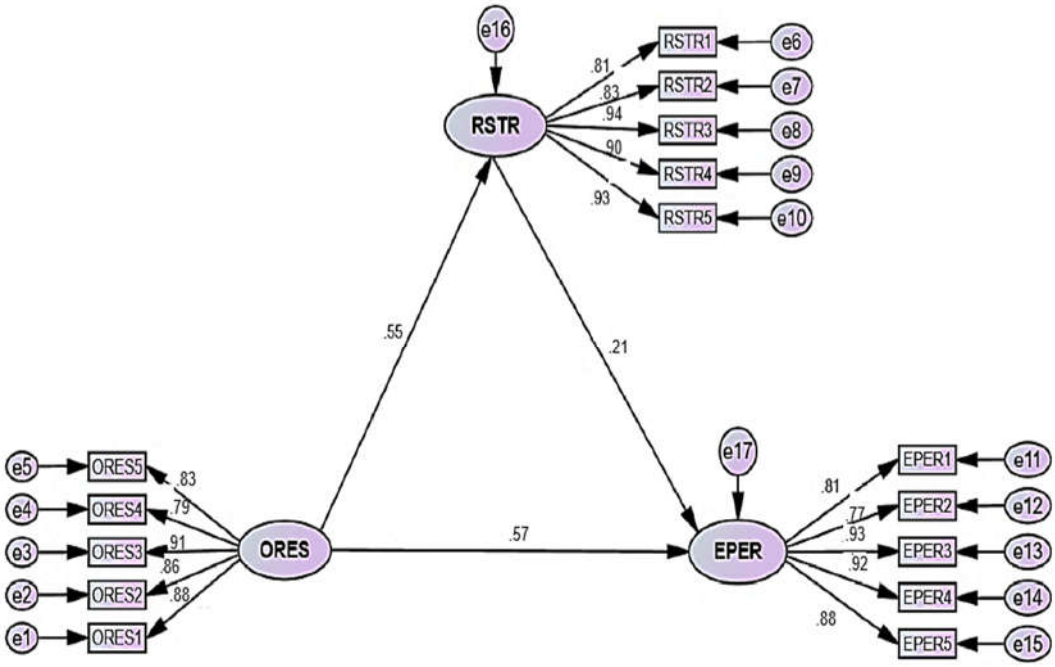
5.4.3 Model Validity of Resilience Strategies Impacting Model

The validity of the resilience strategy impact model pertains to how well the model accurately depicts the connections between the primary variables, with a particular emphasis on the role of resilience strategies in mediating the link between organizational resilience and enterprise performance. Ensuring the validity of the model is essential to confirm that the proposed theoretical framework is not only statistically robust, but also pertinent and suitable for elucidating the dynamics of organizational resilience and its influence on the performance of enterprises owned and led by women. This process involves assessing various aspects of a model's performance, such as fit indices, parameter estimates, and robustness checks, often utilising techniques such as bootstrapping. Bootstrapping methods, including the

Bollen-Stine bootstrap, are frequently used to evaluate a model's stability under resampling conditions while examining measures of model fit, such as the chi-square statistic, root mean square error of approximation (RMSEA), and comparative fit index (CFI). By analysing these fit statistics, researchers can confirm the model's ability to replicate the observed data patterns and evaluate its generalisability and accuracy across different scenarios. This step is vital, as it determines the model's reliability and applicability in both the specific context of the study and broader organizational environments, thereby ensuring its theoretical and practical significance.

Figure 5.4

Resilience Strategies Impacting Model



Source: Primary Data

Table 5.38

Model Fit Measures related to Resilience Strategies Impacting Model

Model Fit Indices	Citation	Threshold Limit	Estimated Value	Interpretation
Normed Chi-Square	Jackson, J A. (1998)	< 3	1390.733/ 787- CMIN/ DF = 1.767	Excellent
CFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	> 0.90	0.932	Acceptable
GFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.918	Good
IFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.916	Good
NFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.953	Good
RMSEA	Hooper, D., Coughlan, J. & Mullen, R M. (2008),	< 0.08	0.059	Acceptable
SRMR	Pavlov, G., Maydeu-Olivares, A. & Shi, D. (2020).	< 0.06	0.048	Excellent

Source: Primary Data

Table 5.38 presents the model fit measures for the resilience strategy impact model, highlighting several key indices that evaluate the adequacy of the model in representing the relationships between organizational resilience, resilience strategies, and enterprise performance. The Normed Chi-Square (CMIN/DF) is 1.767, which is well below the threshold limit of 3, indicating an excellent fit, as per Jackson (1998). The Comparative Fit Index (CFI) value of 0.932 exceeds the recommended threshold of 0.90, suggesting that the model has an acceptable level of fit, as supported by various studies (Shi et al., 2018; Ximénez et al., 2022). Similarly, the Goodness-of-Fit Index (GFI) and the Incremental Fit Index (IFI) both show values of 0.918 and 0.916, respectively, which are above the 0.90 threshold, indicating good model fit, as indicated by multiple scholars (Shi et al., 2018; Ximénez et al., 2022). The Normed Fit Index (NFI) also demonstrated a value of 0.953, further confirming a good fit, surpassing the 0.90 threshold (Shi et al., 2018; Ximénez et al., 2022). The Root Mean Square Error of Approximation (RMSEA) of 0.059 was below the accepted value of 0.08, reflecting an acceptable fit, as suggested by Hooper et al. (2008). The standardised root mean square residual (SRMR) value of 0.048 was well below the recommended limit of 0.06, indicating an excellent fit (Pavlov et al., 2020). Collectively, these model fit indices suggest that the resilience strategy impact model provides a robust and well-fitting representation of the data, with all indices meeting or exceeding the threshold limits.

Table 5.39

The Direct relationship in the Resilience Strategies Impacting Model

Dependent Variable	<---	Independent Variables	Estimate	S.E.	C.R.	P
RSTR	<---	ORES	0.773	0.151	5.119	0.000
EPER	<---	RSTR	1.297	0.234	5.543	0.000
EPER	<---	ORES	0.862	0.114	7.561	0.000

Source: Primary Data

Hypothesis 15: There is no significant relationship between Organizational Resilience (ORES) and Resilience Strategies (RSTR) in women owned enterprises.

The path coefficient for the relationship between ORES and RSTR in the model was 0.773, with a critical ratio (C.R.) of 5.119 and a p-value of 0.000. The estimate of 0.773 indicates a strong positive relationship, while the C.R. value far exceeds the threshold of 1.96, signifying statistical significance. The p-value of 0.000 was well below the typical significance level of 0.05, further confirming the significant relationship between ORES and RSTR. Therefore, this hypothesis is rejected, and the results demonstrate that Organizational Resilience significantly impacts Resilience Strategies in women-owned enterprises. Statistically, the data suggest that, as Organizational Resilience increases, Resilience Strategies tend to strengthen, making this relationship significant and statistically supported.

Hypothesis 16: There is no significant relationship between Resilience Strategies (RSTR) and Enterprise Performance (EPER) in women owned enterprises.

The model estimated a path coefficient of 1.297 between the RSTR and EPER, with a C.R. of 5.543 and a p-value of 0.000. A positive estimate of 1.297 suggests that an increase in Resilience Strategies leads to a noticeable improvement in Enterprise Performance. The C.R. value of 5.543, which is much greater than 1.96, indicates statistical significance, and the p-value of 0.000 confirms that the relationship is highly significant. Given these statistics, Hypothesis 16 is rejected, and the results indicate a significant positive relationship between Resilience Strategies and Enterprise Performance in women-owned enterprises. This statistical evidence supports the idea that implementing resilience strategies improves enterprises' overall performance.

Hypothesis 17: There is no significant relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) in women owned enterprises.

The direct path coefficient between ORES and EPER in the model was 0.862, with a C.R. of 7.561 and a p-value of 0.000. The path coefficient of 0.862 indicates a moderately positive relationship between ORES and EPER, and the C.R. value of 7.561 far exceeds the critical value of 1.96, providing strong statistical evidence of significance. A p-value of 0.000 reinforces the finding that the relationship is statistically significant. Based on these results, Hypothesis 17 is rejected, and the

evidence suggests that Organizational Resilience has a significant positive impact on Enterprise Performance in women-owned enterprises. This finding underscores the importance of organizational resilience as a factor contributing to better performance in enterprises.

Hypothesis 18: Resilience Strategies (RSTR) mediate the relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) in women owned enterprises.

Table 5.40

Mediation Effect of Resilience Strategies Impacting Model

Effect	Standardized Estimation	Un Standardized Estimate	Confidence Interval Low/High	P-value
Indirect Effect (ORE→ RSTR→ EPR)	0.116	0..314	0.081/0.521	0.019
Direct Effect (ORE→EPR)	0.572	0.862	0.123/0.874	0.003
Total Effect (ORE→EPR)	0.688	0.745	0.233/0.821	0.018

Source: Primary Data

Table 5.40 presents the mediation effect of Resilience Strategies (RSTR) on the relationship between Organizational Resilience (ORES) and Enterprise Performance (EPER) in women-owned enterprises. The table includes three key effects: indirect, direct, and total. The indirect effect of ORES on EPER through RSTR had a standardised estimate of 0.116, with an unstandardised estimate of 0.314. The confidence interval for this effect ranged from 0.081 to 0.521, with a p-value of 0.019, which is statistically significant (less than 0.05). This indicates that Resilience Strategies significantly mediate the relationship between Organizational resilience and enterprise performance, as the indirect effect is positive and significant. The direct effect of ORES on EPER was 0.572 in standardised terms, with an unstandardised estimate of 0.862. The confidence interval for the direct effect ranged from 0.123–0.874 ($p = 0.003$), which was also statistically significant. This suggests that even without the mediation of Resilience Strategies, Organizational Resilience directly influences Enterprise Performance in women-owned enterprises. Considering both

the direct and indirect paths, the total effect of ORES on EPER is 0.688 in standardised terms, with an unstandardised estimate of 0.745. The confidence interval for the total effect was between 0.233 and 0.821, with a p-value of 0.018, indicating a statistically significant relationship. These results support the hypothesis that Resilience Strategies mediate the relationship between Organizational Resilience and Enterprise Performance in women-owned enterprises, as both the direct and indirect effects are significant and positive, contributing to the total effect. Statistically, this indicates that Resilience Strategies play a crucial mediating role in enhancing enterprises' performance through the impact of organizational resilience.

Table 5.41

Mediation Effect of the Resilience Strategies Impacting Model Based on Baron and Kenny's (1986) Classical Approach

Effect	Standardized Estimation	p-value	Result	Mediation
Total Effect	0.688	0.018	Significant Impact	Partial Mediation
Direct Effect	0.572	0.003	Significant Impact	
Indirect Effect	0.116	0.019	Significant Impact	

Source: Primary Data

Table 5.41 presents the mediation effect of Resilience Strategies in the relationship between Organizational Resilience and Enterprise Performance, based on Baron and Kenny's (1986) classical approach to mediation analysis. The total effect of Organizational Resilience on Enterprise Performance was 0.688, with a p-value of 0.018, which was statistically significant, indicating a strong overall impact. As both the direct and indirect effects are significant, this suggests partial mediation. The direct effect, which represents the relationship between Organizational Resilience and Enterprise Performance without the mediation of Resilience Strategies, is 0.572, with a p-value of 0.003, confirming a significant direct impact. The indirect effect, which captures the mediation of Resilience Strategies, is 0.116, with a p-value of 0.019, which is also statistically significant. The significance of both the direct and indirect effects indicates that Resilience Strategies partially mediate the relationship between Organizational resilience and enterprise performance. The overall conclusion from this table is that, while Organizational Resilience directly affects Enterprise

Performance, Resilience Strategies also contribute to this effect, supporting partial mediation. The results suggest that Resilience Strategies play a significant role in enhancing the performance of enterprises, although Organizational Resilience also has a direct influence on performance independent of the mediator.

5.4.4 Resilience Strategies Impacting Model Validity and Reliability

The credibility of research findings hinges on the validity and reliability of the Resilience Strategies Impacting Model. To assess the robustness of the model, key metrics, such as composite reliability, convergent validity, and discriminant validity, were employed. Composite reliability evaluates the internal consistency of a measurement model, indicating how consistently multiple indicators of a construct measure the same underlying concept. A high composite reliability score (generally above 0.70) suggests that the constructs were measured consistently, with strong correlations among the items within each construct. On the other hand, convergent validity ensures that the indicators of each latent variable align to measure the same concept. This is typically assessed using Average Variance Extracted (AVE), where a value exceeding 0.50 indicates that over 50% of the variance in the indicators is accounted for by the latent construct. Convergent validity supports the idea that a model's constructs are well-defined and accurately represent the phenomena that they aim to measure. Discriminant validity, which ensures that constructs are distinct from one another, is crucial for model evaluation. It was assessed by comparing the square root of the AVE for each construct with the correlations between the constructs. Discriminant validity was confirmed if the square root of the AVE for each construct surpassed the correlation between constructs. Together, these three metrics—composite reliability, convergent validity, and discriminant validity—ensure that the impact model delivers accurate, consistent, and meaningful measurements, ultimately enhancing the reliability and interpretability of findings related to the relationships between Organizational Resilience, Resilience Strategies, and Enterprise Performance in women-owned enterprises.

Table 5.42

Composite Reliability of the Model related to Resilience Strategies Impacting Model

	CR	AVE	MSV	MaxR(H)
ORES	0.933	0.735	0.378	0.947
RSTR	0.947	0.782	0.365	0.952
EPER	0.937	0.750	0.403	0.943

Source: Primary Data

Table 5.42 provides key reliability and validity measures for the constructs in the resilience strategies impact model, specifically focusing on Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Variance (MSV), and MaxR(H). The CR values for all three constructs—Organizational Resilience (ORES), Resilience Strategies (RSTR), and Enterprise Performance (EPER)— were well above the threshold of 0.70, with ORES at 0.933, RSTR at 0.947, and EPER at 0.937, indicating strong internal consistency and reliable measurement of each construct. The AVE values, which assess convergent validity, were also satisfactory, with all constructs exceeding 0.50. ORES has an AVE of 0.735, RSTR 0.782, and EPER 0.750, suggesting that the constructs explain more than half of the variance in their indicators. The MSV values, which help assess discriminant validity, were low for all constructs, with ORES at 0.378, RSTR at 0.365, and EPER at 0.403, indicating that the constructs are distinct from one another and are not overly correlated. The MaxR(H) values were 0.947 for ORES, 0.952 for RSTR, and 0.943 for EPER, confirming the robustness and reliability of the model. Collectively, these results suggest that the model demonstrates excellent composite reliability, good convergent validity, and strong discriminant validity, making it a reliable and valid measurement framework for examining the relationships between Organizational Resilience, Resilience Strategies, and Enterprise Performance.

Table 5.43

Convergent Validity of the Model related to Resilience Strategies Impacting Model

Latent Variable	Standardized Loading	Square of Standardized Loading	Sum of Square of Standardized Loading	Number of Indicators	AVE
ORES	0.882	0.778			
ORES	0.863	0.745			
ORES	0.914	0.835			
ORES	0.794	0.630			
ORES	0.829	0.687	3.676	5	0.735
RSTR	0.813	0.661			
RSTR	0.832	0.692			
RSTR	0.939	0.882			
RSTR	0.901	0.812			
RSTR	0.928	0.861	3.908	5	0.782
EPER	0.814	0.663			
EPER	0.773	0.598			
EPER	0.928	0.861			
EPER	0.921	0.848			
EPER	0.883	0.780	3.749	5	0.750

Source: Primary Data

Table 5.43 presents the convergent validity of the Resilience Strategies Impacting Model, focusing on the latent variables Organizational Resilience (ORES), Resilience Strategies (RSTR), and Enterprise Performance (EPER). Convergent validity was assessed by the standardised loadings of each indicator, the square of the standardised loadings, and the Average Variance Extracted (AVE). For ORES, the standardised loadings ranged from 0.794 to 0.914, with squared loadings between 0.630 and 0.835. The sum of the squared standardised loadings for ORES is 3.676, and the AVE is

0.735, which exceeds the 0.7 threshold, indicating that the construct explains more than 73% of the variance in its indicators. The standardised regression weights for ORES lie within the range of 0.794–0.914, which are considered robust and indicate that the indicators are strong contributors to the ORES construct. Similarly, for the RSTR, the standardised loadings ranged from 0.813 to 0.939, with squared loadings between 0.661 and 0.882. The sum of squared loadings for RSTR was 3.908, and the AVE was 0.782, further demonstrating the construct's strong convergent validity. The standardised regression weights for the RSTR ranged from 0.813 to 0.939, showing that the indicators contributed significantly to the RSTR. For the EPER, the standardised loadings ranged from 0.773 to 0.928, with squared loadings ranging from 0.598 to 0.861. The sum of the squared loadings for EPER was 3.749, and the AVE was 0.750, confirming good convergent validity for this construct. The standardised regression weights for EPER lie between 0.773 and 0.928, indicating that the indicators are strong predictors of this latent variable. Overall, the values for standardised loadings, squared loadings, and AVE across all constructs, along with the range of standardised regression weights (0.794–0.914 for ORES, 0.813–0.939 for RSTR, and 0.773–0.928 for EPER), suggest that the model demonstrates strong convergent validity. Thus, each construct consistently captures the variance in its indicators, providing a solid foundation for the measurement of Organizational Resilience, Resilience Strategies, and Enterprise Performance.

Table 5.44

Discriminant Validity Fornell Larker Criterion related to Resilience Strategies Impacting Model

	ORES	RSTR	EPER
ORES	**0.857**		
RSTR	0.618	**0.884**	
EPER	0.642	0.578	**0.866**

Source: Primary Data

Table 5.44 illustrates the discriminant validity of the Resilience Strategies Impacting Model using the Fornell-Larcker criterion. Discriminant validity was assessed by comparing the square root of the Average Variance Extracted (AVE) for each latent

variable with the correlations between the latent variable and others in the model. The criterion requires that the square root of the AVE for each construct be greater than its correlations with other constructs. In the case of Organizational Resilience (ORES), the square root of the AVE is 0.857, which is higher than its correlation with Resilience Strategies (RSTR) at 0.618 and Enterprise Performance (EPER) at 0.642, confirming that ORES exhibits discriminant validity. For Resilience Strategies (RSTR), the square root of the AVE is 0.884, which exceeds its correlation with both ORES (0.618) and EPER (0.578), indicating good discriminant validity for the RSTR. Finally, Enterprise Performance (EPER) has a square root of the AVE of 0.866, which is greater than its correlations with ORES (0.642) and RSTR (0.578), further supporting its discriminant validity. This analysis confirms that each construct in the model is distinct and does not overlap excessively with the others, thus demonstrating that the constructs have adequate discriminant validity, meaning that they measure different underlying concepts in the model.

Table 5.45

Heterotrait-Monotrait (HTMT)
criterion related to Resilience Strategies Impacting Model

	ORES	**RSTR**	**EPER**
ORES			
RSTR	0.587		
EPER	0.522	0.614	

Source: Primary Data

Table 5.45 presents the results of the Heterotrait-Monotrait (HTMT) ratio analysis, which is another method for assessing discriminant validity in structural equation modelling (SEM). The HTMT criterion is used to evaluate the degree of similarity between the two constructs. According to the HTMT rule, a value of HTMT greater than 0.85 or 0.90 suggests a lack of discriminant validity, meaning that the constructs are too highly correlated and may be measuring the same underlying factor. In the table, the HTMT ratios between Organizational Resilience (ORES) and Resilience Strategies (RSTR), as well as between ORES and Enterprise Performance (EPER), are 0.587 and 0.522, respectively, which are well below the commonly accepted

threshold of 0.85. This indicates that ORES is sufficiently distinct from both the RSTR and EPER, suggesting good discriminant validity between these constructs. Similarly, the HTMT value between the RSTR and EPER is 0.614, which is also below the 0.85 threshold, further supporting the discriminant validity of the constructs in the model. These results indicate that the constructs in the model are distinct and do not overlap excessively, as indicated by the HTMT ratios being below the critical value, thereby supporting the discriminant validity of the model.

Objective 3: To identify the most effective Resilience Strategies contributing to improved performance among women-led enterprises.

Objective 3 focused on identifying the most effective resilience strategies that enhance the performance of women's enterprises. In a business landscape that is both competitive and unpredictable, resilience strategies are vital for helping businesses adapt, prosper, and maintain growth. For women-led enterprises, implementing the right resilience strategies is especially crucial because of unique challenges such as restricted access to resources, gender biases, and socio-economic hurdles. These strategies, which include digital transformation, financial planning, employee engagement, networking and partnerships, and market diversification, are key to boosting operational efficiency, ensuring financial stability, encouraging innovation, and building robust relationships both within and outside the organisation. Successful adoption of these strategies can greatly influence an enterprise's capacity to overcome obstacles, enhance its performance, and achieve long-term sustainability. This objective aims to investigate how each of these resilience strategies affects the overall performance of women-led businesses, with the goal of identifying strategies that most effectively drive business growth and success.

5.5 Resilience Strategies adopted by of women-owned and led Enterprises

Strategies for resilience implemented by enterprises owned and led by women are essential for overcoming the distinct challenges these businesses encounter in today's competitive and often unpredictable market landscape. Women entrepreneurs frequently face obstacles, such as restricted access to capital, societal prejudices, gender-specific issues, and a shortage of mentorship, all of which can impede their

ability to expand and maintain their businesses. Nevertheless, women-led enterprises have shown exceptional adaptability by adopting innovative resilience strategies that allow them to overcome these challenges and prospers. These strategies include a variety of methods such as embracing digital transformation to improve operational efficiency, engaging in financial planning for sustainable growth, fostering employee engagement to create a positive and productive workplace culture, building networks and partnerships to enhance business relationships, and diversifying markets to lessen reliance on specific sectors and customers. By implementing these resilience strategies, women-led enterprises can manage risks more effectively, seize opportunities, and achieve long-term success. This resilience not only ensures the survival of these businesses but also enhances their competitive edge in a rapidly evolving global business environment.

5.5.1. Normality of the Dimensions related to Resilience Strategies

Understanding the normality of the dimensions associated with resilience strategies is vital when conducting research, especially when using parametric statistical methods that rely on the assumption of a normal distribution of variables. Resilience strategies cover a range of elements including digital transformation, financial planning, employee engagement, networking and partnerships, and market diversification, each representing unique dimensions that can influence the performance of women-led businesses. Verifying normality ensures that the data for these dimensions meet the assumptions necessary for further statistical analyses, such as regression or structural equation modelling. The Kolmogorov-Smirnov (K-S) test is a common approach for assessing normality, as it compares the observed data distribution to a normal distribution. This test is particularly effective in identifying significant deviations from normality in the sample data, aiding researchers in deciding whether parametric tests are suitable or non-parametric alternatives should be considered. In the realm of resilience strategies, evaluating the normality of data for each dimension ensures the reliability of subsequent analyses and supports the validity of conclusions regarding the effectiveness of these strategies in improving enterprise performance.

