

A STUDY ON PARAMETERS INFLUENCING BUSINESS SUSTAINABILITY FOR
TRIBAL WOMEN FARMER GROUP'S RUNNING MICRO SMALL AND MEDIUM
ENTERPRISES (MSME) IN INDIA

by

Aravazhi Selvaraj

DISSERTATION

Presented to the Swiss School of Business and Management Geneva

In Partial Fulfilment

Of the Requirements

For the Degree

DOCTOR OF BUSINESS ADMINISTRATION

SWISS SCHOOL OF BUSINESS AND MANAGEMENT GENEVA

NOVEMBER, 2025

A STUDY ON PARAMETERS INFLUENCING BUSINESS SUSTAINABILITY FOR
TRIBAL WOMEN FARMER GROUP'S RUNNING MICRO SMALL AND MEDIUM
ENTERPRISES (MSME) IN INDIA

by

Aravazhi Selvaraj

Supervised by

Iva Buljubasic

APPROVED BY



Prof.dr.sc. Saša Petar, Ph.D., Dissertation chair

RECEIVED/APPROVED BY:

Renee Goldstein Osmic

Admissions Director

ABSTRACT

A STUDY ON PARAMETERS INFLUENCING BUSINESS SUSTAINABILITY FOR TRIBAL WOMEN FARMER GROUP'S RUNNING MICRO SMALL AND MEDIUM ENTERPRISES (MSME) IN INDIA

Aravazhi Selvaraj
2025

Dissertation Chair: <Chair's Name>
Co-Chair: <If applicable. Co-Chair's Name>

Socio-economic empowerment of tribal women to involve them in socio-economically productive activities and to provide them with steady income-generating avenues is still an issue in India. The Micro, Small, and Medium Enterprises (MSMEs) have been a major source of the rural tribal women farmer groups' socio-economic development, as a result, they have become the agents of their own and the community's economic growth. This study is to find out the factors that have a significant influence on the sustainability of the tribal women farmer groups' MSMEs in Telangana, India, through environmental, social, governance, and financial parameters. The study employed a mixed-method research design that combined quantitative and qualitative components. Information directly from the source was gathered through interviews after a predefined questionnaire was prepared. The interviews were conducted among 100 tribal women entrepreneurs, community leaders, and government officials. The study, after collecting secondary data from various government publications, policy papers, and relevant pieces of literature, proceeded to analyse the quantitative data using SPSS (Statistical Package for the Social Sciences),

which included Spearman's Rank Correlation and Ordinal Regression. Qualitative insights were also analysed thematically during this period, and they were instrumental in the validation and the reliability of the statistics. According to the data, the indigenous women MSMEs' survival was credited to various factors that were not only complex but also closely interrelated. The most significant factor for the business's continuance was the management and operation styles, which, along with others, featured the leadership, innovation, and resource management as indicated in the correlation analysis ($\rho = 0.673$, $p < 0.01$). According to the research, the environment was identified as the primary source of the problems which had the biggest impact on the longevity of the business (Nagelkerke $R^2 = 0.728$, $p < 0.01$). The social factors of the common impact, cultural sustainability, and social well-being were also individually significant contributors to the total model (Nagelkerke $R^2 = 0.781$, $p < 0.01$). Moreover, the indicators linked to governance, such as policy compliance, transparency, and institutional support, were very powerful in leading to a sustainable enterprise stage change (Nagelkerke $R^2 = 0.686$, $p < 0.01$). One of the main factors that made businesses sustainable was financial literacy, which in fact, had a substantial positive influence (Nagelkerke $R^2 = 0.420$, $p = 0.000$). On the other hand, if credit access was considered as the only factor, it would not have resulted in statistically significant findings. The study sees tribal women-run MSMEs as an intricate environmental care, social relations, good governance, and community economic empowerment, mainly, a complex system. The revival and sustainability of the business ventures of the tribal women in India have been mostly reliant on the availability of a strong legal structure, wide-ranging financial literacy programs, and the institutional reforms that are making user-friendly services easier.

Keywords: Tribal Women Entrepreneurs; Micro, Small and Medium Enterprises (MSMEs); Business Sustainability; Environmental Factors; Social Empowerment;

Governance Frameworks; Telangana; Sustainable Entrepreneurship; Rural Development;
Inclusive Growth

TABLE OF CONTENTS

List of Tables	ix
List of Figures	x
List of Abbreviations	xiii
CHAPTER I: INTRODUCTION.....	1
1.1 Overview of MSMEs in India.....	1
1.2 Importance of tribal women in rural and agricultural entrepreneurship.....	6
1.3 Role of MSMEs in socio-economic development	11
1.4 Contribution of tribal women farmer groups to sustainable development.....	14
1.5 Challenges Faced by Tribal Women Farmer Groups	20
1.6 Challenges Faced by Tribal Women Farmer Groups in MSMEs	26
1.7 Exploring the Role of ESG in MSME Performance.....	32
1.8 Research Problem	39
1.9 Purpose of Research.....	40
1.10 Significance of the Study	41
1.11 Research Purpose and Questions	42
CHAPTER II: REVIEW OF LITERATURE	44
2.1 Importance of MSMEs for Tribal Women Farmer Groups	44
2.2 Critical Factors Contributing to Business Sustainability of MSMEs	49
2.3 Environmental Factors and Their Impact on Business Sustainability.....	56
2.4 Social Factors Influencing Business Sustainability	64
2.5 Governance Factors and Business Sustainability	75
2.6 Financial Factors and Their Role in Business Sustainability.....	89
2.7 Theoretical Framework.....	101
2.8 Summary	103
CHAPTER III: METHODOLOGY	105
3.1 Overview of the Research Problem	105
3.2 Operationalization of Theoretical Constructs	106
3.3 Research Purpose and Questions	108
3.4 Research Design.....	108
3.5 Population and Sample	109
3.6 Participant Selection	111

3.7	Instrumentation	111
3.8	Data Collection Procedures.....	112
3.9	Data Analysis	113
3.10	Research Design Limitations	115
3.11	Conclusion	116
CHAPTER IV: RESULTS.....		117
4.1	Introduction.....	117
4.2	Reliability Analysis.....	117
4.3	Demographic Profile of Respondents	118
4.4	Findings of Environmental Factors.....	129
4.5	Findings of Social Factors	141
4.6	Findings of Governance Factors	158
4.7	Findings of Financial Factors.....	176
4.8	Findings of Business Performance and Sustainability Indicators.....	186
4.9	Descriptive analysis	194
4.10	Hypothesis Analysis.....	197
4.11	Summary of Findings.....	207
CHAPTER V: DISCUSSION.....		209
5.1	Discussion of Results	209
5.2	Discussion of Research Question One	211
5.3	Discussion of Research Question Two	213
5.4	Discussion of Research Question Three	216
5.5	Discussion of Research Question Four	218
5.6	Discussion of Research Question Five	220
5.7	Conclusion	223
CHAPTER VI: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS.....		225
6.1	Summary	225
6.2	Implications.....	226
6.3	Recommendations for Future Research	228
6.4	Conclusion	229
REFERENCES		232
APPENDIX A: DATASET.....		271

LIST OF TABLES

Table 3.1: Inclusion and Exclusion Criteria	111
Table 4.1 Reliability Statistics	117
Table 4.2: Demographic Profile of Respondents	118
Table 4.3: Environmental Sustainability and Climate Resilience Practices of Enterprises.....	130
Table 4.4: Social Responsibility and Community Engagement Practices of Enterprises.....	142
Table 4.5: Governance Practices and Compliance Measures of Enterprises.....	158
Table 4.6: Financial Access, Management, and Performance of Enterprises.....	176
Table 4.7: Business Performance and Sustainability Indicators	186
Table 4.8: Descriptive Statistics of Demographic Factors.....	194
Table 4.9: Descriptive Statistics of Key Factors.....	195
Table 4.10: Correlation Between Critical Factors and Business Sustainability of MSMEs	197
Table 4.11: Regression Model Fit and Pseudo R-Square for Business Sustainability of MSMEs.....	198
Table 4.12 Parameter Estimates for Predictors of Business Sustainability of MSMEs	199
Table 4.13: Logistic Regression Model Fit and Pseudo R-Square for Business Sustainability of MSMEs.....	200
Table 4.14: Parameter Estimates of Predictors for Business Sustainability of MSMEs	201
Table 4.15: Logistic Regression Model Fit and Pseudo R-Square for Predictors of Business Sustainability of MSMEs.....	203
Table 4.16: Parameter Estimates of Governance and Policy Predictors for Business Sustainability of MSMEs.....	203
Table 4.17: Logistic Regression Model Fit and Pseudo R-Square for Financial and Micro-Financing Predictors of Business Sustainability of MSMEs	205
Table 4.18: Parameter Estimates for Financial Access and Literacy Predictors of Business Sustainability of MSMEs.....	206

LIST OF FIGURES

Figure 4.1: Distribution of Respondents by Village	121
Figure 4.2: Distribution of Respondents by Gram Panchayat	122
Figure 4.3: Distribution of Respondents by Mandal.....	122
Figure 4.4: Distribution of Respondents by District.....	123
Figure 4.5: Distribution of Respondents by Age	124
Figure 4.6: Distribution of Respondents by Marital Status	125
Figure 4.7: Distribution of Respondents by Education Level.....	125
Figure 4.8: Distribution of Respondents by Primary Source of Income.....	126
Figure 4.9: Distribution of Respondents by Approximate Annual Household Income.....	127
Figure 4.10: Distribution of Respondents by Enterprise Type	128
Figure 4.11: Distribution of Respondents by Enterprise Sector	128
Figure 4.12: Distribution of Respondents by Enterprise Operation Duration	129
Figure 4.13: Efficient Use of Natural Resources	131
Figure 4.14: Measures to Reduce Water Consumption	132
Figure 4.15: Energy Conservation as a Priority.....	133
Figure 4.16: Regular Assessment of Resource Usage	133
Figure 4.17: Investment in Resource Efficiency Technologies	134
Figure 4.18: Minimal Negative Impact on Local Environment.....	135
Figure 4.19: Engagement in Environmental Sustainability Practices.....	135
Figure 4.20: Assessment of Environmental Risks	136
Figure 4.21: Compliance with Environmental Regulations.....	137
Figure 4.22: Participation in Environmental Community Initiatives.....	137
Figure 4.23: Preparedness for Climate Change Impacts.....	138
Figure 4.24: Strategies to Adapt to Changing Environmental Conditions	139
Figure 4.25: Climate Resilience in Business Planning	139
Figure 4.26: Investment in Climate-Resilient Infrastructure	140
Figure 4.27: Collaboration with Communities for Climate Resilience	141
Figure 4.28: Contribution to Local Community Development.....	144

Figure 4.29: Engagement in Initiatives to Improve Community Life	145
Figure 4.30: Creation of Employment Opportunities for Local Residents	146
Figure 4.31: Collaboration with Community Members to Address Local Challenges	147
Figure 4.32: Support for Local Education and Training Programs	147
Figure 4.33: Promotion of Gender Equality and Empowerment of Women	148
Figure 4.34: Provision of Equal Opportunities for All Employees	149
Figure 4.35: Support for Skills Development of Marginalized Groups.....	149
Figure 4.36: Fostering an Inclusive Workplace Culture	150
Figure 4.37: Recruitment Practices Ensuring Community Representation	151
Figure 4.38: Respect and Preservation of Cultural Heritage	151
Figure 4.39: Incorporation of Traditional Knowledge in Business Operations.....	152
Figure 4.40: Products Reflecting Cultural Identity	153
Figure 4.41: Engagement with Cultural Leaders	153
Figure 4.42: Participation in Cultural Events and Festivals	154
Figure 4.43: Contribution to Employee Health and Well-Being	155
Figure 4.44: Support for Social Initiatives in the Broader Community.....	155
Figure 4.45: Promotion of Work-Life Balance.....	156
Figure 4.46: Provision of Healthcare Resources for Workforce.....	157
Figure 4.47: Activities to Reduce Social Inequalities.....	157
Figure 4.48: Adherence to Government Policies and Regulations	161
Figure 4.49: Regular Updates to Comply with New Laws and Regulations	161
Figure 4.50: Transparency and Alignment with Legal Requirements.....	162
Figure 4.51: Procedures for Compliance with Industry Standards.....	163
Figure 4.52: Participation in Industry Policy Discussions.....	164
Figure 4.53: Communication with Stakeholders	165
Figure 4.54: Regular Auditing of Financial Records.....	166
Figure 4.55: Mechanisms to Address Stakeholder Concerns	166
Figure 4.56: Publication of Annual Reports	167
Figure 4.57: Existence of a Code of Ethics.....	168
Figure 4.58: Support from Government Agencies.....	169

Figure 4.59: Access to Financial Assistance Programs	170
Figure 4.60: Access to Training and Development Programs	170
Figure 4.61: Partnerships with Local Institutions	171
Figure 4.62: Engagement with Industry Associations	172
Figure 4.63: Defined Organizational Structure.....	173
Figure 4.64: Internal Control Mechanisms	173
Figure 4.65: Governance and Risk Management Framework	174
Figure 4.66: Review of Governance Policies	175
Figure 4.67: Leadership Commitment to Corporate Governance.....	176
Figure 4.68: Access to Micro-Financing Options for Women Entrepreneurs.....	178
Figure 4.69: Financial Support from Government MSME Schemes.....	179
Figure 4.70: Benefits from Micro-Credit Programs for Tribal Women Entrepreneurs	180
Figure 4.71: Access to Affordable Credit for Business Expansion	181
Figure 4.72: Ability to Secure Loans Without Collateral	181
Figure 4.73: Training on Financial Management and Budgeting	182
Figure 4.74: Access to Financial Planning and Investment Resources	183
Figure 4.75: Awareness of Financial Products and Services.....	184
Figure 4.76: Benefit from Financial Literacy Programs	184
Figure 4.77: Financial Management and Decision-Making Skills	185
Figure 4.78: Business Recovery from Economic Downturns.....	187
Figure 4.79: Customer Recommendations.....	188
Figure 4.80: Adaptability to Market Changes.....	189
Figure 4.81: Response to New Competitors	189
Figure 4.82: Efficient Resource Management	190
Figure 4.83: Cost-Efficient Production Processes	191
Figure 4.84: Revenue Generation and Profitability	191
Figure 4.85: Access to Funding for Growth	192
Figure 4.86: Environmental Impact Minimization	193
Figure 4.87: Contribution to Community Environmental Well-being.....	193

LIST OF ABBREVIATIONS

Abbreviations	Full Form
MSMEs	Micro, Small, and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
NIMSME	National Institute for Micro, Small and Medium Enterprises
NBMSME	National Board for Micro, Small and Medium Enterprises
MGIRI	Mahatma Gandhi Institute for Rural Industrialisation
MSMED	Micro, Small and Medium Enterprises Development
SMEs	Small And Medium-Sized Enterprises
SDGs	Sustainable Development Goals
GDP	Gross Domestic Product
MDGs	Millennium Development Goals
DFS	Digital Financial Services
ESG	Environmental, Social, and Governance
GHG	Greenhouse Gas
EU	European Union
CSR	Corporate Social Responsibility
SRI	Socially Responsible Investment
SBI	State Bank of India's
MNC	Multinational Corporation
SEM-PLS	Structural Equation Model with Partial Least Squares
SOI	Sustainable Orientated Innovation
AHP	Analytical Hierarchy Process
CFs	Critical Factors
HRM	Human Resource Management

POME	Palm Oil Mill Effluents
PMMY	Pradhan Mantri Mudra Yojana
SBM	Sustainable Business Model
EVs	Electric Vehicles
GCS	Glasgow Climate Summit
RBI	Reserve Bank of India
EIB	Europe Investment Bank
PSL	Priority Sector Lending
ESG	Economic, Social, and Environmental
BAO	Belief-Action-Outcome
DT	Digital Transformation
SCM	Supply Chain Management
SBSC	Sustainability Balanced Scorecard
FGD	Focus Group Discussions
SHGs	Self-Help Groups
TRA	Theory of Reasoned Action
TAM	Technology Acceptance Model
MFIs	Microfinance Institutions
CETZAM	Christian Enterprise Trust of Zambia
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
SLF	Sustainable Livelihoods Framework
ESGF	Environmental, Social and Governance, And Financial

CHAPTER I: INTRODUCTION

1.1 Overview of MSMEs in India

Since "Micro, Small, and Medium Enterprises" (MSMEs) have played such a significant role in the expansion of economies around the world, particularly in emerging countries like India, their role in fostering long-term economic growth has been extensively studied and recorded (Pedraza 2021). Out of these, the ownership of tribal women farmer groups for operating MSME has emerged as a dominant factor for overall socio-economic uplift in rural and tribal areas. These enterprises do more than support women; they also support Indigenous knowledge and sustainable agriculture (Meena, Chaturvedi, and Gupta 2021). However, the success and sustainability of such a business depend on several factors which include the availability of resources, market access, financial management, and the factored impacts of policies. Tribal women who are involved in entrepreneurship face bigger struggles in that they have to integrate into business the traditional way of life and the modern way of engaging in business (Seerangan and Venkataravi 2023). To identify key variables that affect the business sustainability of tribal women farmer groups operating MSMEs in India, and to identify their interrelationships for prescriptions to enhance their growth, sustainability, and viability. Consequently, the study's objectives are to advance knowledge on the parameters that can assist policymakers, other stakeholders, and grassroots organisations to advance support structures for tribal women entrepreneurs in the MSME space (Chakraborty 2024).

The needs of consumers both at home and abroad are being met by the diverse range of goods and services produced by MSMEs. This industry typically employs about 80 million people across almost 36 million units. Producing 8,000 different items, this sector contributes 8% to the national gross domestic product (Deen 2020). The Ministry of

MSME and other groups' programs aim to supply the following amenities: Sufficient credit flow from banks and other financial entities, Assist with the modernisation and upgrade of technology, establishment of integrated infrastructure facilities, establishment of new testing facilities, and certification of quality. Opportunity to learn cutting-edge management techniques, foster an entrepreneurial spirit, and improve one's skill set with access to suitable educational resources Assistance with product design, packaging, and development, Employee and craftsman well-being, Improved access to local and international markets, as well as cluster-based initiatives to strengthen individual units' and groups' capabilities and agency (Naddaf and Kadakol 2019). The relevant ministry has established some commissions, institutions, organisations, and statutes to foster the growth of MSMEs (Deen 2020). The “National Institute for Micro, Small and Medium Enterprises” (NIMSME), “National Board for Micro, Small and Medium Enterprises” (NBMSME), "Khadi and Village Industries Commission" (KVIC), Coir Board, "National Small Industries Corporation" (NSIC) Ltd., "Mahatma Gandhi Institute for Rural Industrialisation" (MGIRI), and "Micro, Small and Medium Enterprises Development" (MSMED) Act 2006 are all significant institutional frameworks. (Naveen 2024).

The MSME sector in India is extremely diverse in terms of the dimensions of the businesses, variability of goods and services, and intensities of technology. It balances big businesses as subsidiary components and contributes immensely to the socioeconomic progress of the country. Individuals arrange employment opportunities and enhance the standard of living of both owners and the workforce (Mohanty 2018). Generally, micro corporations are situated in rural and semi-urban areas, and they are artisan-based as well. To trade the products nationally, these corporations utilize national or local experience, skills, and resources. Further, it is unearthed that with the minimum level of fund

investments in machinery, these industries can recruit employees and render them jobs at large scale. These sectors produce goods like as handlooms, khadi, sericulture, coir, bidi-making, needlework, knitting, wood carving, and a host of other handicrafts (Rathi and Kumar 2022).

A significant portion of our economy relies on Indian MSMEs. Interesting aspects of this industry include a high employment opportunity rate and a lower capital investment requirement compared to large corporations. The importance of this to the MSME sector has been highlighted by (Gade 2018b). According to the “Development Commissioner of Micro, Small and Medium Enterprises” in India, MSME accounts for a significant portion of the country's employment, ranking second only to the agricultural sector. The MSME sector is working to wipe out poverty and to create a revenue-generating environment through the creation of jobs. Moreover, it is implementing various strategies that are leading to prosperity of already existing resources like capital and human resources (Hendrawan et al. 2024). This specific sector is like a trigger for entrepreneurs to innovate and so the businesses keep replenishing their stock of ideas to serve with efficiency the ever-changing customers' needs. Small and Medium Enterprises are able to challenge the market not only in their home ground but also on the international level due to the strong bonds they have formed with various financial institutions and the support they receive from them. A significant portion of India's GDP comes from MSMEs (Lohith et al. 2017). Data currently available indicates that "small and medium-sized enterprises" (SMEs) in India account for 40% of exports, 1.3 million annual jobs, and 45% of overall industrial output. Companies in India primarily fall into two categories: manufacturing and service provision (Khan 2011). They further classify these as MSMEs. In 2009, the Development Commissioner of MSME outlined a system for classifying MSMEs in the manufacturing

sector according to their investment in plant and machinery. This system also applies to service-providing organisations (Suresh 2023).

MSMEs are vital to the expansion and development of the economies of most countries. It is well-known around the world that MSMEs are vital to the expansion of economies and the success of major corporations as their suppliers and business associates. They foster the growth of both established companies and up-and-coming entrepreneurs. Hence, a flourishing and increasing MSME sector is an indication of an expanding economy. Despite legislation that aims to promote an environment advantageous for MSME development, the MSME sector continues to encounter numerous obstacles that prevent it from reaching its full potential (Balaria et al. 2020). The world economy will be affected by how MSMEs handle the present crisis. SMEs are particularly vulnerable to natural disasters, which can harm a company's assets and take an emotional and physical toll on employees (Botzen, Deschenes, and Sanders 2019). Some of studies have looked into the difficulties faced by MSME. Research on topics like ASEAN Small and Medium Enterprise Development as it pertains to Thailand and Indonesia The purpose of this research is to analyse the current state of SMEs in ASEAN member states, particularly about Indonesia and Thailand, as well as their past performance during the Asian financial crisis of 1997–1998 and primary obstacles they faced during that time. Tambunan (2008) COVID-19: The difficulties faced by SMEs and their innovative, entrepreneurial, and creative solution (Thukral 2021); Adaptability: a fresh theoretical framework for SMEs (Alberti et al., 2018) resources and strategies; An Indian handicraft sector outlook: Building resilience for the viability of MSMEs post Covid-19 outbreak (Agarwal et al., 2023). Thiruvengala & Sreenivasa (2016) Examine the possibilities and threats faced by MSMEs in India in the post-COVID era. The competitiveness of MSMEs in the face of economic shocks is the primary emphasis of the current research.

The backbone and lifeblood of the Philippine economy are MSMEs (Flaminiano, Francisco, and Caboverde 2021). The Philippine economy's foundation and its source of income are MSMEs. SMEs play the role of a huge contributor to the country's GDP by averaging 40% of the total and providing job opportunities for the ever-increasing workforce. The smaller businesses, however, tend to suffer more than their larger counterparts during crises and disasters. Economic upheaval, for instance, is one such problem. Small businesses usually lack the financial support needed to survive the sudden economic downturn caused by pandemics and natural catastrophes. Assets destroyed by natural disasters can have a detrimental effect on both the mental and physical health of a company's owners and employees. *Entrepreneurs' Capacity to Stay Competitive in the Face of Economic Upheaval* (Nasser 2022).

No economy can exist without MSMEs, that is, they have a major role to play in the economic structure. Besides employing people, MSMEs enhance local economies that can further lead to multiplier effects and power the connected industries (Sutrisno, Permana, and Junaidi 2023). MSMEs can change their operations according to the consumers' tastes and take new openings more readily than the large corporates (Yani, Suparwata, and Hamka 2023). Therefore, global MSME competitiveness is going to depend on the discovery, identification, and development of creative tactics. If they want to benefit from new technology, have flexible business models, and develop strong cooperation networks, then, they have no alternative but to innovate in the first place, as the global marketplace has become so complicated and ever-changing.

SMEs, or MSMEs, mainly face difficulties regarding digital technology that arise from their insufficient knowledge and experience (Kamar et al. 2022). These limitations are most pronounced in the current fast-paced and ever-changing business environment, where the potential for MSMEs to grow and compete is further reduced. Hence, the

application of innovative methods in digitizing business processes can be regarded as one effective measure to overcome these hurdle (Agustian et al. 2023). MSMEs can leverage digital technology to not only create effective business models but also get better exposure in the global market via online marketplaces and lastly, to fortify their presence in the digital world. Moreover, MSMEs can improve their ability to compete and eliminate some of their operational barriers through the understanding of digital tech and the application of innovative ideas. This, eventually, will open up a lot of potential for growth and development in the future (Supriadi, Maghfiroh, and Abadi 2023).

The term MSMEs is used to designate a category of businesses that function on a smaller scale in comparison with large corporations. MSMEs share some common characteristics when it comes to employees, revenue, and ownership of assets (Sutrisno 2023). Depending on the size of operations, there are three categories of MSME: micro-enterprises (1-9), small to medium enterprises (10-49), and medium to large enterprises (50-249). Besides being a source of innovations and creative ideas, MSMEs economically by making major contributions through job creation and local economy support. However, they have obstacles such as lack of capital and international trade that make their survival hard, and at the same time hold the advantages of increased flexibility, quick local market response, and very participation in the long run and inclusive economic growth (Harahap et al. 2021). Consequently, if we are serious about strengthening financial resilience and decreasing economic inequalities on a global and regional scale, we must prioritise supporting and promoting MSMEs (Sutrisno, Susanti, and Murthada 2024).

1.2 Importance of tribal women in rural and agricultural entrepreneurship

Tropical tribal women have been a significant contributing factor to rural and agricultural entrepreneurship, with their contributions being cathartic and fundamental to the agrochemical development of their tribally endowed societies. They understand natural

resources, traditional knowledge, and skills which makes them better placed to embrace sustainable agriculture and rural business (Chhetri 2024). Nevertheless, employment and earning assets are not a problem encountered solely by tribal women, they practice farming and food processing, handicrafts, and other small-scale business activities that generate income at the household and the community level (Khanum, Mahadi, and Islam 2022). Tribal women's entrepreneurship development not only helps raise their socioeconomic standard but also adds the dual benefits of social inclusion, cultural Native American preservation, and rural vitality. Sensitising these women to key areas of capacity development, financial services, and technology, tribal women business owners can elevate their micro businesses to sustainable undertakings that will help sustain the rural economy (Bhukya 2021).