Table 5.46

Normality of the data related to the Dimensions of Resilience Strategies

Variables	Kolmogorov-Smirnov Test (Test Statistics)	p-value
Digital Transformation	0.344	0.208
Financial Planning	0.219	0.213
Employee Engagement	0.342	0.178
Networking and Partnership	0.287	0.135
Market Diversification	0.302	0.218

Source: Primary Data

Table 5.46 presents the results of the Kolmogorov-Smirnov (K-S) test for normality applied to the various dimensions of resilience strategies, including Digital Transformation, Financial Planning, Employee Engagement, Networking and Partnership, and Market Diversification. The K-S test assesses whether the sample data follows a normal distribution by comparing the observed distribution with a theoretical normal distribution. In this table, the test statistics for each variable (e.g. 0.344 for Digital Transformation) represents the maximum difference between the observed and expected normal cumulative distributions. The corresponding p-values for each dimension indicate the probability of the data following a normal distribution. For all five dimensions, the p-values are greater than 0.05 (0.208 for Digital Transformation, 0.213 for Financial Planning, 0.178 for Employee Engagement, 0.135 for Networking and Partnership, and 0.218 for Market Diversification), which suggests that there is no significant deviation from normality. As the p-values were above the threshold of 0.05, we failed to reject the null hypothesis, indicating that the data for these resilience strategy dimensions were normally distributed. This outcome supports the appropriateness of using parametric statistical techniques to further analyse the relationships between resilience strategies and enterprise performance.

5.5.2. Hypothetical relationship between Resilience Strategies and Socio-Demographic Factors

The theoretical association between resilience strategies and sociodemographic factors, including age, marital status, education, and industry type, constitutes a crucial element in understanding how demographic variables affect the adoption and efficacy of resilience strategies in enterprises led by women. These socio-demographic factors are likely to significantly influence the manner in which women entrepreneurs perceive and implement strategies, such as digital transformation, financial planning, employee engagement, networking, and market diversification. For example, age may impact the level of digital literacy and propensity to embrace new technologies, while marital status could influence time management and decision-making priorities. Education may be a critical determinant of strategic thinking, whereas industry type offers insights into the most pertinent and effective resilience strategies. To examine these relationships, Analysis of Variance (ANOVA) can be utilised as a statistical method to evaluate whether significant differences exist in the adoption and impact of resilience strategies across various demographic groups. ANOVA facilitates the comparison of means among multiple groups, such as age categories, marital status, education level, and industry type, by testing whether the variation in resilience strategies was statistically significant. This analysis aids in identifying patterns and understanding how demographic factors influence the resilience and performance of women-led enterprises.

Hypothesis 19: There is no significant difference in the Resilience Strategies of women entrepreneurs across different categories of Age, Marital Status, Education, and Type of Industry.

Table 5.47

ANOVA related to the Resilience Strategies and Age of Women Entrepreneurs

Variables	Age	N	Mean	Std. Deviation	Std. Error	F	Sig.
Digital transformation	Below 25 years	82	4.524	1.390	0.153	2.535	0.010
	25-35 years	38	3.500	1.351	0.219		
	35-45 years	147	4.395	1.383	0.114		
	45-55 years	56	3.196	1.341	0.179		
	Above 55 years	77	4.364	1.404	0.160		
	Total	400	3.398	1.376	0.069		
Financial planning	Below 25 years	82	4.293	0.896	0.099	2.938	0.020
	25-35 years	38	3.868	0.963	0.156		
	35-45 years	147	3.878	1.104	0.091		
	45-55 years	56	3.982	0.863	0.115		
	Above 55 years	77	4.143	0.869	0.099		
	Total	400	4.028	0.984	0.049		
Employee engagement	Below 25 years	82	4.366	0.676	0.075	3.274	0.010
	25-35 years	38	3.053	0.769	0.125		
	35-45 years	147	4.184	0.979	0.081		
	45-55 years	56	3.107	0.779	0.104		
	Above 55 years	77	4.143	0.914	0.104		
	Total	400	3.190	0.866	0.043		
Networking and partnerships	Below 25 years	82	4.110	1.042	0.115	1.767	0.135
	25-35 years	38	3.553	1.179	0.191		
	35-45 years	147	3.884	1.202	0.099		
	45-55 years	56	3.839	1.092	0.146		
	Above 55 years	77	3.779	1.154	0.132		
	Total	400	3.873	1.149	0.057		
Market diversification	Below 25 years	82	4.207	0.926	0.102	1.858	0.117
	25-35 years	38	3.632	1.217	0.197		
	35-45 years	147	3.918	1.214	0.100		
	45-55 years	56	3.946	1.135	0.152		
	Above 55 years	77	3.870	1.239	0.141		
	Total	400	3.945	1.160	0.058		

Source: Primary Data

Table 5.47 presents the results of an Analysis of Variance (ANOVA) examining the relationship between resilience strategies and the age of women entrepreneurs. The analysis shows that age significantly influences the adoption of digital transformation, financial planning, and employee engagement strategies, as indicated by the significant p-values (0.010, 0.020, and 0.010, respectively). For digital transformation, younger women (< 25 years) had the highest mean (4.524), whereas women aged 45-55 years had the lowest mean (3.196), suggesting that younger women are more likely to embrace digital strategies. In financial planning, women aged < 25 years and those aged > 55 years had higher mean scores (4.293 and 4.143), while the middle-aged groups (25-35 years and 35-45 years) showed lower scores, indicating a stronger focus on financial planning among younger and older women. Employee engagement also showed significant age-related differences, with the younger group (< 25 years) having the highest mean (4.366) and the 25-35 years group having the lowest (3.053). However, age did not significantly affect networking and partnerships ($p = 0.135$) or market diversification ($p = 0.117$), suggesting that these strategies were less influenced by age. The mean scores for networking and market diversification were relatively stable across the age groups, with no significant differences. Overall, the results suggest that age plays a key role in shaping how women entrepreneurs approach certain resilience strategies, particularly digital transformation, financial planning, and employee engagement, but has less impact on networking and market diversification.

Table 5.48

ANOVA related to the Resilience Strategies and Marital Status of Women Entrepreneurs

Variables	Marital Status	N	Mean	Std. Deviation	Std. Error	F	Sig.
Digital transformation	Single	82	3.524	1.390	0.153	1.159	0.325
	Married	201	3.448	1.363	0.096		
	Divorced	38	3.079	1.343	0.218		
	Widowed	79	3.291	1.407	0.158		
	Total	400	3.398	1.376	0.069		
Financial planning	Single	82	4.293	0.896	0.099	2.856	0.037
	Married	201	3.970	1.010	0.071		
	Divorced	38	3.816	1.036	0.168		
	Widowed	79	4.000	0.947	0.107		
	Total	400	4.028	0.984	0.049		
Employee engagement	Single	82	4.366	0.676	0.075	2.515	0.010
	Married	201	3.159	0.930	0.066		
	Divorced	38	4.079	0.818	0.133		
	Widowed	79	3.139	0.888	0.100		
	Total	400	3.190	0.866	0.043		
Networking and partnerships	Single	82	4.110	1.042	0.115	3.052	0.006
	Married	201	3.801	1.179	0.083		
	Divorced	38	4.632	1.217	0.197		
	Widowed	79	3.924	1.118	0.126		
	Total	400	4.873	1.149	0.057		
Market diversification	Single	82	4.207	0.926	0.102	3.195	0.028
	Married	201	3.846	1.249	0.088		
	Divorced	38	3.789	1.094	0.178		
	Widowed	79	4.000	1.144	0.129		
	Total	400	3.945	1.160	0.058		

Source: Primary Data

Table 5.48 presents the results of an Analysis of Variance (ANOVA) examining the relationship between resilience strategies and the marital status of women entrepreneurs. The analysis revealed significant differences in the influence of marital status on resilience strategies. For digital transformation, a p-value of 0.325 indicated that marital status did not have a statistically significant effect on the adoption of

digital transformation strategies. The mean scores for single, married, divorced, and widowed women were fairly close, with single women showing a mean of 3.524, married women 3.448, divorced women 3.079, and widowed women 3.291, respectively, indicating minimal variation across marital statuses. By contrast, financial planning showed a significant relationship with marital status ($p = 0.037$). Single women had the highest mean (4.293), followed by widowed women (4.000), married women (3.970), and divorced women (3.816), suggesting that single women are more likely to adopt financial planning strategies than women of other marital statuses. Employee engagement also revealed significant differences ($p = 0.010$), with single women showing the highest engagement (4.366), while married (3.159) and widowed (3.139) women showed much lower engagement, with divorced women at (4.079). These results suggest that single female entrepreneurs may have a stronger inclination towards employee engagement strategies. Regarding networking and partnerships, ANOVA showed a significant effect ($p = 0.006$), with divorced women exhibiting the highest mean (4.632), followed by single women (4.110), widowed women (3.924), and married women (3.801). This finding indicates that divorced women may place more emphasis on networking and partnerships than women in other marital categories. Finally, market diversification shows a significant difference ($p = 0.028$), with single women again exhibiting the highest mean (4.207), followed by widowed women (4.000), married women (3.846), and divorced women (3.789), suggesting that single women are more likely to engage in market diversification strategies than women of other marital statuses. Overall, marital status appears to have a significant impact on financial planning, employee engagement, networking and partnerships, and market diversification, with single and divorced women showing higher scores in some resilience strategies and married and widowed women showing comparatively lower scores.

Table 5.49
ANOVA related to the Resilience Strategies and Education of Women Entrepreneurs

Variables	Education	N	Mean	Std. Deviation	Std. Error	F	Sig.
Digital transformation	School Certification	40	4.300	1.471	0.233	3.276	0.003
	PDC/HSS	38	3.500	1.351	0.219		
	Degree	121	4.479	1.355	0.123		
	PG	77	3.364	1.404	0.160		
	Professional Degree	124	3.339	1.373	0.123		
	Total	400	3.398	1.376	0.069		
Financial planning	School Certification	40	4.250	0.954	0.151	3.298	0.030
	PDC/HSS	38	3.868	0.963	0.156		
	Degree	121	4.025	1.012	0.092		
	PG	77	4.143	0.869	0.099		
	Professional Degree	124	3.935	1.034	0.093		
	Total	400	4.028	0.984	0.049		
Employee engagement	School Certification	40	4.375	0.774	0.122	2.812	0.018
	PDC/HSS	38	4.053	0.769	0.125		
	Degree	121	3.223	0.842	0.077		
	PG	77	4.143	0.914	0.104		
	Professional Degree	124	3.169	0.917	0.082		
	Total	400	4.190	0.866	0.043		
Networking and partnerships	School Certification	40	4.050	1.037	0.164	1.257	0.286
	PDC/HSS	38	3.553	1.179	0.191		
	Degree	121	3.950	1.168	0.106		
	PG	77	3.779	1.154	0.132		
	Professional Degree	124	3.895	1.146	0.103		
	Total	400	3.873	1.149	0.057		
Market diversification	School Certification	40	4.175	1.035	0.164	2.316	0.014
	PDC/HSS	38	3.632	1.217	0.197		
	Degree	121	4.025	1.068	0.097		
	PG	77	3.870	1.239	0.141		
	Professional Degree	124	3.935	1.208	0.108		
	Total	400	3.945	1.160	0.058		

Source: Primary Data

Table 5.49 presents the results of an Analysis of Variance (ANOVA) that examined the relationship between various resilience strategies and the educational

qualifications of women entrepreneurs. The analysis revealed significant differences in the influence of educational level on certain resilience strategies. A significant effect was observed for digital transformation ($p = 0.003$), with women holding degrees (mean = 4.479) showing the highest level of engagement, followed by those with school certification (mean = 4.300), PDC/HSS (mean = 3.500), postgraduate (PG) qualifications (mean = 3.364), and professional degrees (mean = 3.339). This suggests that women with a degree are more likely to adopt digital transformation strategies than are those with other educational qualifications. Similarly, for financial planning, ANOVA revealed a significant relationship ($p = 0.030$). Women with school certification (mean = 4.250) again showed the highest level of engagement, followed by those with PG qualifications (mean = 4.143), degrees (mean = 4.025), professional degrees (mean = 3.935), and the PDC/HSS (mean = 3.868). This indicates that women with lower educational qualifications (e.g. school certification) tend to engage more in financial planning strategies than those with higher academic qualifications. In the case of employee engagement, a significant difference was found ($p = 0.018$), with school-certified women showing the highest engagement (mean = 4.375), followed by those with PDC/HSS (mean = 4.053), PG qualifications (mean = 4.143), degree holders (mean = 3.223), and professional degree holders (mean = 3.169), suggesting that women with lower educational levels are more likely to adopt employee engagement strategies. However, for networking and partnerships, the p-value of 0.286 indicates that educational qualification does not significantly influence the adoption of networking strategies, as the means across educational categories (ranging from 3.553 for PDC/HSS to 3.950 for degree holders) are relatively close and show no substantial difference. Lastly, in terms of market diversification, a significant difference was noted ($p = 0.014$), with women holding school certification (mean = 4.175) showing the highest engagement, followed by those with degrees (mean = 4.025), professional degrees (mean = 3.935), PDC/HSS (mean = 3.632), and PG qualifications (mean = 3.870), indicating that women with school certification tend to engage more in market diversification than women with higher educational qualifications. Overall, the results suggest that certain resilience strategies, particularly digital transformation, financial planning, employee engagement, and market diversification, are significantly influenced by the educational qualifications of female entrepreneurs, with those with lower levels of education (such as school certification) tending to engage more in these strategies.

Table 5.50

ANOVA related to the Resilience Strategies and Type of Industry of Women Entrepreneurs

Variables	Type of Industry	N	Mean	Std. Deviation	Std. Error	F	Sig.
Digital transformation	Manufacturing	65	3.662	1.384	0.172	3.463	0.033
	Service	211	4.332	1.385	0.095		
	Trade	124	4.371	1.352	0.121		
	Total	400	3.398	1.376	0.069		
Financial planning	Manufacturing	65	4.231	0.965	0.120	3.732	0.025
	Service	211	3.071	0.905	0.062		
	Trade	124	3.847	1.097	0.099		
	Total	400	4.028	0.984	0.049		
Employee engagement	Manufacturing	65	4.308	0.809	0.100	3.729	0.013
	Service	211	3.161	0.830	0.057		
	Trade	124	4.177	0.955	0.086		
	Total	400	3.190	0.866	0.043		
Networking and partnerships	Manufacturing	65	4.154	1.093	0.136	2.376	0.194
	Service	211	3.806	1.123	0.077		
	Trade	124	4.839	1.206	0.108		
	Total	400	3.873	1.149	0.057		
Market diversification	Manufacturing	65	4.200	0.955	0.118	1.904	0.150
	Service	211	3.905	1.175	0.081		
	Trade	124	4.879	1.220	0.110		
	Total	400	3.945	1.160	0.058		

Source: Primary Data

Table 5.50 presents the results of an ANOVA assessing the relationship between the type of industry and the adoption of resilience strategies among women entrepreneurs, categorised into manufacturing, service, and trade sectors. The analysis revealed statistically significant differences between the strategies. For digital transformation, a significant F-value of 3.463 and p-value of 0.033 indicate that women entrepreneurs in the trade (mean = 4.371) and service (mean = 4.332) sectors are more engaged in digital transformation than those in the manufacturing sector (mean = 3.662), suggesting higher levels of technological integration in service and trade-based

businesses. In financial planning, the F-value is 3.732 with a p-value of 0.025, indicating significant differences, with manufacturing entrepreneurs reporting the highest mean (4.231), followed by trade (3.847), and service (3.071), implying that structured financial strategies are more robust in the manufacturing and trade industries. Employee engagement also showed a statistically significant difference ($F = 3.729$, $p = 0.013$), with higher mean values in manufacturing (4.308) and trade (4.177) than in service (3.161), suggesting a greater emphasis on workforce involvement in manufacturing and trade. However, networking and partnerships ($F = 2.376$, $p = 0.194$) and market diversification ($F = 1.904$, $p = 0.150$) did not show statistically significant differences across industries, even though the trade sector reported relatively higher means in both areas (4.839 and 4.879, respectively) than manufacturing and service. This implies that while certain resilience strategies, such as digital transformation, financial planning, and employee engagement, are significantly influenced by the type of industry, others, such as networking and market diversification, are more evenly distributed and not significantly impacted by industry classification. Overall, industry type plays an important role in shaping the adoption of specific resilience strategies among women entrepreneurs, particularly in areas involving technology, finance, and human resources.

5.5.3 Hypothetical relationship between Different Level of Resilience Strategies and Enterprise Performance of Women Entrepreneurs.

In today's ever-changing business landscape, marked by unpredictability, disruptions, and competitive challenges, the importance of resilience for women entrepreneurs to ensure their businesses' sustainability and expansion has grown significantly. Resilience strategies, including digital transformation, financial planning, employee engagement, networking, and market diversification, are essential adaptive tools that enable women-led enterprises to endure and recover from challenges. When applied effectively, these strategies can vary in intensity among businesses, resulting in different resilience levels (high, medium, and low). It has been proposed that resilience levels have a direct impact on key performance indicators, such as sales growth, profitability, customer retention, business continuity, and market share. Female entrepreneurs with high resilience are more likely to excel in these areas because of their ability to foresee risks, seize opportunities, and maintain operational stability. A Multivariate Analysis of Variance (MANOVA) is suitable for statistically

examining this complex relationship, as it allows for the simultaneous analysis of the effects of different resilience strategy levels on multiple dependent performance variables. MANOVA not only assesses whether business performance outcomes differ across the three resilience levels, but also considers the interconnections among performance indicators, offering a comprehensive understanding of how resilience strategies collectively influence the success paths of women-owned businesses. This approach enables a more in-depth empirical investigation into whether higher strategic resilience levels are associated with significantly stronger business performance outcomes.

Hypothesis 20: There is no significant difference between different level of Resilience Strategies towards Enterprise Performance of Women Entrepreneurs

Table 5.51

Descriptive Statistics of Different level of Resilience Strategies towards Enterprise Performance

Resilience Strategies		Mean	Std. Deviation	N
Sales Growth	High	3.550	1.452	229
	Medium	3.442	1.487	104
	Low	3.522	1.341	67
	Total	3.518	1.440	400
Profitability	High	3.475	1.510	229
	Medium	3.058	1.433	104
	Low	3.224	1.516	67
	Total	3.210	1.490	400
Customer Retention	High	3.721	1.174	229
	Medium	3.548	1.222	104
	Low	3.657	1.225	67
	Total	3.665	1.194	400
Business Continuity	High	3.720	1.166	229
	Medium	3.452	1.321	104
	Low	3.627	1.312	67
	Total	3.578	1.232	400
Market Share	High	3.633	1.356	229
	Medium	3.317	1.470	104
	Low	3.493	1.397	67
	Total	3.528	1.396	400

Source: Primary Data

Table 5.51 presents the descriptive statistics exploring the relationship between different levels of resilience strategies, categorised as high, medium, and low, and various dimensions of enterprise performance among the 400 women entrepreneurs. The data indicated subtle variations in mean performance across resilience levels, suggesting potential associations between the intensity of resilience strategies and business outcomes. For sales growth, the highest mean score was observed among entrepreneurs with high resilience strategies (M = 3.550, SD = 1.452), followed closely by those with low resilience (M = 3.522, SD = 1.341), while the medium-resilience group showed a slightly lower mean (M = 3.442, SD = 1.487). In terms of profitability, entrepreneurs with high resilience again reported the highest average (M = 3.475, SD = 1.510), whereas those with medium resilience exhibited the lowest profitability (M = 3.058, SD = 1.433), suggesting a positive relationship between resilience and profitability. A similar trend is observed in business continuity and customer retention, where high resilience groups show superior mean values (M = 3.720 and M = 3.721, respectively) compared to their medium and low counterparts. Notably, customer retention showed relatively stable means across all groups, indicating less variance among resilience levels in this dimension. Regarding market share, women entrepreneurs in the high resilience category again reported a higher average (M = 3.633, SD = 1.356) than those in the medium (M = 3.317, SD = 1.470) and low (M = 3.493, SD = 1.397) resilience groups. Overall, the descriptive statistics suggest that higher resilience strategy levels are generally associated with better performance outcomes across the five indicators. However, some anomalies, such as the slightly higher sales growth and market share means in the low resilience group compared to the medium resilience group, imply the need for inferential analysis such as MANOVA to determine the statistical significance and overall multivariate effects of resilience levels on performance outcomes.

Table 5.52

Box's Test of Equality of Covariance Matrices of different level of Resilience Strategies towards Enterprise Performance

Box's Test of Equality of Covariance Matrices[a]	
Box's M	48.507
F	1.578
df1	30
df2	144629.472
Sig.	0.323

Source: Primary Data

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Different level of Resilience Strategies

Table 5.52 presents the results of Box's Test of Equality of Covariance Matrices, which is a preliminary test in multivariate analysis of variance (MANOVA) used to check whether the covariance matrices of the dependent variables are equal across different groups. In this context, the groups refer to the levels of resilience strategies (high, medium, and low) and the dependent variables include sales growth, profitability, customer retention, business continuity, and market share. Box's M value is 48.507 with an associated F statistic of 1.578, degrees of freedom df1 = 30 and df2 = 144629.472, and a significance value (p-value) of 0.323. As the p-value is greater than 0.05, the test does not provide sufficient evidence to reject the null hypothesis, which means that the covariance matrices of the dependent variables can be considered statistically equal across the groups. This satisfies one of the important assumptions of MANOVA, namely, the homogeneity of covariance matrices. As this assumption is met, the use of a MANOVA is justified, and any further multivariate analysis of the effect of resilience strategy levels on enterprise performance indicators can be interpreted with greater statistical confidence.

Table 5.53

Multivariate Test of different level of Resilience Strategies towards Enterprise Performance

Multivariate Tests[a]							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Different Level of Resilience Strategies	Roy's Largest Root	0.804	9.176[b]	5	93	0.008	0.614
	Pillai's Trace	0.612	9.176[b]	5	93	0.008	0.614
	Wilks' Lambda	0.988	9.176[b]	5	93	0.008	0.614
	Hotelling's Trace	0.712	9.176[b]	5	93	0.008	0.614
	Roy's Largest Root	0.511	9.176[b]	5	93	0.008	0.614

Source: Primary Data

a. Design: Intercept + Different Level of Resilience Strategies

b. Exact statistic

Table 5.53 provides the results of the Multivariate Analysis of Variance (MANOVA), which is an extension of ANOVA used when there are multiple dependent variables, in this case, the dimensions of enterprise performance such as sales growth, profitability, customer retention, business continuity, and market share. The independent variable was the different levels of resilience strategies (high, medium, and low) adopted by women entrepreneurs. The multivariate tests—Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root— were all significant, with a consistent F-value of 9.176, degrees of freedom (df) for the hypothesis of 5, error df of 93, and p-value (Sig.) of 0.008. As this significance level is less than 0.05, the null hypothesis that the levels of resilience strategies do not impact enterprise performance can be rejected. This indicates that the resilience strategy levels have a statistically significant multivariate effect on the combined set of performance

variables. The partial eta squared value of 0.614 reflects a strong effect size, implying that over 61% of the variance in enterprise performance is explained by differences in resilience strategy levels. The use of MANOVA here is particularly appropriate, as it accounts for the inter-correlations among the multiple dependent variables and reduces the chances of Type I errors that could arise from multiple separate ANOVAs. Thus, this multivariate result supports the conclusion that the overall enterprise performance of women entrepreneurs varies significantly depending on whether they adopt high, medium, or low resilience strategies.

Table 5.54

Levene's Test of Equality of Error Variances of different level of Resilience Strategies towards Enterprise Performance

Levene's Test of Equality of Error Variances[a]					
		Levene Statistic	df1	df2	Sig.
Sales Growth	Based on Mean	1.066	2	397	0.345
	Based on Median	0.653	2	397	0.521
	Based on Median and with adjusted df	0.653	2	396.389	0.521
	Based on trimmed mean	1.052	2	397	0.350
Profitability	Based on Mean	1.081	2	397	0.340
	Based on Median	0.706	2	397	0.494
	Based on Median and with adjusted df	0.706	2	381.870	0.494
	Based on trimmed mean	1.064	2	397	0.346
Customer Retention	Based on Mean	0.166	2	397	0.847
	Based on Median	0.173	2	397	0.841
	Based on Median and with adjusted df	0.173	2	393.811	0.841
	Based on trimmed mean	0.230	2	397	0.794
Business Continuity	Based on Mean	1.793	2	397	0.168
	Based on Median	0.959	2	397	0.384

	Based on Median and with adjusted df	0.959	2	390.129	0.384
	Based on trimmed mean	1.780	2	397	0.170
Market Share	Based on Mean	1.323	2	397	0.268
	Based on Median	1.215	2	397	0.298
	Based on Median and with adjusted df	1.215	2	393.699	0.298
	Based on trimmed mean	1.573	2	397	0.209

Source: Primary Data

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Different Level of Resilience Strategies

Table 5.54 presents the results of Levene's Test of Equality of Error Variances, which is critical for validating one of the key assumptions of MANOVA—homogeneity of error variances across groups. This test assesses whether the error variances for each dependent variable (Sales Growth, Profitability, Customer Retention, Business Continuity, and Market Share) are equal across the three levels of resilience strategies (high, medium, and low). For each dependent variable, the test statistics based on the mean, median, and median with adjusted degrees of freedom and trimmed mean all yield p-values greater than the commonly used significance threshold of 0.05. Specifically, for Sales Growth, the p-values across all test statistics range from 0.345 to 0.350, indicating no significant differences in the error variance. Similarly, for Profitability, the p-values ranged from 0.340 to 0.346, and for Customer Retention, the p-values ranged from 0.794 to 0.847, suggesting equal variance across the groups. For Business Continuity, the p-values range from 0.168 to 0.170, and for Market Share, the p-values range from 0.209 to 0.298, again showing no significant differences in error variances. Since the p-values for all dependent variables are greater than 0.05, the null hypothesis that the error variances are equal across the resilience strategy groups is not rejected for any variable. This result confirms that the assumption of homogeneity of error variances was met, ensuring the robustness and validity of the subsequent MANOVA analysis. Therefore, the results of the

multivariate tests, which examine the effect of different resilience strategies on enterprise performance, are reliable as the data satisfy this essential assumption for MANOVA.

Table 5.55

Test of between subject effects of different level Resilience Strategies towards Enterprise Performance

Tests of Between-Subjects Effects							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Different Level of Resilience Strategies	Sales Growth	185.835	2	92.917	3.200	0.019	0.201
	Profitability	173.396	2	86.698	4.764	0.007	0.314
	Customer Retention	176.132	2	88.066	4.747	0.015	0.107
	Business Continuity	193.219	2	96.609	3.730	0.483	0.124
	Market Share	169.235	2	84.617	3.864	0.156	0.109

Source: Primary Data

Table 5.55 presents the results of the Tests of Between-Subjects Effects, which assess the influence of different resilience strategy levels (high, medium, and low) on various measures of enterprise performance, including Sales Growth, Profitability, Customer Retention, Business Continuity, and Market Share. For Sales Growth, the F-value is 3.200, with a significance of 0.019, indicating a statistically significant effect of resilience strategies on sales growth, with a partial eta-squared value of 0.201, suggesting that 20.1% of the variance in sales growth is explained by resilience strategies. For Profitability, the F-value is 4.764 and the significance is 0.007, demonstrating a significant effect with a Partial Eta Squared of 0.314, meaning that resilience strategies account for 31.4% of the variance in profitability. Customer Retention also shows a significant effect, with an F-value of 4.747, a significance of 0.015, and a Partial Eta Squared value of 0.107, indicating a moderate effect size where resilience strategies explain 10.7% of the variance in customer retention. However, for Business Continuity, the F-value is 3.730 with a significance of 0.483, which is above the threshold of 0.05, suggesting that resilience strategies do not

significantly influence business continuity, with a small Partial Eta Squared of 0.124. For Market Share, the F-value is 3.864 and the significance is 0.156, indicating no significant effect of resilience strategies on market share, with a small Partial Eta Squared value of 0.109. In conclusion, the results highlight that resilience strategies significantly affect Sales Growth, Profitability, and Customer Retention, with medium to large effect sizes for Profitability and Sales Growth, but have no significant impact on Business Continuity and Market Share. This emphasises the varied importance of resilience strategies across the different dimensions of enterprise performance.

5.6 Model regarding the Resilience Strategies contributing to Enterprise performance of women-owned and led enterprises

The model examining how resilience strategies contribute to the performance of enterprises owned and led by women highlights five main strategies: digital transformation, financial planning, employee engagement, networking and partnerships and market diversification. These strategies are crucial for helping businesses adapt, succeed, and manage the challenges brought about by evolving economic conditions, technological progress, and market change. In particular, women entrepreneurs encounter specific challenges, such as restricted access to resources, societal biases, and concerns about balancing work and life, making it essential for them to adopt effective strategies that mitigate risks and foster business success. Digital transformation enables businesses to use technology to enhance operational efficiency, expand customer reach, and boost competitiveness. Financial planning provides women entrepreneurs with the tools needed to manage business risks, effectively allocate resources, and ensure long-term financial stability.

Employee engagement is another critical strategy that helps businesses maintain a motivated and productive workforce, which directly affects operational efficiency, service quality, and customer satisfaction. Networking and partnerships offer opportunities for collaboration, knowledge sharing, and resource mobilisation, which are vital for business growth and innovation. Through effective networking, women entrepreneurs can access new markets, suppliers, and funding sources, aiding them in

overcoming obstacles they face. Finally, market diversification allows businesses to minimise risk by entering multiple markets through product innovation, geographical expansion, or diversifying customer segments, thereby ensuring stability and growth. When these resilience strategies are successfully implemented, they are anticipated to improve various aspects of enterprise performance such as sales growth, profitability, customer retention, business continuity, and market share. By exploring these strategies in the context of women-owned businesses, the model provides practical insights that can assist entrepreneurs and stakeholders in creating an ecosystem that supports sustainable growth-oriented enterprises.

Table 5.56

Univariate and Multivariate Normality of the Distribution related to observed variables of Resilience Strategies contributing to Enterprise performance

Variable	skew	c.r.	kurtosis	c.r.
EPER5	-0.246	-2.009	-1.379	-5.631
EPER4	-1.466	-11.968	1.820	7.431
EPER3	-0.715	-5.839	-0.828	-3.379
EPER2	1.472	12.019	2.231	9.108
EPER1	0.560	4.571	-1.099	-4.485
MD4	-1.142	-9.325	0.564	2.302
MD3	-0.782	-6.383	-0.677	-2.765
MD2	-0.696	-5.685	-1.053	-4.297
MD1	-1.405	-11.474	1.819	7.427
NP4	-1.433	-11.697	2.022	8.255
NP3	-1.393	-11.371	1.603	6.546
NP2	-1.348	-11.004	1.598	6.525
NP1	-1.121	-9.156	0.658	2.687
EE4	-1.223	-9.986	0.765	3.122
EE3	-1.275	-10.409	1.657	6.764
EE2	-1.792	-14.633	3.728	15.220
EE1	-1.290	-10.530	0.751	3.065
FP4	-0.866	-7.071	-0.616	-2.516
FP3	-0.706	-5.766	-0.838	-3.421
FP2	-1.155	-9.429	0.499	2.037
FP1	-1.022	-8.346	-0.140	-0.573
DT4	-1.039	-8.483	-0.272	-1.110
DT3	-1.278	-10.436	1.042	4.256
DT2	-1.957	-15.977	5.791	23.641
DT1	-1.655	-13.514	3.467	14.153
Multivariate			75.793	20.628

Source: Primary Data

Table 5.56 presents the univariate and multivariate normality of the distribution related to the observed variables of resilience strategies contributing to enterprise performance. The skewness and kurtosis values for each variable are provided, along with their critical ratios (c.r.), which test the null hypothesis that the distribution is normal. Skewness measures the asymmetry of the distribution, while kurtosis measures the "tailedness." Negative skewness values (e.g. EPER5 with a skewness of-0.246)indicate that the distribution is slightly left-skewed, whereas positive skewness values (for example, EPER2 with a skewness of 1.472) suggest a right-skewed distribution. A skewness value close to zero indicates a perfectly symmetrical distribution. The critical ratio of skewness (c.r. skew) indicates how many standard errors the skewness value is away from zero, with values greater than ±2.0, often indicating a departure from normality. Similarly, kurtosis values and their critical ratios (c.r. kurtosis) suggest the degree of outliers or extreme values in the distribution, with values greater than ±7.0, typically considered indicative of non-normality. Many of the observed variables in the table show significant deviations from normality, as evidenced by the skewness and kurtosis critical ratios exceeding the ±2.0 and ±7.0 thresholds. For example, the variable DT2 (Digital Transformation 2) has a skewness of -1.957 and kurtosis of 5.791, with critical ratios of -15.977 and 23.641, suggesting a highly non-normal distribution. Given these deviations, it is important to note that these findings indicate non-normality across many resilience strategy and enterprise performance variables. Bootstrapping, a resampling technique, can be particularly useful in such cases. Bootstrapping allows for the estimation of the sampling distribution of an estimator by repeatedly resampling with replacement from the observed data, thereby providing more reliable inferential statistics, even when normality assumptions are violated. By applying bootstrapping, the model can adjust for non-normality of the data, ensuring more robust and valid statistical results in the analysis of the relationships between resilience strategies and enterprise performance.

5.6.1 Bootstrapping of the Model related to Resilience Strategies contributing to enterprise performance.

Bootstrapping is a resampling method that is particularly beneficial when the assumption of normality is not satisfied. This non-parametric approach does not depend on any assumptions regarding the underlying distribution of the data. Instead of presuming a normal distribution, it utilises observed data to empirically estimate the distribution of the statistic in question. In structural equation modelling (SEM), bootstrapping is frequently employed for model validation, such as for evaluating model fit and estimating confidence intervals for parameters. This technique allows researchers to make fewer assumptions about the distribution, offering a more robust model evaluation. In this context, the researcher used the Bollen-Stine Bootstrap, also known as the Bollen-Stine bootstrap correction, a resampling method in SEM designed to address potential bias in the chi-square test of the model fit. It is particularly useful when the distributional assumptions necessary for the chi-square test are not satisfied. The chi-square test assumes multivariate normality, and when this assumption is violated, it can lead to incorrect conclusions regarding model fit. The Bollen-Stine Bootstrap addresses this issue by providing a correction to the chi-square test, making it less sensitive to distributional assumptions. This method involves generating multiple resamples (bootstrap samples) from observed data. For each resample, the SEM model was estimated and the chi-square statistic was calculated. The distribution of chi-square values was obtained by repeating this process multiple times, allowing for a more accurate assessment of variability and potential bias in the chi-square test.

5.6.2 Model Fit through Bollen-Stine Bootstrap in Resilience Strategies contributing to Enterprise performance

The assessment of model validity in structural equation modelling (SEM) is critical to ensure that the hypothesised relationships between resilience strategies and enterprise performance accurately represent the underlying data structure. Traditional methods, such as the chi-square test of model fit, can be problematic, particularly when dealing with small sample sizes or data that deviate from normality. To

overcome these limitations, the Bollen-Stine Bootstrap is employed as a more robust resampling technique to provide a more accurate evaluation of the model fit. In the context of this study, the researcher utilised the Bollen-Stine Bootstrap to assess the validity of the SEM model to examine the impact of resilience strategies on enterprise performance. The bootstrap procedure involves resampling the observed data to generate a distribution of the chi-squared statistic under the null hypothesis that the model is a good fit. By running 5000 bootstrap samples, the researcher ensured a more reliable and precise model fit evaluation, particularly in the presence of non-normal data or small sample sizes. This approach offers enhanced confidence in the validity of the hypothesised relationship between resilience strategies and enterprise performance.

Table 5.57

Chi-Square Validation of Bollen-Stine Bootstrap of Resilience Strategies contributing to Enterprise performance Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	65	**375.507**	160	0.257	2.347
Saturated model	325	0	0		
Independence model	25	7698.661	300	0.218	25.662

Table 5.57 presents the chi-square validation results of the Bollen-Stine Bootstrap for the model examining the relationship between resilience strategies and enterprise performance. Focusing on the default model, we observed a chi-square value (CMIN) of 375.507 with 160 degrees of freedom (DF). The p-value for the chi-square test was 0.257, which is above the commonly used significance threshold of 0.05, indicating that the model does not significantly deviate from the observed data. Thus, the model fit was considered acceptable. Additionally, the ratio of CMIN to DF (2.347) falls within the generally recommended range of 2–5, further suggesting an acceptable fit for the model. This implies that based on the chi-square test and its derived indices, the default model, which incorporates the relationships between resilience strategies

and enterprise performance, demonstrates a good fit to the data, supporting the validity of the hypothesised model structure.

Figure 5.5

Checking of Chi-square statistics range of Bollen-Stine Bootstrap of Resilience Strategies contributing to Enterprise performance Model

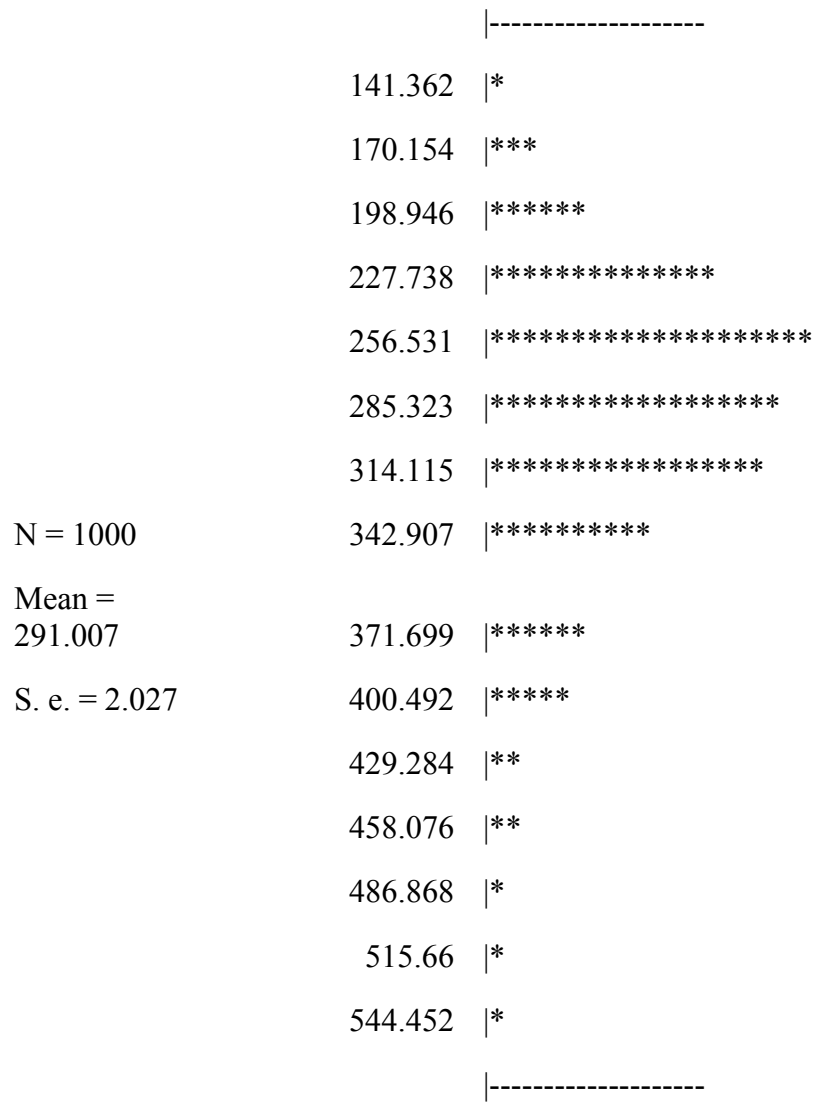


Figure 5.5 presents the distribution of chi-square statistics from the Bollen-Stine Bootstrap resampling technique for the model examining the impact of resilience strategies on enterprise performance. The figure shows the range of chi-square values generated from 1000 bootstrap samples, with a mean value of 291.007 and a standard error (S.E.) of 2.027. The chi-square statistics were plotted along with their corresponding frequencies, with higher frequencies occurring around the mean value

of 291.007, indicating that this value is typical of the chi-square distribution under the null hypothesis. The figure also highlights various chi-square values at different points in the distribution, showing how frequently each statistic occurs in bootstrap samples. As the chi-square values moved further away from the mean, the frequency of their occurrence decreased, demonstrating the shape of the distribution. Chi-square statistics falling above or below the mean indicate the extent to which the observed model's fit is from the expected model fit based on the bootstrap distribution. A standard error value of 2.027 suggests that the chi-square values are relatively stable and consistent across the bootstrap samples, supporting the robustness of the model fit assessment using this method. Overall, this figure provides insight into the variability and reliability of the chi-square statistic when using the Bollen-Stine Bootstrap to evaluate the model's fit.

Table 5.58

Model fit of Bollen –Stine Bootstrap Sample of Resilience Strategies contributing to Enterprise performance Model

Bollen-Stine Bootstrap (Default model)
The model fit better in 3413 bootstrap samples.
It fit about equally well in 0 bootstrap samples.
It fit worse or failed to fit in 374 bootstrap samples.
Testing the null hypothesis that the model is correct, Bollen-Stine bootstrap p = .307

Table 5.58 presents the model fit results based on the Bollen-Stine Bootstrap resampling technique for the model examining resilience strategies contributing to enterprise performance. The table reveals that the default model fits well in 3413 of the 5000 bootstrap samples, indicating that the majority of the resampled models produced a good fit. It fits equally well in the 0 samples, indicating that no bootstrap samples exactly replicated the fit of the original model. However, in 374 samples, the model fit was worse or failed to fit, suggesting that some resampled datasets led to a less optimal or poor model fit. This pattern is useful for assessing the robustness of a

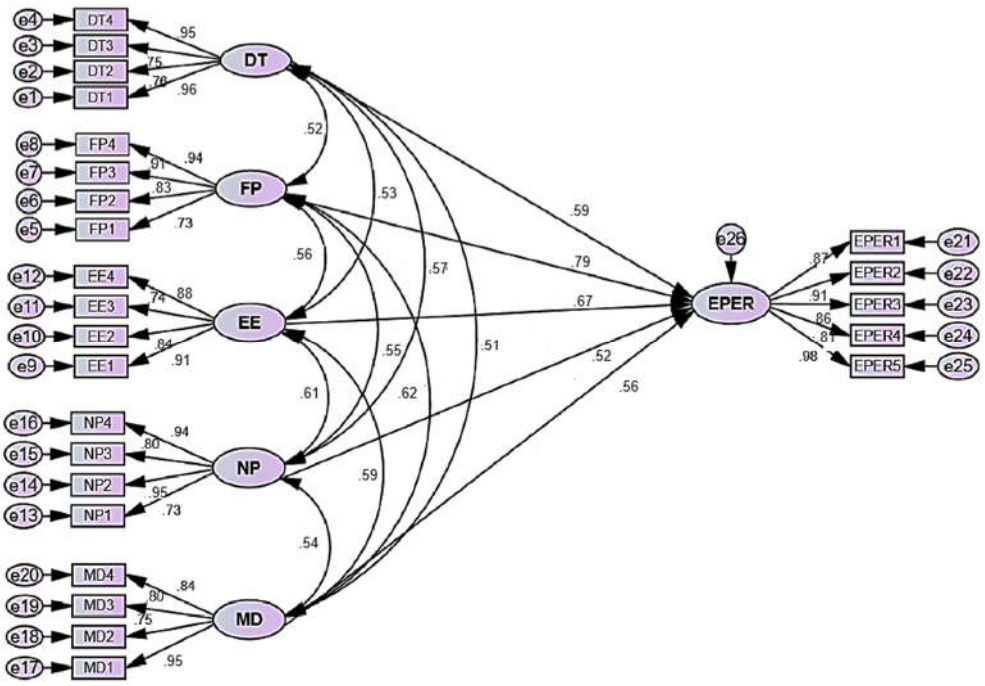
model's fit across different data variations. The Bollen-Stine bootstrap p-value of 0.307 tests the null hypothesis that the model is correct, and because this value is greater than the typical significance threshold of 0.05, we fail to reject the null hypothesis. This indicates that there is no significant evidence to suggest that the model has a poor fit, supporting the validity of the model in representing the relationship between resilience strategies and enterprise performance. Thus, the model appears to be a reasonable representation of the data, as evidenced by the favourable outcomes in the majority of bootstrap samples.

5.6.3 Model Validity of Resilience Strategies contributing to Enterprise performance

Evaluating the validity of models for resilience strategies that enhance enterprise performance is crucial for assessing how effectively businesses can adapt to and succeed in a dynamic and often unpredictable market. For enterprises owned and led by women, resilience strategies such as digital transformation, financial planning, employee engagement, networking and partnerships, and market diversification are essential for maintaining business performance in the face of challenges. Validating the model ensured that the connections between these resilience strategies and enterprise performance were accurately represented and reflected the true nature of the data. Advanced statistical techniques, such as Structural Equation Modelling (SEM) and the Bollen-Stine Bootstrap, enable a thorough assessment of the model's robustness by testing various assumptions, including data normality and the fit of the proposed model. By resampling the observed data, these methods offer a more reliable estimate of the model fit, which is particularly important when traditional methods such as the chi-square test may be inadequate for small sample sizes or non-normal distributions. Ultimately, validating the effectiveness of the model in this context is vital for drawing meaningful conclusions about the impact of resilience strategies on the performance of women-led enterprises, thus providing a solid foundation for both theoretical and practical applications in business management.