The birth of new companies and start-ups is largely due to the efforts of entrepreneurs. The expansion and growth of these businesses leads to the hiring of staff, which in turn lowers unemployment rates (Prabhakar, Nimesh, and Prabhakar 2023b). A country's economy grows when more people have jobs to spend their money on goods and services, and businesses are a major contributor to this dynamic. While empowering one individual, entrepreneurial venture open doors for numerous others. Numerous job opportunities are created across several areas since entrepreneurial organisations, such as start-ups, rely on a diverse group of individuals with different skill sets to run smoothly (Ahmad et al. 2022). The entrepreneurial spirit has the potential to greatly enhance a nation's GDP. For communities in rural and tribal areas, entrepreneurship can mean a world of difference. It has the potential to bring about long-term prosperity, individual agency, and economic autonomy (Deng, Chi, and Zhang 2024).

The foundation of entrepreneurialism in rural and indigenous communities should be the recognition and utilisation of inherent strengths and opportunities. This could

include farming, traditional arts and crafts, or other cultural assets that have the potential to become profitable enterprises (Prabhakar, Nimesh, and Prabhakar 2023a).

There is no social, economic, or cultural fabric that is as robust as that of tribal communities without the women who comprise them. Improving their lives and giving them the tools, they need can change lives at the individual and community levels because they encounter unique obstacles and possibilities. Like many women in rural and minority groups, indigenous women may face gender-based discrimination and unequal access to healthcare, education, and economic opportunities (Sahu, Agarwala, and Maity 2024). Empowering women in tribal communities economically and socially is possible through promoting their entrepreneurial spirit. Programs that help women entrepreneurs gain knowledge and connections to resources can make a huge difference. New directions and trends in a certain field of study can be better understood with the use of bibliometric analysis. The present and future of a field can be better understood by studying the growth and frequency of publications on particular themes (Prabhakar et al. 2023a). Consequently, this study's overarching goal is to analyse trends in tribal women entrepreneurs, and it does so by offering data-driven insights and a thorough review of the relevant literature. Institutions and politicians will be able to use the study to make better decisions, evaluate the impact, and prioritise future research (Kumar, Nimesh, and Banerjee 2023).

As a matter of constitutional and statutory guarantee, women in India enjoy full equality with males. But unlike in cities, women in rural areas do not have equal access to economic and social opportunities (Agrawal and Khare 2019). They still put most of their energy into housework and depend on men to bring in the money (Datta and Gailey 2012). “Sustainable development goals” (SDGs) can be attained through empowering women; this is especially true at the family, community, and national levels (Williams, Väisänen, and Padmadas 2022). Women gain the information and abilities to increase their involvement,

control, and decision-making through this process (Akhter and Cheng 2020). Due to women's efforts to gain equal access to education and the workforce and to launch their own businesses, the trend of elevating women to prominent roles has been growing over the last 20 years (Kapur, 2019). To increase the country's human resources, women from ethnic, tribal, or indigenous origins should participate (Sarma 2014). There are several obstacles that tribal women in India encounter, including issues related to a lack of food, schooling, family violence, and hospitalisation; yet, the majority of their time is spent attending school (Maiti, Unisa, and Agrawal 2005). Thus, starting a business isn't a walk in the park, particularly in a place like this where there's a lot of economic weakness and underdevelopment. When compared to other communities, their commercial activities are less profitable and effective due to a lack of finance, education, and difficulty accessing resources (Naveen, Parida, and Panda 2023).

Entrepreneurship is now more important than ever before in rural development. Entrepreneurship is currently being considered by rural development advocates as a strategic intervention that could hasten the development of rural areas. Also, everyone from politicians to farmers to women who see rural entrepreneurship as a way to boost farm incomes to development agencies that see it as a way to create a lot of jobs close to home that will help them become more self-sufficient and less reliant on others for support seems to agree that there is an immediate need to encourage rural enterprise (Ranganath and Venugopal 2011). The Scheduled Tribe Community has demonstrated a strong desire to embrace entrepreneurship in order to elevate their socio-economic standing to that of the developed community, and caste is progressively giving way to class as the most important factor in Indian society (Iyer, Khanna, and Varshney 2013). There has been a long history of economic and social stratification, with indigenous peoples at the bottom and exploited on top. The goal of employment reservations in independent India was to ameliorate their

condition, but it was a futile effort. However, a remarkable new phenomenon has emerged as a result of the empowerment brought about by democracy and the economic opportunity brought about by 20 years of economic reform. Everybody knows that entrepreneurs are the key to a thriving economy, and there's mounting proof that entrepreneurship is directly related to GDP growth and the alleviation of poverty (Selim 2021).

Indian tribal communities face social and economic vulnerabilities. The rise of globalisation has allowed certain indigenous peoples to overcome centuries of prejudice and start businesses with the goal of uniting caste and capital. For developing nations like India, it's an essential means of subsistence and an answer to numerous societal ills (Kabiraj 2018). "A scholarly field that seeks to understand how opportunities to bring into existence" is the definition of entrepreneurship when it comes to the individuals involved, the implications of their activities, and the future of goods and services being discovered, created, and exploited. The basic concept of empowering tribal women in entrepreneurship emerged amidst India's many problems (Knorr 2011). In addition to helping the economically disadvantaged, entrepreneurship is now playing a role in building social capital and competency among India's indigenous women. With all else being equal, social capital and entrepreneurial competence are significant determinants of financial success (Letters 2023). As a result of globalisation, many indigenous groups have learnt to be self-reliant and have begun to build social capital through their businesses. To inspire tribal women to commence their own work, the government and other organisations offered financial and other forms of help. However, the internal drive manifested as social competence facilitated the entry into adventure.

In nearly every country's economy, the number of enterprises owned by women is on the rise. As society has become more aware of women's roles and economic status, the latent entrepreneurial abilities of women have been evolving over time. The most common

factors that motivate women to start their own businesses are their intelligence, experience, and flexibility. An entrepreneur is a woman who takes on a risk in order to provide for herself and achieve financial independence (Priyadarshini and Basariya 2018). When it comes to rural areas and entrepreneurship, however, women from indigenous communities' face discrimination and lack of support. Women with entrepreneurial spirit have an inherent drive to make a positive difference in the world and are valuable assets in their families and communities. Media has helped women become more self-aware, including in terms of their rights, characteristics, and working conditions (Shelly, Sharma, and Bawa 2020). Women are breaking down barriers and thriving in every industry, even in the marketing of forest-based products. Women in the modern digital age are doing double duty as both job searchers and job creators, thanks to the exponential growth of their businesses producing herbal remedies, honey, medicinal plants, bamboo crafts, and more. Designs, interior decorators, exporters, publishers, and clothing makers are only a few of their thriving industries (International 2020). Despite the fact that women constitute the majority of India's population, men continue to hold most of the positions of power in the business realm. The percentage of women in senior leadership roles has been steadily rising in industrialised nations (Bhukya 2021).

1.3 Role of MSMEs in socio-economic development

The financial structure of MSMEs performs a very significant function in socio-economic development as they contribute to the pace of development and offer employment in addition to the aspect of innovation (Radicic and Petković 2023). MSMEs also operate between the structure laterally as starters of economic activities, and on the other side as opportunities for different groups including the marginalised ones. They provide a large percentage of the total “Gross Domestic Product” (GDP), export revenue, and development to local communities, particularly in developing nations as they help

balance the development disparities within the region. In addition to providing sources of employment, MSMEs contribute to building and developing people's skill and entrepreneurial capacity leading to poverty reduction and social change. Thus, through the application of technology, green economy and, access to financial, MSMEs can unlock the development of communities for perpetual socioeconomic change and stability (Nema and Verma 2019).

The growth and development of economies are often attributed to MSMEs. According to Khan and Dalu (2015) SMEs play a crucial role in driving human and monetary progress in underdeveloped nations. In both emerging and established nations, importance of MSMEs in facilitating industrial development, eliminating regional inequities, and bringing about economic progress is evident (Mahajan and Sidhu 2020; Srinivas 2013). The contribution of MSMEs to national income, employment, manufactured goods, and exports is substantial in developed nations like Germany, Greece, Italy, and France, among others. It is essential in nurturing an entrepreneurial mentality that is successful, efficient, and creative. Unemployment, poverty, economic inequality, a lack of entrepreneurial spirit, and inadequate skill development are some of India's most pressing economic issues, and this sector holds the key to their resolution (Malathy 2023). Consequently, MSMEs are making important aids to economic growth of India. The MSME sector in India provides a large variety of products and services and is classified as quite diverse in terms of size. In spite of this, MSME are labour-intensive, can be set up anywhere with a very low capital ratio, and offer a lot of benefits, like a large number of jobs, decentralisation of industrial activity, making use of resources that are already accessible locally, and expanding the entrepreneurial base. When it comes to large-scale industries, MSMEs are seen as supplementary, if not auxiliary (Muthu 2015). As a general, the industrial sector has seen less growth than this particular sector. Entrepreneurs are

encouraged to start new businesses and current ones are supported by MSME. The potential exists for MSMEs to provide comparatively high income with comparatively little investment (Sharma 2014). Consequently, this study delves into the MSME sector's function in India's economic and social development, specifically in regards to job creation and entrepreneurship (Bhat and Singh 2020).

MSME play an important role in India's economic growth. By increasing employment opportunities and industrializing these areas, these MSMEs contribute to a more equitable distribution of income (Gade 2018b). A number of factors, including the innovation and technology-focused initiatives undertaken by these MSMEs, operational flexibility, and internal and export output, contribute to the growth of the Indian economy. This modest expansion of India's economy would not have been possible without the help of these MSMEs. Rural areas are home to 55% of all businesses, which helps with regional equality and overall growth. Furthermore, they play a significant role in reducing unemployment and contribute decently to the nation's gross domestic product, trade, and industrial management (Vincent 2020).

There are a plethora of personal and compensation work prospects presented by MSME. By promoting gender and public equality, low-cost non-agrarian occupations, impartial local development, and environmentally sustainable up development, MSME is associated with a prominent rate of economic development, the establishment of an inclusive and reasonable populace, and many other positive outcomes. Forty percent of India's workforce is still employed by MSMEs, of which twenty percent are situated in rural areas (Mukherjee 2018). Over 11.7 million people were employed by 5.1 million enterprises in the MSME sector during the 2015–2016 fiscal year.

A lot of success went into the Make-in-India initiative, which aimed to instil new strengths in the manufacturing sector (Pandey and Chaudhary 2024). The goal of "Make in

India" initiative is to facilitate trade between China and India. Partners from all throughout the country are needed to keep this program moving forward. At the grassroots level, the association of MSMEs guarantees the very strong-willed initiative of the Indian government, which places a premium on developing skills and strengthening competences for providing input support (Gade 2018a). The main responsibility for developing and implementing policies, plans, initiatives, and schemes to support and expand MSMEs in India lies with the Ministry of MSMEs of the Indian Government. It is primarily the responsibility of the state government to foster the expansion of these MSMEs, with support from the federal government bolstering their efforts (De and Mondal 2018). As the country's economic landscape evolves, the MSME Ministry and its affiliated organisations play a crucial role in assisting individual states in their ongoing endeavours to boost employment, entrepreneurship, and livelihood prospects while simultaneously making MSMEs more competitive (Srinivas 2013). The MSMEs have been making great strides in fostering entrepreneurial spirit by way of technological and commercial innovations (Kaur 2017). MSMEs in India are growing rapidly, penetrating new markets and providing a wide array of services to meet the demands of consumers both at home and abroad (Uma and Anbuselvi 2023).

1.4 Contribution of tribal women farmer groups to sustainable development

Tribal women farmer groups crop up as an important force to rejuvenate sustainable development strategies and practices that encourage agriculture & allied sectors by incorporating the indigenous knowledge & community scholarship along with available models. These contributions go further beyond the concept of the economic benefit, as they support the protection of the biological diversity, apply environmentally sound practices of agriculture, and use resources efficiently (Priyadarshini and Abhilash 2019). Through small-scale trading and farming activities and joint business and agricultural ventures, they

contribute towards providing the marginalised population with a better food basket, deriving income, and improving their economy and social standards (Kumar, Chauhan, and Patel 2018). These groups play a crucial role in garnering gender equality and coming up with measures to empower women to provide for the growth of all. In addition, the commitments to sustainable practices make them key players, especially in the fight against climate change, argument presented is that long-term environmental and socio-economic objectives cannot be achieved without including these key points (Luqman 2024).

The contributions of women to agricultural development and related disciplines are substantial and vital in emerging nations such as India. It is crucial to comprehend the role of women in different endeavours in order to execute development programs effectively. Developmental activities can be developed for indigenous farm women in various areas, including agriculture (Thiruvengala 2016). The indigenous tribe has been marginalised and has little access to modern agricultural techniques. An important part of tribal people's life was the production of crops and animals, and this was not the only source of their income; through activities such as the making of handicrafts, running small industries, doing business, tailoring, setting up nurseries, etc., the economic condition of the tribe was improved (Rokonuzzaman 2013). Indian women in tribal areas are a major force and backbone of the community as they work very hard for the family's income and livelihood to be stable (Patel et al. 2016). SMS farms rely heavily on the work and contributions of tribal farm women (Saranya 2019). Understanding the role of women in agriculture is crucial for agriculture development projects to be effective because of the significant role women play in the industry. To better understand tribal farm women's involvement in farming and the elements that influence it, this study set out to collect data on this topic (Padhy 2023). In order to make tribal farm women's participation in the cultivation of major crops in the region more successful, it is important to know how much they participate and

what circumstances affect it. With this knowledge, we may plan or develop technologies or farm tools and machinery just for them. The extension organisation and other policymakers could enhance tribal farm women's participatory efficiency in different farming systems by developing policies based on a firm understanding of their engagement in crop production (Shamna et al. 2018).

The majority of working women in the nation are engaged in the informal sector, where they endure the most stifling living and working conditions and have no legal protection. Although they make up 60 percent of the labour and create 50 percent of the world's food supply, women receive just 10 percent of the global economy and most notably, only 1 percent of global estate (Sansiya 2013). In India, 92 percent of labour is in the informal sector which mostly encompasses the rural poor. Similarly, in Odisha, only agriculture, forestry, and fishing account for 53% of the state's informal workers, according to National Sample Survey Report 2011- 2012. The majority of tribal women in Odisha are employed in informal sectors such as forest gathering, traditional agriculture, and wage labourers in rural development projects. While working they also contribute to maintaining environmental sustainability with their traditional skills and knowledge (Dungdung and Pattanaik 2020). The responsibility to preserve ecosystems around the world and reduce consumption of natural resources is at the heart of environmental sustainability. Tribal Women work between sectors and also perform multiple tasks. That is why the skills and knowledge of women are central to the utilization of biodiversity and conservation (Gunwal and Mago 2019). Although women contribute much to the sustenance of their families as well as their community, it is not measured in wages (Shankar et al. 2004). In this study, an effort has been made to analyze the role of tribal women in conserving the environment and sustainable use of resources while working in informal sectors such as

forest space, tribal women in agriculture, and tribal women at rural development works. Their difficulties and concerns have also been highlighted (Nayak and Paltasingh 2024).

In addition to tribal men and women, tribal communities play an important role in national economic and social development (Afsar 2020; Akehurst and Simarro 2012; Hossain et al. 2021). When people, their surroundings, and societal and cultural influences all come together, an entrepreneurial spirit emerges. Entrepreneurship by women is widely acknowledged as a key factor in a country's economic development (Dana, Etemad, and Wright 2001; Das 2000). Scheduled Tribes are self-sufficient, possess unique cultural practices, and live in relative poverty due to their isolation and lack of outside influence. In addition to farming, the indigenous people relied heavily on forest products and the forest itself for their livelihood. They are naturally gifted with the capacity to gather and use small forest goods like gum, adda leaves, honey, and bamboo because they reside in close proximity to forests (Hazarika and Goswami 2018). The increased number of indigenous women who are entrepreneurs may be traced back to the socio-economic development, industrialisation, urbanisation, and migration within the tribal population. When trying to pin down what exactly constitutes entrepreneurship, it's important to take into account the differences between the country's industrially developed and developed regions. As far as Basu (2000), The tribal conditions of entrepreneurs and self-employed persons were identical. Thus, even opening a little enterprise like a tailoring unit or retail store represents breaking with tradition and elevating one's tribe status. The role of the entrepreneur has grown in popularity among women in Bangladesh, who are from all walks of life and geographical areas (Nasima and Alam 2015). It has been found that entrepreneurship can be induced, according to multiple tests. There have been many initiatives by the government of Bangladesh to encourage innovation and creativity among its population. One of the best ways for indigenous women business owners to raise their

economic and social standing is to start their own businesses. Hemasrikumar et al. (2018) The economic security that tribal women in Bangladesh may achieve through their exceptional entrepreneurial skills is a key component of their business, which in turn empowers them. This economic upheaval has inspired some indigenous people to start their own businesses. Their operations, which are rooted in both rural and urban areas, are experimenting with new technology, and they are embracing novel inputs in food production and allied industries (Towfiq and Hasan 2022).

Women play an important role in Indian Society. However, they do not enjoy equal rights along with men when it comes to finances. Tribal women in India often endure severe societal bias, both inside their homes and in the wider community (Sahu, Baral, and Singh 2024), leading to their disempowerment. The basic premise of microfinance is that women can and should be empowered to take charge of their own lives and the lives of their families and communities. Despite some good results for indigenous women, data from Dahod shows that these programs have failed miserably in that region (Solotaroff et al. 2019). These results provide more evidence that microfinance programs help indigenous women gain agency. Microfinance programs frequently have positive outcomes by empowering women with enhanced economic, social, psychological, and political influence, despite some accompanying adverse impacts (Mengstie 2022).

Because of their contributions to social, cultural, economic, and religious spheres, women are highly valued in tribal societies and excel in many aspects of tribal life. However, they continue to fall far behind in other areas, including economic empowerment, employment, health, and education. One definition of empowerment is providing marginalised people with the means and agency to achieve their own goals, such as granting financial independence to low-income women (Aind 2013). Providing Indigenous women with economic independence is a crucial step towards ending

discrimination, exploitation, and injustice and advancing their community as a whole. Numerous studies elaborate on the causes and consequences of women's underpowering (Pradha and Sethi 2024). As part of a larger effort to understand why women aren't more powerful, these studies look at things like men's control over resources and reproductive rights, women's social exclusion and segregation, and women's lack of education, training, and skills. Various socioeconomic categories of socially varied women are subjugated to varying degrees by these elements (Sama 2017).

In order to achieve sustainable development and all of the Millennium Development Goals (MDGs), women must be economically empowered. Achieving gender equality and empowering women increases the impact of development activities (Odera and Mulusa 2020). They found that of all development programs, investments in gender equality produced the highest returns. When compared to men, women are more likely to give back to their family and communities with the money they earn (Lal 2020). The World Bank cites Brazilian studies showing that a child's survival rate is 20% higher when the mother has a financial stake in the household (Östlund et.al. 2011). The government and non-governmental organisations must devise suitable plans and programs to empower indigenous women financially (Kabeer 2012).

To achieve SDGs, it is essential to empower women. This is true at the national, community, and family levels (Williams, Väisänen, and Padmadas 2022). Training women to be more active participants and decision-makers is what this term refers to (Akhter and Cheng 2020). In the past 20 years, women have made strides towards more agency, gaining the same access to education and employment opportunities as males while also trying to establish their own businesses (Kumar and Kumar 2024).

1.5 Challenges Faced by Tribal Women Farmer Groups

Organised Women Farmer Groups are significant in improving food security, poverty reduction, management of natural resources and the welfare status of van tribal women in the rural settings. But these groups encounter diverse obstacles that do not allow them to develop and become sustainable (Alvi et al. 2021). They are also locked out from markets, credit and land and have poor education, health and attributes of physical infrastructures. Furthermore, well-established traditional and cultural practices together with gender disparity limit their ability to engage in decision-making and actual business ventures (Krishnan et al. 2008). These kinds of conditions are worsened by climate change and various forms of environmental risks making their productivity and ability to secure food and income sources a concern. Failing to address these issues means missing out not only on the ability to better the lives of tribal women but also on deeper objectives of continued socio-economic, gender and environmental development. A systems approach of strengthening the capacities of tribal women farmer groups, policy support and access to resources can enable the groups act as catalysts for positive change (Dhal 2018).

It is common practice to classify people into groups based on their shared characteristics, such as geography, language, cultural norms, and political and social structures. Multiple subgroups could be a part of it. It is only by notification as a Scheduled Tribe under Article 342 of the Constitution of India that a tribe is often considered a Scheduled Tribe (Mukherjee 2013). Empowerment is a dynamic and multi-faceted process that helps women develop their full potential in every area of life. Almost no one will argue against the necessity of empowering indigenous women. Development of tribals and tribal areas is essential due to their traditional way of life, social and economic backwardness, lack of education, antiquated production methods, lack of moral principles, sparse physical infrastructure, and poor demographic properties (Soni 2019). Despite the fact that the tribal

economy was overrun by commercialisation and industrialisation, women maintained a prominent position. The majority of the harvest from smaller forests is done by children and women. The majority of the women in the tribe earn a living by working as domestic workers, construction workers, or industrial labourers. But environmental degradation and outside intervention make it hard for tribal women to make a living and live decently (Jana and Midya 2024) on their own. The primary limitations highlighted by Eswaran et al. (2017) issues such as low exposure levels, gender-based technology, salary discrimination, a lack of training, and the inaccessibility of credit are obstacles that tribal women face when trying to participate in agricultural and related fields, among others. Tribal development strategies, particularly those pertaining to women, require enhancement, improvement, development, and elevation in order to empower them. This article makes an attempt to find out what kinds of barriers tribal women encounter when trying to take part in tribal development projects (Mareeswaran et al. 2017).

In popular culture, tribals represent independence and strength. They inhabit mostly central India and a small number of northeastern locations. Scheduled Tribes make up 8.2% of the country's overall population, according to 2001 census data. Scheduled tribespeople make up 10.4 percent of the country's rural population and reside mostly in rural areas. The International Encyclopaedia of Social Sciences states that the term "tribe" is typically used to describe a group of people who are subservient to a leader and live in an uncivilised or primitive manner (Marchang 2019). The social standing of tribal women is largely determined by the roles they perform in society. The socioeconomic status of Scheduled Tribe women in West Bengal was compared to that of the scheduled caste and non-Scheduled women in research done by Chowdhuri in 1988. In comparison to Scheduled Caste women at 13.70% and the non-scheduled population at 36.43%, the primary results showed that just 5.01% of Scheduled Tribe females could read and write (Naik and

Dasaratharamaiah 2019). In comparison to the total percentage of female literacy, this level was dramatically lower. Singh and Rajya Laxmi's 1993 study revealed that tribal women's demographic, health, educational, and occupational status had been analysed. Subsequent to India's independence, the Constitution of India bestowed numerous safeguards upon the country's indigenous people (Kumari and Siotra 2023). The investigation brought to light certain features of tribal labour, such as sexual exploitation and equal employment opportunities for women and men, but at lesser wages. In addition to not having legal access to property, tribal women's literacy rates are lower than those of the whole population and scheduled castes. Tribal women have poor health and are afflicted with a number of illnesses and malnutrition. In order to transform the status of tribal women, the study emphasised the necessity of improving the status of indigenous girls (Kaur. 2005). Tribal women in India had no political clout. They had no place in the village councils. In the panchayats, they were never given a voice. Nevertheless, the number of tribal women participating in government is quite low. According to research by Vikas Nandal on "Participation of Women in Panchayati Raj Institutions," women make up almost half of the world's population, however they play a negligible part in politics when compared to men. A liberal democratic nation cannot advance if half of its potential is focused solely on domestic issues (Srinivas 2024). Eventually, women in tribal communities start taking part in every aspect of government, while they still lack the authority that men have when it comes to these matters. Real change can't happen unless they participate actively in every part of society. The number of native women serving in leadership positions is very low. Just a small fraction have managed to get to positions of significant power. Nagaraja (2013) It was shown in his research that tribal women could benefit from more social and political engagement in order to become politically active and dynamic. They can do a lot to help their communities thrive if given the chance to be politically involved. Getting indigenous

women involved in politics is the first step towards empowering them (Nandal 2013). As a result of patriarchy, tribal women were less likely to become involved in politics. There has been a very little improvement in the status of tribal women in the 75 years since India gained her independence. Examining the role of indigenous women in governance is essential for knowing and understanding their social position. There is a direct correlation between one's socioeconomic and cultural standing and their level of political participation and influence, which in turn influences and shapes the political and socioeconomic makeup of a country. Having the ability to vote and participate actively in government is widely recognised as essential to women's position. (Mohapatra 2009).

Their political influence and visibility have progressively risen. It is absolutely necessary to bring tribal women's voices to the forefront globally, nationally and regionally. In fact, one could say that there has been an upsurge in the activities aimed at empowering tribal women by allowing them to being a part of the decision-making process (Mosse 2018). It is serious matter that the Scheduled Tribe women should be given priority in the matter of local governance as their participation in the political process is an effective way of promoting gender equality, generating new ideas, and upholding democratic values. This view is supported by his research. A large number of people are of the opinion that women's political participation is restricted due to their non-involvement in political processes and that merely having representation would not bring about a change in this situation (Muhammed and Ayenalem 2023). As a result, the need for a more inclusive approach in the governance of indigenous women and their full participation is being increasingly recognized not only by governments but also by NGOs and international bodies. Many efforts have been made to provide them with a voice so they can actively participate in shaping policy and provide their unique perspectives on its implementation. Through these programs, indigenous women are able to hone their leadership qualities.

(Raju 2024). But even with all this, there are still a number of obstacles that indigenous women face that prevent them from being integral parts of government. Sustainable development relies on empowering indigenous women in governance, which is a human rights and justice issue in and of itself. Building inclusive and resilient societies that listen to, respect, and act upon the voices of indigenous women requires us to recognise and appreciate their contribution (Kriti et al. 2023)

A society's level of social justice is highly tied to the position of women in that community. Common ways that women's status is characterised include income, employment, education, health, fertility, and the obligations that women have within families, communities, and society as a whole. It is impossible to exaggerate the significance of women's responsibilities in indigenous communities (Mishra 2016). Because they work longer hours and are in charge of the family's finances, women in tribal society have a higher status than in other social groupings, and they also make up half of the population. Even as commercialisation and industrialisation started to overwhelm the tribal economy, women continued to play an important role in it. The majority of small-scale forest product harvesting is done by children and women (Fabiya et al. 2007). They help support their families by working as domestic helpers, in factories, or on construction sites. Contractors and managers may try all they want, but tribal people will always be more reliable and honest than average Americans (Sujeetha, Suganthi, and Ravichandran 2017).

Limited access to resources and finance

Developing nations like India face a significant challenge when it comes to access to financing for MSMEs. SMEs are the backbone of developing nations' economies. Over the last half-century, MSME have been a lifeline for India's economy (Nema, Suryavanshi, and Verma 2021). MSMEs are responsible for 80% of the world's economic growth and

make substantial contributions to the economies of both developed and developing countries. A large portion of India's GDP (6.11%), services GDP (24.63%), manufacturing output (33.4%), and overall exports (34% of a wide variety of commodities) come from the MSME sector (September 2019) It should be noted that the current export contribution of MSME is 50%, and this might rise to 75% by 2024 if employment opportunities are extended to 15 crore people. By 2024, the Indian economy is projected to exceed \$5 trillion, with a contribution of 24% from MSMEs (Doshi et al. 2024). also found that as MSMEs grow, social and economic objectives are met more quickly. There was a disparity between India's total available finances of 13.54 trillion Indian rupees and its total addressable demand for foreign loans of 41.64 trillion. There was a 28.10 trillion rupee gap in loans for MSME in 2019 (Prasad and Barje 2022). When it comes to India, it's more challenging for MSMEs to secure capital from institutional sources (Pachouri and Sharma 2016). Short-term funding is the main source of financing for most MSMEs in India due to the reluctance of banks to lend to these businesses or the shortage of information sharing. A significant number of small businesses in India turn to informal finance as they face challenges getting money from banks and capital markets (Baker, Kumar, and Rao 2020). In India, many MSMEs struggle to get off the ground because of red tape and a lack of capital. In 2020, India's DB score was 71.0, placing it at number 63 on the Ease of Doing Business list. New business owners in developing nations like India face significant barriers to entry, such as a lack of readily available MSME financing, which prevents them from growing their existing companies or starting new ones (Rajamani et al. 2022).

On the subject of employment and innovation, MSMEs are frequently referred to as the "engine of growth" for developing nations. UN projections show that SMEs make up 90% of all firms worldwide and provide 60% to 70% of all jobs. Recently conducted research has contributed to the accumulation of more data regarding this engine (Chironga

et al. 2012).’ Several of these studies have looked at the topic of MSMEs access to financing and have come to the conclusion that this is most commonly acknowledged limitation for this sector on a worldwide scale (Rajamani and Raj 2020). Moving forward, it is becoming more apparent that “digital financial services” (DFS) can boost and quicken the financial inclusion of MSME in comparison to more conventional brick-and-mortar approaches:

How MSMEs have access to working capital and cash flow financing is being transformed by new global players in the financial technology (fintech) industry (Deb and Baruah 2022). Recognising that they lack the resources to compile the financial data needed by financial institutions to determine their repayment capability and default risk, MSMEs are turning to more flexible and agile technology in order to have a better grasp of their cash conversion cycle (Madan 2020).

1.6 Challenges Faced by Tribal Women Farmer Groups in MSMEs

Tribal women farmer groups are emotionally involved in the growth of agriculturally funded rural economies mainly by providing their services to MSMEs. However, they encounter severally diverse challenges that undermine their sustainability and growth (Pandhare, Bellampalli, and Yadava 2024). The major constraints include; availability of financial capital, trainings and knowledge in the new Agriculture/Business, and market access. Furthermore, socio-cultural constraints which limit the decision-making authority and gender bias complicate these challenges, and thus provide a tough environment for the tribal women undertake appropriate management of their enterprises and grow their businesses (Katiki et al. 2021). This is made even worse by the lack of sound physical and organisational base, exposure to global economic and ecological volatilities. Meeting these challenges is relevant not only to improve the situation with indigenous

women's rights, but to create conditions for economic growth and sustainable business in the regions (Kennedy et al. 2023).

Scattered across the nation, indigenous tribes have a long history of victimisation at the hands of landlords and moneylenders. Hunting and the use of natural resources were traditionally their main sources of food. Most of the tribal groupings, as well as their native languages, live in abject poverty and have few resources to fall back on (Biswas 1993). Entrepreneurship is complex and difficult, making the subject matter of this paper highly challenging. Addressing members of the indigenous community, and especially indigenous women, makes this intricacy even more apparent. While there have been some steps taken to improve the economic and social situations of indigenous communities, a lot more needs to be done (Majhi and Nanda 2024). The purpose of my present study is to examine the obstacles to encouraging tribal women in Odisha to start their own businesses and to provide workable answers to the problems plaguing tribal affairs today. The current policy framework seeks to improve society as a whole, and our research fits in with that (Castes and Tribes 2009).

Female entrepreneurs are those who take the initiative to launch, structure, and manage their own businesses. This can be done solo or by a group of women. It is traditionally believed that women can only be considered entrepreneurs if they take the lead in a new business endeavour (Mari et al. 2024). "Owning and controlling an enterprise with at least fifty-one percent financial interest and significantly contributing to employment opportunities within the enterprise" is how the Indian government defines female entrepreneurship (Sivasakkaravarthi 2024). In modern-day India, women have been enjoying the same rights and privileges in terms of access to higher education, particularly in cities. Innovations such as this one have made it possible for urban Indian women to enter and even dominate the male-dominated sectors. Women with a bachelor's degree are

more confident, ambitious and successful than those who do not have one (Lather, Jain, and Vikas 2009).

Improving women's status in society and empowering them requires their active engagement and participation in development processes. Two major channels for making use of human resources exist in this setting: paid work and self-employment (Mahbub 2021). The most viable choice, considering the restricted supply of employment options, is self-employment. When people seek out self-employment opportunities, they often end up becoming entrepreneurs and, in rare instances, employers themselves. The number of women who choose to work for themselves has been the subject of several campaigns and organisations (Light and Munk 2018).

It is critical that women, irrespective of their educational background, be encouraged to launch their own enterprises immediately. Some organisations are attempting to influence governmental and private sector policies and attitudes in order to increase the number of women who establish their own enterprises (Thomas 2024). There has been a marked increase in women entrepreneurs thanks to grassroots efforts by a variety of organisations and government-sponsored entrepreneurship development programs (Majhi and Nanda 2024).

In India, as in the rest of the globe, women make up around half of the population. They did all their housework and lived within the confines of their homes in traditional societies. These days, people in contemporary societies can be found engaged in a wide range of extracurricular activities, such as teaching, administration, social work, politics, and academia (De and Mondal 2018). They have also started to jump into industry with both feet and are doing very well. More and more, people are realizing that entrepreneurs are the engine that keeps the economy turning, creating jobs, innovations, and productivity. Additionally, it is seen as an essential element of economic vitality (Stam and van de Ven

2021). Women business owners are a relatively new phenomena, both in concept and in practice. MSMEs employ a small number of female entrepreneurs. In this piece, we'll look at some of the obstacles and possibilities that women business owners in India face (Reviewed and Journal 2024).

There has been a marked and positive shift in the position of women in Indian society during the last many decades. More and more women are taking over traditionally male-dominated corporate roles, and in some cases, they are even surpassing their male colleagues. More pervasive gender stereotypes of yesteryear are gradually fading from popular culture (Patil 2021). However, a considerable amount of work remains. However, India ranks 113th out of 135 nations when considering the gender gap in the workforce as a whole. This places it much behind numerous other countries (Agarwal and Lenka 2018).

An enterprise is considered a Women Entrepreneur by the Government of India if "women own and control it with a minimum financial interest of 51% of the capital and that enterprise generates at least 51% of employment for women" (Koneru 2018).

Although traditional Indian values and customs persist, women's roles and position have evolved significantly in recent decades. The once-domesticated ladies who were unable to consider anything other than their families' well-being have suddenly roused themselves to take action (Punam and Sharma 2017).

These customary conditions have been significantly altered even in a developing nation like India due to numerous causes such as urbanisation, technological progress, women's education, etc. As time has progressed, particularly in urban areas, the idea that women should leave the house and work to support their families and communities has been increasingly thrust upon them (Dhamija, Roychowdhury, and Shankar 2023) as the best way for them to make a positive impact, more and more Indian women are starting to

do what their Western counterparts did over eighty years ago. Awareness of women's existence, rights, and working conditions is growing (Padma Anagol-McGinn 1994).

The Indian women demonstrated their mettle in the traditionally male-dominated corporate world. In a country where women were once expected to stay at home and care for the children, stepping into the spotlight of corporate America has been a powerful symbol of female emancipation (Dhamija, Roychowdhury, and Shankar 2023).

The participation of women in corporate India is a recent phenomenon, even in the country's traditionally conservative socio-cultural context. Women's latent entrepreneurial potential is being transformed through a growing awareness of their economic and social roles (Hemalatha, Furzana, and Nayaki 2014). The current women entrepreneurs are representing a new generation of women who are creating their own spaces in the labor market. The ambition to do good, coupled with women's professional expertise, knowledge, skills, talents, and creativity in the business sphere, is the main drive behind women's organized enterprises (Kumar, Singh, and Singh 2012).

The contemporary entrepreneurs are those that take the lead and manage the whole affair by themselves in the business domain. A majority of the people easily identify the one who establishes a business, a sector, or a shop as an entrepreneur. It is the quality of having an entrepreneurial spirit that is a requirement for the economic growth of a country (Agarwal 2016).

Both the status of women in society and the function of entrepreneurship within that society are addressed by the study of women entrepreneurs. Equal opportunity for men and women depends on resolving the specific obstacles women face, such as the responsibilities of family life (Edman and Punkari 2020). The ability to own property and enter into contracts may be more difficult for women in certain nations. For women

generally and women who work for themselves specifically to advance in society, there must be a surge in the number of women entering the workforce (Anandhi 2022).

A crucial component of human resource development is empowering women to start their own businesses. Especially in rural areas, women's entrepreneurial growth is severely lacking in India. There has been growing worry about women entrepreneurs as of late (Saraswat and Lathabhavan 2020). Women now know who they are, what they can do for themselves, and how the workplace affects them. Nevertheless, middle-class women are wary of societal rejection if they change their roles. Wealthier households in metropolitan areas tend to see the improvements more clearly (Singh 2012).

- **Lack of access and awareness about the financial assistance:** Loans provided to small and medium-sized female businesses fall well short of meeting their full financial requirements (Barhate and Patgaonkar 2012). This jibes with anecdotal evidence that women business owners have a harder time getting loans. It is difficult for female entrepreneurs to secure loans due to a lack of collateral (Mwobobia 2012). Lending money to women is another something that bankers are uneasy about. A considerable amount of research has looked into the gender gap in access to financing and found that women encounter "higher hurdles" when trying to get funding for their enterprises (Brush et al. 2014). A lot of rural women don't know about the government programs and subsidies that are out there.
- **Socio-cultural factors and status of women:** Minor societal hurdles that women business owners encounter include patriarchal society, women's dual roles, economic inequality, and a lack of support from family and friends. Everything together acts as an obstacle to and has a negative impact on business endeavours (Kaur and Kaur 2024).

- **Individual factors like low self-esteem or confidence:** The female members of the community had lower levels of achievement motivation than the male members. Low levels of education and self-confidence make women less likely to want to work in business or operate their own company, which in turn reduces their chances of success (Kumar and Bhuvaneswari 2016).
- **Lack of Social mobility: Social mobility:** level of difficulty women faces in both urban and rural areas when it comes to attending client meetings or making long distance trips to be present in the marketplace. Levels of difficulty women face in both urban and rural areas when it comes to attending client meetings or making long distance trips to be present in the marketplace (Raj and Sree 2023).

1.7 Exploring the Role of ESG in MSME Performance

MSMEs have to incorporate the "Environmental, Social, and Governance" (ESG) principles in order to drive their performance and sustainability. The ESG frameworks steer businesses to adopt policies that minimize their ecological footprint, promote social equity, and secure ethical governance in order to synchronize their operations with the global sustainability objectives. The small-sized companies that mostly have limited resources, accepting ESG can make them more robust, increase the trust of the stakeholders, and lead them to new markets (Chen, Xie, and He 2024). Moreover, compliance with ESG is progressively turning out to be a must-have for getting investors, getting government backing, and satisfying consumers' expectations. Investigating the function of ESG in MSME performance reveals its ability to change these firms into responsible and sustainable economic growth drivers while tackling environmental and social concerns (Sobir 2023).

The global interest in ESG practices has been increasing. The whole concept of "sustainability" which includes social and environmental responsibilities of companies and their management is getting a lot of attention (Yu et al. 2024). To ensure their financial success, companies in modern times need to be extremely flexible and must embrace and factor in a myriad of different kinds of environments including environmental, social, and labor. ESG factors are among the many factors that can have a considerable influence on business performance in this area (Stauropoulou et al. 2023). Considering the crucial role of banks in modern economies, the primary goal of this research is to investigate the impact of these practices on the financial performance of the companies. Banks are the suppliers of vital financial services both to persons and firms. The emphasis here is on the banking and financial industry (Proud and Suhendra 2023). The services mentioned above, however, are not the main motivation; the intention is to cut down the social and environmental costs while improving the governance. Therefore, a sustainable financial model will be created which will take into account social and environmental factors not only during the assessment and gaining of the market but also when the negotiations for competition between the institutions. This research consolidates previous investigations into ESG issues and their effect on the financial performance of banks and other businesses (Wu and Tham 2023). Thus, it defines the connection between different ESG factors and financial performance in the banking and other sectors and motivates both companies and financial institutions in the direction of sustainability.

The daily significance of sustainability practices among businesses is getting higher and higher. The economic, environmental, and social dimensions of sustainability have already been recognized. Environmental sustainability is rapidly becoming an issue of equal importance with economic sustainability due to the rising pollution levels from various sources such as GHG emissions, untreated wastewater discharge, and dangerous

waste disposal (Zhivkova 2022). When it comes to protecting human rights, meeting the expectations of many stakeholders, and developing local communities, social sustainability is just as important as environmental sustainability. There are two sides to the coin when it comes to social sustainability: the internal and the exterior (Nasrullah 2011). Ensuring employee well-being is tied to the internal sub-dimension, while meeting the expectations of the government, "non-governmental organisations" (NGOs), various interest groups, society, community, and the general public at large is related to the exterior sub-dimension.

When it comes to sustainable business practices, the literature has mostly ignored SMEs in favour of huge corporations. SMEs have been overlooked in comparison to major corporations due to their size and operational scale (Boakye et al. 2020). In the grand scheme of things, nevertheless, SMEs are a key source of employment for the majority of a country's people, both directly and indirectly, and they contribute substantially to exports and GDP. As an example, SMEs account for 70-98% of enterprises globally, with most nations having percentages above 95% (Bayraktar and Algan 2019). At least 95% of private sector companies are SMEs, and over two-thirds of the workforce is employed by these businesses. Similarly, studies focussing on "European Union" (EU) have found that SMEs contribute significantly to economic growth and job creation (Al-Haddad et al. 2019).

Regarding environmental practices, a lot of SMEs are unaware of how their operations affect the environment. The impact of SMEs on the environment and society is lower than that of large businesses (Friedman, Miles, and Adams 2000). In spite of this, SMEs have far-reaching social and environmental consequences when added up, as is shown by the fact that SMEs are estimated to be responsible for 70% of the world's pollution. The fact that SMEs account for over 70% of the industrial wastewater discharge should be mentioned as well. In UK, 60% of GHGs emissions are caused by SMEs (Bakos

et al. 2020). Consequently, SMEs must be the primary target of efforts to enhance their social and environmental performance.

When compared to SMEs, large organisations have more access to resources, including capital, technically advanced equipment, and skilled workers. SMEs struggle to invest in sustainable practices due to a shortage of resources. Staff members of SMEs also have limited opportunities for professional growth and training (Permatasari and Gunawan 2023). Accordingly, it is recommended that SMEs implement sustainable practices over time. Effective arguments that highlight both immediate and distant benefits are necessary to persuade SMEs to embrace sustainable practices. Clusters of SMEs share office space and other resources a lot of countries. Shared technology, information, and experience might be a powerful tool for SMEs looking to embrace sustainable practices (Permatasari and Gunawan 2023).

SDGs of the UN provide a framework that is referred to as ESG. ESG is a form of “Corporate Social Responsibility” (CSR) that was created by the UN in 2005 and provides stakeholders with standards to evaluate a company's performance in three important areas: society, governance, and the environment (UNEP 2012). Among other things, environmental variables include how an organisation goes about protecting the environment, keeping its policies in place, showing accurate results of its environmental performance, cutting costs in this area, and being transparent about what it does to keep the environment safe (Zhao et al. 2020). CSR initiatives and the way an organisation handles its connections with its workers, vendors, consumers, and local communities are examples of social aspects (Mohamed and Hammami 2017). Governance includes a company's top brass, CEO compensation, audits, internal controls, and shareholder rights (Chien 2022).

In addition, there has been a significant uptick in research establishing connections between ESG and SDGs. Chien (2022), gaps between theory and practice and certain shortcomings are still there. For example, ESG evaluations tend to be laser-focussed on quarterly results, ignoring the strategic viability of companies over the long haul. Consequently, the purpose of this article is to compare and contrast the ESG strategies employed by various companies. There is a dearth of particular metrics that would allow organisations to quantify social and environmental consequences in a standardised manner, and there are no direct ties between ESG and organisations' investment decisions or financial models in the current literature (Bakker 2005). With that goal in mind, the purpose of this article is to go into a similar idea called “socially responsible investment” (SRI). Situated within the larger framework of sustainability and finance, this is a set of objectives that prioritise ethics, the environment, and finance (Bakker 2005). Furthermore, green investment is employed to decrease emissions of greenhouse gases and air pollution (Eyraud et al., 2013), without concurrently decreasing production and consumption of non-energy items (Bisogno, Cuadrado-Ballesteros, and Sánchez 2017). Organisations should take SRIs into account when developing ESG criteria as a component of their overall sustainability plan.

Organisations may better prepare for change and respond to complex, non-linear environments when they have a solid strategic sustainability framework in place (Aldowaish et al. 2022). When doing so, it is important to keep in mind the wants and requirements of the people who have a stake in the organisation. Consider one key stakeholder group, "investors," as an example. Lower risks and better investment outcomes are common outcomes of initiatives aimed at ESG-investor integration (Cappucci 2017). Thus, even when there are some unfavourable effects during investor integration (such as neglecting basic problems with company models and finances, lacking clear rules, and

having data of poor quality), investors typically support ESG and ethical actions (Friede 2019). The “State Bank of India's” (SBI) innovative position in India's green housing sector is an interesting example. The "Green Home Loan" is a new product that offers a home loan with a pathetic interest rate of 0.25 percent, a 5% margin cut, and no administrative fees (Mir and Bhat 2022). While this is going on, investors do not look well upon investments that are backed by fossil fuels or that harm the environment (Turek, Dziembek, and Hernes 2021).

It is critical to acknowledge, even if only briefly, the significance of each organization's stakeholders in keeping with the aforementioned principles. An example of how "managers" and "administrative personnel" utilise ESG reporting is in the areas of risk reduction and investment strategy integration (Przychodzen et al. 2016; Sciarelli et al. 2021). ‘A company's "customers" can also help spread the word about the importance of sustainability initiatives (Gong et al. 2019). When making a purchase, many consumers think about how a product or service will affect the environment. Additionally, 'workers' are another stakeholder group that is likely to be more motivated by corporate sustainability (Engert and Baumgartner 2016). The term "business partners" has the same meaning. ESG norms are increasingly important when choosing a business partner or supplier for a “multinational corporation” (MNC). Throughout the supply chain, we aim to foster sustainable best practices. Logistics, strategic sourcing, and online shopping are three areas where ESG is gaining traction, according to recent research.

Furthermore, as previously said, there are so-called green IT innovations and systems that fall under the umbrella of sustainability and digitisation (Thrassou et al. 2022) (Imasiku, Thomas, and Ntagwirumugara 2019). Experts from all around the globe have taken notice of the idea since it helps achieve the SDGs by promoting eco-friendly product manufacturing, cutting down on carbon emissions, and greening economic practices (Cai

et al. 2021). The idea, initially put forth by Braun & Wield, 1994, proposes a departure from conventional innovation techniques and green technology breakthroughs, the latter of which mainly aim to reduce environmental pollution.

Nevertheless, there are many who critique environmentally conscious technical innovation. Despite the fact that green technology has the potential to decrease carbon emissions and increase energy utilisation, the commentators claim that it also increases output levels and economies of scale, which in turn necessitates even more energy (Abdoui and Hammami 2017). Because of this, energy consumption goes up, leading to more carbon emissions. In a similar vein, the extraction of lithium, a component in EV batteries, is a water-intensive process that degrades soil, contaminates water supplies, pollutes air, and reduces biodiversity in the regions affected (Negrete et al. 2024). The places in India where lithium is mined are notorious for their environmental damage. For this reason, eco-innovations and green technology may actually be harmful to the environment (Braungardt, Elsland, and Eichhammer 2016), unless their primary goal is to lessen pollution by cutting down on carbon emissions (Efthymiou, Kulshrestha, and Kulshrestha 2023).

As the world becomes more conscious of environmental crises, social injustices, and the shortcomings of corporate governance, the significance of ESG factors in business has become more prominent (Eccles, Ioannou, and Serafeim 2014). A comparable awakening is happening in the corporate environment of India. More and more, Indian businesses are realising how critical it is to integrate ESG concepts into their whole strategy and operations (Maji and Lohia 2023). There has been a dramatic change in the Indian business climate, and this change signifies a major break from conventional wisdom. While ESG is a hot topic in academic circles throughout the world, little is known about how Indian corporations are embracing this change. The purpose of this research is to shed light on the various ESG initiatives implemented by Indian companies. It has also emphasised

the significance of these initiatives about relation to India's distinct socio-economic and regulatory landscape, as well as the tactics used by companies operating in this dynamic and diverse market to incorporate ESG principles (Braungardt et al. 2016). The current study provides policymakers and stakeholders with information that could shape India's ESG landscape, and it could also be useful for Indian enterprises looking for advice on ESG integration (Agarwal 2003).

1.8 Research Problem

India's roughly 8.6 percent tribal population is hopelessly ensnared in generation-old socio-economic problems, including poverty, marginalization and limited access to education, infrastructure, and markets. Many tribal inhabitants of Telangana are agriculturalists and exploiters of forest resources. However, such livelihoods are still far from adequate and do not have scope for economic improvement or extended growth. The Micro, Small and Medium Enterprises (MSMEs), as such, are important in empowering the tribal women economically through the provision of alternative sources of incomes and promotion of entrepreneurship.

In the Indian state of Telangana, the majority of the tribal people derive their sustenance from agricultural and forest-based economic activities. These livelihoods, however, are not always enough and are not stable enough for the economy to grow sustainably. The situation is even worse for tribal women who are at the bottom of the socio-economic ladder and are deprived of access to education, markets, and financial resources. The empowerment of women through Micro, Small and Medium Enterprises (MSMEs) is seen as one of the ways to help these women out of poverty, but the financial limitations, environmental factors, poor governance, and social restrictions all contribute to the unsustainable nature of such enterprises. Despite the government's efforts to promote tribal entrepreneurship, there is a significant research gap regarding the co-influence of

Environmental, Social, Governance (ESG), and financial factors on the long-term sustainability of tribal women-led MSMEs in Telangana. This study, therefore, seeks to fill that gap and aims to influence the creation of policies and strategies that will nurture and expand these enterprises.

Having potential, MSME's yet encounter severe sustainability problems. Coalition of financial access difficulties, environmental impacts, weak governance, and lack of social security create formidable barriers to the continuous growth of such businesses. While some findings can be gleaned from the current literature, it is puzzling how little research has been done to investigate the complex ESG-financial interrelations that ultimately decide the sustainability of MSMEs for tribal women farmers' co-operatives. The purpose of the present research endeavour is to fill this research gap by examining these critical aspects in depth and determining their influence on the growth and sustainability of MSMEs by tribal women farmers in Telangana. Detailed understanding of these aspects allows the policymakers to create customized strategies that can promote inclusive and sustainable development in the tribal communities.

1.9 Purpose of Research

The primary goal of this study is to analyse the MSME units established and run by the tribal women groups in the Telangana state of India about the ESG framework and come up with factors that influence the business sustainability of these units. Particularly, the study has the following sub-objectives:

- To examine the critical factors that contribute to the sustainability of MSMEs run by tribal women farmer groups.
- To investigate the effect of financial factors on the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

- To analyse the environmental factors that influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.
- To examine the role of social factors in influencing the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.
- To analyse the governance factors that influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

1.10 Significance of the Study

The significance of this study comes from offering a detailed analysis of MSMEs, especially the ones run by tribal women farmers in Telangana, India, which is a territory that has not yet been extensively researched but is crucial for the economic development that includes everyone. The continuous socio-economic isolation of tribal communities might make MSMEs the solution to the women's empowerment and the income increase, but at the same time, lack of formal support can prevent them from being successful in the long run. The study highlights the rigid obstacles that these women encounter such as climate changes, social isolation, weak institutional frameworks, and lack of financial literacy establishing even more the need for interventions that are specifically directed at them.

In addition to the academic contribution, the research offers valuable insights to decision-makers and community-based organizations such as policy makers and program managers. The information gained from the current research can assist the government, NGOs, banks, and community development agencies in making better plans for the encouragements of the MSMEs' survival in the tribal areas. Being aware of the particular difficulties and support factors may lead to more targeted improvements of policies regarding microcredit, business skills, access to markets, and government systems. By bringing the perspectives and difficulties of tribal women entrepreneurs to light, the study

adds to the debate on gender parity and economic contribution under the rural and tribal uplift of India. In a nutshell, the findings should be the bases for launching development strategies that put the emphasis on economic prosperity combined with social equity as well as environmental protection.

1.11 Research Purpose and Questions

Research Purpose

The present research intends to investigate the major factors that primarily influence the sustainability of MSMEs controlled by tribal women farmer groups in Telangana, India. Therefore, by emphasizing ESG and financial indicators, the study intends to elucidate the roles of the aforementioned factors in the continuity and robustness of these enterprises. In order to provide recommendations to authorities, this study will address a gap in the literature by addressing research limitations and investigating the unique challenges faced by women entrepreneurs from tribal communities.

Research Question

- What are the critical factors that contribute to the sustainability of MSMEs run by tribal women farmer groups?
- What is the effect of financial factors on the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?
- How do the environmental factors influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?
- What is the role of social factors in influencing the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?
- How do the governance factors influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?