Figure 5.6

The impact of Resilience Strategies contributing to Enterprise performance



Source: Primary Data

Table 5.59

Model Fit Measures related to Resilience Strategies contributing to Enterprise performance

Model Fit Indices	Citation	Threshold Limit	Estimated Value	Interpretation
Normed Chi-Square	Jackson, J A. (1998)	< 3	375.507/ 160-CMIN/ DF = 2.345	Excellent
CFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	> 0.90	0.922	Acceptable
GFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D.,	>.90	0.934	Good

	&Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)			
IFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.949	Good
NFI	Shi, D., Lee, T. &Maydeu-Olivares, A. (2018), Ximénez, C., Maydeu-Olivares, A., Shi, D., &Revuelta, J. (2022), and Xia, Y., & Yang, Y. (2018)	>.90	0.936	Good
RMSEA	Hooper, D., Coughlan, J. & Mullen, R M. (2008),	< 0.08	0.063	Acceptable
SRMR	Pavlov, G., Maydeu-Olivares, A. & Shi, D. (2020).	< 0.06	0.041	Excellent

Source: Primary Data

Table 5.59 provides various model fit indices to evaluate the adequacy of the Resilience Strategies contributing to the Enterprise Performance model, ensuring that the hypothesised relationships between variables are well represented by the data. The Normed Chi-Square (CMIN/DF) value of 2.345 was below the threshold limit of 3 (Jackson, 1998), indicating an excellent fit. The CFI (Comparative Fit Index) value of 0.922 exceeds the threshold of 0.90 (Shi et al., 2018), suggesting an acceptable model fit, indicating that the model explains the data well when compared to a null model. Similarly, the GFI (Goodness of Fit Index) value of 0.934 and the IFI (Incremental Fit Index) value of 0.949 both surpass the threshold of 0.90, indicating a good fit to the data and further confirming the adequacy of the model's structure. The NFI (Normed Fit Index) value of 0.936, exceeding the 0.90 threshold, also supports a good fit, highlighting the proportion of variance explained by the model. The RMSEA (Root Mean Square Error of Approximation) value of 0.063 is below the recommended cutoff of 0.08 (Hooper et al., 2008), indicating an acceptable level of model error. Finally, the SRMR (Standardized Root Mean Square Residual) value of 0.041 is well within the threshold of 0.06 (Pavlov et al., 2020), suggesting an excellent fit with minimal residual variance. Overall, these indices collectively indicate that the model has a strong and statistically robust fit, confirming that the

hypothesised relationships between resilience strategies and enterprise performance were accurately captured by the model.

Table 5.60

The relationship between Resilience Strategies and Enterprise performance

Dependent Variable	<---	Independent Variables	Estimate	S.E.	C.R.	P
EPER	<---	DT	1.637	0.112	14.616	0.000
EPER	<---	FP	1.858	0.141	13.177	0.001
EPER	<---	EE	1.721	0.159	10.824	0.039
EPER	<---	NP	1.611	0.144	11.188	0.021
EPER	<---	MD	1.625	0.146	11.130	0.015

Source: Primary Data

Hypothesis 21: There is no significant relationship between Digital Transformation (DT) and the Enterprise Performance (EPER) in women owned enterprises.

Based on the results, the path estimate for Digital Transformation (DT) to Enterprise Performance (EPER) is 1.637, with a standard error of 0.112. The critical ratio (C.R.) is 14.616, which is substantially greater than the typical threshold of 1.96 for statistical significance, and the p-value is 0.000, which is well below the conventional significance level of 0.05. These statistics strongly suggest that Digital Transformation (DT) has a significant positive relationship with Enterprise Performance (EPER) in women-owned enterprises. Therefore, the hypothesis that there is no significant relationship between Digital Transformation and Enterprise Performance is rejected. This means that adopting digital transformation strategies significantly impacts the performance of women-owned enterprises.

Hypothesis 22: There is no significant relationship between Financial Planning (FP) and the Enterprise Performance (EPER) in women owned enterprises.

The relationship between Financial Planning (FP) and Enterprise Performance (EPER) is represented by a path estimate of 1.858, with a standard error of 0.141. The critical ratio (C.R.) was 13.177, and the p-value was 0.001, both of which indicate a

highly significant relationship (since $p < 0.05$ and C.R. > 1.96). These results suggest that Financial Planning (FP) significantly influences the Enterprise Performance (EPER) of women-owned enterprises. Hence, the hypothesis that posits no significant relationship between Financial Planning and Enterprise Performance is rejected. This indicates that sound financial planning plays a crucial role in enhancing the performance of such enterprises.

Hypothesis 23: There is no significant relationship between Employee Engagement (EE) and the Enterprise Performance (EPER) in women owned enterprises.

The path estimate for Employee Engagement (EE) to Enterprise Performance (EPER) is 1.721 with a standard error of 0.159. The critical ratio (C.R.) is 10.824, and the p-value is 0.039, which is statistically significant at the level of 0.05. These findings suggest that Employee Engagement (EE) has a significant positive impact on the performance of women-owned enterprises. As such, the hypothesis, which asserts no significant relationship between Employee Engagement and Enterprise Performance, is rejected. Statistical evidence supports the notion that engaged employees positively contribute to enterprise performance.

Hypothesis 24: There is no significant relationship between Networking and Partnerships (NP) and Enterprise Performance (EPER) in women-owned enterprises.

The path estimate for Networking and Partnerships (NP) to Enterprise Performance (EPER) is 1.611, with a standard error of 0.144. The critical ratio (C.R.) was 11.188, and the p-value was 0.021, indicating statistical significance at the level of 0.05. These results suggest a significant positive relationship between Networking and Partnerships (NP) and Enterprise Performance (EPER) in women-owned enterprises. Therefore, the hypothesis, which suggests no significant relationship, is rejected. This finding indicates that networking and building partnerships significantly enhance enterprise performance in women-owned enterprises.

Hypothesis 25: There is no significant relationship between Market Diversification (MD) and the Enterprise Performance (EPER) in women owned enterprises.

The path estimate for Market Diversification (MD) to Enterprise Performance (EPER) is 1.625, with a standard error of 0.146. The critical ratio (C.R.) is 11.130, and the p-value is 0.015, which is statistically significant at the level of 0.05. These results suggest that Market Diversification (MD) positively influences the Enterprise Performance (EPER) of women-owned enterprises. Therefore, the hypothesis that posits no significant relationship between Market Diversification and Enterprise Performance is rejected. The findings highlight the importance of market diversification strategies for improving the performance of women-owned businesses.

5.6.4 Most effective Resilience Strategies (RS) contributing to improved performance among women-led enterprises:

To identify the most effective resilience strategies (RS) contributing to improved performance among women-led enterprises, we examined the standardised estimates for each independent variable in relation to the dependent variable, enterprise performance (EPER). The results indicate that financial planning (FP) has the highest standardised estimate (1.858), suggesting that it has the strongest positive impact on enterprise performance. This is followed by employee engagement (EE) with an estimate of 1.721, demonstrating its substantial contribution to enhancing performance. Digital transformation (DT) also plays a significant role, with an estimate of 1.637, highlighting its positive influence on performance in women-led enterprises. Market diversification (MD) (estimate = 1.625) and networking and partnerships (NP) (estimate = 1.611) also contribute positively but to a slightly lesser extent. Statistically, all relationships are significant, as indicated by the high critical ratios (C.R.) and low p-values (with all p-values well below 0.05), confirming that each resilience strategy significantly influences enterprise performance. These findings suggest that financial planning is the most effective resilience strategy, followed by employee engagement and digital transformation, with market diversification, networking, and partnerships contributing slightly less but still playing important roles in improving performance in women-led enterprises.

5.6.5 Model Validity and Reliability of Resilience Strategies contributing to Enterprise performance

Model validity and reliability are essential components for ensuring that the measurement model accurately represents the relationships between the observed variables and latent constructs in structural equation modelling (SEM). In examining resilience strategies that enhance enterprise performance, composite reliability (CR), convergent validity, and discriminant validity are critical for evaluating the robustness of a measurement model. Composite reliability, which assesses the internal consistency of a latent variable, should ideally exceed the threshold of 0.70 to indicate reliable indicators. Convergent validity is assessed by analysing the average variance extracted (AVE), where values above 0.50 suggest that the indicators adequately represent the latent constructs. Conversely, discriminant validity ensures that constructs are distinct from one another, and is evaluated by comparing the square root of the AVE of each construct to its correlations with other constructs. A higher square root of AVE compared with the inter-construct correlations confirms the distinctiveness of the constructs. Collectively, these measures ensure that the model provides meaningful and reliable insights into the relationship between resilience strategies and enterprise performance. The validity and reliability of these constructs are fundamental for deriving accurate and actionable conclusions in the study of women-owned enterprises and their performance.

Table 5. 61

Composite Reliability of the Model related to Resilience Strategies contributing to Enterprise performance

	CR	AVE	MSV	MaxR(H)
DT	0.920	0.745	0.402	0.931
FP	0.916	0.734	0.375	0.918
EE	0.910	0.717	0.315	0.220
NP	0.918	0.740	0.344	0.925
MD	0.906	0.708	0.348	0.918
EPER	0.950	0.793	0.437	0.961

Source: Primary Data

Table 5.61 presents the composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), and maximum reliability (MaxR(H)) values for the constructs in the model related to resilience strategies that contribute to enterprise performance. Composite reliability (CR) values range from 0.906 to 0.950 across the constructs, which are all well above the commonly accepted threshold of 0.70, indicating that the latent constructs demonstrate excellent internal consistency. The average variance extracted (AVE) values, ranging from 0.708 to 0.793, exceeded the recommended threshold of 0.50, suggesting that the constructs adequately captured the variance in their respective observed indicators and exhibited good convergent validity. The maximum shared variance (MSV) values, which measure the highest correlation between any two constructs, range from 0.315 to 0.437, indicating that the constructs are sufficiently distinct, which is a sign of good discriminant validity. Finally, the maximum reliability (MaxR(H)) values, ranging from 0.918 to 0.961, were above the threshold of 0.80, indicating that the constructs had good overall reliability. Collectively, these indices suggest that the model for resilience strategies contributing to enterprise performance has strong validity and reliability, ensuring that the relationships between constructs are robust and meaningful.

Table 5.62

Convergent Validity of the Model related to Resilience Strategies contributing to Enterprise performance

Indicator Variable	<---	Latent Variable	Standardized Loading	Square of Standardized Loading	Sum of Square of Standardized Loading	Number of Indicators	AVE
DT1	<---	DT	0.961	0.924			
DT2	<---	DT	0.764	0.584			
DT3	<---	DT	0.753	0.567			
DT4	<---	DT	0.952	0.906	2.981	4	0.745
FP1	<---	FP	0.733	0.537			
FP2	<---	FP	0.831	0.691			
FP3	<---	FP	0.909	0.826			
FP4	<---	FP	0.939	0.882	2.936	4	0.734
EE1	<---	EE	0.911	0.830			
EE2	<---	EE	0.843	0.711	2.869	4	0.717

EE3	<---	EE	0.741	0.549			
EE4	<---	EE	0.883	0.780			
NP1	<---	NP	0.729	0.531			
NP2	<---	NP	0.948	0.899			
NP3	<---	NP	0.801	0.642			
NP4	<---	NP	0.942	0.887	2.959	4	0.740
MD1	<---	MD	0.953	0.908			
MD2	<---	MD	0.754	0.569			
MD3	<---	MD	0.804	0.646			
MD4	<---	MD	0.843	0.711	2.834	4	0.708
EPER1	<---	EPER	0.874	0.764			
EPER2	<---	EPER	0.913	0.834			
EPER3	<---	EPER	0.862	0.743			
EPER4	<---	EPER	0.811	0.658			
EPER5	<---	EPER	0.982	0.964	3.963	5	0.793

Source: Primary Data

Table 5.62 provides a detailed breakdown of the convergent validity of the model related to resilience strategies that contribute to enterprise performance. The table presents the standardized loadings, squared standardized loadings, sum of squared standardized loadings, number of indicators, and average variance extracted (AVE) for each construct in the model. Standardised loadings represent the strength of the relationships between observed indicators and their corresponding latent variables, with values ranging from 0.733 to 0.982. These loadings are all well above the threshold of 0.70, suggesting that each indicator is a strong representation of its respective latent variable. The squared standardised loadings (ranging from 0.531 to 0.964) indicate the proportion of variance in the observed indicators, which is explained by the latent variable, further confirming the strength of the relationship. The sum of the squared standardised loadings provides an aggregated measure of the total variance explained by each latent variable across all indicators, which is high for each latent variable. For example, the sum of the enterprise performance (EPER) latent variable is 3.963, indicating strong explanatory power across the five indicators. The number of indicators per latent variable ranged from four to five, which is typical for good model specifications. Finally, the AVE values, which range from 0.708 to 0.793, all exceed the threshold of 0.50, signifying good convergent validity for each

construct. This confirms that the latent variables are well defined by their indicators and adequately capture the variance in the data, thus supporting the overall validity of the model.

Table 5.63

Discriminant Validity Fornell Larker Criterion related to Resilience Strategies contributing to Enterprise performance

	DT	FP	EE	NP	MD	EPER
DT	**0.863**					
FP	0.612	**0.857**				
EE	0.612	0.617	**0.847**			
NP	0.614	0.614	0.607	**0.860**		
MD	0.578	0.547	0.547	0.578	**0.842**	
EPER	0.549	0.611	0.512	0.516	0.618	**0.890**

Source: Primary Data

Table 5.63 presents the discriminant validity of the model using the Fornell-Larcker criterion for resilience strategies that contribute to enterprise performance. Discriminant validity assesses whether constructs in the model are distinct from one another, ensuring that the indicators for each latent variable do not overlap excessively with those of the other latent variables. According to the Fornell-Larcker criterion, for discriminant validity to be established, the square root of the average variance extracted (AVE) for each construct should be greater than the correlations between that construct and the other constructs in the model. The diagonal values represent the square root of the AVE for each latent variable, ranging from 0.842 for market diversification (MD) to 0.890 for enterprise performance (EPER), all of which are greater than the off-diagonal correlations with other constructs. For example, the correlation between digital transformation (DT) and financial planning (FP) is 0.612, which is lower than the square root of AVE for DT (0.863), indicating that DT and FP are distinct constructs. Similarly, the correlation between employee engagement (EE) and market diversification (MD) is 0.547, which is less than the square root of the AVE for EE (0.847). The correlations between the constructs were all below the respective square roots of the AVEs, demonstrating that the latent variables were

sufficiently distinct from one another. This confirms that the model exhibits good discriminant validity, ensuring that the constructs measure the unique aspects of resilience strategies that contribute to an enterprise's performance.

Table 5.64

Heterotrait-Monotrait (HTMT) criterion related to Resilience Strategies contributing to Enterprise performance

	DT	FP	EE	NP	MD	EPER
DT						
FP	0.315					
EE	0.418	0.318				
NP	0.512	0.614	0.421			
MD	0.614	0.413	0.478	0.614		
EPER	0.257	0.571	0.516	0.647	0.584	

Source: Primary Data

Table 5.64 presents the Heterotrait-Monotrait (HTMT) criterion for assessing discriminant validity in the model related to resilience strategies that contribute to enterprise performance. The HTMT criterion is an advanced method for evaluating distinctiveness between constructs, where lower values indicate good discriminant validity. According to the HTMT, for discriminant validity to hold, the HTMT value should generally be below 0.85 or, in some cases, 0.90, depending on the research context. In this table, the HTMT values for the correlations between the constructs are calculated, with values below 0.85 indicating acceptable discriminant validity. For instance, the HTMT value between digital transformation (DT) and financial planning (FP) is 0.315, which is well below the 0.85 threshold, indicating that these two constructs are distinct. Similarly, the HTMT value between employee engagement (EE) and networking and partnerships (NP) is 0.421, further confirming the discriminant validity between these constructs. Additionally, the HTMT value between enterprise performance (EPER) and financial planning (FP) is 0.571, which is below the threshold and supports their distinction. The highest HTMT value in this table is between networking and partnerships (NP) and enterprise performance (EPER), which is 0.647, still below the 0.85 threshold, suggesting that while the

constructs are related, they maintain distinctiveness. Overall, the HTMT values across all pairs of constructs demonstrate strong evidence of discriminant validity in the model, confirming that the constructs are adequately separate and measure the unique aspects of resilience strategies that contribute to enterprise performance.

Objective 4: To analyse the role of Socio- Demographic Factors in moderating the relationship between Organizational Resilience and Enterprise Performance.

Objective 4 seeks to investigate the moderating influence of socioeconomic and demographic variables, including age, marital status, education, and industry type, on the relationship between organizational resilience and enterprise performance. These variables are essential for comprehending how individual and organizational characteristics can modify the efficacy of resilience strategies and their impact on overall enterprise performance. Age and marital status may influence entrepreneurial attitudes and risk tolerance, potentially affecting how businesses respond to challenges and uncertainties. Similarly, educational background may affect decision-making capabilities, strategic planning, and innovation, which are crucial for fostering resilience within organisations. The type of industry can dictate the level of resilience required, as certain industries encounter more volatile market conditions than others do. By examining these factors, this objective aims to reveal how variations in socioeconomic and demographic characteristics may either facilitate or hinder the successful implementation of organizational resilience strategies, ultimately affecting enterprise performance. This investigation is vital for tailoring resilience strategies that consider diverse socioeconomic and demographic contexts to ensure more effective outcomes for enterprises across different sectors.

5.7 Model regarding the moderating role of Age in the relationship between Organizational Resilience and Enterprise Performance

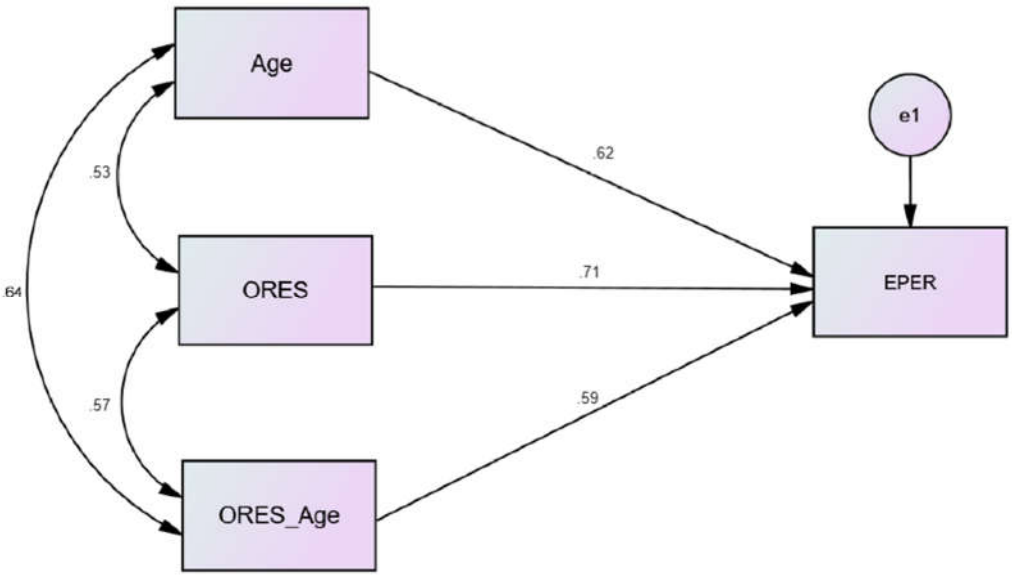
This model considers the influence of age as a moderating factor in the link between organizational resilience (the independent variable) and Enterprise Performance (the dependent variable), with a focus on women-led enterprises. Organizational resilience is defined as the capability of a business to predict, adapt to, and manage disruptions effectively, which is essential for sustaining performance amid environmental

challenges. However, the impact of resilience strategies on performance may differ among the demographic groups. Age, serving as a moderating element, introduces a significant layer of complexity that shapes how entrepreneurs perceive, internalise, and apply resilience. Younger entrepreneurs may exhibit greater flexibility, technological proficiency, and openness to innovative methods, while older entrepreneurs may depend on their experience, stability, and conventional resilience approaches. This model assesses whether age significantly affects the strength or direction of the relationship between resilience and performance, thereby determining whether resilience strategies result in diverse performance outcomes across different age groups. By analysing this moderating effect, this study seeks to provide valuable insights for developing age-specific capacity-building initiatives and targeted policy actions to enhance the resilience and performance of women-led enterprises.

Hypothesis 26: The entrepreneur's age moderates the relationship between Organizational Resilience and Enterprise Performance in women owned enterprises

Figure 5.7

Age moderates the relationship between Organizational Resilience and Enterprise Performance



Source: Primary Data

Table 5.65

The Moderation effect of Age in the relationship between Organizational Resilience on the Enterprises Performance

Dependent Variable	<---	Independent Variable	Estimate	S.E.	C.R.	P	Standardized Regression Weight
EPER	<---	Age	0.733	0.105	6.981	0.015	0.621
EPER	<---	ORES	0.842	0.137	6.146	0.006	0.714
EPER	<---	ORES *Age	0.613	0.141	4.348	0.014	0.592

Source: Primary Data

Table 5.65 presents the results of a moderation analysis exploring how age influences the relationship between organizational resilience and enterprise performance among women-owned enterprises. The findings indicate that age has a significant direct impact on enterprise performance, with an unstandardised estimate of 0.733, standard error of 0.105, and critical ratio (C.R.) of 6.981. The p-value was 0.015, which is below the conventional threshold of 0.05, indicating statistical significance. Similarly, organizational resilience (ORES) has a strong and significant positive effect on enterprise performance, with an estimate of 0.842, standard error of 0.137, C.R. of 6.146, and a p-value of 0.006. The standardised regression weight of 0.714 for ORES confirms its substantial contribution in improving enterprise outcomes.

The interaction term (ORES * Age) reveals a statistically significant moderation effect with an estimate of 0.613, standard error of 0.141, C.R. of 4.348, and a p-value of 0.014. The standardised regression weight was 0.592, suggesting a meaningful interaction. This means that the entrepreneur's age influences the effect of organizational resilience on enterprise performance. Specifically, as age increased, the strength of the relationship between resilience and performance became more pronounced. This supports the hypothesis that an entrepreneur's age moderates the relationship between organizational resilience and enterprise performance in women-owned enterprises. The results suggest that older female entrepreneurs may be better positioned to leverage resilience strategies for improved business outcomes, possibly due to greater experience, decision-making maturity, and adaptability acquired over

time. These insights are valuable for designing targeted support programs that consider age to be a key moderating factor.

Table 5.66

Test(s) of highest order unconditional interaction(s) of ORES *Age

Interaction	R2 -chng	F	df1	df2	p
ORES *Age	0.042	6.483	4	395	0.000

Source: Primary Data

Table 5.66 presents the results of the highest-order unconditional interaction test to examine whether age significantly moderates the relationship between organizational resilience (ORES) and enterprise performance (EPER) in women-owned enterprises. The table reports an R-squared change (R^2-chng) of 0.042, indicating that the inclusion of the interaction term (ORES * Age) in the model explains an additional 4.2% of the variance in enterprise performance beyond that explained by the main effects of organizational resilience and age alone. This improvement in model fit was statistically significant, as reflected by an F-value of 6.483 with degrees of freedom df1 = 4 and df2 = 395, and a p-value of 0.000. A p-value of less than 0.001 ($p < 0.0005$) confirms that the interaction effect is highly significant, providing strong evidence to reject the null hypothesis that age has no moderating effect. Statistically, this result underscores that age not only plays a direct role in influencing enterprise performance, but also significantly interacts with organizational resilience to impact performance outcomes. In practical terms, the significant interaction suggests that the strength or direction of the relationship between resilience strategies and enterprise performance varies depending on the age of the entrepreneur. These findings reinforce the importance of incorporating demographic moderators such as age into enterprise resilience frameworks for a more nuanced understanding of performance determinants among women-led businesses.