CHAPTER II: REVIEW OF LITERATURE

2.1 Importance of MSMEs for Tribal Women Farmer Groups

Majhi & Nanda (2024) It is often believed that women in poor nations should only pitch in financially when their families are in dire straits. A family's reliance on the revenue that women bring in increases as their income level decreases. It is critical to work towards expanding employment possibilities so that low-income women may earn a living. The number of organizations and activities aimed at empowering women to work for themselves has increased dramatically. Within this framework, it is critical to highlight the importance of empowering women entrepreneurs, irrespective of their level of education. Promoting female entrepreneurship is a top priority for many federal, state, and local governments, as well as for some non-profits. There has been meteoric growth in the number of countries where women operate their enterprises. In industrialized countries, women are highly esteemed and have significant roles in corporate America. Social and personal hurdles, marketing stumbling blocks, budgetary restrictions, and production problems are just a few of significant difficulties faced by Odisha's female entrepreneurs. In addition, as society evolves, the challenges faced by tribal women entrepreneurs become even more intricate. Some of the other difficulties that can be mentioned include a lack of education, a lack of ambition, a lack of self-confidence, an inadequate transportation system, financial difficulties, a lack of experience and knowledge, a lack of transportation options, family obligations, and limited financial resources. Making a wise investment in a company opportunity can pay out handsomely down the road. The socioeconomic situation in Odisha's tribal regions can be improved by the establishment of companies run by women. This research will not only examine the difficulty of promoting tribal women's entrepreneurship in Odisha but also provide practical recommendations to improve the

situation and the country as a whole. Additionally, it aims to align with the state's current policy framework for a general betterment of society.

Sahu, Agarwala, and Maity (2024) Tribal women's entrepreneurship is a multi-faceted initiative that seeks to include socially overlooked groups, empower them economically and promote their development. By opening up the avenues of entrepreneurship such as group cooperatives or small businesses for the tribal women, the program intends to break the cycle of poverty and invisibility that has been trapping the tribal communities for a long time. The women are given access to the resources, mentorship and training so they can fully utilize their traditional knowledge and skills while, at the same time, being able to economically empower them³⁶³ Challenge gender stereotypes and become the leaders of their communities. Ultimately, tribal women's entrepreneurship is the process of building up social harmony, gender equality and economic growth, thus giving birth to stronger, more independent tribal communities.

Ubfal (2024) Entrepreneurial women who think outside the box can be game-changers by bringing fresh perspectives to old problems. But expanding their enterprises isn't easy for them. I do a literature review on methods that have been successful in helping female entrepreneurs achieve better results in their businesses. I centre my efforts on programs that aim to fill four gaps that affect their decision-making and company performance: human capital, financial, technological, and market access; and contextual factors like legal and regulatory constraints, healthcare access, social norms, and gender-based violence. I draw the conclusion that more targeted approaches are required due to evidence of average treatment effects that are modest and variation in treatment effects across different interventions. It is necessary to test out several intervention packages due to the fact that women entrepreneurs encounter numerous obstacles. Additionally, it is important to take into account the contextual constraints that impact women-led enterprises

differently in order to successfully execute and embrace recommended solutions. There are large gaps in the evidence regarding the most successful techniques for supporting women entrepreneurs, even though I do mention a few interventions that show promise.

Khandelwal & Priya (2024) It is very important to empower women in order to elevate their status in the economic, social, and political arenas. The phrase "women entrepreneurs" is used to refer to a situation where women are the ones to start, develop, and manage their businesses. "To awaken the women, is to awaken the whole nation," was one of the most striking quotes by Jawaharlal Nehru. When she is active, everything changes: the family, the society, and the nation. Women indeed constitute more than half of the world population, but in India, it seems like there are fewer females than males. The society does not very often view women as having equal rights with men. But in today's world, they're lowering barriers and getting involved in all sorts of things, including businesses. There can be no industrial progress without MSMEs. In the Indian economy, the MSME sector operates as a huge reservoir of labor force, the Ministry of MSME reveals that more than 63 million businesses are employing more than 110 million persons. With a contribution of approximately 30% to GDP, MSMEs continue to play a pivotal role in the economy. Women business owners may find new avenues for expansion, access to markets, and financial autonomy as a result of the digital transformation of MSMEs, which is the focus of this study. Another possibility is that the study would focus on female-owned SMEs that have thrived in the modern internet age.

Fansuri (2023) An examination of the methods used by rural women in the Kediri Regency who are involved with MSMEs players to better their families' financial situations is the primary goal of this work. Researching women's roles as builders of gender equality as agents or drivers of MSMEs is an intriguing area of study. Rational choice theory underpins this investigation, which makes use of interpretive qualitative research methods.

This study's findings clarify that: 1) Women in Kediri Regency who run MSMEs do so because they are aware of, and supportive of, the opportunities available to them to manage their businesses using the resources that are already available to them. 2) Women business owners in Kediri Regency are driven to succeed by strong family economic pressures and a strong desire to attain their goals. Three, there are some ways in which MSMEs in Kediri Regency build capital: (a) through sales mechanism initiatives, (b) through social capital building, (c) through norm establishment, and (d) through trust instillation.

Gufron & Nengsih (2023) In addition to boosting the family's economic capabilities, empowering women through micro and small companies also helps to elevate women's status within the family and society at large. This study's title reflects the researcher's interest in the topic of how empowering women through MSMEs in Pisangan, East Ciputat might contribute to the local family economy. This research made use of a quantitative approach, specifically a questionnaire. In this study, they looked at how MSMEs affected female entrepreneurs and how they may grow. Data study shows that MSMEs are crucial in helping women gain economic independence. Women who possess MSMEs have been encountering considerable challenges but still have done it with flying colors as successfully as not. Some of them admitted that they had problems concerning social support and the balance between personal life and work, but none of them reported instances of discrimination based on gender. The conclusions drawn point out that MSMEs are the source of women's power by lifting self-esteem, leading to economic independence, and providing access to education and professional advancement. Not only do women take their own MSME as a means of positively affecting their family's economy but also they are a source of financial relief and improving the quality of life. MSME is the factor that greatly contributes to women's advancing social standing and empowerment.

Pappala (2020) This research employed a holistic approach and conducted interviews with 46 tribal women farmers (aged between 15 and 49) including pregnant and lactating mothers, over the period of February 9th to March 3rd, 2020. One of the main objectives of this study is to gain deeper insights into the economic role and dynamics of tribal women in Lotheru village, ITDA Paderu revenue division, Visakhapatnam district. In addition, it will showcase women's contributions in the field of agriculture as well as in product and operations. Observations, case studies, and interviews are some of the anthropological instruments and methodologies used to gather empirical data on demographic and socioeconomic characteristics, employment status, occupational distribution, and occupational classification. Utilizing SPSS-18, they coded and analyzed all of the data. The research showed that Indigenous women were more likely to be part of farmer groups with low literacy rates, low incomes, and marginal standing. When it comes to agro-economic operations, such as seed selection (which includes hulling) and inter-cultivation, as well as land preparation, showing, harvesting, and post-harvest tasks, tribal women are said to be substantially more involved.

Paray (2019) Tribal Women's Empowerment Involvement of women is crucial for any community's socioeconomic growth to see improvements. For their participation to be assured, the women have to be present to take part in social processes in India; only through multi-level, effective actions that really give power to them, this can be achieved. The concept of women's empowerment has come up in the context of raising women's status. Health care, education, literacy, economic engagement, self-awareness, self-reliance, self-esteem, and confidence are all part of empowerment. So is equal ownership of productive resources, higher living standards, and more learning and growing opportunities. The collection of small forest products is mainly done by women and children. However, the indigenous women still suffer from discrimination and inequality within the tribal societies.

They must address the complicated phenomena of gender equality among tribal tribes in the context of different challenges of tribal life. Indian tribal societies' gender dynamics impact the importance of tribal development. What has changed and how has it affected tribal women in India is the subject of this study. Although the Tribals are known for their democracy, the study delves into how gender and class dynamics have emerged as new challenges due to socioeconomic shifts in the past few decades. This research will rely on secondary data gathered from a variety of sources.

2.2 Critical Factors Contributing to Business Sustainability of MSMEs

Ogbari et al. (2024) The fight against female poverty and for women's empowerment is ongoing, even though it is a global problem. It will need innovative approaches to reach sustainable development's aims, which include ending poverty, achieving gender equality, boosting economic growth and employment, and removing inequalities. Focusing on the Nigerian Youth and Women Farmers Association, this study sought to examine the relationship between social empowerment and the reduction of agricultural poverty in Nigeria. This study only considered 335 of the 353 questionnaires that were sent out for analysis. One method that was used to examine the initial data was a "structural equation model with partial least squares" (SEM-PLS). There was a strong relationship between farm women's efforts to reduce poverty and their social empowerment, according to the data. Therefore, helping women become economically and socially empowered requires more cooperation, more resources, and more support than ever before. The results of this study call for more sustainable farming methods among female entrepreneurs and urge policymakers, groups, and governments to back efforts to empower women in agriculture.

Chatterjee et al. (2023) The entrepreneurial spirit, job creation, skill training, technical support, and overall economic growth of a nation are all positively impacted

by MSMEs. Many people don't realize that small enterprises actually contribute to reducing poverty. The government relies on the MSME sector for about 29% of its GDP. Entrepreneurial development programs are reaching women in both urban and rural regions through government-sponsored initiatives. Examining female entrepreneurs' perspectives and identifying trends in their utilization of funding schemes to launch microbusinesses were the primary objectives of the study. The survey showed that gender biases in the allocation of economic resources between men and women continue, limiting women's social inclusion and empowerment, despite several initiatives by the Indian federal and state governments to encourage entrepreneurship.

Chaturvedi & Meena (2021) MSMEs are considered as one of the major contributors to India's economic growth. Businesses under the MSME category require low capital investment but are very effective in creating jobs thus, driving up the economic growth and at the same time, promoting the equitable distribution of wealth across the country. Though the MSMEs are established in the rural areas, the extent of the workforce working in these enterprises is much higher in the rural areas than in large city firms. National growth, job creation, and the fight against unemployment are all greatly impacted by SMEs. Exploring the elements that contribute to the effective operation of MSMEs is the purpose of this study. The research will also make an effort to illuminate the difficulties indigenous business owners encounter when trying to spot and seize entrepreneurial opportunities.

Khurana et al. (2021) Any developing nation's economic growth is boosted by MSMEs because of their inherent capacity to turn fresh concepts into innovations and, ultimately, lucrative enterprises. Because of globalization, smaller businesses have to focus on "Sustainable Orientated Innovation" (SOI) strategies to get a competitive edge. Converting MSMEs to adopt SOI techniques is no simple feat, especially for a developing

nation like India. Specifically, this means that MSMEs should zero in on major innovation drivers that will allow them to remain competitive on a global scale. Research conducted in the Delhi NCR region of India's MSMEs serving the manufacturing industry has uncovered key "Critical Factors" (CFs) for implementing SOI techniques in this sector. To discern the key CFs essentially, the researchers apply the "Analytical Hierarchy Process" (AHP), which is the latest decision-making technique based on multiple criteria. To validate the robustness of the AHP evaluation results, they will carry out a sensitivity analysis. As per the study, among the various factors, "Top management support," "Government initiatives," and "Financial resources" are the ones that mainly facilitate the adoption of SOI methods. Corporate leaders, academics, and government officials can all benefit from the recommendations made possible by this study. There is a strong belief among the research that the results of this study would aid India in its efforts to support the long-term growth of MSME.

Jegadeeswari et al. (2020) To contribute to a country's economic growth, entrepreneurs serve as company heads, scouting for new business opportunities and seeing them through to fruition. There are three major areas in which he is instrumental: industrial development, service sector development, and agriculture sector development. In addition to taking out loans from financial institutions, entrepreneurs often use their savings to launch a new business. Entrepreneurs play a crucial role in driving industrial and economic development by contributing to the production of wealth and adding value. MSMSs can help alleviate the problem of unemployment by increasing the number of these establishments, which in turn boosts economic growth. In addition, a more even distribution of economic activity across regions can be achieved through the launch of more MSMSs. Business owners help a wider range of people both directly and indirectly by speeding up the fair distribution of resources. Nevertheless, very few entrepreneurs manage

to stay in business for an extended length of time. Therefore, an attempt has been made to comprehend the attributes necessary for the longevity of entrepreneurs.

Khurana et al. (2019) Global market integration, quick technological advancements, and shorter product and technology lifecycles have forced MSMEs to concentrate on innovation as a crucial component of gaining an advantage in long-term competition. Since Indian manufacturing MSMEs account for a sizable amount of the nation's manufacturing-related economic output, this study contributes to the existing body of empirical research by cataloging and synthesizing the elements that enable these companies to integrate sustainability and innovation. To do this, the data was extracted through a methodical assessment of the literature and expert opinion. The data was to be statistically validated through the use of the questionnaire approach. The current study's output, following factor analysis and data refinement, is a collection of precise, one-dimensional, and definite determinants that can be used in other contexts or to investigate various theoretical models, advancing the development of theory in “Sustainable Orientated Innovation” (SOI) for Indian manufacturing MSMEs.

Overview of Business Sustainability in MSMEs

Nawangarsi et al. (2023) Human Resource Management (HRM) is essential in MSMEs since it enhances HR competency by augmenting the knowledge and abilities inside these organizations. Effective management of human resources is an essential skill for stakeholders in MSMEs. HRM in MSMEs includes all phases of the hiring process, including advertising, interviewing, placement, training, compensation, performance reviews, advancement, and firing. Human resources management that is effective and efficient is an important skill that is at the core of the stakeholders of the MSME sector. As the world economic conditions change, the competition becomes a lot more difficult and the MSMEs will have to deal with this issue. MSMEs are not very competitive, and the

reasons for this include poor quality of products, lack of product innovation, and very little technological know-how. The open market is still untouched by MSME items. However, MSMEs cannot survive in the long run without a competitive advantage; however, quality and technological constraints are their biggest obstacles. For the sake of this definition, "business sustainability" is an operating environment that is both stable and resilient, while "sustainability" means a method for ensuring the growth and expansion of a company. Constant technological updates, a focus on the long term, the production of less damaging products for the world, the conserving of nature's resources, and efficient use of technology are the actions that may be taken to implement business sustainability in MSMEs.

Ramli et al. (2022) An organization's long-term success depends on its capacity to implement a sustainability strategy that takes into account the company's financial, ecological, and social impacts in all of its decision-making. In other words, the plan is being made and put into action in such a way that the current and future demands of the company and its constituents are satisfied while simultaneously preserving and improving the natural resources that will be required. The establishment of an economy that is sustainable, fair, and equitable can only be achieved through significant changes in corporate practices. A lot of the social and environmental issues that are plaguing society right now—like habitat loss and exploitative working conditions—will disproportionately affect businesses. Production of economic value, often profits, during short to medium term, is the central purpose of conventional business strategy. A small group of people, mostly owners and stockholders, are the intended beneficiaries of these strategies' value-creation efforts. When it comes to protecting its MSMEs, developing nations like Indonesia are among the last to act. Enterprises with an MSME are the ones that keep the economy going. As a local industrial sector, the government has made significant efforts to support and develop MSME. Local authorities have classified MSMEs according to specific

industries, including domestic manufacturing, commerce, farming, food production, fishing, and handicrafts. Community service projects like this one aim to educate people about "palm oil mill effluents" (POME) and how to recycle them into environmentally friendly materials so that they won't harm the surrounding area.

Muafi & Roostika (2022) The business climate is fraught with uncertainty. According to RBV theory, human resources are the most crucial asset for maintaining a competitive edge over the long term. All firms must adapt to the ever-changing global competition and environment. This study is on SMEs in Indonesia that have developed models for long-term sustainability through the application of Green HRM, green organizational culture, personal values, and competitive strategy. Researchers in Indonesia's Central Java Province and Daerah Istimewa Yogyakarta will put the model through its paces in the creative industries of MSMEs. Using a purposive sampling technique, this research surveyed innovative MSMS owners and managers. The AMOS 23 program is utilized for the data analysis. The findings indicate that innovative MSMEs have not yet achieved success in implementing a corporate sustainability model that takes into account Green HRM, green organizational culture, personal values, and competitive strategy.

Afdal et al. (2021) Given the increased competitiveness and numerous supply and demand concerns that MSMEs confront, business sustainability is a crucial issue in the discussion of MSMEs. Additionally, MSMEs have been significantly impacted by the coronavirus pandemic (Covid-19). Readings and other studies served as the foundation for this investigation. MSMEs were praised for reviving the national economy during the 1998 crisis, which contrasted with the current situation. But they too fell apart in the face of the epidemic. For MSMEs to endure and prosper, they need to adhere to quality standards, technology, and competitive pricing. Technology proficiency will have a favorable

influence on the long-term viability of business's operations, particularly in the industry 4.0 age. Based on research information, gaps in case understanding were found, and suggestions and directions for additional study were provided.

Vásquez et al. (2021) This study presents a maturity model for assessing the level of sustainability strategy and practice implementation in MSMEs. The study discovered that many sustainability-maturity assessment models created for MSMEs omit three key components: environmental management systems, environmental strategies and best practices, and environmental knowledge management. This article presents a sustainability maturity model for MSMEs to aid enterprises in their quest for environmentally sustainable manufacturing systems. The model uses a four-point qualitative scale and supervised classification algorithms to categorize businesses. Results showed that among a sample of Colombian MSMEs operating in different industries, 18% were at a consolidated level of sustainability, 31% were at an initial level, 45% were at a developed level, and 6% were at an inadequate level. Those in charge of making decisions in the second group seem to have put more effort into charting a course for development, which has led to enhanced capacities for sustainable advancement.

Singh and Roy (2019) In the current business climate, the ability of MSMEs to impact society and the environment in opposition to financial benefits determines their success and survival. As a result, it is essential to use sustainability reporting disclosures to analyse the fundamental business practices of companies in developing economies like India. To learn more about the business practices used by manufacturing MSMEs to solve sustainability concerns, the study examined sustainability reports using the MSME "sustainability disclosure index" (MSDI). According to the findings, Indian manufacturing MSMEs lack sustainability reporting practices, particularly when it comes to social and environmental disclosures. The study adds to the existing literature on the topic of MSDI's

potential as a mechanism to ensure that MSMEs are held responsible for their influence on society and the environment.

2.3 Environmental Factors and Their Impact on Business Sustainability

Sahu et al. (2024) Financial assistance in form of microcredit facilities has been hailed as being crucial for promoting entrepreneurial endeavors and empowering people, particularly women. Microcredit programs have so been started by the government and policymakers to help those at "bottom of the pyramid." The "Pradhan Mantri Mudra Yojana" (PMMY) is a microcredit scheme that Indian government has instituted to help the aforementioned people keep their jobs and improve their living conditions. Thus, the current study examines how well this microcredit program works to create jobs and improve the financial situation of tribal women entrepreneurs in particular. In empirical research, tools such as ordered logistic regression, Effect Size test, and Wilcoxon Sign test have been employed. The research shows that the quantity of debt has a significant effect on employability. The building also helped women in other ways, including their economic, psychological, and social independence. According to the report, microcredit-based help can empower women and create jobs. It also advises that the government and the financial industry might make improvements to the current policies, take steps to make the scheme more accessible, and establish a supportive atmosphere to help borrowers in the early stages of the enterprise through various training programs.

Maulana et al. (2020) Despite an increasing body of research on the environmental practices of large corporations, MSMEs continue to receive less attention. Even though MSMEs make up the majority of businesses in Indonesia, they will have an indirect impact on environmental challenges. The extent to which MSMEs engage in environmental practices is examined in this study. The research is meant to assess the firm's characteristics, their corresponding industry and their influence on ecological aspects. In

the quest for primary data, self-administered questionnaires were distributed to 250 respondents randomly selected from the target MSMEs located in East Java. The analysis has shown that the company's size positively influences the entrepreneur's involvement in environmental practices. It means that large MSMEs are more likely to adopt environmental practices. Besides, it has been found that the business sector of the company positively influences the entrepreneur's commitment to environmental practices. It has been reported that among the MSMEs, those sectors where the owners or managers have more direct contact with the consumers, such as in the case of FMCG and restaurants, are more likely to implement environmental policies.

Sun et al. (2018) An eco-systemic framework for promoting innovation for corporate sustainability is presented in this study. They place a strong emphasis on systemic thinking, which views the company as a system that functions similarly to a living thing. Businesses, as this theory sees it, affect their surrounding environments in a way that is both continuous and contingent. In contrast to the conventional linear approach, which is common in many industries, which attempts to explain the potential causes of an action or reaction while ignoring any feedback loop between the cause and resultant action. This study provides company executives with useful advice and strategies for integrating complexity science into the development of sustainable enterprises.

Lakshmi et al. (2018) Business models are increasingly embracing sustainability as consumers get increasingly conscious of and concerned about the things they purchase. This research presents the "Sustainable Business Model" (SBM) as a framework for manufacturing companies. This model was created with the concepts of competitive and sustainable manufacturing together with social, economic, and environmental considerations as its foundation.

Hosseiniinia & Ramezani (2016) The aim of this study was to pinpoint the environmental and social factors that impact "sustainable entrepreneurship" (SE) in SMEs. Also, it was going to see whether the demographics of the entrepreneurs had any bearing on the SE in Irani SMEs in the food industry. Twelve SME owner-managers in the food sector were among the 130 people surveyed and interviewed as part of the data gathering strategy. Descriptive statistics and other inferential approaches were used to examine the data. Among the characteristics that significantly affect SE, the results have shown that the entrepreneur's level of education and professional experience are important. Furthermore, out of the eight elements that were discovered, participants deemed social (including customer orientation and human resources) and environmental (including recycling and the future of Earth) considerations as the most crucial for guaranteeing the sustainable performance of SMEs in the food industry. According to the research, SMEs in the food sector could reap significant benefits from implementing SE strategies that emphasize hiring competent workers and taking social and environmental factors into account.

Ahmad and Arif (2015) current tendencies as well as potential obstacles and opportunities that can help women become more financially self-sufficient entrepreneurs. SMEs run by women in developing nations are of special interest because of their great potential for expansion. Specifically, for MSMEs, "International Financial Corporation and McKinsey" collaborated to compile an exhaustive database. Incorporating information from publicly available global data sources allows for statistical coverage of numerous nations. Addressing the unique challenges faced by women business owners (WE) while trying to secure funding ought to be a priority for development programs, given the importance of capital in seizing growth possibilities. There are some important points for policymakers to remember: first, it is necessary to arrange an open atmosphere where

women will not have to struggle to get financial services in your country; secondly, push for projects that will help discover, evaluate, and copy the successful methods for women's financial services enlargement; finally, organize the gathering of gender-disaggregated data on SMSs financing. The study not only reveals trends, challenges, and opportunities concerning the empowerment of female entrepreneurs but also gives them access to financing.

Haddad (2013) In the Islamic Arab country of Jordan, where many women run micro and tiny handcraft companies, they faced and conquered many obstacles. The study was able to zero in on the dynamic between agency and structure because of its critical realist and critical theory/feminism stances. The results of this dissertation were mostly explained by Structuration Theory, the dominant theoretical framework. This theory states that structure and agency are constantly interacting with one another. Here, "structure" refers to both the internal (women's sociocultural and religious) and external (men's business) environments. A woman's agency is the degree to which she can direct her actions as a business owner in these settings. The researchers utilized a sequential, mixed-method study technique to investigate these events, and it was the most fruitful and appropriate choice. In the first half, participants were given a quantitative self-completion questionnaire to drop and collect, and in the second part, they were interviewed face-to-face in-depth using a semi-structured interview format. The quantitative portion of the study included 264 female participants who filled out a questionnaire; the qualitative portion involved in-depth interviews with 12 female participants. For the quantitative data, they utilized SPSS, and for the qualitative data, they employed theme analysis. Western countries have been the primary focus of published studies on female micro and small company owners' experiences and influences. Women in Jordan's patriarchal, communal, Islamic society who run handicraft companies are the subject of this study, which expands

upon previous research in the field. A description of the women company owners, information on their companies, and their experiences with starting and running a business are all part of the quantitative research. The qualitative research reveals that the company environment, as well as socio-cultural and religious elements, have a significant influence on the attitudes and behaviours of women business owners. Taken as a whole, these studies show how micro and small handicraft company owners' attitudes, behaviour, and power to make decisions are impacted by socio-cultural-religious and business environment aspects. The qualitative and quantitative data were integrated to form a conceptual framework.

Environmental Impacts of MSME Operations

Sugin & Raja (2024) MSMEs are vital to the national economies of every nation as well as the global economy. It produces a wide range of goods and services, adds to GDP, exports, and investments, provides jobs, and creates a variety of wealth. Compared to large enterprises, the MSME sector has a substantially higher labour intensity. Through the regional dispersion of economic activities, they also help achieve a fair and just distribution of wealth. This study uses soil and water testing techniques to examine the environmental effects of MSMEs. The samples were taken from the Tirunelveli district's two industrial zones. The study's results indicate the presence of water and soil pollution in industrial regions.

Kadaba, Aithal, and Sharma (2022) improved development and improved financing for economic growth are both contributed to by SF. The goal of environmentally responsible development is to preserve and restore natural ecosystems. To advance sustainable finance, institutions like the World Bank, SIDBI, and NITI Aayog collaborate. which helps SMEs expand into larger industries that can have a huge influence on a global scale. The World Bank predicts that climate change will hurt people's living standards and cut India's GDP by approximately 3%. It is possible to monitor the country's progress in

climate protection using the CCPI program. A wide range of sustainable financing options are available to businesses and MSMEs in India through climate funds, microfinance, green bonds, microinsurance, NABARD, the Made in India initiative, and the SIDBI Sustainable Finance Scheme. These options come from banks, corporations, IFIs, institutional investors, and international organizations. India aims to achieve zero net emissions by the year 2070. Energy conservation, waste management, recycling, "electric vehicles" (EVs), renewable energy, solar power plants, and green machinery are just a few of the many projects in which MSMEs and SMEs participate. India made a five-point action plan to address climate change and raise money for relevant projects at "Glasgow Climate Summit" (GCS). By a report from the Ministry of the Environment. Green infrastructure in India requires \$280 billion, and the country's government has suggested a social stock exchange, "State Bank of India" (SBI)"and Europe Investment Bank" (EIB), to finance this project. The "Reserve Bank of India" (RBI) has decided that projects that are environmentally friendly and would help the green economy flourish should be eligible for Priority Sector Lending (PSL). This will help these projects satisfy SDGs and "Economic, Social, and Environmental" (ESG) parameters for fundraising. This research examines several finance mechanisms for sustainable development and green production using theoretical principles. Determinations and outcomes: Sustainable finance, often known as climate finance, is essential for MSME and companies to invest in environmentally friendly production facilities and support the government's climate change initiatives. Developed the necessary model for a sustainable fiancé to promote environmentally friendly development in India by reviewing relevant papers and case studies.

Unachukwu & Egbunike (2021) Conduct a study to find out the views of MSMEs owners and managers about sustainability difficulties in the Awka metropolitan area and how the difficulties affect their sustainable business performance. They created the

framework for Triple Bottom Line, which categorizes the evaluations into three subscales that measure monetary, social, and ecological influences, to analyze sustainability. The data was collected through the survey method. The sample consisted of 78 MSMEs in Awka from the following sectors: pharmaceuticals and healthcare, food service and baking, wholesale and retail sales, water production and supply, and agriculture. Chi-Square and multiple regression tests were two methods used to analyze survey results. The research outcomes showed that MSMEs are benefiting from sustainability as the sustainability practices get integrated into their corporate decision-making processes. This opens the way for them to reach a long-lasting business success. Besides that, the sustainability activities are also said to be a factor in the companies' good reputations, according to the results. In light of this, the study suggests, among other things, that for MSMEs to accomplish lasting change, they need to be ready to put aside their desires and ambitions. SMBs can't afford to be rigid if they want to keep up with the competition. Also, MSMEs can use e-commerce and digital marketing to spread the word about their products and services and build brand recognition.

Wielgórka (2016) The global economy relies on MSME. The Central Statistical Office reported in 2013 that 99.7 percent of Poland's businesses are MSMEs. The concept of an economy based on sustainable development has grown in significance in company operations in recent years. This approach seeks to guarantee, within the bounds of Earth's natural capacity, high ecological, economic, and socio-cultural standards for all people, both now and in the future, based on the principle of inter- and intragenerational justice. Businesses are increasingly adopting CSR strategies and thinking about environmental management from a social and ecological perspective to meet the growing environmental requirements. The major objective of research was to assess, from a CSR perspective, some of MSME sector environmental management activity. Additionally, the study reveals links

between MSMEs' competitiveness and actions related to environmental management using statistical methodologies. Some advantages of implementing an environmental management system were highlighted in a study of randomly chosen Polish businesses from the MSME group. Additionally, a model for environmental management in MSMEs was developed and the survey helped identify the primary challenges to ecological activities in MSMEs. With this model, they can better understand how to include micro-pollution into their environmental management system and maximize its beneficial benefits. The increasing presence of micro-pollutants in water and wastewater is having a devastating effect on the natural world. This evolution is a direct result of the methodical and ever-present progress in human activities. Various micro-pollutants are discharged into environment as solids, liquids, and gases. The decomposition of these compounds is triggered by their penetration into the air, water, and soil. The decrease in micro-pollutant emissions is influenced by the implementation of environmental management in businesses.

Jaiswal (2014) The Indian economy is seen by global investors as a promising market for the future. But there are some restrictions and difficulties linked with this assumption. An increasing number of SMEs and the agricultural sector are bolstering India's economy. The agriculture sector is the largest contributor to India's "gross domestic product" (GDP), followed by the cement, steel, textile, handicraft, and industrial SMEs. Some countries have some of the fastest-growing SME sectors. The majority of export revenue comes from them, and they also employ a lot of people. The government and investors are now paying attention to these industries for this same reason. While being designated as the economic backbone, SMEs continue to encounter obstacles to environmental concerns, while being growth-oriented sectors with plenty of opportunity. First, it must determine "what these impacts are" before it can begin to lessen the

destructive effects of environmental problems. Next, come up with a plan to figure out these effects. Researchers in this study calculated the ecological footprint in India and looked at the opportunities and threats posed by green product businesses, Indian financial institutions, and the country's laws and regulations. A way forward that turns environmental problems into opportunities for business has been considered. Issues about energy, resources, society, and the environment are mapped out in this research. Additionally, it helps them access the resources provided by the law and promotes improving their energy and environmental performance through education and certification. In this research, they looked at the environmental and social impacts of SME growth sustainability issues. These difficulties include new product development, research and development, and technological advancements faced by SMEs.

Nulkar (2014) Industry has been compelled innovate to decrease its environmental impact due to the growing concern for the environment. There are some reasons why societal and regulatory pressures may have ignored SMEs. It is now impossible to continue ignoring the environmental implications of SMEs. To help SMEs do better in terms of the environment, this study tries lay forth a plan. Interviews with SME owners and environment managers/sustainability professionals from big companies will follow a literature analysis on green competitive advantages for businesses. By adopting the methodology outlined in this study, SMEs can embark on sustainability practices. There has not been a single green strategy for SMEs in India given before this study.

2.4 Social Factors Influencing Business Sustainability

Mishra and Gupta (2024) study set out to learn more about the interplay of emotional, financial, and geographical factors as they pertain to tribal members' intentions to start their businesses. Toto models the factors that influence "entrepreneurial intention" (EI) among young people from indigenous communities, this study used the

utility maximization method. This study used a non-linear qualitative response model to look at how factors including economics, psychology, and the environment affected the intention to start a business among young people in tribal communities. In the eastern central region of India, 363 tribal youths were selected for the sample. Logit model results showed that economic and environmental factors, rather than psychological considerations, were the strongest predictors of EI among young people from Indigenous communities. Additionally, the decision to become an entrepreneur was determined to be mostly impacted by the external environmental elements and the socio-economic background of the tribal society. The results of this study provide credence to idea that economic, environmental, and psychological elements all play a part in the entrepreneurial decision-making process among Indigenous communities. Therefore, an eclectic theory of tribal entrepreneurship was developed as a fundamental contribution of this research.

Yadav et al. (2023) A growing number of people around the world are taking an interest in women running their businesses in the handmade goods industry. This study goals to uncover the various factors that impact women entrepreneurs in India, both while they are learning and after they finish their degree (whether it's a skill degree or a professional degree). Especially in developing countries, female entrepreneurship is a key component of economic advancement since it opens doors to new ideas, bridges gaps across cultures and traditions, generates employment possibilities, helps alleviate poverty, spurs social and economic development, and so on. Despite its importance, this study has received scant attention from entrepreneurship scholars. In this study, the researchers used convenience sampling and survey research methods. Data analysis was carried out using AMOS 25 software. When necessary, tables were formed using an Excel sheet. Simultaneously, research on Indian women's involvement in handicraft enterprise has mostly focused on classic cultural restrictions. It has been noted that the majority of female

entrepreneurs in India see their businesses succeed. These amazing women work in the banking, manufacturing, food & beverage, electrical, textile, and small company sectors. Despite efforts by the Indian government to encourage female entrepreneurs in the handicraft industry, for a variety of reasons, fewer women than men pursue business ownership in this area. In the handmade goods sector in particular, only a small percentage of the population has profited from individual initiative. Moreover, the impact of crucial components has been the subject of insufficient investigation. A Theory of Planned Behaviour, an Entrepreneurship Event Model, and an integrated model of theory are all introduced and evaluated with data from various entrepreneurship-related Indian organisations.

Agarwala et al. (2022) Increased availability of credit affects societal and economic development. As a result, financial assistance programs have become an indispensable development tool for assisting the underprivileged in overcoming poverty. The empowerment of women, who face discrimination based on their gender, has been a central focus of these initiatives. So, this research looks at the Mudra Yojana, a government microcredit plan that helps people get their businesses off the ground or grow by offering them loans with no collateral. It also charges reduced borrowing rates, which is a great incentive for women to join. Using data collected from 417 female recipients in India's tribal districts, this study looks at how financial aid has helped women advance economically and socially. As a measure of the scheme's success, it looks at how empowered and employable women are. Data analysis techniques used in the study include ordered logistic regression, Wilcoxon sign test, effect size, and more. Researchers found that women benefited economically, socially, mentally, and politically from micro-credit through the Mudra Yojana, which in turn increased their wages, employability, and

likelihood of starting their businesses. This study shows that women can be "active agents of change" and play important roles in the home and in society.

Manninen & Huiskonen (2022) A company's strategy that is in line with sustainability principles and seeks to address global sustainability issues that are pertinent to the enterprise is known as the integrated strategy perspective. A company can use an integrated strategy to support sustainable development while conducting business. An extensive case study was carried out to investigate the elements impacting the process of implementing an integrated strategy in a worldwide horticultural firm in 2020 and 2021. Recognized elements include organizational and personnel success circumstances, market conditions, and internal and external measures that aid implementation. The results were used to form a theoretical model of the factors and actions that impact the execution of a coordinated plan. The end goal is for other companies to use the findings as a guide to implement their integrated strategies, avoiding some of the mistakes that have previously doomed new sustainability initiatives.

Ana et al. (2018) The relevance of sustainability is being more acknowledged in various social contexts, and the development of new firms is continuing this trend. They looked at what influences initiatives that aim to make businesses more sustainable. Environmental, behavioural, interpersonal, and commercial considerations are all facets of this. The "Analytic Hierarchy Process" (AHP) method was employed to rank the sustainability business requirements in order of relevance for entrepreneurs launching sustainable enterprises, based on expert questionnaire responses. The results show that the main factors that determine sustained entrepreneurship are behavioral and company traits. Taking steps toward sustainability requires a combination of competitive intelligence and adherence to ethical ideas and values.

Community Impact of Tribal Women-led MSMEs

Yadav et al. (2024) examine the influence of digital technology, financial variables, and socioeconomic status on the success of women artisans in India's handicraft sector. Part of their research involves dissecting how the One District, One Product Scheme was created. To answer the questions of how to promote the craft industry and how monetary, social, and technological aspects influence the ODOP scheme's success in empowering women artisans to become entrepreneurs, this study examined these variables. The research strategy for this study was an explanatory and descriptive quantitative one, and it made use of survey methods. The information gathered for this study came from a cross-sectional survey. Applying "Yamen's sample size determination formula" to the 268 female-owned registered businesses, this study's sample size was determined. The closed-ended questions were selected using stratified randomization and scored on a five-point Likert scale. They utilized factor and regression analysis to verify the connection between the dependent and independent variables and to look for patterns in the data. The researchers discovered that there are certain social, economic, financial, legal, administrative, and digitization elements that are linked to greater success among women entrepreneurs and the ODOP plan. The success of women craftsmen in business is impacted by these aspects as well. In spite of this, demographic characteristics may not be the sole determinants of ODOP performance for women in India. Implications for management, practice, and theory are significant since the research suggests and promotes the growth of the craft industry while shedding light on the challenges faced by female artisans who are also entrepreneurs. The study's overarching goal is to level the playing field for Indian handicraft entrepreneurs. Giessen and Amsterdam's model of entrepreneurial success, the resource-based view, the general system theory, and the technology adoption model are among the theoretical frameworks

that provide support for this study. Managers and legislators interested in crafting policies for the craft industry will find useful information in this study's findings.

Towfiq & Hasan (2022) Investigate the part played by the entrepreneurial competencies of the tribal women entrepreneurs of Bangladesh in reaching the SDGs. Method: The research took a quantitative approach. The main data has been collected from the tribal women of the Sylhet division. Primary data comes mainly from women operating and running SMEs in the indigenous communities. The analysis of the data was done using SPSS 22. The outcomes were studied applying statistical techniques like correlation, regression, and descriptive statistics. The study concludes that the empowerment of native women was influenced by progressive variables positively. Enthusiasm is again missing. Economic empowerment of women in the tribal community is certainly a victory for the future of Bangladesh's development. The findings of the research are applicable in a practical way to management and business decision making. If the government, NGOs, and other stakeholders in Bangladesh are keen to promote economic independence of tribal women, then they should facilitate the process of tribal women entrepreneurs. It will once more help Bangladesh in attaining the SDGs.

Cultural Sustainability in Business Practices

Emon & Khan (2023) The research aims to understand the extent to which cultural norms affect sustainable entrepreneurship programs in small and medium enterprises (SMEs) placed in the chaotic economy of Bangladesh. A total of forty among business owners, executives, and other key stakeholders of SMEs were interviewed through a rigorous research method in the form of semi-structured interviews. Then, a comprehensive thematic analysis is performed to reveal the main ideas and the complex relationships among the data that has been gathered. The findings reveal a delicate viewpoint, revealing the cultural norms that are of such nature as complex social networks, risk-averse

behaviours, and great family influence on business operations that might tip the scale towards sustainable or non-sustainable practices in SMEs through different channels. Moreover, the study highlights that the regulatory systems and state policies are vital factors that shape the nature of sustainable entrepreneurship. The research highlights the necessity for a thorough and unified strategy to abolish the cultural barriers that have been in existence for a long time based on the given findings. A supportive atmosphere should also be included in this strategy accompanied by the assistance of enlightened government policies and skillfully framed laws. This study possesses a great influence that is not limited to Bangladesh only; it may assist other underdeveloped countries in overcoming the challenge posed by cultural customs and government regulations that deter businesses from earning a long-term profit. A deeper exploration of the complicated relationship between cultural norms and sustainable business practices in various contexts would be a great help to future research activities.

Isensee et al. (2020) The growth of SMEs is affected by factors such as organizational culture, influence on the environment, and digitization. Organizational culture factors (such as beliefs, standards, and assumptions) shape behaviour and provide a feeling of self. The latter group encompasses more broad strategies for reducing an organization's negative influence on the environment (green sustainability) or for embracing digital technology (digitalization), which can lead to significant changes in the way a company operates. The interplay between these three ideas has received very little research. As a result of their research, SMEs now have the first comprehensive picture of interplay between organizational culture, environmental sustainability, and digitalization, allowing them to better navigate this complex interaction. They also synthesize previous studies in this area. Out of 811 peer-reviewed studies, 80 were deemed noteworthy after following a systematic literature review methodology that, when applicable, combined it

with meta-analysis. To make the connections between the three ideas easier to see, they made a network diagram. They broke out the three main bidirectional channels using quantitative path analysis. To do qualitative analysis, they came up with a new addition to “Belief-Action-Outcome” (BAO) framework, which was included explicitly in the study. Thirteen critical dimensions are exposed by their research, along with 10 connections between these critical dimensions. The cultural characteristics that have been studied the most include attitudes, management, strategic orientation, ability, and internal capacities. Additionally, they devised the innovative idea of green digitalization tools and included commonly used phrases (such as Green IT and Green IS). Application research methodologies, study locations, leading publications, and the connection itself were all shown to be trending in the meta-analysis. The authors conclude by outlining areas where current research is lacking and difficulties that need to be addressed to spur further research.

Das et al. (2020) sought to improve and strategically manage SMEs' sustainability practices by conducting a comprehensive literature review to evaluate the current level of CSR practices, problems, and challenges in SMEs in Asia's emerging markets. The writers started by presenting the theoretical justification for why businesses must promote sustainable development. They then conducted a high-level literature study to assess the gap area. They developed study questions regarding the reasons for SMEs' gap in CS practices, particularly in the Asian rising market, based on the findings. Using the "literature survey" as their method, the researchers then carried out a thorough literature review to answer the aforementioned research questions and organized their findings in accordance with these questions. Because there hasn't been much research done on the subject and because SMEs are crucial to the growth of the national economy, the authors restricted their search for relevant literature on CS to SMEs. Large corporations are

actively involved in the field of computer science. However, the data indicates that the situation is different for SMEs. SMEs, especially in emerging countries, pay little attention to social and environmental issues. According to the existing literature, SMEs can enhance their financial performance by enhancing their sustainability performance through a government policy and facilitation, collaborative mode of operation, and a supportive organizational culture. Suggestions and ideas from the Western environment formed the basis of the conceptual model. A large sample of SMEs in the Asian market is necessary to verify the model's validity in Asian business situations. Implications for sustainable development research in academia and corporate development are both highlighted by the present study. The present model is built only on the literature review. The empirical validation of such a model will pave the way for its usefulness in advising SMEs on how to make their operations more sustainable. In addition, society and environment will benefit in the long term from environmental and social best practices that SMEs implement. This study compared sustainable practices in SMEs across countries. The authors drew on the advice of various scholars, as outlined in the extensive literature analysis, to formulate a few research questions and provide a conceptual model. To close the loop, it suggests avenues for further study that might examine SMEs in Asia's developing marketplaces to verify and validate the suggested model.

Čepel (2019) Businesses in the SME sector need a good business climate for their economic systems to be stable, successful, and competitive in all industrialized nations. The strength of a nation's business climate is a major factor in the growth of its economy. Reason being, long-term economic expansion cannot occur without a highly competitive market. Research in the Czech and Slovak Republics set out to measure and assess the relative importance of social and cultural elements that contribute to a good business climate for SMEs. A questionnaire survey was sent out to businesses that are classified as

SMEs to collect data for the study. Included in the study were 312 Czech enterprises and 320 Slovak companies. They used the Z-score approach to check the well-established scientific theories. Notable and intriguing findings have been uncovered by the research. There is strong evidence from this study that entrepreneurs in both nations have faced low levels of political and public support. The entrepreneurs, on the other hand, have said that they get their entrepreneurial spirit and support from their families. In both nations, the reaction from the media has been overwhelmingly unfavourable towards the company. As a whole, entrepreneurs believe that the media distorts the reality of business and does nothing to influence it, even when it comes to highlighting successful companies. Almost two-thirds of business owners in both nations think the benefits of doing business much exceed the drawbacks. Although this study has its limits, it has produced intriguing results and may serve as a springboard for future studies that delve further into the problem of SMEs' quality of the business environment.

Giudice et al. (2017) examining the impact of owner-managers micro-level activities on stakeholders as they work to improve the sustainability of SMEs. The study uses an inductive analytical technique to glean important findings from several sources, including literature on micro foundations and sustainability as well as evidence from five Italian and five British SMEs in cultural and creative industries. According to the results, owner-managers are vital in promoting sustainability initiatives that involve employees and other interested parties, as their participation boosts organizational sustainability practices as a whole. This study adds to an increasing body of literature on the topic of the sustainability of SME micro foundations by comparing and contrasting two different approaches to the issue in the United Kingdom and Italy.

Marshall et al. (2015) delves into the reasons behind different social sustainability supply chain methodologies. Social supply chain practices, adoption rates, and the

variables influencing their implementation are largely unknown, in contrast to the abundance of literature on environmental sustainability practices. Sustainability culture is studied as a moderator of the acceptance of basic and sophisticated socially responsible supply chain practices, such as the development of new products and procedures, the rethinking of supply chain strategies, and the implementation of management and monitoring systems. The impact of an entrepreneurial spirit on an organization's social sustainability supply chain activities and sustainability culture is examined below. They polled 156 supply chain managers across a range of Irish businesses to find out how these variables interact with one another. There is a favourable correlation between sustainability culture and all of the activities, according to the data. The entrepreneurial orientation modifies the adoption of advanced social sustainability supply chain techniques, and it also affects social sustainability culture. This survey, like other surveys, is cross-sectional in design, performed in a single country, and focuses on a single respondent at a specific point in time. Beyond supplier monitoring, socially sustainable supply chain management strategies influence behaviour changes through the supply chain, impacting not just the buyer-supplier dyad but also lower-tier suppliers and the local community. Consequently, to put these principles into action, managers need to cultivate and support cultural traits within a company. To the best of the authors' knowledge, this study provides the first analysis of the impact of entrepreneurial and cultural characteristics on the adoption of social sustainability supply chain practices, providing a new viewpoint on the factors influencing this adoption. It also demonstrates how supply chain managers are both producers and players in their surroundings, and it examines the differing adoption levels of different sustainable supply chain methods via the perspective of strategic choice theory.

2.5 Governance Factors and Business Sustainability

Zhang et al. (2022) With the advent of the digital economy came new ways for companies to get an edge in the cutthroat and ever-changing business landscape. One such way is “digital transformation” (DT). DT has been or is being implemented by companies across nearly all industries. Since SMEs often have limited resources and manpower, their digital transformation is progressing at a snail's pace. As a result, to maximize the performance of those assets, it is crucial to identify the vital success factors and pathways for DT in SMEs. However, studies on the DT of SMEs are incredibly rare. To fill this need in the literature, this study will explore the mechanisms of interaction between the various DT variables in SMEs and identify their critical components. This study has developed an action mechanism model based on resource-dependence theory and resource-based approach. Its holistic perspective identifies six important components from three domains technology, organization, and environment. After compiling data from 180 Chinese SMEs, structural equation modelling was employed for analysis. They find that environmental and technology elements boost organizational skills, which in turn helps DT efforts succeed for SMEs. Both technical and environmental factors impact DT, but organizational capacities mediate this relationship. Not only that but the link between organizational competencies and DT success is moderated positively by employee skills. In the domain of DT, this study adds to existing body of knowledge and has management implications. Their research offers valuable information for practitioners interested in enterprise DT, and it implies that businesses place a premium on developing internal competencies, and that strategy and talent are key assets in achieving enterprise DT success.

López-Pérez et al. (2018) Sustainable and socially responsible company strategies are becoming increasingly popular in society. As a result, many businesses' achievements in the modern business environment can be understood through the idea of sustainability.

On the other hand, SMEs as a whole have not gotten much study. To address this knowledge vacuum, this study examines the relationships between SMEs' sustainability policies and economic and non-economic (i.e., image and reputation) results. The study also intends to compare and contrast family businesses with those that are not. The aim of this quantitative study is to test the suggested model based on the Socioemotional Wealth Theory and the Stewardship Theory by analysing a sample of SME owners and managers using PLS techniques. The researchers set out to quantify the moderating effect of family businesses on some important sustainability-driven outcomes, making their study groundbreaking in this regard. Sustainability affects the financial worth, brand image, and corporate reputation of SMEs, according to the research. They discovered that the firm's profile (family vs. non-family) moderates the relationships between sustainability and business success, which is an important finding. Therefore, their research has significant consequences for the application of sustainability in settings including SMEs. At last, they lay out a set of rules on how to make sustainability-based business practices work as well as possible.

Kot (2018) In any country's economy, SMEs are vital cogs. The growth of national and international economies is based on these entities. If SMEs are to continue growing in today's complicated and competitive business climate, they must adopt suitable strategies. According to this model, SMEs must build sustainable "supply chain management" (SCM) into their company plan. That supply chain also incorporates the economic, ecological, and social components of sustainable development. This research aims to synthesize the current literature and empirical findings on sustainable development with respect to SME and SCM. Despite the disparity mentioned in the literature, the study's findings showed that the analyzed SMEs placed a high value on each of the sustainability domains in their SCM

strategies. Additionally, the report highlights the key components of SCM and SMEs' unique sustainability domains.

Falle et al. (2016) This study delves into the notion of "Sustainability Balanced Scorecard" (SBSC) as it pertains to SMEs, taking into consideration their economic significance and the necessity for strategic sustainability management. A medium-sized Austrian brewery's SBSC development is detailed in this case study. The company's unique requirements were taken into account when tailoring the existing processes utilised to create SBSCs. The research shows that strategic management, organizational structure, and resources are some of the prevalent factors that must be considered while building an SBSC to accommodate unique SMEs. The case study devoted much time and energy to analysing strategies, which laid the groundwork for the SBSC. In addition, contrary to what is commonly believed in the literature, the data reveal that SBSC development is a complex process characterized by repeated phases, rather than a series of separate sequential ones. In addition, the research emphasizes the variables that provide support and the difficulties that were faced. Key supportive variables found for the development process include top-level management backing, a project team, and significant employee involvement. Negative factors include a lack of particular resources and unclear strategy formulation. Other SMEs should find the results offered here useful as they work to build an SBSC. By drawing attention to pertinent enabling variables and obstacles, the study promotes scholarly conversation on strategic management and sustainability.

Hörisch et al. (2015) investigates the relationship between firm size and sustainability management tool knowledge and application using the knowledge-based view as its theoretical basis. It finds that compared to large companies in Germany, SMEs know and use a lot fewer tools, but that the percentage of tools deployed is unaffected by company size, based on empirical survey data. Therefore, it is important to study how

knowledge mediates the relationship between firm size and the use of sustainability management tools, since these tools have been developed for both big and small businesses.

Transparency and Accountability in MSMEs

Nida et al. (2024) In addition to contributing 60% to GDP, MSMEs also absorb labor and gather investment. The problem is that MSMEs only receive 20% of all bank loans. Disbursing credit is a challenge for banks because there is insufficient data on borrowers' creditworthiness. Problems arise because creditworthiness cannot be determined using financial reports. SMEs will have an easier time keeping up with policies that have been or will be implemented thanks to open accounting. When enough correct information regarding accounting policies and reporting is readily available, they say that there is transparency. In light of SAK EMKM, this study aspires to offer suggestions for how MSMEs might enhance their accounting capacities. One hundred residents of Denpasar filled out questionnaires and ten residents of the area participated as informants in "focus group discussions" (FGD). The research employed an interpretative descriptive qualitative analysis technique for data analysis. Therefore, MSMEs cannot compile financial reports at this time. Money, people, and new ideas (or goods) are more crucial than books when it comes to beginning an MSME. One consequence of insufficient accounting skills is a failure to adequately prepare financial reports. Funding opportunities from investors and banks, as well as chances for collaboration, can be enhanced through transparency. Little time, money, and manpower have prevented many MSMEs from preparing financial reports. But MSMEs participants are keen on putting together financial reports. When it comes to financial reporting, only a subset of MSMEs in the medium business category have used SAK EMKM. A balance sheet, which displays the financial situation at the conclusion of the period, along with a profit and loss statement and notes to the financial statement are required components of financial statements according to

SAK EMKM. When planning their profits and losses, MSMEs pay more attention to recording their income and expenses than they do to balance sheet and Calc. The combined profit and loss statement is meaningless because numerous accounts have been overlooked. The material provided will be considerably more relevant and reliable if the report is prepared according to SAK EMKM.

Rinaldo et al. (2023) This study aimed to identify excellent governance practices for MSMEs by conducting a comprehensive literature review. The SEM-PLS method was used to determine how competencies of MSMEs' owners affected the degree to which the governance model was put into practice and how well the MSMEs performed. Based on the results of the tests, it seems that the idea behind the governance model can boost company performance. But for MSMEs to thrive, their owners need to be prepared to put money into their professional development. The results of this study provide groundwork for a novel model of MSMEs governance that can guide development efforts aimed at improving MSMEs' performance.