5.8 Model regarding the moderating role of Marital Status in the relationship between Organizational Resilience and Enterprise Performance

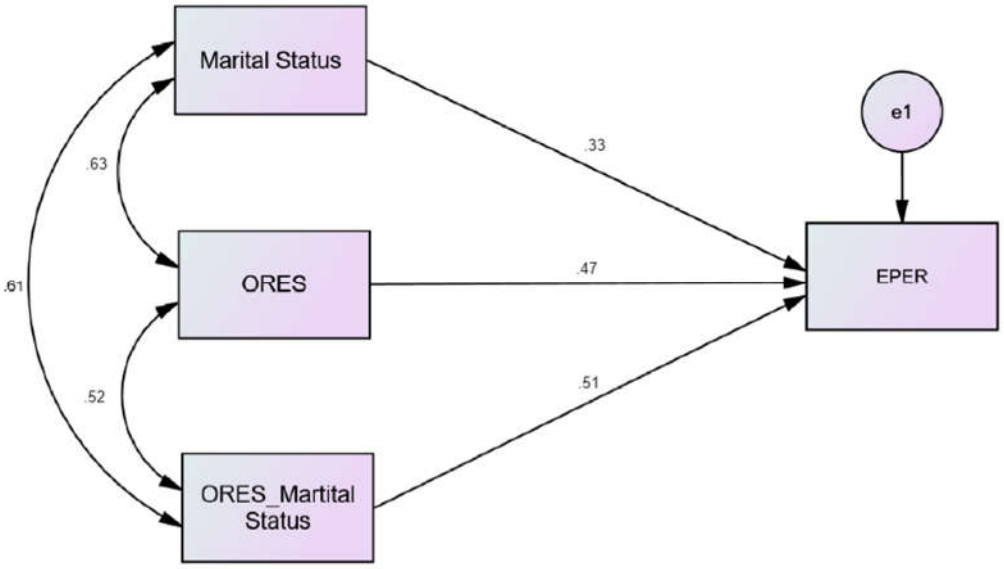
The present model investigates the moderating influence of marital status on the relationship between organizational resilience and enterprise performance in women-owned businesses. Organizational resilience, defined as a firm's ability to anticipate,

prepare for, respond to, and adapt to both incremental and sudden disruptions, is a critical determinant of its performance in dynamic and uncertain environments. While prior research has highlighted the significance of resilience in promoting business continuity and competitive advantage, the impact of personal and demographic factors such as marital status remains relatively underexplored. Marital status may affect entrepreneurs' access to emotional support, time availability, risk tolerance, and work-life balance, all of which can influence the implementation and translation of resilience strategies into performance outcomes. By incorporating marital status as a moderating variable, this model assesses whether the strength or nature of the relationship between organizational resilience and enterprise performance varies according to the marital status of women entrepreneurs. This analysis enhances our understanding of how personal life contexts interact with organizational capabilities to shape business success in women-led enterprises.

Hypothesis 27: An entrepreneur's marital status moderates the relationship between Organizational Resilience and Enterprise Performance in women-owned enterprises.

Figure 5.8

Marital Status moderates the relationship between Organizational Resilience and Enterprise Performance



Source: Primary Data

Table 5.67

The Moderation effect of Marital Status in the relationship between Organizational Resilience on the Enterprises Performance

Dependent Variable	<---	Independent Variable	Estimate	S.E.	C.R.	P	Standardized Regression Weights
EPER	<---	Marital Status	0.501	0.143	3.503	0.002	0.334
EPER	<---	ORES	0.682	0.145	4.703	0.015	0.474
EPER	<---	ORES*Marital Status	0.803	0.156	5.147	0.022	0.514

Source: Primary Data

Table 5.67 presents the moderation analysis examining whether marital status influences the relationship between organizational resilience (ORES) and enterprise performance (EPER) among women-owned enterprises. The estimate for the direct effect of Marital Status on EPER was 0.501, with a standard error (S.E.) of 0.143 and a critical ratio (C.R.) of 3.503. The associated p-value was 0.002, indicating that marital status had a statistically significant direct effect on enterprise performance. The standardised regression weight ($\beta = 0.334$) suggests a moderately positive association, meaning that married or unmarried status can independently influence how women entrepreneurs perceive and achieve enterprise performance. The interaction term ORES * Marital Status showed a regression estimate of 0.803 with an S.E. of 0.156 and a C.R. of 5.147, which was statistically significant ($p = 0.022$). The standardised regression weight for the interaction was 0.514, indicating a strong moderation effect. This result provides empirical support for the hypothesis that marital status moderates the relationship between organizational resilience and enterprise performance**.** Specifically, this implies that the strength and direction of the impact of organizational resilience on enterprise performance vary depending on the marital status of the entrepreneur. For instance, married women may leverage family support structures differently than unmarried women, which could affect how effectively resilience strategies translate into performance gain. Therefore, marital status emerges as a critical socio-demographic factor in understanding how resilience capabilities shape outcomes in women-led enterprises.

Table 5.68

Test(s) of highest order unconditional interaction(s) of ORES * Marital Status

Interaction	R2 -chng	F	df1	df2	p
ORES * Marital Status	0.039	6.012	3	396	0.000

Source: Primary Data

Table 5.68 presents the results of the highest order unconditional interaction test for the relationship between organizational resilience (ORES) and marital status as a moderator on enterprise performance (EPER). The table shows that the interaction effect of ORES * Marital Status contributes an R^2 change of 0.039, indicating that approximately 3.9% of the variance in enterprise performance is explained by the interaction between organizational resilience and marital status. This is a meaningful but moderate effect, suggesting that marital status indeed influences how organizational resilience impacts enterprise performance, although other factors may still play a more dominant role. The F-statistic for this interaction was 6.012, with degrees of freedom (df1 = 3, df2 = 396) and a p-value of 0.000, which is highly significant. The highly significant p-value indicates that the moderating effect of marital status is statistically reliable and that the interaction between organizational resilience and marital status contributes significantly to explaining variations in enterprise performance. This finding suggests that marital status is a key factor in determining how organizational resilience is applied and how it influences enterprise outcomes. The test demonstrated that women entrepreneurs' marital status plays an important role in the effectiveness of resilience strategies and their impact on business performance.

5.9 Model regarding the Education moderates the relationship between Organizational Resilience and Enterprise Performance

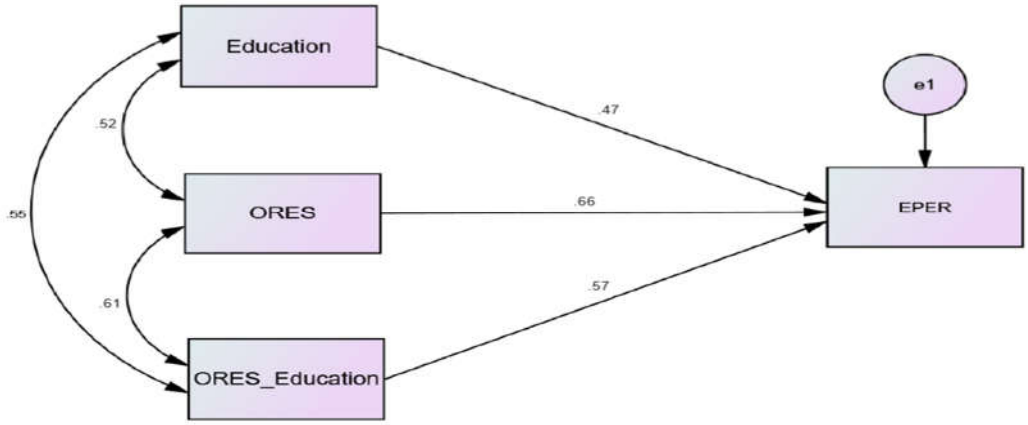
This model examines the moderating influence of education on the relationship between organizational resilience and enterprise performance in women-owned businesses. Organizational resilience is defined as an enterprise's strategic and adaptive capacity to endure and prosper amid disruptions, uncertainties, or market

fluctuations. Education, as a socio-demographic factor, can significantly shape an entrepreneur's cognitive abilities, decision-making processes, risk management strategies, and openness to innovation, all of which directly affect the conceptualisation and implementation of resilience strategies. Higher educational qualifications may provide women entrepreneurs with advanced problem-solving skills, greater exposure to business practices, and enhanced access to information and resources, potentially amplifying the positive impact of resilience on performance. Conversely, entrepreneurs with lower educational levels might encounter challenges in fully leveraging resilience mechanisms, which could moderate the strength of the relationship. By analysing education as a moderating variable, this model seeks to determine the extent to which educational attainment can influence the effectiveness of organizational resilience in enhancing enterprise performance.

Hypothesis 28: Entrepreneurs' education moderates the relationship between Organizational Resilience and Enterprise Performance in women owned enterprises.

Figure 5.9

Education moderates the relationship between Organizational Resilience and Enterprise Performance



Source: Primary Data

Table 5.69

The Moderation effect of Education in the relationship between Organizational Resilience on the Enterprises Performance

Dependent Variable	<---	Independent Variable	Estimate	S.E.	C.R.	P	Standardized Regression Weights
EPER	<---	Education	0.664	0.112	5.929	0.017	0.474
EPER	<---	ORES	0.742	0.165	4.497	0.013	0.661
EPER	<---	ORES*Education	0.728	0.144	5.056	0.008	0.574

Source: Primary Data

Table 5.69 outlines the results of the moderation analysis assessing the role of education in moderating the relationship between organizational resilience (ORES) and enterprise performance (EPER) among women-led enterprises. The direct effect of Education on EPER shows an unstandardised estimate of 0.664, with a standard error (S.E.) of 0.112 and a critical ratio (C.R.) of 5.929, which is statistically significant at $p = 0.017$. The corresponding standardised regression weight ($\beta = 0.474$) indicates a moderate positive influence, suggesting that higher levels of education among female entrepreneurs are associated with better enterprise performance outcomes. This implies that educational attainment alone enhances a woman entrepreneur's ability to make informed strategic decisions, effectively utilise resilience strategies, and capitalise on growth opportunities. The interaction term ORES * Education has an estimate of 0.728, S.E. of 0.144, and C.R. of 5.056, which was statistically significant ($p = 0.008$). The standardised regression weight for this moderation effect was 0.574, indicating a strong and meaningful moderating role of education in the relationship between organizational resilience and enterprise performance. This supports the hypothesis that education level moderates the relationship between ORES and EPER in women-owned enterprises. The results suggest that female entrepreneurs with higher educational qualifications may be more capable of applying resilience strategies (such as proactive planning, adaptability, and resource optimisation) in ways that enhance business performance. By contrast, those with lower educational backgrounds may face challenges in operationalising these strategies effectively. Hence, education acts as a crucial contextual factor shaping the effectiveness of resilience in driving enterprise success.

Table 5.70

Test(s) of highest order unconditional interaction(s) of ORES*Education

Interaction	R2 -chng	F	df1	df2	p
ORES*Education	0.037	5.938	4	395	0.000

Source: Primary Data

Table 5.70 presents the results of the highest-order unconditional interaction test for the relationship between organizational resilience (ORES) and education as a moderator of enterprise performance (EPER). The interaction effect between ORES and education shows an R^2 change of 0.037, meaning that education contributes to explaining approximately 3.7% of the variance in enterprise performance when moderating the relationship between organizational resilience and performance. This indicates that education has a moderating effect on how organizational resilience influences enterprise outcomes, suggesting that higher levels of education might enhance the positive effects of resilience strategies on business performance. The F-statistic for this interaction is 5.938, with degrees of freedom (df1 = 4, df2 = 395) and a p-value of 0.000, which is highly significant. A p-value of less than 0.05 indicates that the moderation effect of education is statistically reliable and meaningful. This suggests that education plays a crucial role in strengthening the relationship between organizational resilience and enterprise performance. As such, the results suggest that women entrepreneurs with higher levels of education may be better equipped to apply resilience strategies effectively, leading to better business performance. The findings underscore the importance of education in shaping how organizational resilience is translated into tangible enterprise outcomes.

5.10 Model regarding the Type of Industry moderates the relationship between Organizational Resilience and Enterprise Performance

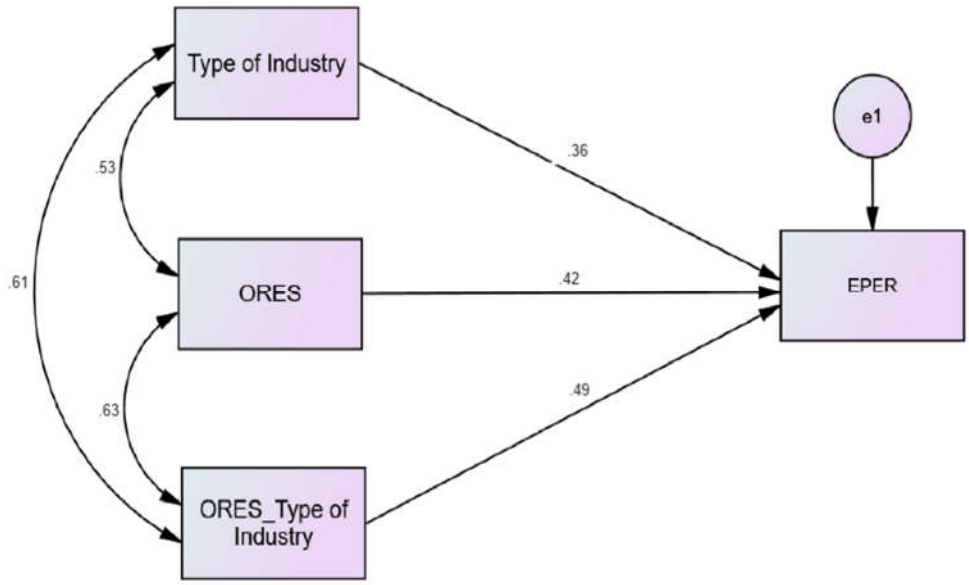
This model investigates the moderating influence of industry type on the relationship between organizational resilience and enterprise performance in women-owned enterprises. Organizational resilience refers to an enterprise's ability to anticipate, prepare for, respond, and adapt to both incremental and sudden disruptions to ensure

survival and prosperity. However, the effectiveness of resilience strategies can vary considerably, depending on the nature and characteristics of the industry in which the enterprise operates. Different industries encounter varying levels of volatility, regulation, competition, customer demand, and supply chain dependencies. For example, the manufacturing sector may prioritise operational agility and resource adaptability, whereas service-oriented industries may emphasise customer retention and workforce flexibility. Consequently, the type of industry may affect how resilience practices are implemented and the extent to which they influence performance outcomes such as profitability, growth, and sustainability. This model analyses whether and how the relationship between organizational resilience and enterprise performance is moderated by industry type, thereby providing insights into sector-specific strategic implications for enhancing the success of women-led enterprises.

Hypothesis 29: The entrepreneur's industry type moderates the relationship between Organizational Resilience and Enterprise Performance in women-owned enterprises.

Figure 5.10

Type of Industry moderates the relationship between Organizational Resilience and Enterprise Performance



Source: Primary Data

Table 5.71

The Moderation effect of Type of Industry in the relationship between Organizational Resilience on the Enterprises Performance

Dependent Variable	<---	Independent Variable	Estimate	S.E.	C.R.	P	Standardized Regression Weights
EPER	<---	Type of Industry	0.524	0.121	4.331	0.003	0.364
EPER	<---	ORES	0.669	0.135	4.956	0.016	0.425
EPER	<---	ORES*Type of Industry	0.712	0.119	5.983	0.005	0.489

Source: Primary Data

Table 5.71 presents the results of the moderation analysis that investigates how industry type moderates the relationship between organizational resilience (ORES**)** and enterprise performance (EPER) in women-owned enterprises. The direct effect of industry type on EPER shows an estimate of 0.524, with a standard error (S.E.) of 0.121 and a critical ratio (C.R.) of 4.331, which is statistically significant at p = 0.003. The standardised regression weight is 0.364, indicating a moderate positive relationship between the type of industry and enterprise performance. This suggests that female entrepreneurs operating in certain industries experience higher enterprise performance due to industry-specific factors, which may include access to resources, market demand, or the degree of innovation in that sector. The influence of industry type suggests that industry characteristics play a role in enhancing or hindering overall business performance. The interaction term ORES * Type of Industry has an estimate of 0.712, with an S.E. of 0.119 and a C.R. of 5.983, which is statistically significant at p = 0.005. The corresponding standardised regression weight was 0.489, indicating a strong moderating effect. This result supports the hypothesis that industry type moderates the relationship between organizational resilience and enterprise performance in women-owned enterprises. Specifically, women entrepreneurs in certain industries may be better positioned to leverage organizational resilience strategies such as adapting to challenges, managing crises, and innovating, resulting in better performance outcomes. In contrast, other industries may not provide the

same level of support or opportunities, limiting the impact of resilience on performance. Therefore, the type of industry in which the enterprise operates is a crucial factor influencing the effectiveness of organizational resilience in driving enterprise success.

Table 5.72

Test(s) of highest order unconditional interaction(s) of ORES*Type of Industry

Interaction	R2 -chng	F	df1	df2	p
ORES*Type of Industry	0.041	7.154	2	397	0.000

Source: Primary Data

Table 5.72 presents the results of the highest order unconditional interaction test for the relationship between organizational resilience (ORES) and the type of industry as a moderator of enterprise performance (EPER). The interaction effect between ORES and industry type shows an R^2 change of 0.041, indicating that industry type contributes to explaining approximately 4.1% of the variance in enterprise performance when moderating the relationship between organizational resilience and performance. This suggests that the type of industry in which a women-owned enterprise operates has a notable effect on how organizational resilience influences business outcomes. Industries that are more resilient or adaptable may experience stronger positive effects of organizational resilience on performance. The F-statistic for this interaction is 7.154, with degrees of freedom (df1 = 2, df2 = 397) and a p-value of 0.000, which is highly significant. This p-value indicates that the moderating effect of industry type on the relationship between organizational resilience and enterprise performance is statistically robust and significant. The results imply that different industries may provide varying levels of support or resistance to the implementation of resilience strategies, thereby influencing the extent to which organizational resilience impacts business performance. This finding highlights the importance of the industry context in understanding the effectiveness of resilience strategies, with women entrepreneurs in certain industries potentially benefiting more from such strategies than others.

CHAPTER 6
FINDINGS, SUGGESTIONS, PRACTICAL IMPLICATIONS, RECOMMENDATIONS TO POLICY MAKERS AND CONCLUSION

6.1 Findings
6.2 Suggestions
6.3 Practical Implications of the Study
6.4 Recommendations to Policy Makers
6.5 Future Scope of Research
6.6 Conclusion

6.1 Findings

This research shows that Kerala women entrepreneurs are resilient in their organisations that have been able to be kept afloat by a woman's determination, business adaptability, and community support systems. However, women-led enterprises, which are grappling with numerous hindrances, including lack of capital, gender bias, and restrictions from regulatory authorities, are still able to recover from economic upheavals such as pandemics (pandemic of COVID 19) and natural calamities (floods). It also surfaced that resilience jumps manifold when one has an internal motivation to succeed against odds, constantly learning, and getting adopted digitally. Those who came out on top in programs offering capacity building and flexible business models were more equipped to handle uncertainty and had to pivot their strategies when needed.

In addition, social networks, peer support, and government interventions to increase organizational resilience are emphasised. Women entrepreneurs who were involved in self-help groups, women's business networks, and state-sponsored programs in providing training sessions demonstrated better confidence and adaptability. The results further suggest that resilience is a proactive capacity, not only when it comes to thinking on its feet, but also when it comes to and supported by strategic planning, emotional intelligence, and a clear long-term vision of sustainability. Thus, the overriding of this research is that, despite the pitfalls, there are systemic barriers, and a hardy mindset coupled with external facilitating mechanisms helps many women entrepreneurs in Kerala survive and expand their ventures in the face of adversities to provide helpful insights into the formulation of policy and entrepreneurial development programs.

6.1.1 Impact of Organizational Resilience on the Performance of Women-Owned and Led Enterprises in Kerala

Organizational resilience and its impact on the performance of women-owned and led enterprises in Kerala has provided critical insight into how adaptability, proactive planning, and recovery capabilities add to enterprise success in a dynamic and very

often challenging environment. A firm's capacity to adapt and respond to incremental changes and sudden disruptions is organizational resilience, which dictates the sustainability of an enterprise. Resilience is a strategic asset that empowers women entrepreneurs in Kerala with sociocultural and resource constraints to buffer the market, resource constraints, and challenges of business institutions. This impact can be assessed by providing an empirical basis to understand how resilient practices affect key performance indicators such as profitability, market competitiveness, customer retention, and innovation. In addition, this exploration is timely and germane, given its congruence with more general state efforts to improve gender-inclusive entrepreneurship and economic empowerment. Analyses of direct relationship between organizational resilience and enterprise performance allow for the identification of the strength of the linkage between the resilience of women enterprise leaders and the performance of their enterprises.

1. The ANOVA test results exhibited a statistical difference in the organisational dimensions of resilience among different age groups of women entrepreneurs in Kerala. In particular, the adaptability factor showed a significant variation with a p-value of 0.013, namely those entrepreneurs aged <25 years recorded the highest mean score (M = 4.293), while entrepreneurs aged 35–45 years recorded the lowest (M = 3.054). Resourcefulness was also significantly different across different age groups (p = 0.010), with the < 25 years group having the highest mean (M = 4.195) and the 45–55 years group having the lowest (M = 3.036). With respect to the Crisis Management dimensions, there were significant differences (p = 0.007), with a high mean in the group of < 25 years (M = 4.256) and low mean in the group of 25–35 years (M = 3.026). No statistically significant differences were found with respect to proactiveness (p = 0.631) and innovation (p = 0.133). These findings imply that younger women entrepreneurs take advantage of more resistance than older women entrepreneurs in urgent areas that are highly critical for enterprise performance.

2. ANOVA to establish the existence of an association between organizational resilience dimensions and the marital status of women entrepreneurs in Kerala resulted in statistically significant differences in adaptability ($p = 0.003$), proactiveness ($p = 0.008$), and crisis management ($p = 0.021$). Among the classified individuals, single women showed the highest mean in adaptability (4.293), followed by married (4.154), divorced (3.974), and widowed (3.139). Single (4.329) and widowed women (4.266) were considered to be the most proactive, while married (3.279) and divorced women (3.132) were less proactive. Single women had the highest crisis management (4.256) skill, as compared to widowed (4.152), married (4.119), and divorced (3.868). In contrast, no significant differences were observed in terms of resourcefulness ($p = 0.313$) and innovation ($p = 0.177$), indicating that marital status does not impact these dimensions of resilience. Thus, some aspects of organisational resilience, such as adaptability, proactiveness, and crisis management, differ with marital status and consequently affect business performance.

3. ANOVA applied to test the relationship between organizational resilience dimensions and the education level of women entrepreneurs in Kerala, was found statistically significant for adaptability ($p = 0.006$), resourcefulness ($p = 0.017$), and innovation ($p = 0.012$). The mean adaptability of women with school certification was 4.175 and professional qualification was 4.121, whereas it was lowest for postgraduates (3.208). Resourcefulness was also the highest among those with graduates (4.132) and the lowest among postgraduates (3.039). In case of innovation School certification and post-graduate women had the highest mean levels (4.250 and 4.247, respectively), whereas the lowest mean was reported by women who received PDC/HSS education (mean 3.947). There were no significant differences with respect to proactiveness ($p = 0.807$) or crisis management ($p = 0.939$) based on educational level. This outcome suggests that education level had a significant impact on adaptability, resourcefulness, and innovation, while proactiveness

and crisis management did not show significant differences across educational categories.

4. ANOVA used to investigate the relationship between organizational resilience dimensions and the type of industry women entrepreneurs engaged in, showed significant difference in adaptability (p=0.017), resourcefulness (p=0.030), crisis management (p=0.007) and innovation (p=0.019). Women in the manufacturing sector exhibited the highest mean scores for adaptability (mean = 4.277), resourcefulness (mean = 4.385), crisis management (mean = 4.338), and innovation (mean = 4.354), followed by those of their counterparts in service and trade. The results did not indicate that proactiveness varied across industries (p = 0.325), as the mean scores were similar for the manufacturing (mean = 4.385), service (mean = 4.232), and trade (mean = 4.282) sectors. The findings of this research demonstrate how industry type affects different dimensions of organizational resilience and higher levels of resilience for manufacturing-sector entrepreneurs, which might positively impact business performance.

5. The results of the ANOVA conducted to probe the relationship between enterprise performance and women's age as female business owners in the state of Kerala found age to be significant for customer retention (F = 3.945, p = 0.002) and continuity of business (F = 2.317, p = 0.017). The women in the age group of 35 – 45 years retained customers the most (mean = 4.701), while those in the age group 45 – 55 years contributed the most to business continuity (mean = 4.429). However, there are no significant differences in sales growth (F = 1.726, p = 0.143), profitability (F = 1.338, p = 0.255), or market share (F = 2.360, p = 0.153), which means that age does not significantly affect any of these aspects of enterprise performance. Thus, age has a negligible effect on most performance measures other than customer retention and business continuity.

6. The ANOVA results of the relationship between enterprise performance and marital status of women entrepreneurs in Kerala showed significant differences in sales growth (F = 2.843, p = 0.038), business continuity (F = 2.803, p = 0.010), and market share (F = 2.543, p = 0.016). Married entrepreneurs had the highest sales growth (mean = 4.333) and business continuity (mean = 4.468), implying that marital status had a positive impact on these performance indicators. In addition, marital status might also influence market share, as divorced women entrepreneurs had the highest market share (mean = 4.684). However, it was found that profitability (F = 1.542, p = 0.203) and customer retention (F = 1.096, p = 0.351) were not significantly different with respect to marital status.

7. A series of ANOVA were conducted to analyse the relationship between enterprise performance and the education levels of women entrepreneurs in Kerala. There were differences in sales growth (F = 4.944, p = 0.008), profitability (F = 3.236, p = 0.016), and customer retention (F = 4.562, p = 0.004) between the education levels of the women entrepreneurs. Women with school certification recorded the highest growth (4.850), whereas those with PDC/HSS certification recorded the highest profits (4.079) and customer retention (4.316). However, business continuity (F = 1.215, p = 0.304) and market share (F = 1.092, p = 0.360) were not significantly affected by educational level. In general, the level of education has a significant impact on sales growth, profitability, and customer retention but does not affect business continuity and market share.

8. For female entrepreneurs in Kerala, the ANOVA to discover the relationship between enterprise performance and industry type showed sales growth (F = 3.361, p = 0.016), profitability (F = 3.638, p = 0.027), and customer retention (F = 3.352, p = 0.004) significant difference. Women entrepreneurs in the service industry had the highest sales growth (mean = 4.502), whereas manufacturing entrepreneurs had the highest profitability (mean = 4.662) and customer retention (mean = 4.000). Finally, business continuity (F = 2.711, p

= 0.268) and market share (F = 1.032, p = 0.357) showed no significant differences in relation to industry type on these aspects. In general, industry type is significant for sales growth, profitability, and customer retention, yet relatively insignificant for business continuity or market share

9. The between-subject effects tests (MANOVA) show that all five enterprise performance variables of women-owned and-led enterprises in Kerala were significantly affected by organisational resilience. Specifically, sales growth (F = 2.015, p = 0.005), profitability (F = 3.145, p = 0.014), customer retention (F = 4.638, p = 0.016), business continuity (F = 3.221, p = 0.006), and market share (F = 2.426, p = 0.024) had significant effect on organisational resilience. Customer retention (0.401) and profitability (0.428) have relatively high effect sizes being higher partial eta squired values which suggest that organizational resilience has a substantial impact on these variables.

10. There is Significant relationship between Proactiveness and Organizational Resilience (Estimate 0.818; C.R. = 9.402; p=0.001). The C.R. significantly exceeds the threshold of 1.96. Thus, enterprises with higher levels of proactiveness are more resilient, and hence are able to perceive and react to changes or challenges in the business environment quite well. As such, leadership and decision-making approaches, which are proactive factors, significantly increase the resilience of women owned enterprises.

11. The researcher also found that women-owned enterprises with greater resourcefulness (RESFL) have a significantly positive impact on organizational resilience (ORES). (Estimation 0.702; C.R. value = 8.069; p = 0.014). This result implies that women-founded enterprises seem to be better at taking advantage of resourceful leadership, flexibility, and problem-solving strategies that enable them to develop stronger organisational resilience. It is revealed that enterprises with resourceful leaders who can utilise available resources more efficiently tend to create a more resilient foundation, which

can survive the challenges and keep adjusting to the changed market conditions.

12. The Organizational resilience of women owned enterprise is highly influenced by the factor of crisis management (CM). The results indicate that (Estimate = 0.807; Cr = 9.170, p = 0.019) crisis management is a statistically significant predictor of organisational resilience. Enterprises with higher levels of resilience tend to have strong crisis management practices, that is, the ability to anticipate and manage crises and recover from crises. The application of these practices enables enterprises to maintain stability, curb the adverse effects of unexpected shocks, and prove that crisis management is essential for enhancing the organisation's resilience, mostly in women-owned enterprises.

13. Organizational resilience (ORES) is driven by innovation (INNOV) in female enterprises. The relationship between innovation and organizational resilience is statistically significant, with an estimate of 0.781, C.R. of 7.733, and p= 0.003. This implies that enterprises that are ready to innovate through product development, process improvements, and business strategies are more likely to have resilient structures and processes. Thanks to innovative approaches, an enterprise can change the market, meet customer needs, and gain a competitive advantage, which leads to the strengthening of an enterprise’s resilience in challenging conditions.

14. Organizational resilience (ORES) in women-owned enterprises is based on adaptability (ADAPT). The results (C.R. 9.407, p-value 0.007, and estimated value of C.R. 0.856) indicate that adaptability has a statistically significant relationship with organisational resilience. This suggests that women-owned enterprises which are adaptable, that is, able to quickly react to changes and the surrounding circumstances, are better at coping in uncertain times. An enterprise which is adaptable can rapidly pivot strategy, operations, and offerings, leading to long-term sustainability and resilience.

15. A significant positive relationship exists between enterprise performance (EPER) and sales growth (SG) in women enterprises. It is found that (CR of 10.029, estimate of 0.692, and a p-value of 0.005) higher sales growth is related to better overall performance such as better revenue and market dominance. Overall, enterprises that continually post growth in sales are likely to experience better financial stability and competitive positioning; hence, there is probable assurance of the long-term performance and success of the enterprise.

16. The results show that the performance of women-owned enterprises is significantly associated with profitability (CR= 12. 705.p= 0.016, estimate= 0.991). This finding indicates that higher profitability is an important determinant of business performance. Enterprises with higher profitability are often characterised as having better financial health, and therefore have more to reinvest in their operations, products, or services and work towards long-term success. Therefore, more profitable women are able to create their enterprises.

17. Another factor that affects the performance of Women Owned Enterprise is Customer Retention (CR). With a C.R. of 9.534, p-value of 0.007, and estimate of 0.839, the result is a statistically significant positive relationship. Thus, in a market where enterprises that retain customers are likely to be more successful in several dimensions, from the profitability dimension to brand loyalty and market competitiveness. A high customer retention rate indicates that the enterprise has perfectly met some customer needs, has built strong relationships, and has created value, which leads to continuing business performance.

18. Enterprise performance and business continuity are important factors in women owned enterprises. The statistical significance of this relationship is proven by its estimate of 0.994 with a C.R. of 12.272 and a p-value of 0.016. This result indicates that enterprises with high-quality Business Continuity

Plans (BCPs) demonstrate superior performance compared to those without such plans. Business continuity plans are important to women's businesses in helping them survive when faced with potentially catastrophic events outside their control and, hence, contribute directly to their performance.

19. Women's owned enterprise performance (EPER) is significantly associated with Market Share (MS). The analysis confirms that an increase in market share positively affects enterprise performance by citing data that estimate the amount to be 0.835, C.R. to be 10.987, and the p-value to be 0.008. Enterprises which secure a larger share of the market are likely to have a stronger brand presence, a more loyal and stable customer base, and predictable revenue streams. The greater the market share, the better its performance, which helps improve the competitive advantage of the enterprise in the market.

20. Women's organizational resilience (ORES) has a strong positive relationship with enterprise performance (EPER). The relationship between organizational resilience and enterprise performance is statistically significant, given that the estimated average value equals 0.872, the C.R. equals 11.784, and the p-value equals 0.000. In other words, firms that show higher ratios of organizational resilience (via proactive strategies, innovation, and adaptability, as well as crisis management) perform better. Resilience is the ability of an organisation to manage adverse and difficult challenges and uncertainties, inevitably leading to higher overall performance in the long term.

6.1.2 Mediating role of Resilience Strategies in the relationship between Organizational Resilience and Enterprise Performance

The second contribution to exploring the mediating role of resilience strategies in the relationship between organizational resilience and enterprise performance helps to explain how resilient organisations transform their capabilities into actual business results. Although organizational resilience is an enterprise's overall ability to withstand and adapt to disruptions, resilience strategies are actions and approaches (e.g. crisis planning, resource reallocation, innovation adoption, and stakeholder

engagement) by which this capacity is put into practice. In this context of women owned and led enterprises especially in Kerala, these pathways define necessary strategy pathways to convert the resilience potential into improved performance outcome of profitability, market reach, operational efficiency and long-term sustainability. The existence of this mediating role also suggests that the presence of resilience itself is not sufficient for success unless it is actually manifested by behaviours aimed at managing uncertainty and complexity. In addition to enhancing the theoretical framework with respect to enterprise resilience, this analytical perspective provides actionable insights into which strategic levers are most useful in promoting the performance of the business under external and internal challenges that entrepreneurs, policymakers, and support institutions can draw from.

1. The analysis suggests a positive and strong statistical association between Organizational resilience (ORES) and Resilience Strategies (RSTR) of women-owned enterprises with a path coefficient of 0.773, critical ratio (C. R) 5.119, and p-value 0.000. The findings supports that organizational resilience has a considerable positive influence on the development and implementation of vulnerability reduction strategies. As the resilience strategy strengthens, the organisation becomes more adaptable and sustainable.

2. There is a highly significant relationship between Resilience Strategies (RSTR) and Enterprise Performance (EPER) on women-owned enterprises. (Estimate 1.297; CR value = 5.543; p = 0.000). Hence, the hypothesis that effective resilience strategy adoption leads to a significant improvement in enterprise performance is supported by this result.

3. ORES is also directly related to Enterprise Performance (EPER) in women-owned enterprises (Path coefficient is 0.862, C.R. is 7.561, and P>0.000 (p=0.000); thus, a good and positive relationship exists between organizational resilience and enterprise performance. This implies that organisations which are more resilient have chances to achieve better

performance outcomes. The results also show that organizational resilience is a critical factor that determines the performance of women-owned firms.

4. However, RSTR statistically mediated the relationship between ORES and EPER. With a p-value of 0.019, the indirect effect of 0.116 showed that Resilience Strategies partly mediated the relationship between ORES and EPER. Statistical significance was also observed for the direct effect of ORES on EPER (0.572, p = 0.003) and the total effect (0.688, p = 0.018). These results show that the relationship between Organizational resilience and enterprise performance has a significant impact on Resilience Strategies. These results indicate that Organizational resilience is positively related to Enterprise Performance and that the effect of Organizational resilience on Enterprise Performance is intensified when Resilience Strategies are implemented, which indicates the mediating role of resilience strategies between these variables.

5. The results indicated partial mediation of Resilience Strategies in the relationship between Organizational resilience and enterprise performance using Baron and Kenny's (1986) classical method of mediation analysis. The p-value of 0.018 and total effect of 0.688 were found to be statistically significant; hence, Organizational resilience has a strong overall impact on Enterprise Performance. The analysis found that both the direct effect (0.572, p = 0.003) and indirect effect (0.116 p = 0.019) were significant, and that Resilience Strategies partially mediated the relationship. Organizational resilience partially mediates the effect of Resilience Strategies on Enterprise Performance which implies that Resilience Strategies lead to enhanced effects on enterprise performance through Organisational resilience.

6.1.3 Most effective Resilience Strategies (RS) contributing to improved performance among women-led enterprises.

For a better understanding of how these businesses survive uncertainty and grow amidst it, it is fundamental to identify the most effective resilience strategies that

enhance performance among women-led enterprises. Several targeted practices, such as proactive risk management, adaptive leadership, financial prudence, innovation adoption, workforce flexibility, and stakeholder collaboration, comprise resilience strategies that enable enterprises to respond appropriately to disruptions and continue to function. In relation to women entrepreneurs, particularly in a dynamic and diverse region like Kerala, these strategies are significant in the furtherance of such discourse both because of the gender-specific challenges they face, such as restricted access to resources and social presumption, and the constraints imposed by work-life balance. This study examines what strategies matter most in their drive to improve enterprise performance, as it indicates adaptive mechanisms of success that can help entrepreneurs and policymakers develop resilient business ecosystems. Specifically, the findings serve practical implications by identifying the specific strategy that yields the highest returns in terms of profitability, stability of operations, customer satisfaction, and long-term sustainability if these strategies are embedded in the culture of an organisation. This understanding can serve as a basis for targeted training, policy support, and capacity-building programs on resilience-focused development to empower women entrepreneurs.

1. Results from the Analysis of Variance (ANOVA) showed a significant effect of age on the adoption of some resilience strategies in women-led enterprises, such as online transformation, financial planning, and employee engagement. This is evidenced by the significant p values (0.010, 0.020, and 0.010, respectively), which demonstrate that age affects the utilization of these strategies during the adoption phase. In case of digital transformation women under 25 years exhibited the greatest mean score (4.524), while those aged 45-55 years demonstrated the lowest mean score (3.196). In financial planning, women under 25 years and those over 55 years had higher mean scores (4.293 and 4.143), but the middle-aged groups (25-35 years and 35-45 years) demonstrated lower scores. Employee engagement also showed significant age-related differences, with the younger group (< 25 years) having the highest mean (4.366) and the 25-35 years group having the lowest (3.053).

Age did not exert a significant influence on network in and partnerships (p= 0.135) or market diversification (p= 0.117) indicating that these strategies were hardly affected by age. From these findings, age was found to be a significant factor in adopting some resilience strategies which results in boosting the performance of women-run enterprises.

2. Results from the Analysis of Variance (ANOVA) indicate that marital status influence some resilience strategies of women entrepreneurs. Financial planning (p = 0.037), employee engagement (p = 0.010), networking and partnerships (p = 0.006), and market diversity (p = 0.028) differed significantly depending on marital status. Financial planning (mean = 4.293), employee engagement (mean = 4.366), and market diversification (mean = 4.207) were found to be the most practiced strategies, with the highest scores demonstrated by the single women group. The average value (mean) for networking and partnerships was highest for divorced women (mean = 4.632). In contrast, the scores in these dimensions were found to be relatively lower in the case of married and widowed women compared to single women, with married women scoring the lowest for employee engagement (mean = 3.159) and networking (mean = 3.801). Thus, these findings indicate that marital status is a factor influencing the development of resilience strategies with single separated women being more inclined to adopt methods that improve performance in women owned firms.

3. The results of the Analysis of Variance (ANOVA) show that educational qualifications have a significant effect on some resilience strategies of women entrepreneurs. Differences were found in the digital transformation (p = 0.003), financial planning (p = 0.030), officer engagement (p = 0.018), and market diversification of products and services (p = 0.014) based on educational qualifications. Participants with degrees had the highest engagement in digital transformation (mean =4.479), and school-certified participants had the highest engagement in financial planning (mean =4.250), employee engagement (mean =4.375), and market diversification (mean

=4.175). However, education did not significantly impact networking and partnerships (p = 0.286), as the mean scores were more or less the same across all educational levels. These findings imply that women held lower educational qualifications, and more so for school certification, are more engaged in resilience strategies that could reduce performance in women-led enterprises.

4. The ANOVA results indicate that industry type is significantly associated with women entrepreneurs' adoption of resilience strategies. Digital transformation (F = 3.463, p = 0.033), financial planning (F = 3.732, p = 0.025), and employee engagement (F = 3.729, p = 0.013) showed significant differences. Entrepreneurs of the trade and service sectors were more involved in digital transformation, while manufacturing entrepreneurs demonstrated better strategies of engagement of employees and financial planning. However, two other areas of business networking and partnerships (F = 2.376, p = 0.194) and market diversification (F = 1.904, p = 0.150) did not show differences between industries, with trade leading in either area. The results indicate that industry type impacts the uptake of some resilience strategies, such as digital transformation, financial planning, and employee engagement which encourages the performance improvement of women-led businesses.

5. In the Tests of Between-Subjects Effects (MANOVA), resilience strategies significantly impact sales growth (F = 3.200, p = 0.019); resilience strategies explaining 20.1% of the variance in sales growth. For profitability (F = 4.764, p = 0.007); resilience strategies account for 31.4% of the variance in profitability. Customer retention also showed a significant effect. (F = 4.747, p = 0.015) and explaining 10.7% of the variance (Partial eta squired value 0.107). However, resilience strategies did not have a strong impact on business continuity (F = 3.730; p = 0.483) and market share (F = 3.864; p = 0.156), and the effect size was small for both. Resilience strategies appear to be important levers of sales growth, profitability, and customer retention in women-led

enterprises, but their effects on business survival and market share are less marked.

6. The results showed that financial planning is the most effective resilience strategy that enhance better performance among women-led enterprises. It has the strongest positive impact on enterprise performance (path estimate= 1.858, C. R=13.177 p-value = 0.001). It can be concluded that sound financial strategies are key factors behind the performance of female firms. The most influential strategy for resilience is financial planning which allows women entrepreneurs to carefully manage the available resources and make informed, wise decisions that help them sustain themselves in the long run.

7. Employee engagement also helps improve enterprise performance, with a path estimate of 1.721, the p-value is 0.039, and the C.R. is 10.824. This, in turn, helps increase performance because engaged employees are likely to be more productive, innovative, and committed to the success of the business. This points to the significance of cultivating a positive organisational culture that inspires employees and acclimates them to the business objectives of employee engagement as an essential element of the resilience strategy.

8. It is found that Digital transformation has substantial influence on enterprise performance (estimate= 1.637; critical ratio =14.616; p-value of 0.000). Digital technologies such as online platforms, automation tools, and digital marketing allow women entrepreneurs to reach more markets, enhance their operational efficiency, and improve the delivery of customer experience. This proves that digital transformation should be accepted as a resilience strategy to influence the upper hand of the performance of women-founded enterprises in coping with a changing business environment.

9. The Analysis shows that market diversification positively influences business performance. (path estimate= 1.625; p= 0.015; CR= 11.130). The expansion into new markets enables women entrepreneurs to offset the risks linked to market fluctuations and access new sources of revenue. The effect of this

strategy is slightly less pronounced than that of financial planning and employee engagement; however, this strategy contributes to the enhancement of business resilience and performance. Thus, diversification of the market is a very important strategy that assists in the sustainability and prospects of the growth of women-led enterprises.

10. Networking and partnerships also positively influence enterprise performance (path estimate =1.611; CR= 11.188: p= 0.021). Establishing partnerships with other businesses, suppliers, and customers helps create strong networks, which helps women entrepreneurs access new opportunities, resources, and expertise for business growth. Even though the impact of networking and partnership is less significant compared to other resilience strategies, networking and partnership are significant elements in boosting the performance of women-led enterprises.

11. From the results, it has been established that financial planning plays the strongest role in sustaining the positive performance of enterprises led by women, since it has the highest standardised estimate of 1.858. Employee engagement has an estimate of 1.721, meaning that its relative importance contributes specifically to performance enhancement. The estimate of 1.637 is quite large, suggesting that digital transformation has a positive influence. Market diversification (1.625) and networking and partnerships (1.611) also had positive, but marginally lesser effects. All relationships are statistically significant with critical ratios at high and p-values at low, which indicates that each resilience strategy significantly affects enterprise performance. Financial planning was found to be the most efficient resilience strategy after employee engagement and digital transformation, but before market diversification and networking, it was still relevant but slightly weaker.

6.1.4 Moderating Role of Socio- Demographic Factors in the relationship between Organizational Resilience and Enterprise Performance.

It is important to understand how socio-demographic factors moderate the relationship between organizational resilience and enterprise performance: age, marital status, education, and type of industry of women-led enterprises. The effect of these factors or moderating variables is that these individual and contextual characteristics shape the effectiveness of organizational resilience strategies in real business outcomes. For example, age may indicate experience, risk tolerance, and marital status; has a bearing on time available and associated support systems; education may provide cognitive and decision-making capabilities; and industry type can be considered to indicate the level of resource base, market exposure, and resilience of the sector. Through an analysis of these factors, we can gain a multidimensional view of how different groups of women entrepreneurs utilise resilience to improve performance. The findings highlight that not all women-led enterprises equally benefit from resilience strategies; instead, these strategies vary greatly depending on demographic and social attributes. Taking this perspective into account is critical for designing interventions, training modules, and policy frameworks that consider the diversity of women entrepreneurs to foster women's inclusive and context-sensitive support for business sustainability and growth.

1. The moderation analysis shows that age significantly moderates the relationship between enterprise performance (EPER) and organizational resilience (ORES) in women owned enterprises. For enterprise performance, there is an unstandardized estimate of 0.733, critical ratio (C.R.) score of 6.981, and p-value of 0.015 at level of less than 0.05, the age has statistical significance. The impact of organizational resilience on performance is also strongly positive, with an estimate of 0.842 and p-value of 0.006. The moderating effect between ORES and age was significant, with an estimated 0.613. 4.348, and p = 0.014, which validates that age boosts the effect of organizational resilience on enterprise performance. In the highest order interaction test, age contributes to 4.2% of the variance in enterprise

performance (R^2 change = 0.042 [$p < 0.0005$]). This indicates that older female entrepreneurs have a better opportunity to use resilience strategies for better business outcomes, and age should be considered a moderator for enterprise resilience frameworks.

2. As a moderator marital status also has a significant effect on the relationship between organizational resilience (ORES) and enterprise performance (EPER) for women owned enterprises. Marital status has a direct impact on enterprise performance with an estimate of 0.501, a critical ratio (C.R) of 3.503, and $p = 0.002$ which is significant at the 5% confidence level. The effect of marital status on the strength and direction of the influence of organizational resilience on enterprise performance is confirmed because the interaction term between ORES and marital status is significant with a coefficient estimate of 0.803, C.R. of 5.147, and $p = 0.022$. The standardised regression weight of the interaction was 0.514 (indicating a strong moderation effect). The last test of the highest order consisted of marital status, and an explanation of 3.9% of the variance in enterprise performance showed an R^2 change of 0.039 ($p < 0.05$). This indicates that marital status is essential in how women entrepreneurs adopt resilience strategies, and married women might be more advantaged by family support structures when it comes to the impact of resilience strategies on business performance.