Nugrahanti et al. (2023) This research about MSMEs in West Java, Indonesia, uncovers the complicated link between the fields of economics, entrepreneurship, and auditing. The main objective of this research is to contribute to the understanding of how these interactions affect financial performance and accountability systems. The study uses a mixed-methods approach which contrasts the quantitative survey findings with the qualitative interview narratives for data triangulation. They start with structured surveys as a quantitative method to understand the relationships and then conduct interviews as a qualitative method to collect expert opinions. The findings imply that the accountability factor plays a mediating role in the connection between entrepreneurship and financial success. Besides that, in the long run, auditing practices as a strategic tool can be regarded as a way to increase transparency and improve financial outcomes indirectly. Different

contextual factors including the entrepreneurial ecosystem in West Java, have a significant impact on these interactions. The insights provided can serve as actionable implications for the MSME accountability and sustainable growth support of policymakers, practitioners, and stakeholders respectively.

Miati et al. (2022) The "Standards for Financial Statements of MSMEs (SAK EMKM)" is a set of guidelines created by the Indonesian Institute of Accountants to govern the financial reporting of MSMEs. Recording financial statements according to standards has many benefits for MSMEs, but it also brings some trials. For instance, a survey conducted among MSMEs revealed that 65.7% of the respondents acknowledged having bad financial records and that 83.7% of them relied solely on personal funds for business; the other sources were bank loans (12.7%), family loans (3%), and investor loans (0.6%). A few research studies have focused on the financial record-keeping practice among MSMEs. The outcomes of these studies contributed to the design of a research model that intends to clarify the unclear relation between the financial visibility brought by the transaction recording via Qris and the level of the accountability that exists as a result of this visibility. The methodology of this research is based on the "Partial Last square" (PLS) model with a sample size of 100 participants, which is drawn from a total of 97,277 MSMEs. The results of the research discovered that Qris affects Accountability through two routes: it does this directly and indirectly through the recording of financial transactions. The second recommendation for future research is to consider new variables; based on the analysis, there are several of them that could explain 45% of the variance in the accountability relationship based on the R Squared value observed.

Institutional Support for Tribal Women Farmer Groups

Behera et al. (2024) The purpose of this study is to evaluate the accomplishments of the rural women entrepreneurs and their possible future contributions in the areas of

microfinance, rural marketing, agriculture, and "Self Help Groups" (SHGs). Microfinance and agriculture are two sectors where women play a very important role. The study will view women's lives through the lenses of access to resources, market options, income generation, and general improvement of livelihoods. The women's contribution in the agriculture and rural business sectors in the Birbhum district of West Bengal is being recognized for having a positive effect on economic growth, poverty alleviation, and gender balance. The study, taking place in the rural part of West Bengal in the Birbhum district, aims to bring about gender equality, women's empowerment, and sustainability. The research investigates women's participation, the hurdles they face, and the possibilities in various fields for their career advancement. The research draws connections between female micro-entrepreneurs' objectives and concrete business performance and thus the whole web of women, microfinance, SHGs, trade, and agriculture is unraveled. The research conducted over various case studies, policy frameworks, and empirical data aims to highlight the specific difficulties experienced by female entrepreneurs in rural and agricultural sectors by revealing patterns and current trends in this area. The main purpose of the study is to measure the impact that SHG microfinance has on the entrepreneurial spirit of rural women in the Birbhum region. The data of the research, which has been collected from different secondary sources, indicate that microfinance is a double-edged sword, presenting some hurdles to entrepreneurship besides its usual advantages. It suggested to the government to intervene in the specific populations where high interest rates are the problem and to help alleviate that problem. Speaking of microfinance, SHGs are the main players in the financial inclusion of rural people through providing them access to banking services. This study further connects to the rural women aspect of sustainable development by discussing empowerment through entrepreneurial activity in terms of social and economic factors.

Sahu, Baral, and Singh (2024) Recently, the development discussion has started to revolve around the notion that the empowerment of the underprivileged is a key factor in the reduction of economic inequality and the promotion of inclusive growth. This research project intends to probe into the issue of indigenous women's access to capital, and at the same time evaluate the interrelationship between economic justice initiatives and long-term strategies for inclusive growth. The study's primal aim is to gain insights into the financial empowerment programs for Aboriginal women in this particular context. Ultimately, it intends to contribute to the existing discourse surrounding the fostering of societal change and economic parity. The intricate financial inclusion processes are the center of attention in this research, which is designed to show how the emancipation of Indigenous women might lead to their being given a place in the economy. Heineken's money in the neighborhood will be less than the poverty and insecurity that have long been afflicting these communities. It discusses the key area of financial empowerment of tribal women in the context of India's development ideology. The researchers aim at bringing the hardships of Indigenous women in the path to financial independence to light by exploring the intricate network of relationships between economic justice programs and inclusive growth policies. They are going to be of help a lot in the discussion about the equality of the economy and the future of social change if they continue exploring the complicated terrain of financial empowerment programs that target only tribal women. Overcoming the barriers of financial inclusion, Indigenous women will win economic justice and be the ones to decide how a fairer and more resilient society looks like. Their exploration is already waiting for this future scenario. A great variety of things that stand in the way of economic justice for women to be removed, which means better education, delivery of equal wealth, improving people's finance knowledge, and changing the negative attitude of the society towards women, all this is the making of a patriarchal free future. Among these,

are microfinance, community savings, direct cash transfers, loans, and government projects, which all focus on uplifting tribal women's economic, social, psychological, and political status through community, non-profit, and government support to create a more just society.

Lipinge & Narang (2022) Entrepreneurship is a product of a nation with the right conditions such as a supportive economic, social, and political climate. The research uses the institutional theory framework to explore the different types of governmental support provided for the Indigenous population's entrepreneurial activities in India. Research shows that the government can take advantage of some programs, grants, and other resources to encourage innovation and entrepreneurship and provide a helping hand to new businesses. Nevertheless, regardless of this, the environments present unique possibilities and obstacles that necessitate distinct sets of resources. Based on the findings, the research suggests that Indigenous entrepreneurship can thrive with the help of a contextualized institutional support model, with variations in this model appropriate for urban, rural, and distant areas. A more independent India could be within reach if this strategy helps practitioners and politicians speed up programs that empower Indigenous people to start and grow their businesses.

Gupta (2020) In India, the small-scale industry sector has grown into a powerful economic force throughout the past half-century. These days, this industry is responsible for 95 percent of all industrial units, 40 percent of all manufacturing value addition, 80 percent of all manufacturing jobs, and 35 percent of all exports, direct and indirect. In today's economy, large and medium-scale units rely on small-scale industries as supplementary units. The small-scale industry is being held in high esteem due to the high employment rate and the backlog of new job creation. All hands are needed to meet the demand for employment in this sector. If the small-scale industrial sector is to increase its

output, exports, and employment, the government will do all in its power to create an enabling environment, level the playing field, and offer policy support. The government of India has done a lot to help SMEs in the years since the planned economy model came into effect. Tax breaks for small businesses, loans through priority sector lending, state purchases of small-scale businesses' products, infrastructure facilities like sheds and plots in industrial estates, training and technical assistance, and the cultivation of entrepreneurs are all potential policy supports. Nearly 2 lac SSI are employed in various parts of Jharkhand. Most tribal people, and especially tribal women, work in these businesses because state is predominantly tribal. These kinds of businesses provide the majority of their income. They hoped to learn how SSI affected these Indigenous women in Jharkhand through this research.

Agarwal (2018) Is there a way to alleviate the financial hardships faced by millions of smallholders in developing nations who lack the capital and other resources to engage in small-scale farming? Group farming, in which smallholders willingly combine resources (land, labor, and money) to form bigger farms that they share management of, could be one such alternative. For example, in South Asia, smaller and more female farmers make up over 85% of the population. The benefits of cooperative farming include the possibility of economies of scale, a more reliable labor force, more investable capital and expertise, and stronger negotiating positions with markets and governments. Can, however, this promise be fulfilled? Specifically, are large-scale farms still more economically viable than smaller-scale family farms? Two trials started in the 2000s in the Indian states of Telangana and Kerala give a unique chance to confirm this. These all-female cooperatives get together to farm by leasing land and splitting the labor, input costs, and harvest profits. Nonetheless, there are some ways in which the states vary. These include the groups' institutional foundation, composition, land availability, and agricultural practices, as well as the

technical assistance they receive. This research draws on the researcher's main sample surveys conducted in both states to examine the relative profitability and productivity of large-scale farms and smaller-scale family farms operating within the same state. Group farms in Kerala outperform individual farms, which are mostly run by men, in terms of both yearly net returns per farm and value of output per hectare. In Telangana, on the other hand, group farms lose ground to individual farms in terms of yearly output but are on par when it comes to net returns. Commercial crops fare far better for both groups than traditional food grains, where individual farms—often run by men—with better land and more experience in farming tend to do better. Discussed as well are the circumstances that led to Telangana and Kerala's differing results, as well as the lessons acquired that could be applied in the future. The research shows that cooperative farming can be a good alternative under certain conditions and with some model adaptation to local circumstances.

Governance Structures Promoting Sustainability

Journeault et al. (2021) The need to enhance the social and environmental impact of SMEs has become an issue that is increasingly regarded by governments worldwide. The main reason behind this is that SMEs are already acknowledged as the vital partners in the process of reaching the national sustainability targets. When it comes to integrating social and environmental factors into their business operations, large and small companies alike still encounter difficulties, even though they are being urged to do so. Companies of all sizes face hurdles when attempting to adopt sustainable practices. These challenges consist of a lack of awareness of the subject, limited resources, and no access to qualified staff. The research's main aims are to (1) identify the key ways in which various parties can work together to facilitate sustainability adoption by SMEs, and (2) examine how these activities aid in the removal of adoption barriers. The research that consisted of thirteen

case studies concluded that the stakeholders—in their roles as trainers, analysts, coordinators, specialists, and finance providers—support sustainable practices within SMEs in five different but complementary ways. It indicates that a combination of local stakeholders can perform one of these roles and thus help SMEs deal with the challenges of adopting sustainable practices. Given these findings, it is suggested that government agencies should take steps first to develop and facilitate the stakeholder networks that can perform the five major functions, which would significantly enhance the sustainability performance of SMEs and thus place governments' support to such enterprises' adoption of sustainability as a priority.

Bakar et al. (2020) The Malaysian government is taking a different and encouraging course towards small and medium enterprises (SMEs) adoption of sustainable technologies as the main character of this research. The fact that resource constraints in many transitional economies do not allow private sector organizations to innovate is the main reason for this scenario. Such scenarios are especially applicable when dealing with technologies that are less harmful to the environment and that are being used in corporate processes. This situation necessitates the involvement of external parties who will support the adoption process even though such support is considered a blessing. The government's role in promoting the use of environmentally friendly technologies is very important because of its power and resources. Therefore, the study examines the governmental function as a vital element in the rapid and effective adoption process. The "Theory of Reasoned Action" (TRA) serves as the theoretical underpinning for this research. The data set comprised responses from as many as 263 SMEs in Malaysia. PLS-SEM was the method employed for data processing. The Malaysian government has to support the green technology movement through subsidies and policies, among others. Besides that, this research indicates the direction for upcoming studies in this fast-growing field, acknowledges the

limitations of the study, and discusses its importance for the sustainable technology initiatives of the governments."

Ye & Kulathunga (2019) The importance of knowledge-based resources in helping SMEs become more sustainable is a hotly debated subject right now. There has been less effort to comprehend how financial literacy influences the long-term viability of SMEs, despite widespread agreement that it is an essential tool for prudent financial decision-making. Their goal in developing this integrated model was to examine how factors like financial risk mindset, financial literacy, and access to financing impacted the sustainability of SMEs over the long run. A knowledge-based worldview, dual process theory, and peaked order theory form the theoretical basis of the model. Included in the sample were 291 Sri Lankan SME CFOs. Structural equation modeling outcomes show that financial literacy, an optimistic view of financial risk, and easy access to capital all positively affect sustainability. A person's attitude toward financial risk and their access to financing were both correlated with their level of financial literacy. Along with financial literacy and SMEs' sustainability, they discovered that financial risk mindset and availability to capital mediated this link to a lesser extent. The theoretical and practical consequences that should be explored are emphasised, with a focus on academics, practitioners, and policymakers who are interested in promoting sustainability among SMEs.

Oliveira & Jabbour (2017) An important topic of discussion in the literature on SMEs and CSR in developing nations is the function of local industrial districts, sometimes known as industrial clusters, in fostering CSR in such nations. Even while there is some preliminary research on the topic, there is a dearth of comprehensive analytical frameworks that can help us better understand how cluster governance affects CSR in developing-world SMEs. Drawing on works about developing nations, this research constructs such a theoretical framework by way of cluster governance, SMEs, CSR, and EM. Legal

enforcement, voluntary engagement and supply chain pressure, in CSR are the three pillars upon which the authors build their case for better environmental governance in SME clusters. The suggested model is an effort to demonstrate how cluster-based SMEs are likely to react differently to various forms of cluster governance. All of these replies pertain to different aspects of SMEs' CSR efforts, including the steps they take, the challenges they encounter, the methods they employ, the strategies they employ to combat climate change, and the advantages they reap as a result of their CSR efforts. The contributors present a paradigm that could be valuable for academics and practitioners alike as they endeavor to contemplate interplay of these matters from perspectives of research, policy, and practice.

Sáez-Martínez et al. (2016) Growing political and social consensus emphasizes the need for businesses to take environmental responsibility seriously. Many people hold huge corporations more accountable for the causes of climate change and resource loss when questions of blame are raised. Despite this, a whopping 64% of Europe's pollution comes from SMEs, who are notoriously heavy users of resources like energy and materials. When analysing environmental responsibility of European SMEs, "The Eurobarometer 381 Survey on SMEs, Resource Efficiency and Green Markets" comes into play. They look at things like how many factors influence SMEs' environmental attitude and whether or not they comply with environmental laws. They surveyed 3647 SMEs from 38 different countries. A small percentage of businesses actually go above and above what is required by law to demonstrate extreme environmental stewardship. They study the elements that influence a positive attitude towards the environment among European SMEs using ordinary least squares regressions; the importance of internal drivers is shown to outweigh that of external ones. Next, they find out how a company's track record of offering environmentally friendly services and goods impacts their performance. It should be noted

that no conjoint impact was seen. Policymakers, academics, and practitioners should all take note of the following implications.

2.6 Financial Factors and Their Role in Business Sustainability

Simba et al. (2023) Research on the impact of group-based financing on female entrepreneurs in developing countries is limited. This exploratory study aims to understand the effects of community financing schemes on women business owners in developing countries by looking at the topic from a community finance viewpoint. 'Ajo,' a community funding initiative, influenced the entrepreneurial paths and social structures of 75 women in Nigeria's gendered financial markets, according to data obtained from interviews with these entrepreneurs. In their setting, the sharing and pooling of financial resources was supported by prosocial actions of trust, solidarity, camaraderie, collectivism, and reciprocity. These results add to their knowledge of how female company owners used a community financing plan to promote their enterprises in male-dominated financial markets. There are societal, policy, and scholarly ramifications to this realization.

Tubastuvi & Purwidiанти (2023) When women take the entrepreneurial plunge, they help spur expansion in the economy. The purpose of this study is to investigate how women's SME performance is influenced by financial literacy, technology adoption, financial inclusion, and other related factors. Conceptual model: To understand how financial inclusion is affected by technology adoption, resource-based theory is utilized. An explanation for how technology adoption affects business performance is provided by the "Technology Acceptance Model" (TAM) theory. A link between financial inclusion, SME, and financial literacy is established using upper-echelon theory. Businesses in Indonesia that were owned by women made up the population. They randomly selected 250 female SME owners to participate in the survey. The convenience sampling method was employed in this investigation. A systematic questionnaire was used to gather data.

What they found: Financial inclusion was found to be aided by both financial literacy and the usage of technology. Technology adoption effects on how well SMEs run by women. Evidence does not point to a direct correlation between financial literacy and success of SMEs. Supporting the idea that financial inclusion facilitates relationship between women's SMEs' success and financial literacy and technology adoption is evidence from the literature. Evidence does not point to a direct connection between financial literacy and the success of SMEs. Implications for research, practice, and society: by focusing on women business owners' financial literacy, technology adoption, and financial inclusion, this study can help the government support SMEs owned by women. The unique contribution of this study was its investigation of how financial inclusion mediated the association between women's performance and financial literacy and technology use.

Pu et al. (2021) The diversified nature of the economy makes it all the more important that SMEs be able to weather economic storms. Therefore, the aggregate economy suffers when SMEs are unable to operate. Limited market demand, financial incapacity, supply constraints, and capital restrictions are posing challenges to the viability of SMEs in Bangladesh during the present epidemic. However, SMEs have been working together with corporations and the governance to recover from the unexpected outcome by making the most of their expertise, resources, and creativity. This research is being conducted in Bangladesh to determine how the COVID-19 epidemic affected SMEs and how innovative financing, technical adaption, and government intervention affected their sustainability. The research team in this study used a standardized questionnaire to gather information from 2000 SMEs between December 10, 2020, and January 28, 2021. Along with their responses, a variety of 1895 SMEs were sent out. Even after a rigorous data cleaning process, only 1395 responses (or 69.75%) were considered suitable for following up with. The study relied on structural equation modelling to examine the hypothesis for

the hypnotized model, which in turn examined the direct and indirect effects of technology adaptation, innovative finance, and government support on SMEs. According to the results, implementing technology adaption and using creative financing strategies helps SMEs become more sustainable. The government's mediation function was also established through indirect assessment, paradoxically. According to the study's results, steps should be taken to formulate and implement policies that priorities efficient online financial services, the settlement of commercial transactions, and the integration of IT innovations into operational processes.

Bakos et al. (2020) Environment change is one of biggest problems planet is experiencing right now. There is a constant desire for businesses to be more environmentally sustainable, and these practices must advance consistently. Through a comprehensive literature review covering the years 2013–2019, this study examines 122 papers from 58 publications that focus on the environmental sustainability of SMEs. To educate policymakers and managers of SMEs, they study current trends in the drivers and hurdles of sustainable adoption. To help guide future studies on SMEs' sustainability practices, their findings also categories the studies according to their techniques and display the distribution of studies across industries and regions.

Cantele & Zardini (2018) A company's belief in the benefits of sustainability strategies and practices determines how much of an impact the company has on sustainable development. There has been a lot of discussion, with conflicting outcomes, relative to the link between the social performance and financial performance of corporations. Their study's overarching goal is to provide a framework for how sustainable practices influence the bottom line by way of strategic drivers and antecedents of business success. After surveying 348 SME manufacturers in Italy, they analyzed the results using structural equation modelling. There were five total constructs: four assessing sustainability, one

measuring financial performance, and four measuring potential mediators between the two. Through company reputation, customer happiness, and organizational commitment, they discovered that sustainability's economic, social, and formal practices elements favourably impact competitive advantage. Another favourable factor that leads to financial performance is a competitive advantage, which they discovered to be a second-stage mediator. Their study adds to the existing literature by testing a novel model of the sustainability-financial performance relationship in a hitherto unstudied setting: small manufacturing firms in Europe. This approach incorporates many intermediaries and considers all facets of sustainability.

Access to Micro-Financing and Credit Facilities

Onyekwelu et al. (2023) The rise of microfinancing for entrepreneurs, With the world's economy collapsing, poverty rates rising, and rural-urban mobility on the rise, entrepreneurial institutions have emerged as a critical tool for long-term sustainability. The questionnaire was the principal instrument for gathering data in this descriptive survey study. Statistical Package for the Social Sciences (SPSS) regression analysis methods were used to evaluate the hypothesis. Aniocha-North Local Government Area, Delta State, Nigeria, was home to 711 current National Youth Service Corps members who served as the study's research population. The results show that the lifetime of entrepreneurs' enterprises and the availability of micro-financing are both influenced by the entrepreneurial institutions in developing nations. In order to guarantee the viability, productivity, and sustainability of micro-finance enterprises, the study recommends that entrepreneurial institutions provide them with support.

Taiwo et al. (2016) The contribution of SMEs to national development is substantial over the globe. The widespread employment it offers to the local population is a major factor in this. Many experts in the field are questioning how these "gooses" have been able

to amass so much wealth. The Nigerian government started microfinance banks in 2007 to help SMEs get the money they needed after realising the importance of this sector. To what degree have small firms profited from microfinance banks' loan schemes? The study also investigated the functions and impacts of these institutions on SMEs. Primary data was collected by interviewing fifteen small companies spread all across Lagos state. The responses were then summarized in tables. The purpose of this study is twofold: first, to inform the management of microfinance institutions and banks about effects of requiring collateral when lending money to small businesses; and second, to boost microfinance institutions' ability to support small businesses' growth and expansion through recapitalization.

Prah (2016) The accessibility of credit facilities is still one of biggest challenges that SMEs deal with. Researchers in Ghana's Cape Coast Metropolis set out to find out if microfinance loan facilities help SMEs expand. Quantitative analysis and a descriptive study design were also employed. Three hundred and fifty-seven participants were chosen at random for the study. Microfinance credit facilities have been contracted by the majority of SMEs in "Cape Coast Metropolis", according to the study. The study also found that SMEs' growth rates were significantly different before and after getting these loans. Researchers in "Republic of Ghana's Cape Coast" metropolis found that SMEs faced several problems when trying to use microfinance credit facilities to expand their operations. These included short repayment periods, high interest rates, and small loan amounts. The government should make it easier for banks and other government agencies to lend SMEs more of these kinds of loans.

Nuwagaba (2015) The Republic of Zambia's government understands the need to foster SMEs as a means of private sector development. It has also come to light that adequately microfinancing these SMEs is crucial for a successful outcome. Microfinancing

solutions for medium and small businesses in Zambia were the focus of this study. The purpose of this research was to analyze microfinance in Zambia and demonstrate its potential to foster the growth of the SME sector in the nation. A two-part hypothesis test was conducted: first, that microfinance is essential to the development of the SME sector in the nation; and second, that the shift in focus from social factors to profit-making by microfinance institutions has led to inadequate funding of SMEs in the country. The two "microfinance institutions" (MFIs) that were the subjects of the study were Genesis and "Christian Enterprise Trust of Zambia" (CETZAM). Interviews and a survey of secondary sources were used to gather knowledge. The period of three years, 2012–2014, was covered. The data was tested using correlation coefficients. With a correlation value of 0.854415, CETZAM indicates a significant association wherein SMEs will have access to micro funds if there are more of them available; otherwise, they would continue to see a decline in funding, as demonstrated by the 37.3%. As far as H1 is concerned, this test is successful. Because of this, "microfinance institutions" (MFIs) are hesitant to lend money to SMEs, even if they don't have collateral. This stifles growth in the industry. Comparing the two microfinance institutions' data sets, establishes that H0 is true.

Importance of Financial Literacy Among Tribal Women

Rink et al. (2021) study aims to fill a gap in the literature by providing evidence that cultural influences play a role in explaining the gender difference in financial literacy. Their findings reveal that women in India possess significantly less financial literacy than men, according to survey data collected across the entire country. But when they exclude patrilineal states, this gender discrepancy disappears. Financial matters are also better understood by matrilineal women than by patriarchal ones. In patriarchal nations and matrilineal communities, the Blinder-Oaxaca decomposition approach is used to compare men's and women's financial expertise. According to the findings, some of the most

important transmission links are education, proficiency in the English language, and exposure to various news outlets.

Agyei (2018) Examining the relationship between cultural beliefs (Catholicism or Protestantism) and financial literacy, this study broadens the existing literature to include the performance of SMEs in developing economies. This research set out to answer two primary questions: Is cultural norms a moderating factor between financial education and business success in Ghana? And if so, how does cultural norms impact financial literacy? The findings, derived from Ordinary Least Squares and Logit regressions and applied to 300 randomly selected SME-Owners, indicate that cultural norms act as a barrier to acquiring financial knowledge. Additionally, Protestant values increase the likelihood that SMEs will capitalize on growth possibilities resulting from financial literacy. Therefore, the study concluded that cultural environment is a key factor in deciding the relationship between financial literacy and the success of SMEs. First, the study suggests that religious organizations include lessons on personal finance in their lessons. Second, it says that training programs for SMEs owners should be customized to their specific needs. Third, it says that when creating these programs, the cultural beliefs of the owners should be given top priority.

Sahoo et al. (2017) This research set out to examine the level of financial inclusion among Odisha's tribal population in two districts with a high concentration of tribal people: Bolangir and Mayurbhanj. Field investigations were conducted to establish the level of financial inclusion in six villages dispersed across these two districts. These villages had a higher tribal population than the overall population. Three hundred homes were surveyed using a semi-open survey schedule to collect primary data. Research showed that a whopping 97.7% of households did not have a savings account with the post office, and that nearly as many (71.7%) did not have access to a savings account with any bank.

Furthermore, the several factors that influence tribal households' access to financial services were determined using a logistic regression model. There was a strong correlation between a person's degree of education, the amount of privately owned land, their total annual income, and their involvement in "Mahatma Gandhi National Rural Employment Guarantee Scheme" (MGNREGS) and their degree of financial inclusion among indigenous people.

Singh and Kumar (2017) Making women more educated, financially independent, and self-reliant is the key to empowering women, which is one of their country's largest concerns. The capacity to understand the regular functioning of money is one definition of financial literacy. Financial literacy is the capability to manage one's own money wisely and effectively, based on one's own unique set of circumstances and goals. In Indian households, women typically cover more of the household's expenses, although males typically bring in more money. The past decade has seen a dramatic acceleration in women's access to financial services, but the barriers they face as a result of their gender continue to hinder how they can make the most of this access. Though they excel at keeping household budgets and spending under control, many women shirk responsibility for making major financial decisions, instead placing their trust in their husbands, fathers, brothers, and other male relatives, who they perceive as possessing superior financial acumen. For women to have agency over their own lives and make positive contributions to their families' well-being, they must have a basic understanding of personal finance. As a result of women's vast untapped potential, economically self-sufficient women can be a boon to national prosperity. The researchers in this study set out to generalize what little is known about women's financial literacy in underdeveloped nations like India.

Desai et al. (2017) Although caesarean sections are an important part of obstetric and infant care for lowering neonatal and mother mortality, little is known about the

prevalence of these procedures, the factors that influence their decision to have one, or the effects on the health of India's Indigenous tribal populations. Objective Calculating and comparing rates, causes, reasons, and outcomes of caesarean sections is the goal of this research. In this research, researchers in the Indian state of Gujarat look at the issue of uneven use in a community hospital that caters to indigenous populations and possible solutions. Method Prospectively recorded information on births at Kasturba Maternity Hospital (N = 19923) from April 2010 to March 2016 was utilized in this investigation. They compared tribal and non-tribal women to find out what the chances ratio of caesarean section was. Utilizing decomposition analysis, researchers sought to learn why caesarean sections were more common among non-tribal women compared to tribal women. Final Product The rate of caesarean sections was considerably lower among tribal women (9.4% vs 15.6%, $p\text{-value} < 0.01$) in comparison to non-tribal women. Unexplained factors accounted for 60% of the variation in caesarean section rates between Indigenous and non-indigenous women. Of the variation that could be explained, 96% ($p\text{-value} < 0.01$) was attributed to the previous caesarean section. Numerous factors, including maternal age, parity, history of caesarean section, and proximity to the hospital, played a significant role in determining the frequency of caesarean sections. The most common reasons for a caesarean section were complications during labor (11.2%), a history of such a procedure (23.9%), the presence of breech presentation (16%), and very protracted labor (11.2%). Neither the tribal nor the non-tribal mothers had a different rate of case fatalities or frequency of birth asphyxia. The $p\text{-value}$ for the former was 0.90, while the incidence for the latter was 0.26. They replicated the previous findings that non-tribal women had a greater caesarean section rate than tribal women. When it came to caesarean sections, nevertheless, the risks were the same for Indigenous and non-indigenous women.

Financial Challenges and Opportunities for MSMEs

Rajamani et al. (2022) Ready availability of loans to the public in a nation serves as a catalyst to the formation of more businesses and consequently the entire economic growth. It cheers up the new attempts in the field of entrepreneurship. Micro, small, and medium enterprises (MSMEs) are highly dependent on the timely availability of funds for their very existence and growth. The main question behind the research is how financing obstacles influence the performance of MSMEs. In a survey conducted in India, 400 MSMEs belonging to various industrial clusters were included. Samples were drawn using the quota sampling technique. A structural equation modeling (SEM) was applied to build and validate the framework. Findings indicate that the life cycle of an MSME, the sources of funding, and firm attributes have a favorable influence on financing access. Yet, the national economic development is blocked when the financial constraints that prevent MSMEs from growing are not removed.

Maheshkar & Soni (2021) MSMEs are given a prominent place in the Indian economy. This labor-saving sector is a major contributor to both social and economic stability. If the legal framework is supportive, they will be able to provide employment, create economic independence and, through their contributions to society's sustainable growth, reduce economic disparities between regions. The government and the financial sector do not provide enough help to MSMEs, which contribute significantly to the nation's development. Small companies are facing many challenges at different operational levels, which affect their success. Some of these factors include a lack of resources, ineffective social infrastructure, inexperienced managers, and the sudden changes brought about by tax and economic policies. In light of that, the study has served to bring attention to challenges encountered by MSMEs in India. The marketing, financial, technological, labour, raw material, and management families of challenges were discovered using the

quantitative approach. Internal and external factors were used to classify each problem area. The effects of demonetization, GST, and skill development initiatives on MSMEs have been thoroughly examined. As a result, certain recommendations have been put up to boost the efficiency of MSMEs.

Sultan & Sultan (2020) This research analyses how women-owned MSMEs fared throughout the economic crisis and delves into the creative solutions these women used to keep their businesses afloat. This cross-sectional study of a nation makes use of qualitative and quantitative methodologies. The survey was filled out by 260 Palestinian women business owners from a representative sample. In addition, 15 female entrepreneurs who made it through the tough times were interviewed using semi-structured interviews to gather qualitative data. Analyse quantitative data using tools like cross-tabulations and Chi-Square testing; analyse qualitative data using tools like thematic analysis. The primary results demonstrate that several female MSMEs' performance is negatively impacted by the corona crisis about output, turnover, and profit. When it comes to reducing lost sales during the crisis, social media and promotions are more likely to help women than other techniques. Among other things, this research focusses on the innovative approaches taken by the female-owned MSMEs that made it through the tough times, including digital marketing and financial management. If other women-run MSMEs that are having trouble making ends meet can learn from these creative ideas, they may be able to get back into business. Female MSME owners in developing nations have received surprisingly little attention from researchers. During this economic downturn, the highlighted innovative tactics may be able to assist ambitious female MSMEs in surviving.

Khatri (2019) In India, the growth of the economy is largely attributable to the MSMEs. Industrial output, GDP, export revenues, job creation, regional development, economic diversity, and social stability are all aided by it. Presenting the MSME sector's

importance in India's economy is the goal of this exploratory research study. Despite several efforts by the relevant ministries, the thriving sector is nonetheless confronted with some obstacles. Several difficulties faced by the MSME sector are the focus of this research. Utilizing secondary sources, it sheds light on some of issues about money, advertising, technology, human resources, operations, and export prospects. There are many issues that businesses face today. Some of these include: a lack of timely funding for working capital needs; overly complicated documentation; outdated technology; need-based research programs; low levels of information and communication technology literacy; low levels of motivation and inefficient logistics; high employee turnover; weak bargaining power; low-quality products; a lack of foreign quality certifications; complicated laws; unclear regularity policies; and a lack of information and infrastructure. In addition, it offers some policy-based recommendations for dealing with these problems that limit the expansion possibilities of MSME units.

Biswas (2015) In most economies, MSMEs make up more than 90% of all businesses. These companies also have a disproportionately large influence on job growth, trade, and industrial output. MSMEs play an essential part in expanding India's industrial sector. In recent years, the MSME sector has outpaced the economy as a whole in terms of growth. The fact that India's poor own half of the country's MSME is indicative of the sector's significance. MSMEs have played a significant part in India's amazing economic change from an agrarian to an industrial giant. The MSME sector is in second place for employment creation in India, next to agriculture only. They have a wide range of products and services, scattered in numerous locations across the country, and they serve the local market, the international market, and the national and international value chains. The government has set up several initiatives and programs to support growth and enhance the competitiveness of this sector. This sector has been contributing a lot to the Indian economy

but at the same time, it is facing so many problems that it becomes hard to operate. This report points out the opportunities and challenges for the MSMEs in India. The study's author makes an effort to draw attention to the numerous legislative initiatives in India's MSME sector that aim to spur growth in this industry. Substantial literature on MSMEs formed the basis of this research. Despite the government's best efforts, the assessment found that there are still many restrictions and obstacles that need to be removed from the MSMEs sector, even though the government is offering numerous plans to support them.

2.7 Theoretical Framework

This research is informed by Sustainable Livelihoods Framework (SLF) and Stakeholder Theory in order to explore what influences the sustainability of the MSMEs as managed by the tribal women farmer groups in Telangana. Using the SLF, this study demonstrates how tribal women exploit financial, social, natural, and human endowments, and cope with threats such as environmental distress and market challenges for the sustenance of income streams through MSME development. Also, Stakeholder Theory emphasizes the need to take into account the community, the government organs, money organizations and environmental issues for the promotion of sustainable nature for these enterprises. By bringing these theories together, they are capable of obtaining a critical, comprehensive view of how environmental, social, governance and financial aspects do or do not support the sustainability of enterprises headed by tribal women in rural India.

Sustainable Livelihoods Framework (SLF)

Created by the DFID (United Kingdom's Department for International Development), the Sustainable Livelihoods Framework (SLF) is designed to shed light on how people and communities respond to economic, environmental and social pressures while creating their livelihood (Natarajan et al. 2022). The Sustainable Livelihoods framework engages on five key forms of capitals – human, social, nature, physical, and

monetary, where these forms are moderated by vulnerability circumstances, institutional functioning, and regulatory process. Few stable access or access to assets in rural and tribal settings leads to perpetual poverty and marginalisation. By using Sustainable Livelihoods Framework, the development activities are extended to include income generation and also enhancing resilience as well as reducing vulnerability and sustaining livelihood in the long run (Serrat 2017).

The Socio-ecological Livelihood Framework (SLF) is highly relevant for tribal women farmer groups operating MSMEs in Telangana (Naveen, Parida, and Panda 2023). The main areas in which the women depend on are natural and social capitals while, their financial and physical resources are limited. The framework explains that MSMEs provide a mechanism for improving livelihoods through the use of available resources and identifies critical sustainability impediments such as inadequate infrastructure, a paucity of market links, and susceptibility to climate risks. By employing SLF, this investigation produces the complex interplays that largely define the livelihood of their tribal women farmers and provides a cohesive structure to study how ESG and financial aspects sustain their enterprises.

Stakeholder Theory

Stakeholder Theory, originally proposed by R. Edward Freeman in 1984, challenges the traditional view of business as solely accountable to shareholders, instead arguing that organizations must consider and address the needs of all parties who are affected by or can affect the business (Freeman and McVea 2005). These parties, often called stakeholders, cover a range of groups: workers, buyers, vendors, regulatory agencies, shareholders, the nearby community, and sometimes even the ecosystem. It is said that the proper handling of the relationships with those different stakeholders is the key factor in the long-run success and sustainability of the firm (Mahajan et al. 2023).

Moreover, the theory points out the importance of ethics in decision-making, inclusiveness, and value that is created collectively, thus making it even more pertinent for communal or socially oriented businesses.

In the case of Telangana, the Tribal Women-led MSMEs, Stakeholder Theory can be regarded as the most suitable theory, because the challenges and support systems which surround these enterprises are very diverse (Likhita 2025). These MSMEs are subject to the complexities of a socio-political environment where different stakeholders like local government, self-help groups, microfinance institutions, NGOs, customers, and community members are involved and they can either support or restrict the business operations. For instance, the access to credit is determined by the financial institutions, while market access and keeping up with the regulations rely heavily on the support of local government and civil society actors. Furthermore, the community's view and their involvement may greatly impact the social acceptance and stability of the workforce. The Stakeholder Theory has been used to analyze the engagement, collaboration, and responsiveness of various stakeholders and its effect on the business sustainability of tribal women-led MSMEs, particularly from the perspectives of Environmental, Social, Governance (ESG), and financial factors. Consequently, the research work points out that the existence of a collaborative, inclusive ecosystem that is in harmony with the goals and requirements of tribal women entrepreneurs is very crucial.

2.8 Summary

The literature is unequivocal in stating that micro, small, and medium-sized enterprises (MSMEs) are one of the major drivers of economic empowerment for tribal women in Indian rural regions, notably Telangana. Existing literature strongly asserts that the longevity of these businesses hinges on unlocking finance, the challenges and opportunities shared with the environment, the social circle they find themselves in, and

the type of governing structure they have in place. It is indeed a clear case for further research to disentangle the factors at play in the ESG framework and their impact on the survival of the businesses. The use of the concepts of the Sustainable Livelihoods Framework (SLF) and Stakeholder Theory provides a robust theoretical foundation for understanding the intricacies of sustainability in a business context. The entire body of evidence supports an integrative approach that not only emphasizes the engagement of stakeholders and the building of resources but also aids the tribal women entrepreneurs and enhances the long-term sustainability of their MSMEs.

CHAPTER III: METHODOLOGY

3.1 Overview of the Research Problem

Micro, Small and Medium Enterprises (MSMEs) are the main drivers of the Indian economy and the promoters of the inclusive development. Among them, tribal women's farmer groups, especially in the (Shelly, Sharma and Bawa 2020). The Tribal Empowerment Zones Policy in Telangana has contributed a lot to the tribal population, which is a trend. Besides that, the rural areas are being kept alive, the effects are also to be found in the field of gender equity and community development. Despite this, numerous, interrelated sustainability issues undermine the sustainability of such enterprises.

Many tribal women entrepreneurs are entrenched in socio-economically deprived contexts, where limited financial resources are available, exposure to markets is very limited, and formal education and training are very limited. The environmental health issues such as unpredictable weather and decreasing soil fertility are not only a hindrance but also a direct consequence of the agribusinesses involved. Weak institutions and governance also contribute to the problem and thereby diminish their opportunities for scaling up their operations or getting the necessary support (Malhi, Kaur, and Kaushik 2021). Constraints in the social sphere further limit their business sustainability due to restrictions imposed by society, gender norms, and lack of connections.

The unique socio-cultural and economic context of Telangana offers the opportunity to research the factors affecting the sustainability of MSMEs. The state constitutes a diverse tribal population, besides being suitable for the study because of the rural industries being concentrated in some areas. The research particularly focuses on the tribal women's farmer community in this region and thereby is capable of mirroring the interaction of environmental, social, governance, and financial factors that are specific to

their circumstance. Such a localized understanding is of great importance for the creation of specific interventions and policies that not only increase the longevity of these businesses but also incorporate the development and empowerment of women in the tribal community.

In spite of various government schemes as well as several non-government initiatives to motivate tribal entrepreneurship, a yawning gap exists in the understanding of what exactly the parameters to support the sustainability of the MSMEs run by tribal women farmers groups are, thus limiting the impacts of government interventions and non-government initiatives. The focus of most existing studies has been on generic MSME challenges and not taking into account the distinct nexus of gender, geography and tribal identity (Saini and Maurya 2024).

To fill this gap, this study looks at the environmental, social and governance, and financial (ESGF) factors involved in the sustainability of these enterprises in Telangana. These parameters are critical to understanding how and where to develop targeted strategies, policies, and interventions to ensure success of tribal women led MSMEs in the long term (Chinmayee and Varghese 2022). Through the identification of the critical enablers and barriers, the research intends to contribute to the local knowledge pool which will help build resilient business ecosystems able to empower tribal women, enable their economic participation and promote sustainable rural development.

3.2 Operationalization of Theoretical Constructs

In this study, theoretical constructs are operationalized because abstract concepts like environmental consciousness, social responsibility, financial inclusion, governance practices, and business as a whole sustainability need to be measured against the backdrop of MSME run by tribal women farmer groups in Telangana (Kadaba et al. 2022). A structured questionnaire is used through which each construct of the model is translated

into measurable indicators using a 5-point Likert scale, ranging from Strongly Disagree to Strongly Agree. This enables the study to measure subjective perception, experience, etc. in a standardised way.

Dimensions including resource utilization, environmental impact, and climate resilience are used to represent the construct of environmental factors. They also review the degree to which enterprises exercise efficient use of resources, follow eco-friendly practices, occupy in compliance with environment regulations and plan for climate adaptation (Bansal et al. 2024). These same elements mirror the enterprise's willingness to assume ecological risks and the enterprise's commitment to environmental sustainability.

The dimensions that capture the social factors include community impact, empowerment and inclusivity, cultural sustainability and social well-being. These dimensions include the enterprise's contribution to community welfare, inclusive hiring and decision-making, preservation of tribal cultural identity, and its role in other processes of social development (Nair, James, and Shailendran 2024). The whole idea is that social engagement and cultural integration help to ensure long-term sustainability.

These governance factors are operationalized through compliance with regulations, institutional support, transparency and accountability, and governance structures. These indicators evaluate whether the enterprise has legal conformity, ethical business practices, stakeholder engagement, and good internal governance mechanisms. It is to determine to what extent the operations are formalized and held in line by institutions to support the sustainable operations.

Access to credit and financial literacy is a reflection of financial factors. Statements study how easy for the enterprise to access micro financing, utilize financial products, and aid to finance management, making decisions and planning expenses. This construct

enables the insight into how tribal women entrepreneurs are financially empowered (Naveen, Parida, and Panda 2023).

The business sustainability construct is finally operationalized through a set of indicators for economic resilience, adaptability, customer satisfaction, environmental responsibility, and community contribution. It is the outcome variable that summarizes the effects of the other constructs on the enterprise's long-term success and viability.

3.3 Research Purpose and Questions

This research aims to determine and evaluate the important financial, environmental, social, and governance factors that affect the enterprise sustainability of MSMEs run by tribal women farmer groups in the Telangana state, India. Specifically, the main questions of this study are as follows:

1. What are the critical factors that contribute to the sustainability of MSMEs run by tribal women farmer groups?
2. What is the effect of financial factors on the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?
3. How do the environmental factors influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?
4. What is the role of social factors in influencing the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?
5. How do the governance factors influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?

3.4 Research Design

The current research implements a concurrent mixed-method research design. This includes quantitative data collection through surveys that gather qualitative insights from the systematic review of secondary sources like academic journals, government reports,

and research studies. The wide-ranging comprehension of the factors affecting the business sustainability of tribal women farmer groups running MSMEs in Telangana, India is made possible by such an approach (Östlund et al. 2011).

The overall research scheme is a way of presenting the results which are not just statistically significant but also very informative in terms of context, therefore, making practical recommendations for the sustainability improvement of Telangana tribal women MSMEs. Such a research design is warranted as it permits the triangulation of the empirical data with the established literature, thereby ensuring both the breadth and the depth of the understanding. The incorporation of the secondary qualitative sources keeps the work of the research at the required academic level while removing the logistical constraints of the field-based qualitative interviews. The simultaneous use of both methods offers a comprehensive evaluation of the business sustainability issues and the facilitators of tribal women entrepreneurs, which in turn results in the evidence-based recommendations for policy and practice.

3.5 Population and Sample

The people on whom the research is based are the agriculturist tribal women working groups in Telangana, India, who are engaged in the MSME units (Nancy and Afari-sefa 2019). The groups were the women entrepreneurs of various rural industries in agriculture, food processing, handicrafts, and other allied sectors. The women from different tribes, living in the districts of Telangana, have been the focus of the MSMEs, which are functional in several districts of Telangana.

Due to the study's emphasis on sustainable parameters, it mainly concentrates on the tribal women that are a part of the decision-making and operational management of their enterprises. The people are identified as being spread out in different locations, facing

socio-economic deprivation, and having little access to markets; hence, they become a crucial demographic for the research on inclusive development.

The sample for the study was chosen using a purposive sampling technique to allow representation from different tribal regions and various types of enterprises. 100 respondents were randomly selected in this study's survey among tribal women entrepreneurs who were the owners or workers in MSMEs (Steve Hatfield-Dodds 2007). The districts of Telangana, especially those with a significant tribal population such as Adilabad, Khammam, Warangal, and Nizamabad, are the main focus for achieving a fair representation.

Telangana was selected to be the primary location for this research because it is one of the most diverse tribal regions in India, and women are largely engaged in agriculture and related rural industries. The percentage of tribals in this state is quite high, and they are predominantly spread over the districts of Adilabad, Khammam, Warangal, and Nizamabad, where community-oriented economic activities and women's self-help groups are heavily supported (Baburao and Mangilal 2018). Apart from that, various government initiatives and development programs, including the Girijan Cooperative Corporation (GCC), the Mission for Elimination of Poverty in Municipal Areas (MEPMA), and the Tribal Welfare Department's entrepreneurship schemes, were constantly present in Telangana, which were the paths for women to enter micro-entrepreneurship and rural industries (Ministry of MSME 2023). The varied demographics along with the policies and economic potential that are in place create a perfect scenario for the examination of the environmental, social, governance, and financial factors and their sustainability of tribal women-led MSMEs in the region. The combination of developing and underdeveloped districts within the same area not only leads to significant comparisons but also provides practical insights that can be applied to other tribal regions in India.

The number of these women-led MSMEs, the tribes, and their varying degrees of sustainability serve as a basis for the research to not only understand the interrelation of the factors economic, ecological, social, and governance in determining the sustainability of tribal women-led MSMEs but also to come up with suggestions that are practicable and thereby, relevant to the actual situation.

3.6 Participant Selection

The participants of this study were selected based on particular inclusion and exclusion criteria, which are mentioned in the following Table 3.1:

Table 3.1: Inclusion and Exclusion Criteria

Criteria Type	Inclusion Criteria	Exclusion Criteria
Geographic	Tribal women farmer groups are located in Telangana, India.	Women farmer groups are located outside Telangana.
Demographic	Members of recognised tribal communities.	Non-tribal women or male-led farmer groups.
Business Type	Actively running Micro, Small, or Medium Enterprises (MSMEs).	Groups not currently involved in any business or those running large enterprises.
Role	Women who are owners, co-owners, or core decision-makers in the enterprise.	Women are involved only as labourers or non-decision-making participants.
Duration	MSMEs that have been in operation for at least one year.	Enterprises less than one year old or at a nascent/planning stage.
Consent	Participants who consent to take part in the study.	Individuals who refuse or withdraw consent.

Source: Author

3.7 Instrumentation

In this study, the primary data collection method was the structured questionnaire. The purpose of the questionnaire was to assess the financial, environmental, social, and governance (FESG) factors influencing the business sustainability of MSMEs operated by

women farmers' groups in tribes. The preparation of the questionnaire included a thorough examination of relevant literature, research articles, and field-tested surveys associated with sustainability, governance, and enterprise development.

The instrument comprised six major constructs: Environmental, Social, Governance, Financial Factors, and Business Sustainability. Every construct was evaluated through several items which were subsequently rated using a five-point Likert scale where 1 stood for “Strongly Disagree” and 5 for “Strongly Agree”. This gave the respondents the opportunity to indicate the degree of their agreement for each statement. The definitions of major variables are as follows:

- **Environmental Factors** The situation was characterized by the Environmental Factors under the four areas of resource utilisation, environmental impact, climate resilience and regulatory compliance.
- **Social Factors** The evaluation of Social Factors was carried out through indicators such as community impact, empowerment and inclusiveness, cultural sustainability, and social well-being.
- **Governance Factors** Governance Factors included policy compliance, transparency and accountability, institutional support, and organizational structures.
- **Financial Factors** Factors under the Financial category covered the chances of getting micro-financing and credit and the extent of financial literacy.
- **Business Sustainability** The assessment of Business Sustainability was done through a number of metrics and focused on issues such as resilience, customer loyalty, adaptability, financial viability, and environmental responsibility.

3.8 Data Collection Procedures

The research has utilized different techniques and at the same time collected both numerical and non-numerical data along with utilizing both quantitative and qualitative methods. This method has allowed for a thorough examination of the obstacles related to environmental, social, governance, and financial factors that have negatively impacted the business sustainability of tribal women-led MSMEs in Telangana state.

- **Primary Data Collection:** Primary data was collected through structured questionnaires which were given personally to almost 100 tribal women entrepreneurs. The closed-ended questions and a Likert scale for the main sustainability dimensions formed the core of the questionnaire (Salahange et al. 2024).
- **Secondary Data Collection:** Primary data was supported and contextually provided through a wide and deep literature review that was done for the secondary data. A significant number of academic articles, peer-reviewed journals, government reports, and policy papers related to tribal entrepreneurship, MSME development, ESG frameworks, and women's economic empowerment were systematically collected. Accessing JSTOR, Scopus, Google Scholar, and the Ministry of MSME's official publications were among the methods used to literature retrieval. The insights gained from this review proved to be of great assistance to the analysis by providing theoretical and empirical models of the socio-economic issues, potentials, and sustainability aspects prevalent in the study area (Chaturvedi and Meena 2021).

3.9 Data Analysis

To find out if the factors related to finance, environment, social aspects, and governance have a major impact on the sustainability of tribal women's MSMEs in Telangana, a mixed-methods analysis approach combining both quantitative and

qualitative data has been applied in this study (Kiran, Chaubey, and Shastri 2023). In the quantitative phase, data obtained from 100 structured survey responses was encoded and processed with the help of "Statistical Package for the Social Sciences" (SPSS). The following are the main statistical techniques that were used for data analysis:

- **Reliability Analysis:** As a precursor to advanced analysis, the internal consistency of the Likert scale items was verified through Cronbach's Alpha by (Adeniran 2019). The acceptable coefficient threshold of 0.70 or above was utilized. This procedure guaranteed that the multi-item scales used for measuring constructs like governance support, social influence, and business sustainability were dependable and consistent from within.
- **Descriptive Statistics:** The study involves the calculation of frequencies, percentages, means, and standard deviations to derive socio-economic and demographic features of the respondents (Yellapu 2019). Additionally, it presented a summary of the responses to essential variables such as financial access, market linkage, environmental impact, social capital, and governance support.
- **Correlation Analysis:** To measure the linear relationship between the independent variables (financial, social, environmental, governance factors) and the dependent variable (business sustainability) Spearman correlation coefficient was utilized. This helps the researchers to find out how strong and in which direction (positive or negative) the relationships are (Zhou 2024).
- **Ordinal Regression:** An ordinal regression analysis was employed to determine the extent to which the independent variables could predict business sustainability. Since the dependent variable was of an ordinal nature and obtained through Likert-scale responses, this technique was the most suitable

one. The study examined the impact of the financial, environmental, social, and governance factors on the changes in business sustainability of MSMEs run by tribal women farmer groups. The findings were explained through the model fitting information, pseudo-R-squared values, significance levels (p-values), and the magnitude and direction of parameter estimates (β coefficients). Such a procedure allowed the researcher to gain a detailed insight into the contribution of each predictor to the changes in sustainability results.

3.10 Research Design Limitations

While the research design was structured and comprehensive, several limitations are implicit in the design and need to be acknowledged in order to judge the findings of the study in the right context.

- **Geographical Limitation:** Because only some regions of Telangana are included in the study, the applicability of the findings to tribal women MSMEs in other parts of India may be restricted. Socioeconomic and cultural differences among states may have differential effects across states in sustainability factors.
- **Sample Representation:** Although the sample size of 100 is obviously diverse in purposive sampling, in any case, the sample size selected may not be sufficient to represent the huge and diverse tribal population participating in MSMEs. They may not catch micro-dynamics or outlier experiences in more remote or underrepresented groups.
- **Self-Reported Data:** Because the study is based largely on self-reported responses, the responses may suffer from social desirability bias or inaccurately recall. Respondents can inflate their success, understate financial troubles, or unwittingly misuse some of the questions.

- **Language and Literacy Barriers:** Many tribal women entrepreneurs may not be literate or fluent in the language the survey questions were asked; thus, interpreting assistance was required in survey data collection.

3.11 Conclusion

Using the ESGF criteria, this study has assessed the sustainability of MSMEs run by tribal women farmer groups in the Telangana state. This is particularly significant, as such enterprises contribute significantly to improving rural livelihoods, women's empowerment, and the community as a whole; however, they face challenges that may undermine their sustainability in the long run.

In general, these MSMEs are financially resilient even though they have limited access to the formal credit system and market linkages. There is growing awareness of environmentally sound agricultural practices; nevertheless, to adopt long-endurance, climate-resilient technologies and resource-efficient operations, more structured support is needed. Socially, gender roles have been transformed at the enterprises amongst local employment and collective empowerment among tribal communities. On the governance side, however, there is much room for improvement, in terms of formal structures and mechanisms of accountability, the management of strategic planning and other strategic means.

Importantly, the study points out the need for targeted policy interventions, capacity-building programs and institutional support towards a stronger ESGF backbone for the tribal women-led MSMEs. Access to finance, market networks, training and digital tools should be key areas to improve their overall sustainability. These enterprises, through an active promotion of socio-inclusive, sustainable and well-governed business models, have a prospective role in promoting equitable development and sustainable rural transformation in Telangana.