3. Education is found to significantly moderated the relationship between ORES and EPER in women-led enterprises. In addition, the direct positive effect of education on enterprise performance is estimated at 0.664, which is statistically significant at the 5% level, and the critical ratio (C.R.) is 5.929. Education was found to play a strong moderating role (estimate = 0.728, C.R. = 5.056, $p = 0.008$) in the sense that (standardised regression weight = 0.574) the interaction term between ORES and education has a significant effect. Education explained 3.7% (R^2 change = 0.037; $p = 0.05$) of the variance in enterprise performance, as shown in the highest order interaction test. These findings suggest the education levels of the entrepreneurs affect their capacity

to employ resilience strategies and, therefore, achieve better business outcomes.

4. The enterprise industry type significantly moderates the relationship between organizational resilience (ORES) and enterprise performance (EPER) in women-owned businesses. Industry type is statistically significant in its direct impact on EPER (estimate = 0.524, S.E. = 0.121, CR = 4.331, p = 0.003) with a standardised regression weight of 0.364, indicating that industry-specific factors have a positive relationship with performance. Furthermore, the interaction term (ORES*Type of Industry) is significant (estimate = 0.712, SE). = 0.119, CR = 5.983, p = 0.005) with a standardised regression weight = 0.489, implying that strong moderation occurs. However, further confirmation of this finding is the highest-order interaction test: An R^2 change of 0.041 (F = 7.154, df1 = 2, df2 = 397, p = 0.000), showing that industry type accounts for another 4.1% of the variance in enterprise performance. The results of these analyses imply that the unique resource availability, market demand, and innovation capacity of such an industry context significantly influence how organizational resilience determines the degree of better performance outcomes.

6.2 Suggestions

Women owned and managed enterprises in the micro, small, and medium enterprises (MSMEs) sector in Kerala play a critical role in supporting the inclusive and sustainable development of businesses in the face of frequent disruptions, such as natural calamities, economic downturns, and socio-cultural barriers. However, despite their critical role in improving livelihoods, creating employment, and local innovation, women entrepreneurs' enterprises continue to suffer tremendously due to inherent systemic challenges such as inaccessibility to finance, poor infrastructure, non-existent policy support, and marginalisation in decision-making networks. To tackle these issues, a multi-stakeholder approach is needed to address the needs of the operational and financial health of women-led businesses but also to support them

with knowledge, digital tools, institutional support, and, more importantly, empowering them through social engagement at all levels. The following are suggestions on how to collectively craft policies and programs to ensure that women entrepreneurs in Kerala adapt to the environmental changes.

1. To increase the financial resilience of women entrepreneurs in Kerala, the need is to extend the available facilities of credit to them in a simplified and streamlined manner. Moreover, difficulty in approaching banks on account of procedural hurdles, shortage of collateral, and fear of rejection also prevents many women from going to a bank. Financial institutions must design flexible loan products which take into consider the informal documentation of income, offer lower interest rates, and incorporate a credit guarantee mechanism. Apart from this, awareness drives must be carried out at the grassroots level to make women aware of the available financial schemes such as MUDRA, Stand-Up India, and Kerala state-specific subsidies. In addition, it is necessary that financial inclusion must be accompanied by post-loan handholding support in the form of mentoring and tracking of progress to ensure that the funds are utilised for business growth and not used for personal financial pressure.

2. There is a strong need to develop targeted training programs on digital literacy and e-commerce integration for women who are entrepreneurs. However, many female-run businesses, especially in rural or semi-urban areas of Kerala, still follow the traditional method of selling and communication. If they are equipped with digital skills, including social media marketing, digital payment systems, online customer relationship management, and navigation in e-commerce platform(s), they can greatly improve their market access and operational efficiency. For these training sessions, they should be conducted in local languages and adjusted to different educational backgrounds. Additionally, the pace of digital adoption can also be increased through a connection between training and live mentoring, as well as on-field implementation support.

3. Women business hubs and incubation centres are able to play a transformative role in strengthening enterprise resilience if they are developed as women-centric spaces across Kerala. The provision of these centres should entail the provision of co-working spaces, business advisory support, market intelligence, product development labs, and legal aid. More importantly, they should be safe and inclusive places to work effectively, taking into consideration the specific constraints on women's mobility, childcare concerns, and lack of confidence. In addition, these centres should also include networking and opportunities to join in peer learning to enable women to discuss, offer ideas, and solutions to each other. Some government bodies, academic institutions, and private stakeholders can set up hubs at the district and panchayat levels to make them accessible and scalable.

4. Localised female entrepreneur networks can have a huge impact on the dissemination of information, provision of emotional support, and cooperation to grow. Most women entrepreneurs work in isolation and are unable to find a platform from which to share their experiences. Examples include setting up micro-level networking groups on a cluster bases, such as geography, sector, business size, for mentorship, sharing of resources, and strategic collaborations. During crises, these networks can be used as early warning systems by quickly sharing actionable insights and generating collective responses. In addition, they encourage women to come out of silos and access a variety of perspectives and joint ventures that reduce the risk . NGOs, industries, and women's commissions can nurture such networks and support them on digital platforms to maintain consistent engagement.

5. As such, there must be continued policy-level advocacy to ensure that gender-responsive disaster preparedness frameworks are in place for women-led enterprises. Kerala has witnessed many natural disasters such as floods, cyclones, and pandemics. However, existing disaster management plans often disregard the specific capacities and vulnerabilities of women entrepreneurs. Gender-sensitive risk assessment, early warning dissemination, recovery

funds, and supply chain safeguards will be integrated into state-level disaster policies to protect women-led enterprises and help them bounce back quickly. Additionally, women should participate in decision-making committees at the district and local levels to ensure that their voices are heard in the development and implementation of the frameworks.

6. Therefore, improving access to childcare facilities at locations close to businesses would have a great impact on the productivity and resilience of women entrepreneurs. The challenge of balancing care responsibilities with enterprise management is one of the basic barriers preventing women from sustaining or expanding their business. If women are allowed to cheque their children in subsidised or community-centred childcare centres within commercial zones, marketplaces, and industrial estates where they work, their time will be freed, stress will be reduced, and they will be able to concentrate on strategizing their business. Such centres can be funded with the help of government schemes, and thus can be in partnership with NGOs and local self-governing bodies for the effective management of such centres and their cultural appropriateness.

7. Integrating entrepreneurship education and gender-sensitive material in the school and college curriculum can transform the lives of youngsters to become resilient women entrepreneurs. Introducing girls to the concept of entrepreneurship, risk management and leadership skills at an early age will go a long way in motivating them to pursue such careers. Practical modules, exposure visits, and activities of role model women entrepreneurs should be included in schools and colleges. Additionally, challenging gender stereotypes when dealing with textbooks and classroom discussions would help normalise women in the leadership and high-growth sectors. The strong ethos of this cultural shift is the foundation for building a future generation of women business leaders who have been prepared for adversities.

8. Emotional intelligence and mental wellness training must be mainstreamed into entrepreneurial support programs to boost entrepreneurial resilience. Stressors faced by women entrepreneurs may differ from men because of gender bias, family opposition, risk of failure, financial uncertainty, and burnout from managing multiple roles. Workshops related to stress management, decision making under such pressures, communication skills, work-life balance, and so forth can be offered to cope better under difficult times. Furthermore, having a mental health helpline or wellness check-in system in place for entrepreneurs can be their lifeline during such down times. As financial capital is important, so too are emotional and psychological capital of confidence and optimism in the face of many setbacks.

9. Targeted exposure and incentive programs should encourage the sectoral diversification of women-led enterprises. Currently, women entrepreneurs in Kerala are over-represented in low-margin sectors, such as food processing, tailoring, and retail which are more prone to reduction during recessions. The government and private stakeholders would introduce schemes that would entice women to look at emerging sectors such as technology services, sustainable tourism, healthcare innovation, green energy, and digital design. We can do this through seed grants, tax incentives, training modules, and local mentorship, all of which are focused on these specific sectors. Women who lead enterprises by diversifying business portfolios can minimise dependence on variable markets and ultimately increase their long-term resilience.

10. There should be robust data collection and monitoring to map the resilience capabilities and needs of women entrepreneurs. Gathering gender-disaggregated data at the local level has proven to be a common factor that often hinders the success of policy interventions. A real-time, dynamic database in the form of a 'barometer of women's entrepreneurship' will help to better match policies and resources to the size, nature, and challenges and aspirations of women-owned enterprises. It covers information on digital access, financial stability, disaster preparedness, sectoral growth, and regional

disparities in data. The database should be regularly updated using digital tracking tools, academic partnerships, and surveys.

11. Tailored mentorship programs, which pair experienced businesswomen with emerging entrepreneurs, will be a great deal to developing confidence, adding innovation, and crisis management skills. First-generation entrepreneurs especially lack business experience within the family or their community and always require mentorship. To offer a comprehensive perspective, the mentor pool should be diverse by sector, age, and region. This mentoring should also be done through hybrid programs (offline and online) so that it can be made accessible in remote areas.

12. Infrastructure support in the form of logistics, storage, internet connectivity, and utilities needs to be available, as Kerala's women-led enterprises require operational resilience, particularly in remote or coastal parts of Kerala. Poor connectivity, such as the absence of roads, erratic electricity, or indefinite logistics solutions, put down many women entrepreneurs from reaching deadlines, managing product quality, or even expanding operations. Small scale, but high impact, would be the focus of public–private partnerships, specifically shared cold storage units, rural e-commerce delivery centres, and even internet kiosks. With these interventions, costs decrease, reliability increases, and women can expand their businesses beyond their current geographies.

13. The involvement of women entrepreneurs in organising periodic business continuity planning (BCP) workshops can go a long way to enhance their preparedness for crises. The workshops covered in these should be essential areas, such as risk identification, emergency fund planning, supplier diversification, backup of data, and customer retention strategies. Their objective was to assist women entrepreneurs with formalising their response mechanisms so that when disruptions strike, it does not equate to a shutter of business. As part of the eligibility criteria for availing different government

schemes, these BCPs can be incentivised to become part of entrepreneurs' business plans. This could be achieved through the use of local case studies in which local women explored successful BCPs.

14. Inclusive insurance schemes that cover business assets, natural disasters, cyber threats, and health emergencies can be promoted for women owned enterprises as a critical safety net. Many women ignore or avoid comprehensive health insurance because of misperception, unaffordability, or fear of their own culture. Without the collaboration of insurance companies and self-help groups, there cannot be products with low premium and high coverage for micro and small business enterprises run by women. Testimonials, simplified documentation, and training on how to effectively stake insurance claims should all be included in awareness drives. Growth-oriented decisions can be taken with more confidence in such coverage, as it can reduce long-term risk exposure.

15. By enabling women entrepreneurs to enhance their utilisation of market intelligence and competitive benchmarking tools, access to data can help them make data-driven decisions to enhance their resilience. Too many women-led businesses operate with no knowledge of pricing trends, changes in consumer behaviour, or even industry benchmarks, leaving them vulnerable during the downturn. Government agencies and trade bodies should develop mobile apps and portals that provide real-time updates on market trends, lists of export opportunities, pricing indices, and real-time customer-related feedback. The tool must be presented in simple interfaces and a regional language. By accessing market knowledge in time, women entrepreneurs can modify their offerings, reprice their products, or conquer new customer segments before the threat intensifies.

16. Strengthening the connections between women entrepreneurs and research institutions can provide a possible push for innovation and sustainability. Women led businesses can collaborate with universities and technical

institutes to avail R&D support, product testing, process optimisation, and support in packaging innovation. In fact, these partnerships would be incentivised through the introduction of innovation vouchers, student internship programs, or industry academy knowledge exchange platforms. By collaborating in this manner, one's product quality and marketability are improved, as well as improving one's long-term thinking and thinking on its feet which are aspects necessary to have an organisation which is resilient as the market mutates.

17. Female entrepreneurs' social and financial resilience can be enhanced by encouraging community-supported enterprise models. Women can also organise local consumer groups that build a loyal customer base that reduces demand uncertainty or organise advanced subscription models or cooperative marketing platforms. Along with compelling products and services, these models guarantee that business is founded on community trust and shared ownership as well as a greater likelihood of survival during times of crisis. Panchayat bodies and NGOs have the opportunity to organise such initiatives by establishing product exhibitions, order aggregations, and feedback mechanisms. This approach also helps bridge the gap between small women-led business markets and larger, more common markets.

18. Gender audit mechanisms can be implemented across existing entrepreneurship programs to ensure that women entrepreneurs' specific needs are addressed systematically. The audit should encompass programme design inclusiveness, the representation of women in the design, decision-making, and support services processes, and the measurability of outcomes for women. These audits should lead to data-driven modifications with the purpose of letting the shapes of women entrepreneurs' programmed lives—their needs, dreams, goals, and ambitions—inform those programs that have evolved. Gender audits are accountability tools that incentivise implementing agencies to be more responsive and performance-oriented and create a much-needed ecosystem that nourishes resilient women-led enterprises.

19. Supplier diversity initiatives can create a stable and large customer base for women-led enterprises through partnerships with other women-led actors and corporate value chains to strengthen these partnerships. Today, many corporations integrate sustainability and inclusiveness in their procurement strategies, which is also a good prospect to make women entrepreneurs from Kerala prefer vendors. To assist women in meeting corporate requirements, government departments and industry associations can play a role and facilitate match-making events, quality certification support, and compliance training. Being part of corporate supply chains means guaranteed income and encourages women to adopt formal business practices, expand capacity, and strengthen organisational robustness.

6.3 Practical Implications of the Study

This study offers practical implications for effectively contributing to the organizational resilience of women-owned and-led enterprises in Kerala, which offers a framework to improve the sustainability, growth, and adaptability of these businesses in a rapidly changing economic and social context. The implications of these issues centre on responding to the multidimensional problems of women entrepreneurs, specifically pertaining to access to finance, the digital literacy gap, infrastructural challenges, and the absence of supportive policy frameworks. The study offers actionable recommendations across financial empowerment, capability development, network building, leadership training, policy reform, and community-based support, and therefore outlines a roadmap for both governmental and non-governmental stakeholders to develop the resilience of women-led enterprises. Correspondingly, by emphasising the development of inclusive and gender-sensitive, as well as resource-efficient approaches, the practical implications strive to ensure that women entrepreneurs in Kerala not only survive external disruptions, but thrive in a dynamic global economy. These strategies will have to be integrated into the local business ecosystem to build an entrepreneurial environment in which women can lead businesses that simultaneously contribute to economic development, social equity, and sustainability.

1. This leads to one major implication that women entrepreneurs require complete financial support systems for business purposes. Generally, women tend to face distinct challenges in accessing credit because of gender bias, aversion to providing collateral, or lack of financial literacy. A federal government agency or financial institution should develop customised loan products that are flexible in terms of repayment and are similarly more accessible. This entails offering microloans, lower benchmarks, and credit guarantees that lighten the burden of female-led businesses. In addition, women entrepreneurs would be better equipped to effectively manage funds and thus shield themselves from the risk of financial instability during periods of crisis through the introduction of financial literacy programs.

2. At the level of one of the main practical implications, there is an urgent need to improve digital infrastructure and training for female entrepreneurs in rural and remote areas. With the world becoming increasingly digitalised, women-led businesses in Kerala must be able to take advantage of online platforms to market, sell, and communicate with other entities. Before these sensors prevail, however, many women entrepreneurs will lack the necessary digital skills to run their businesses well in this digitalised world. Therefore, concerted efforts must be made to provide digitability that incorporates the practical use of social media, e-commerce, and payment platforms in digital services. In addition, better Internet connectivity and cheaper access to digital tools would allow these women to work in a digital business environment, driving their greater reach and keeping them on pace with the pace of their competition.

3. Another significant implication is the development of sector-specific support systems for female entrepreneurs. The majority of women-owned businesses in Kerala are concentrated in traditional sectors, such as food processing, textiles, and handicrafts. These industries are, by themselves, stable income, as they are not easily affected by external shocks such as natural disasters; however, they are more vulnerable to external shocks such as changes in

market demand. Women need to be encouraged to diversify into emerging sectors, such as renewable energy, technology, healthcare, and tourism, to increase resilience. Women entrepreneurs can be helped to move out of the more vulnerable, lower growth sectors into the higher growth, less vulnerable sectors, either by the government or the private sector, through specialised training, access to emerging markets, and financial incentives. This will not only make them more economically resilient, but also more entrepreneurial.

4. Additionally, it calls for the need to erect gender-inclusive business networks that are of practical importance. Looking for informal networks and support that facilitate idea sharing, collaboration, and advice-seeking, many women entrepreneurs in Kerala do not have easy access to such vehicles. Women should build valuable connections that would increase business resilience by creating formal, informal, physical, and digital networks. Having these networks can be a good way for women entrepreneurs to obtain peer mentorship, resource sharing, and collaborative problem solving, and to tap collective knowledge and experience when they face business challenges. Networks can also open doors to new opportunities and markets by linking women led businesses, industry experts, and potential customers, thereby mitigating risks.

5. Another practical implication is that mentoring and leadership development of women entrepreneurs is important. Kerala's many first-generation women entrepreneurs are having difficulties in leadership and decision making because they did not have much of an entrepreneurial training and their network is very limited. Structured mentoring programs based on offering experienced entrepreneurs to mentor newer ones can greatly add to women entrepreneurs' leadership capacities. As a result, these mentoring programs should provide an opportunity to develop crucial leadership skills, such as strategic thinking, crisis management, and communication. Since many women entrepreneurs lack emotional and professional support in the face of

their own challenges, easy access to someone who has been through the same experience helps them become more confident in their business decisions.

6. Another vital practical implication is that one needs to create a more responsive and supportive policy environment to address the practical challenges faced by women entrepreneurs. Policy-sensitive policies should be created and implemented by policymakers, and these policies should focus on empowering women economically as well as solving issues related to work-life balance, mobility, and social bias. Therefore, this may entail incentives such as tax, grants, and subsidies for women-owned businesses (especially those operating in rural areas). Furthermore, policies should encourage corporate sectors to adopt inclusive procurement approaches to enable women-led businesses to have access to markets of better quality. Therefore, governments can lead by urging such policies and encouraging an environment for women entrepreneurs to thrive, so that they can overcome barriers hindering resilience and growth.

7. For fostering resilience, providing people with access to reliable and affordable infrastructure is very essential. Many women-owned businesses in Kerala face logistical challenges due to poor transportation, inadequate storage facilities, and a lack of access to utilities such as water and electricity. Hence it is vital to address these infrastructure deficits by giving targeted support to small and medium women led enterprises. These can also be the development of infrastructure such as shared warehousing, transportation hubs, or co-working areas. There is an increased possibility, with improved infrastructure, of women entrepreneurs scaling their operations and managing costs more efficiently and being better placed to respond to supply chain disruptions, thereby improving their resilience.

8. Another implication is the need to foster community-based resilience through collective action and social capital. To understand business challenges, women entrepreneurs need community support which such women do not

have. However, financial and social resilience can be fostered by establishing cooperative models and women's self-help groups. However, these community-driven initiatives possess the capability to gain access to pooled resources, shared knowledge, and shared security, as they make this a collective act among each other. Women entrepreneurs working together increase their bargaining power with suppliers, especially in terms of purchasing raw materials and accessing channels to purchase equipment, marketing, and distribution. They also provided mutual support during crisis periods. Providing a channel to supply knowledge and support to encourage the formation of such groups at the grassroots level can help women-led businesses not only to be resilient but also as part of the growing support network.

9. Since Kerala is highly disaster-prone, integrating elements of disaster preparedness and risk management into business planning would greatly enhance the resilience of women entrepreneurs to disasters. However, women entrepreneurs should be educated on disaster risk reduction and business continuity planning through practical programs. Some of these programs could be in the form of workshops addressing the creation of emergency funds, diversification of supply chains, and development of resilient business models that may survive environmental shocks. Moreover, local governments can supply disaster insurance for women-led businesses so that when natural calamities occur, they are protected from financial repercussions. Building a resilient entrepreneurial ecosystem in Kerala will help prepare women entrepreneurs for any unforeseen crises, as Kerala will continue to flourish despite these challenges.

10. Another important practical implication is the requirement of data-driven insightful information, along with the continuous monitoring of women-led enterprises in Kerala. Thus, the lack of gender-disaggregated data on entrepreneurship deprives policymakers and supports organisations of knowledge to make informed decisions. Strong data collection and analysis

systems will be established that will allow the identification of the great recording trends, risks, and challenges that women entrepreneurs face. This is possible through regular surveys, data-driven research, and partnerships with academic institutions that provide insights to fine-tune policies and mechanisms, such as programs and markets, that help build resilience. Continuous monitoring will also help women entrepreneurs prevent their businesses from declining and subsequent failures when the appropriate support is available.

Each of these practical implications provides actionable strategies that can in turn, make a significant contribution in improving the organizational resilience of women-owned and women-led enterprises in Kerala. As these areas are addressed, stakeholders (policymakers, etc., to support organisations) can help women entrepreneurs overcome existing challenges and build their ability to endure and revert from disruptions to create a robust entrepreneurial ecosystem that not only supports women but also the entire society.

6.4 Recommendations to Policy Makers

The recommendations from the study of organizational resilience of women-owned and-led enterprises in Kerala can be used by policymakers to facilitate an enabling environment for the growth and sustainability of women enterprises. As such, these recommendations centre on gender-sensitive procurement policies, financial accessibility, digital accessibility, and inclusive networks to complement the unique challenges that women entrepreneurs face in the region. Crafting regulations and offering incentives play important roles for policymakers with regard to encouraging entrepreneurship and fostering the conditions that will allow women-led enterprises to thrive in a swiftly changing competitive economy. Both of these recommendations emphasise the importance of simplified regulatory frameworks, capacity-building initiatives targeted to a particular sector, provision of funding to support their implementation, and making their products visible in the existing market. They also point out the necessity of incorporating gender perspectives into policymaking,

avoiding unsustainable practices, and ensuring that women entrepreneurs are placed at the table when decisions are being made. Ultimately, these recommendations aspire to build an entire ecosystem by which a woman entrepreneur will be enabled to leverage challenges as well as opportunities and increase their contribution to Kerala's economic growth.

1. Policymakers in Kerala can significantly contribute to organizational resilience in women-owned and women-led enterprises. An important recommendation is to provide supportive gender-specific procurement policies to ensure that female entrepreneurs can access government tenders and contracts. A prime way in which policymakers are giving women entrepreneurs a new path to growth is by mandating that a certain percentage of public procurement be allotted to women-owned businesses. A part of this initiative could be limited capacity-building programs aimed at ensuring that women run businesses acquire the necessary skills, resources, and knowledge to adequately compete in the procurement processes. Such measures, however, would provide a more equitable playing field and improve the financial stability of these businesses during periods when the economy is uncertain.

2. A second bold recommendation is to set up a dedicated entrepreneurship development fund for women-led enterprises that offers low-interest loans, grants, and subsidies. Women entrepreneurs often find it difficult to obtain finance because of factors such as gender bias, lack of collateral, and financial literacy. If we were able to establish a fund that focuses on giving these women access to much-needed capital with flexible repayment terms, minimal interest rates, and lower collateral requirements, this will increase their access. Moreover, incorporating mentorship and business coaching into the loan grant program will contribute to women entrepreneurs' success and sustainability of their businesses in the long run.

3. Moreover, policymakers must strive to reward corporate social responsibility (CSR) projects that assist women in entrepreneurship, particularly in villages and less-developed locations. We should motivate corporations to invest in building up women-led enterprises financially, provide them with a business mentorship, and allow them access to markets. This can be achieved through the introduction of CSR policies which give tax incentivise companies to invest in women's entrepreneurship. Fostering partnerships between large corporations and women-led enterprises in Kerala is a way to increase visibility and ensure the resources needed to expand the operations of these businesses.

4. There is an essential recommendation to streamline regulatory frameworks and reduce bureaucratic barriers for women to enter entrepreneurship activities. Currently, many women in Kerala are unable to start or run businesses because of complex licencing procedures, taxes, and regulations. Simplifying registration processes, creating a one-stop permit for women entrepreneurs, and creating a clear and accessible way to meet the regulatory requirements of women entrepreneurs can help policymakers alleviate these challenges. This will reduce the time and cost, especially related to the establishment of business, with women no longer having to put a chunk of their time into dealing with administrative issues, which will also help them grow their enterprises faster.

5. There is also a need to develop targeted policies that enhance women entrepreneurs´ access to technology and the digital infrastructure. Since they are essential for business expansion, these digital tools are difficult to obtain for women – led businesses, especially those in rural areas where most of these women live, do not have access to affordable and reliable Internet connections, digital devices, and applications that are common with most digital tools. Policymakers can empower women entrepreneurs in leveraging global markets, operational efficiency, and simplified business management by subsidising the cost of digital tools and providing affordable internet

connectivity. This will be of special value for women who work in handicrafts, food processing, and tourism, where digital technology presents growth potential that can be approached through digital platforms.

6. Moreover, policymakers should ensure that female entrepreneurs benefit from gender-sensitive training and capacity-building programs that enable them to exercise leadership and decision-making skills. Women owned businesses in Kerala have a tendency to display remarkable innovation, but they are weak in the leadership capabilities required for growth. To support women entrepreneurs, specialised training programs in areas such as strategic planning, crisis management, and financial decision-making will equip them with the required skills for navigating challenges. These should be accessible in rural areas to rural entrepreneurs as well as urban centres, and these should be particularised by the nature of various sectors.

7. Another pivotal recommendation is to create support networks and business incubators for female entrepreneurs. Policymakers can create a space for women entrepreneurs to obtain business coaching, mentorship, and access to funding and resources by establishing women-focused incubators. Additionally, these incubators could provide networking opportunities, workshops, and collaborative platforms to ensure knowledge sharing and growth. Beyond business incubators, the support network could enable community-driven and bottom-up thirst to create a community or ecosystem for women entrepreneurs to connect to each other, share best practices, and access shared resources to empower, connect, collaborate, and thrive.

8. Efforts must be made in concert to include gender perspectives in all policy and planning processes. Policymakers should ensure that no initiative for business development takes place without a gender lens, that is, by looking at the specific challenges and needs of women entrepreneurs. In its work to create new policies, programs, and funding schemes, it would include conducting gender analysis and/or impact assessments in order to ensure that

they can support women's economic empowerment. Thus, if the policy environment is more gender-responsive, then there would be more equitable opportunities for women-led businesses to grow and participate in a more inclusive economy.

9. Another valuable recommendation is to encourage collaboration between female entrepreneurs and research institutions. Partnerships between universities and research organisations can be advantageous for the growth and resilience of any business, and in terms of research and development (R&D), women owned enterprises in Kerala profit from the same. Instead, policymakers should design incentives for research institutions to partner with women entrepreneurs to develop product innovation, process optimisation, and sustainable business practices. With these collaborations, new technologies, products, and services could be developed to assist women entrepreneurs to remain competitive in a market environment that is experiencing rapid change.

10. Policymakers also need to facilitate the emergence of inclusive marketing and branding platforms for the advertisement of women-led business products and services. On many occasions, women entrepreneurs face challenges in achieving visibility in local and international markets because of a lack of marketing expertise or financial resources. Policymakers can introduce local, national, and global marketing campaigns promoting women's entrepreneurship. Therefore, the government should create platforms where women lead businesses to participate in online marketplaces, organise trade fairs and exhibitions to market these products, and provide more marketing training for these women to promote strong and reputable brand identity for these businesses.

11. Another policy recommendation should be to support women's participation in high-growth industries, such as technology, renewable energy, and tourism. Although women in Kerala have huge potential for entrepreneurship, they are

concentrated in traditional sectors. Women entrepreneurs should be incentivised to explore work in high-growth and innovation-intensive sectors, something policymakers should focus on. Tax breaks, subsidies, and venture capital funds allocated to women in these fields are part of this, as well as giving women access to a specialised training program that will equip them with the skills necessary for success in these sectors. With this, women can be encouraged to diversify into industries that are not only resilience-enhancing but also drive for economic diversification and innovation.

12. In addition, it is necessary to recognise that long-term support of women entrepreneurs in times of unexpected crises, including natural disasters or economic crises, is a priority. Recent floods and the pandemic have proven that many women leading businesses in Kerala are vulnerable. Policymakers should also open disaster relief funds for women entrepreneurs and other mechanisms for rapid recovery. These funds should include how insurance, emergency loans, and grants can be provided for businesses to recover quickly and effectively from shocks. In addition, business continuity planning and resilience training should be incorporated as part of support programs so that women entrepreneurs are ready in the event of another crisis.

13. From a policy point of view, policymakers are also required to ensure that policymaking bodies and advisory councils provide space for the representation of women entrepreneurs. Although Kerala has been able to make tremendous strides in enhancing gender equality, women entrepreneurs are mostly left behind in decision-making processes regarding issues related to business development and economic policies. Women entrepreneurs, including, would be included in key advisory groups for key business-related policy formulation, thus allowing their distinct perspectives, needs, and challenges to be taken and incorporated. Likewise, this could be used to advocate policies aimed specifically at women entrepreneurs to gain access to finance and infrastructure.

14. A strong focus on sustainability should be achieved through policies dedicated to women's business. With consumers and investors alike making sincere environmentally responsible practices an increasingly key factor in business success, sustainability is an increasingly vital part of business success. Policymakers can provide women entrepreneurs with incentives to utilise green technologies by making them accessible and funding green projects and certification programs that help women businesses market themselves as sustainable brands. Moreover, encouraging sustainability, which would not only serve environmental goals but would also position women-led businesses as leaders on the rise of the green economy.

15. Finally, policymakers should implement gender-inclusive labour policies to create an enabling environment for women entrepreneurs to hire and retain skilled workers. Because the labour force is usually male, women-led businesses tend to struggle to attract and retain qualified employees. Regarding women's workforce training, policies can be designed to create gender-inclusive hiring practices and encourage greater labour market participation. Providing subsidies to businesses that hire women or invest in women's skill development training programs can help mitigate gender inequality in the labour market and allow women entrepreneurs to access a skilled labour force, which is critical to the growth and resilience of their business.

Arguably, each of these policy recommendations provides a pragmatic pathway to fortify the organizational resilience of women's enterprises in Kerala and to enhance the inclusiveness, sustainability, and diversification of the entrepreneurial ecosystem in the state.

6.5 Future Scope of Research

The potential avenues for future research on the organizational resilience of women-owned and-led enterprises in Kerala are extensive, fluid, and encompass a critical aspect of understanding the challenges and possibilities of women entrepreneurs in an

ever-evolving business environment. In the changing entrepreneurial environment, several dimensions of resilience have not yet been explored. This includes the roles of sociocultural factors, digital transformation, social entrepreneurship, financial literacy, and mentoring programs. In addition, crisis management and the effectiveness of government policies are new areas of discovery which may provide deeper insights in the future. Reviewing these various dimensions, relevant research would surely bring great insights into the academic environment and useful solutions for policymakers, businesses, and female entrepreneurs. Studies exploring how women entrepreneurs adjust to economic disruptions, capitalise on social networks, and enhance their resilience can help identify strategies for enhancing sustainability, scalability, and long-term success in women enterprises. In its specific socioeconomic and cultural context, this research agenda is expected to offer a comprehensive framework to scale up the resilience and empowerment of women entrepreneurs in Kerala and the region at large.

1. Future research on the organizational resilience of women-led and owned businesses in Kerala can extend the analysis of how regional and cultural factors guide business strategy. The sociocultural environment in Kerala is distinct and endowed with a rich history, diversity, and progressiveness in social policies. Thus, these factors can be examined by researchers in terms of how they impact the resilience of women entrepreneurs and in terms of how preexisting local customs, religious practices, and community support systems promote or struggle against women's business' existence and growth. This research, therefore, is open to studying the point of intersection between Kerala's matrilineal influences and modern entrepreneurship, which could shed a more enlightened view on the specific challenges and opportunities of women entrepreneurs in this region in comparison to other parts of India.

2. Another potential area of future research is the impact of digital transformation on the organiational resilience of women-owned businesses. Although technology adoption is a major contributor to the growth of businesses, women entrepreneurs in Kerala may have specific hindrances in

digital integration in comparison to men because of their lack of sense of access and ability to use technology, which are supplemented by existing societal norms. It could research the particular technologies that women entrepreneurs in Kerala are retaining in their businesses, such as e-commerce platforms, electronic promotional methods, and cloud—notion allied business well run units. This would provide an opportunity to better understand how certain technologies may either empower or restrict women-led enterprises from being resilient, and what targeted interventions are needed to close the digital divide.

3. Another avenue for future research on the role of social entrepreneurship and social entrepreneurship in relation to organizational resilience in women-owned businesses has also emerged. Global prominence has been accorded to social enterprises that aim at social issues but are also business-viable. Many women entrepreneurs in Kerala run businesses to solve social problems, such as waste management, education, health, and environmental sustainability. Research could assess the extent to which social entrepreneurship enhances the long-term resilience of women-led firms and how inevitably linked social impact goals help women entrepreneurs manage economic downturns and crises better than profit-oriented ones. The focus of this line of enquiry could be to understand the corporate strategies uniquely built and used by women, leading social enterprises to become more resilient to natural disasters.

4. It might also be useful to examine the effects of financial literacy and access to financial resources on the organizational resilience of women-led enterprises. As financial products for women entrepreneurs become more accessible, for various reasons, they continue to have difficulty securing funding to grow their businesses. Detailed studies on the interdependence between financial literacy, access to capital, and business resilience would offer actionable insights into how women in business can enhance their financial resilience, specifically wealth creation and business continuity, when faced with economic challenges, by improving their levels of financial

literacy. The results of this research could also assess the participation of financial institutions in supporting women entrepreneurs and the efficacy of women entrepreneurship in financial inclusion policies.

5. Future research should address the role of mentorship and leadership development programs in improving the resilience of women-owned businesses. There are different mentorship programs, but their influence on the long-term sustainability and adaptability of a female entrepreneur is not well documented. Formal and informal mentoring networks can be studied in terms of how they impact women entrepreneurs in their decision-making, innovation, and strategic planning. Researchers can use these studies to determine the types of mentoring relationships that are effective tools for aiding women's business resilience. In addition, the impact of women's leadership training programs could be investigated on organizational resilience in the case of external challenges by training women in leadership skills that are unique to women and encompass their needs.

6. Research can also be conducted to explore resilience in the context of crisis management in women-led enterprises. As we saw in the recent COVID pandemic all businesses in the world are at high risk, but women-led enterprises have been disproportionately harmed, with many of them having no access to emergency resources and support. However, future studies could examine how these crises impacted Kerala's women entrepreneurs as well as their method of weathering the turbulence and adapting to changing business circumstances. This may include reviewing the coping mechanisms, risk management strategies, and innovative survival practices for survival and thriving in times of crisis by women entrepreneurs. Examining how women-led enterprises respond in the face of disruption can help identify the best practices and strategies for resilience building to be adopted in future disruption situations.

7. Further work must be done on how government policies and institutional support contribute to the organizational resilience of women's enterprises. Kerala also has substantially progressive policies on women's empowerment compared to other Indian states; however, in practice, there may be gaps in policy implementation, whether access to subsidies or other programmes for women entrepreneurship. Further research can be conducted to determine the effectiveness of current policies and how effective these policies are in increasing the resilience for women owned business. This could include determining the extent to which the Kerala State Women's Development Corporation and microfinance programs are functioning and how well they meet the needs of women entrepreneurs in urban and rural areas.

8. Studies of the intersectionality between gender, caste, and class in determining the resilience of women entrepreneurs will contribute to illuminating the diversity of challenges of women-led enterprises in Kerala. Kerala's caste, class, and regional differences can affect women's access to resources and opportunities. Further studies may consider how among these factors, gender interacts with a woman's ability to successfully create an industry-resilient organisation. There are also examples such as women from marginalised communities buttressed by additional challenges relating to social exclusion, limited access to education, and limited mobility in the economic realm, which compounded barriers to business resilience. Exploring these issues would underscore the importance of a pro-women policy that accounts for the multiple levels of disadvantage that some groups of women entrepreneurs' experience.

9. In particular, further in-depth studies would be valuable, primarily to investigate the role of networking and community support in building organizational resilience in relation to how women entrepreneurs in Kerala rely on local networks to establish and grow their businesses. Societally and culturally, women generally lack access to traditional business networks. A possible area of research might be to look at what alternative networks women

entrepreneurs in Kerala use to help their businesses, such as women's collectives, local cooperatives, or online communities. Policymakers, for their part, would benefit from appreciating the significance of social capital in bolstering organizational resilience to encourage better networking sites for women entrepreneurs regionally and globally.

10. Finally, in the future, the long-term effects of designating these strategies in mitigating risk regarding their ability to enable smooth growth and scalability of women's enterprises in Kerala can be explored. Short-term resilience can be defined as the ability to sustain economic shocks or market fluctuations, whereas long-term resilience involves growth, diversification, and adaptation to changes in market dynamics. How different strategies would diversify product lines, expand into new markets, adopt sustainable practices, support long-term scales, and ensure the longevity of women led businesses is an area for future research. This study would be instrumental in bringing forth the critical success factors for scaling women-owned enterprises and, in doing so, will be able to provide useful guidance for women entrepreneurs as they attempt to scale their enterprises beyond the local or regional markets.

These future research directions have the potential to penetrate deeper into the various dynamics that contribute to the organizational resilience of women owned and led enterprises in Kerala. Through investigation of these varied areas, scholars can identify action points that not only help women entrepreneurs but also inform interventions of public policy and practical strategies to promote women's business growth.

6.6 Conclusion

This study on the organizational resilience of women-headed enterprises in Kerala has identified challenges as well as the particular opportunities of women entrepreneurs in the region. Organizational resilience and its impact on the performance of women-owned and led enterprises in Kerala has provided critical insight into how adaptability, proactive planning, and recovery capabilities add to

enterprise success in a dynamic and very often challenging environment. Women entrepreneurs in Kerala are resilient, adapt to changes, are innovative, and have strong community ties. However, they are also confronted with a number of barriers, such as restricted access to funding, gender discrimination, and lack of general institutional assistance. Nevertheless, women-owned businesses in Kerala survive, especially in areas where social impact and community participation are of utmost importance. Although this resilience does not solely reside among the individual, it is affected significantly by broad, socio-political, economic, and cultural factors, which highlights the need for policy intervention aimed at further fortifying the resilience of women entrepreneurs. The findings of this study pinpoint the need for further support from governmental and non-governmental entities to solve these systemic challenges to expand women-owned businesses in Kerala. Through components such as increasing financial literacy, increasing funding accessibility, digitalisation push, and establishing a more inclusive private business network, policymakers can also be in a position to help grow a more resilient entrepreneurial ecosystem. In addition, there is also an opportunity to partner with mentorship programs, social enterprises, and educational institutions to support women entrepreneurs for their long-term success. Finally, the study calls for the synthesis of disparate factors underlying the improvement of organizational resilience by means of a multiplicity of elements ranging from financial to social and cultural. In the evolving entrepreneurial landscape, numerous aspects of resilience remain unexamined. This encompasses the functions of sociocultural influences, digital transformation, social entrepreneurship, financial literacy, and mentorship initiatives. This, therefore, presents a great opportunity for Kerala to create an environment that cements support for women entrepreneurs and pushes inclusive economic growth that enables women to participate much more in contributing to the economy and society at large of Kerala.

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APPENDIX

Interview Schedule

ORGANIZATIONAL RESILIENCE OF WOMEN ENTREPRENEURS IN KERALA

SECTION – I

GENERAL INFORMATION

1. Age: ☐ 1= Below 25 years, 2= 25-35 years, 3= 35-45 years, 4= 45-55 years, 5= Above 55 years
2. Marital Status: ☐ 1= Single, 2= Married, 3= Divorced, 4= Widowed
3. Religion: ☐ 1= Hindu, 2= Christian, 3= Muslim,
4. Educational qualifications: ☐ 1= School Certification, 2= PDC/HSS, 3= Degree, 4= PG, 5= Professional Degree.
5. Type of Family: ☐ 1= Joint family, 2= Nuclear Family

SECTION – II

ORGANIZATIONAL DEMOGRAPHICS

6. District: ☐
7. Location of the Organization: ☐ 1= Rural, 2= Urban. 3= Semi Urban
8. How old is your organization? ☐ 1= 1-5 years: 2= 5-10 years: 3= 10-20 years: 4= More than 20 years.
9. Size of Organization: ☐ 1= Micro, 2= Small, 3= Medium.
10. Type of Industry: ☐ 1= Manufacturing: 2= Service: 3= Trade
11. Are you managing the enterprise on your own? ☐ 1=Yes, 2=No.
12. If no, who is helping you? ☐ 1= Spouse, 2= Parents 3= Siblings 4=Others
13. If helping, to what extent? ☐ 1= Fully managed by that person, 2= Partly managed by me and partly by that person, 3= To a certain extent.
14. Nature of Workplace Premises: ☐ 1=Owned commercial, 2=Owned home, 3=Rent commercial, 4=Rent home, 5=Lease commercial, 6= Others

15. Which of the following categories describe your firm's Legal status? ☐
    1= Sole proprietorship, 2= Partnership,3= S.H.G, 4= Company,

16. Main activity of your firm: (Please tick your choice)

1.	Argo Food based
2.	Textiles & Garments
3.	General Engineering
4.	Service Activities
5.	Wood Products
6.	Cement Products
7.	Printing & Allied
8.	Paper Products
9.	IT

17. Whether you are outsourcing any of your ancillary activities ☐ 1= Yes. 2= No

18. Major source of Funding: ☐ 1= Personal savings, 2=Household (support of the

    family), 3=Micro finance institutions (Self Help

    Groups), 4=Borrowed from friends and relatives,

    5= Inheritance, 6=Borrowed from bank and

    financial institutions, 7=Others (Specify)

19. Has your organization experienced a crisis or emergency since you established it? 1= Yes, 2= No,

20. Please rank the nature of crises your organization has experienced,

Sl. No.	Crises	
1	Covid – 19 Pandemic	
2	Natural hazards (Kerala Flood 2018, Severe climate, etc.)	
3	Financial crises	
4	Major accident or fire	
5	Loss of critical services, e.g., electricity	
6	Regulatory issues	
7	Failure of a key supplier or customer	
8	Acute labour Shortage	
9	Acute Material Shortage	

SECTION- III

To what extent do you agree or disagree with the following statements for your organization? Please tick the appropriate number based on your perception **(5= Strongly agree; 4= Agree; 3= Neutral; 2= Disagree; 1= Strongly disagree**)

21. Adaptability	SA	A	N	DA	SDA
I quickly adapt my business operations to unexpected changes in the environment.					
I am open to altering my goals when necessary to remain competitive.					
My enterprise effectively adapts to shifting market conditions.					
I embrace change as a normal part of running my business.					

22. Proactiveness	SA	A	N	DA	SDA
I actively seek out opportunities before competitors do.					

I plan ahead for possible challenges that may arise in my business.					
My business takes timely initiatives to stay ahead in the market.					
I continuously monitor trends to prepare for future developments.					

23. Resourcefulness	SA	A	N	DA	SDA
I can find alternative solutions when resources are limited.					
I effectively utilize available resources to overcome obstacles.					
My business adapts well even when facing resource shortages.					
I am skilled at making the most out of what I have.					

24. Crisis Management	SA	A	N	DA	SDA
I remain calm and focused during a business crisis.					
I have a clear action plan in place to manage potential disruptions.					
I am confident in my ability to lead during unexpected challenges.					
My business can bounce back quickly after a setback.					

25. Innovation	SA	A	N	DA	SDA
I regularly introduce new ideas into my business operations.					
I invest in innovative solutions to improve my business.					
I encourage experimentation and creativity in decision-making.					
My business adapts new technologies to stay competitive.					

26. Digital transformation	SA	A	N	DA	SDA
I have adopted digital technologies to streamline my business processes.					
My business uses online platforms to engage with customers.					
I regularly upgrade digital tools to enhance operational efficiency.					
Technology has helped my business become more resilient to disruptions.					

27. Financial planning	SA	A	N	DA	SDA
I maintain a clear financial plan to support business continuity.					
I regularly review and adjust my business budget based on market conditions.					
I have emergency funds or financial backups for unexpected challenges.					
My business manages its debts and cash flow effectively.					

28. Employee engagement	SA	A	N	DA	SDA
I involve my employees in decision-making processes.					
My employees feel motivated and committed to the goals of the business.					
I provide support and flexibility to my staff during challenging times.					
I encourage continuous learning and upskilling among my employees.					

29. Networking and partnerships	SA	A	N	DA	SDA
I actively collaborate with other entrepreneurs or businesses.					
I participate in business networks or associations relevant to my field.					
My business benefits from partnerships and shared resources.					

I seek advice and mentorship through professional connections.					

30. Market diversification	SA	A	N	DA	SDA
I have introduced new products/services to reach different customer segments.					
I explore alternative sales channels to reduce dependence on one market.					
I am open to entering new geographic or digital markets.					
My business adjusts its offerings based on market feedback and opportunities.					

31. Sales Growth	SA	A	N	DA	SDA
My business has experienced consistent sales growth over the past year.					
I have achieved higher sales targets compared to the previous year.					
Seasonal variations have not significantly affected my sales trends.					
I am confident in my ability to increase sales in the near future.					

32. Profitability	SA	A	N	DA	SDA
My business generates sufficient profit to sustain operations.					
I have seen an increase in net profit margins over the past year.					
Profitability has improved due to better cost control measures.					
I reinvest profits strategically to promote business growth.					

33. Customer Retention	SA	A	N	DA	SDA
Most of my customers return for repeat purchases.					

I have a loyal customer base that recommends my business to others.					
My customer service practices encourage long-term relationships.					
I regularly engage with customers to maintain satisfaction and loyalty.					

34. Business Continuity	SA	A	N	DA	SDA
My business has maintained continuous operations despite external challenges.					
I have contingency plans in place to deal with potential disruptions.					
My business can recover quickly from economic or market shocks.					
I take proactive measures to ensure operational stability.					

35. Market Share	SA	A	N	DA	SDA
My business has a strong presence in the target market.					
I have successfully expanded my customer base over time.					
I am competitive in pricing, quality, and service compared to others in my sector.					
My business holds a significant share within my industry niche.					