CHAPTER IV:

RESULTS

4.1 Introduction

The chapter herewith delineates the outcomes of the dissection to recognize and appraise the principal facets that uphold the continuance of a business of MSMEs led by the tribal women farmer groups in India. The results reflect the descriptive and inferential statistical analyses carried out to open the influence of different internal and external factors on the long-term survival of these enterprises. This chapter invokes the correlation and regression analyses to examine the proposed hypotheses and to measure the extent, the direction, and the significance of the relationships of the critical, environmental, social, governance, and financial factors affecting sustainability with each other.

4.2 Reliability Analysis

Reliability analysis is a measure of how well a research instrument keeps tracking its constructs. For this purpose, Cronbach's Alpha is employed, with values higher than 0.7 being regarded as satisfactory. The closer the value is to one, the more the scale is internally consistent and reliable.

Table 4.1 Reliability Statistics

Cronbach's Alpha	N of Items
0.966	75

Source: Author

The reliability test found in the above Table 4.1 yielded a Cronbach's Alpha of 0.966 for the 75 items, which is an indication of excellent internal consistency. Such an extremely high value is a clear confirmation that the items are very much related and measure the constructs of organisational sustainability practices consistently, thus presenting the instrument as appropriate for further analysis.

4.3 Demographic Profile of Respondents

The information presented in this chapter is a concise description of the socio-cultural profiles of the respondents. The summary includes the participants' place of residence, age, marital status, level of education, income, and business profile. Such data serve as a background for recognizing the diversity and the social-cultural profiles of the participants.

Table 4.2: Demographic Profile of Respondents

Demographic Details	Category	Freq	%
Village	Bhadrachalam	8	8
	Eturnagaram	5	5
	Eturu	17	17
	Keshwapur	14	14
	Kothaguda	8	8
	Kothapally	1	1
	Kuravapalli Kothuru	6	6
	Laxminagaram	12	12
	Mominpura	14	14
	Saleguda	11	11
	Thummalacheruvu	4	4
Gram Panchayat	Bhadrachalam	8	8
	Eturnagaram	5	5
	Eturu	17	17
	Keshwapur	14	14
	Kothaguda	9	9
	Laxminagaram	12	12
	Mominpura	14	14
	Saleguda	11	11

	Thummalacheruvu	10	10
Mandal	Asifabad	11	11
	Aswapuram	10	10
	Bhadrachalam	8	8
	Dhummugudem	12	12
	Elkathurthy	14	14
	Etunagaram	1	1
	Eturnagaram	5	5
	Kannayigudem	16	16
	Kothaguda	9	9
	Utnur	14	14
District	Adilabad	14	14
	Asifabad	11	11
	Badradri	4	4
	Bhadradi Kothagudem	26	26
	Hanamlonda	14	14
	Mahabubabad	9	9
	Mulugu	22	22
Age	18-25 Years	25	25
	26-35 Years	47	47
	36-45 Years	21	21
	46-55 Years	7	7
Marital Status	Single	25	25
	Married	65	65
	Widowed	6	6
	Divorced	2	2
	Separated	2	2
Education	Primary education	26	26
	Secondary education	17	17

	Higher secondary education	23	23
	Diploma/Certificate course	5	5
	Bachelor's degree	18	18
	Postgraduate degree	6	6
	Others	5	5
Primary Source of Income	Agriculture/Farming	59	59
	Business/Entrepreneurship	11	11
	Employment (salaried job)	18	18
	Daily Wage Labour	12	12
Approximate Annual Household Income	Less than Rs. 50,000	34	34
	Rs. 50,000 - 1,00,000	23	23
	Rs. 1,00,001 - 2,00,000	25	25
	Rs. 2,00,001 - 3,00,000	16	16
	More than Rs. 3,00,000	2	2
Enterprise Type	Micro	40	40
	Small	43	43
	Medium	13	13
	Large	4	4
Enterprise Sector	Agriculture	11	11
	Handicrafts	15	15
	Retail	8	8
	Food Processing	59	59
	Services	4	4
	Other	3	3
Enterprise Operation Duration	Less than 1 year	15	15
	1-3 years	24	24
	4-6 years	46	46
	7-10 years	7	7
	More than 10 years	8	8

Source: Author

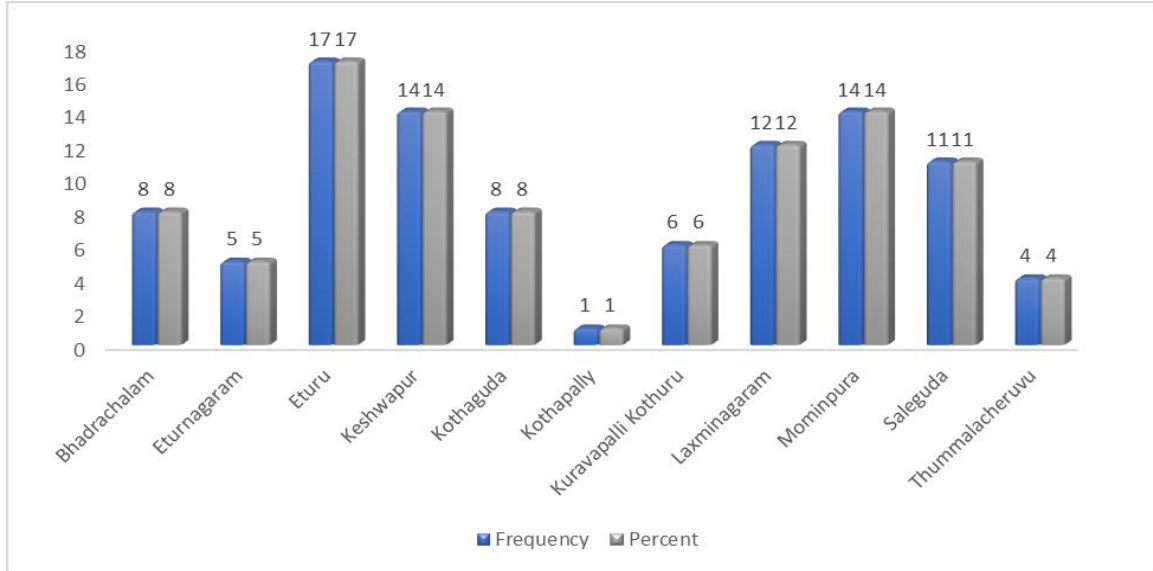


Figure 4.1: Distribution of Respondents by Village

Source: Author

Based on the information from Figure 4.1, the respondents were distributed between various villages, and Eturu (17%) and Mominpura (14%) could be considered the two biggest contributors. Keshwapur was also responsible for a notable 14% of the total with Kothapally only 1%. Hence, this points to an imbalanced representation scenario in which some villages had a far higher number of respondents in the survey than the remaining ones.

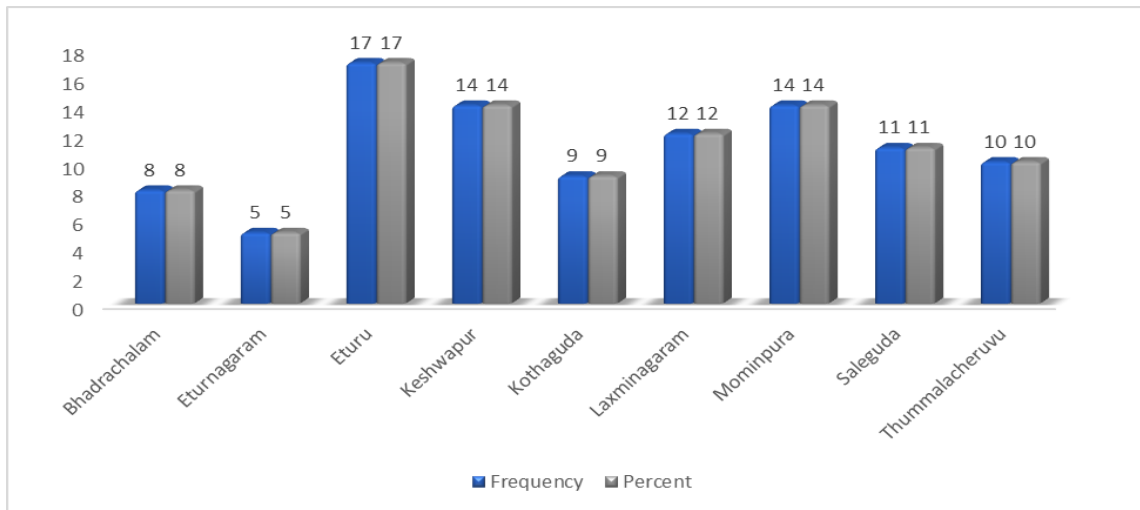


Figure 4.2: Distribution of Respondents by Gram Panchayat

Source: Author

Figure 4.2 shows that the maximum figures were from Eturu – 17%, Mominpura – 14%, and Keshwapur – 14% respectively. The least number of people were recorded in Etunagaram – 5% and Thummalacheruvu – 10%. Such a distribution of the data indicated that the level of interaction between the staff and the local government varied markedly, in which some GPs actively participated in the study while others didn't.

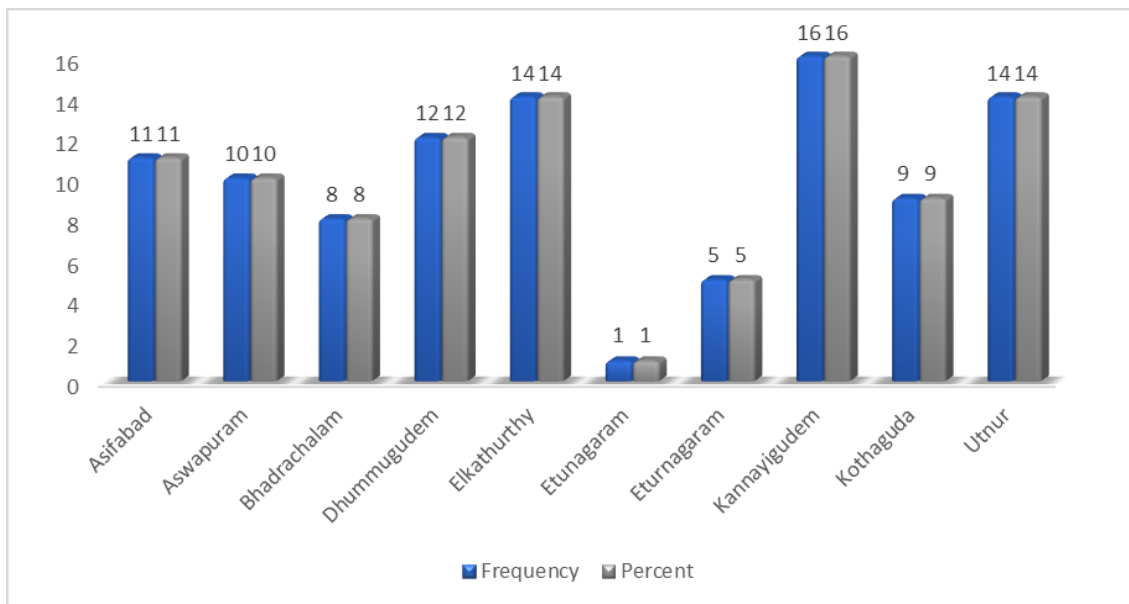


Figure 4.3: Distribution of Respondents by Mandal

Source: Author

According to Figure 4.3, Kannayigudem (16%), Elkathurthy (14%), and Utnur (14%) were the three mandals contributing the largest share of responses. Dhumugudem was recording 12% of the responses, and Etunagaram was at 1% only. Such differences reveal that some mandals were more active and had a higher level of representation in the survey than the rest.

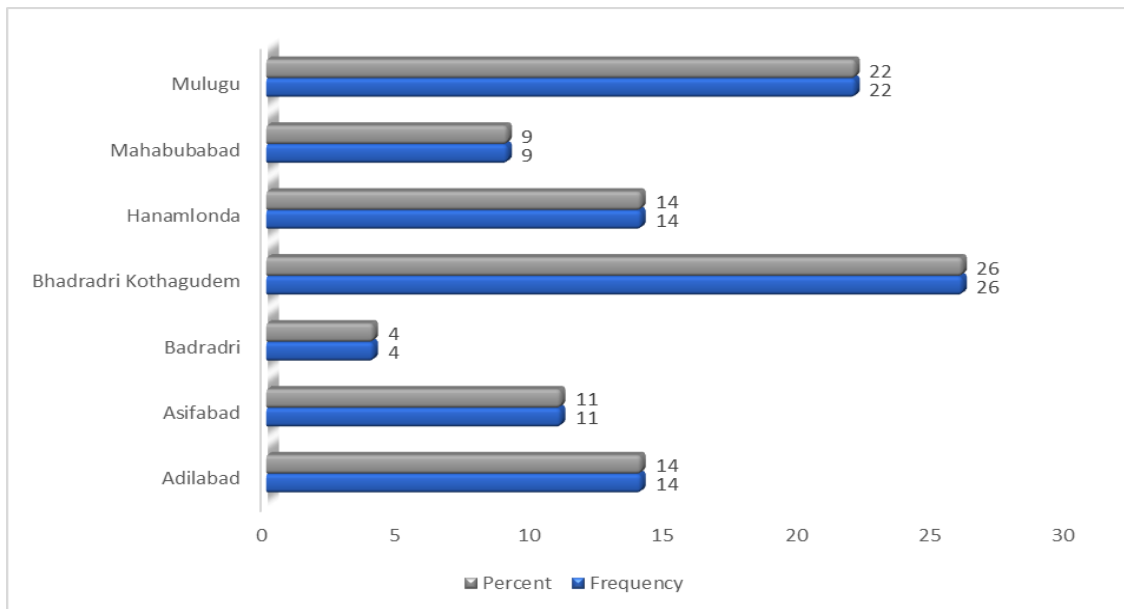


Figure 4.4: Distribution of Respondents by District

Source: Author

According to the data, Bhadradi Kothagudem (26%) and Mulugu (22%) were the districts where the maximum number of respondents could be found. Both Adilabad and Hanamkonda were at 14%, whereas the contribution of Badradri was merely 4%. The outcomes indicate that there was a high concentration of engagement in a limited number of districts, thus pointing to the disparity of the regions that were represented.

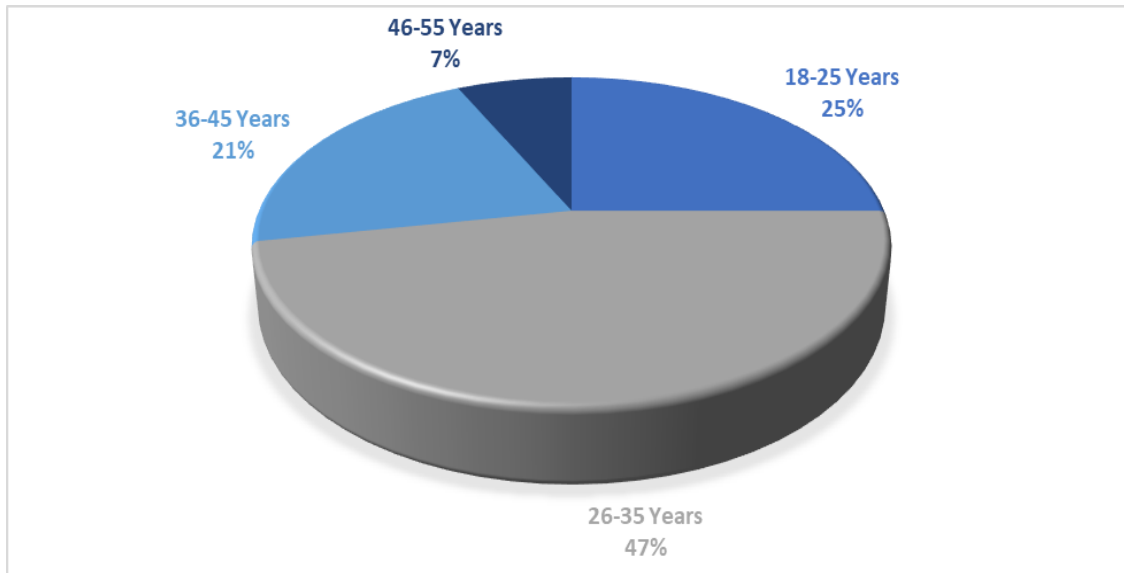


Figure 4.5: Distribution of Respondents by Age

Source: Author

Figure 4.5 reveals the age bracket of 26–35 years to have the highest number of respondents (47%), then the group of 18–25 years (25%) was next. The representation of the older age groups was significantly less with merely 7% of them being between 46–55 years. The mentioned allocation points to the fact that the mentioned age groups of young and middle-aged people are the ones mostly involved in entrepreneurial and livelihood activities.

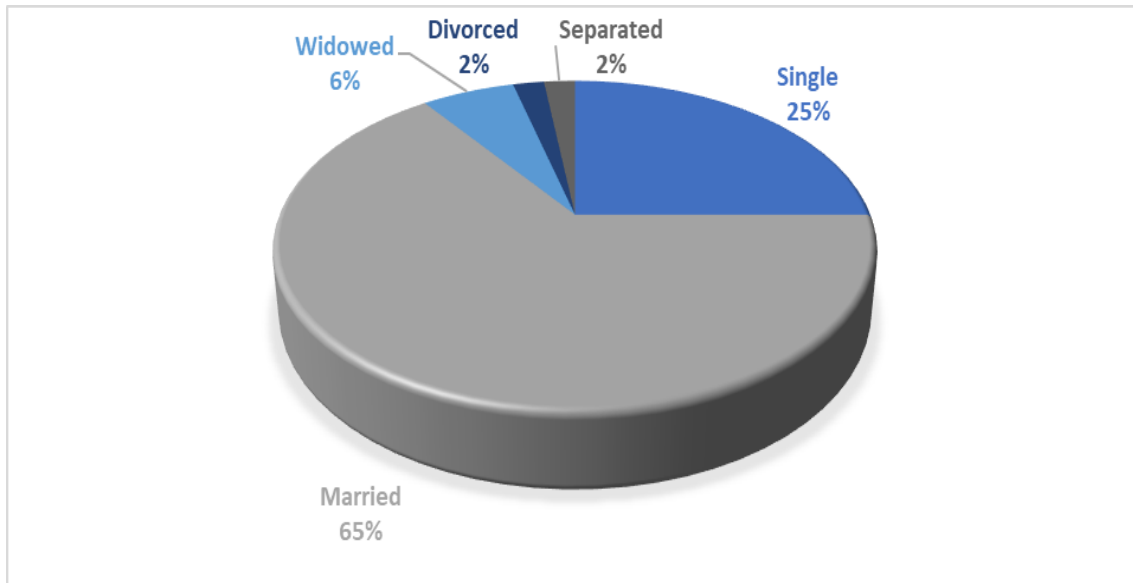


Figure 4.6: Distribution of Respondents by Marital Status

Source: Author

Figure 4.6 shows that the majority of the respondents were married (65%) followed by singles (25%). Widowed, divorced, and separated participants combined accounted for only 10%. Hence, the married individuals constitute the major demographic of the respondents whose influence may be felt in the decision-making, the involvement of the family in enterprise operations, and the flow of resources in the community.

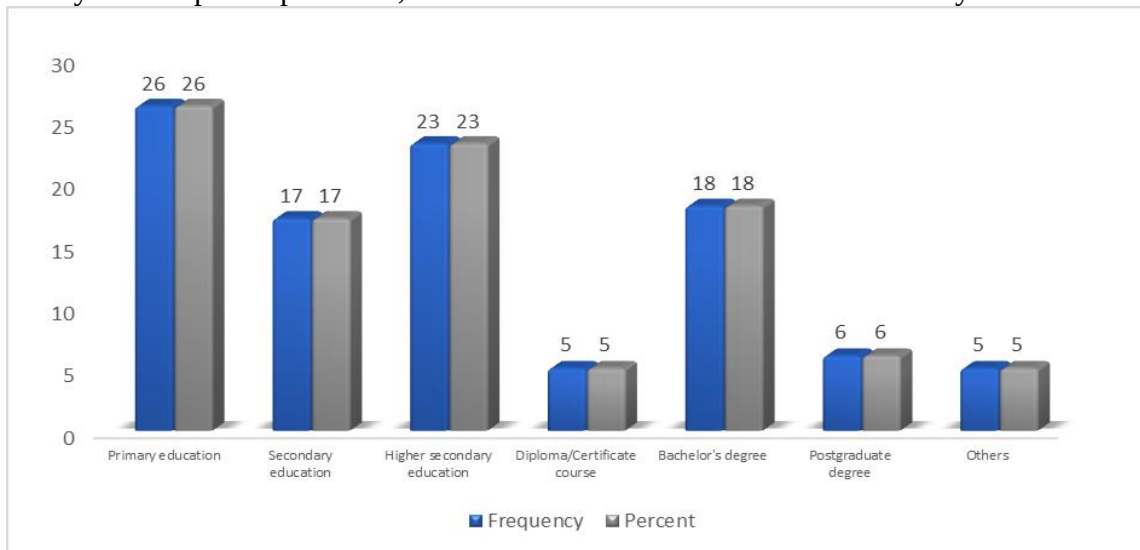


Figure 4.7: Distribution of Respondents by Education Level

Source: Author

Figure 4.7 depicts that most of the respondents achieved either primary education (26%) or higher secondary education (23%), while the percentage of bachelor's degree was 18%. Fewer people were educated up to the level of secondary education and postgraduate qualifications, and the figures for diploma and other certifications were 5–6% each. Such a range indicates that the participants had different levels of formal education, which in turn could have an influence on their entrepreneurial skills.

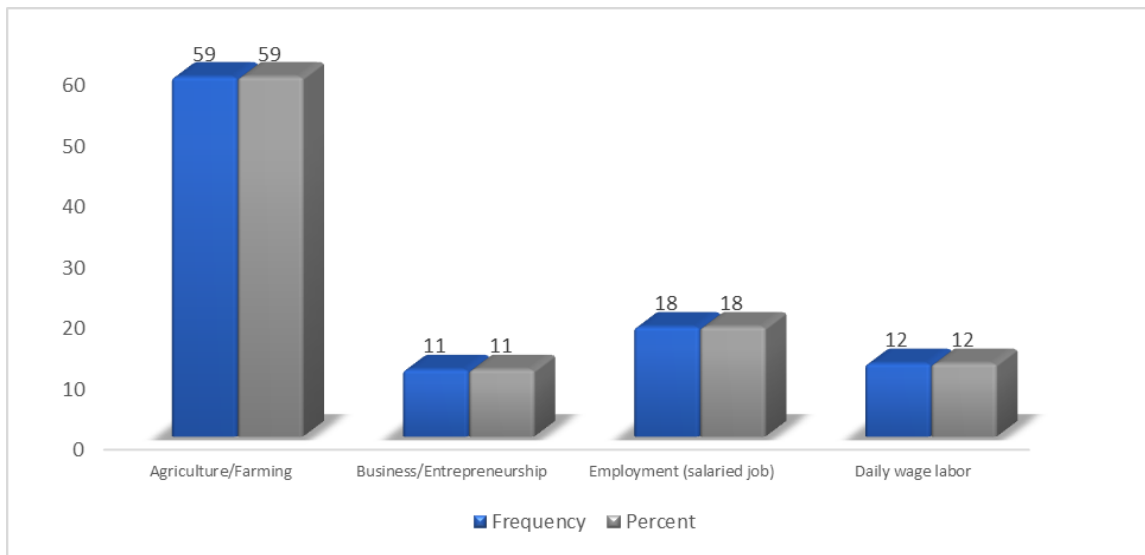


Figure 4.8: Distribution of Respondents by Primary Source of Income

Source: Author

According to Figure 4.8, more than half of the households (59%) earn their income primarily through agriculture/farming, while the next significant sources of income are salaried employment (18%), business/entrepreneurship (11%), and daily wage labor (12%). The data thus suggest that the majority of families are depending heavily on conventional farming practices, which in turn, reflects the local economy and might imply certain difficulties in transitioning to new sectors or increasing their income level.

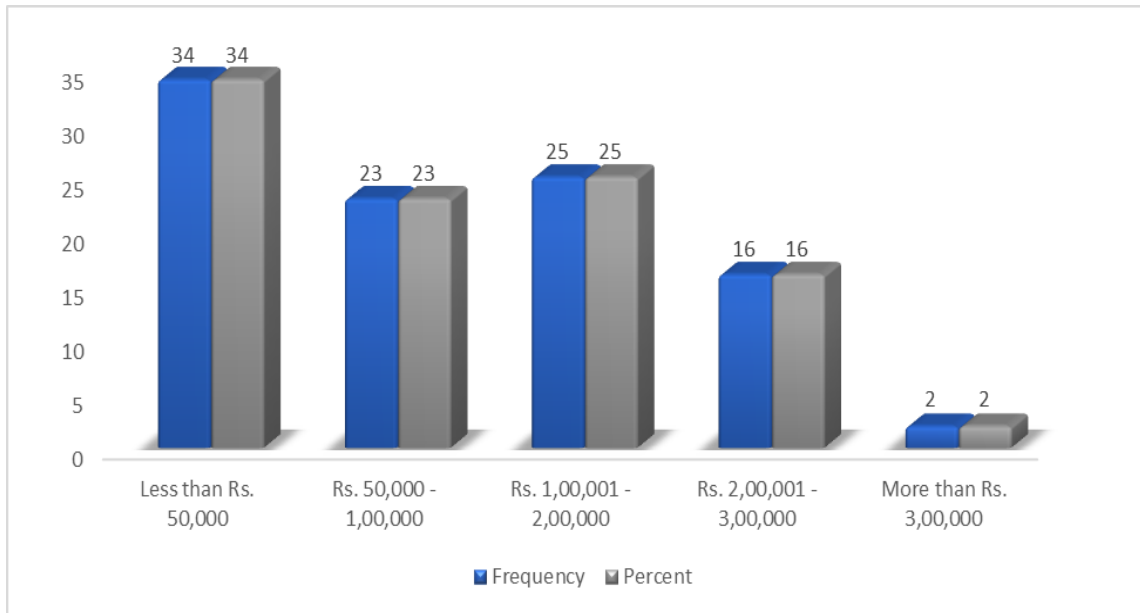


Figure 4.9: Distribution of Respondents by Approximate Annual Household Income

Source: Author

The data represented in Figure 4.9 reveals that a significant portion of families have an annual income of less than Rs. 50,000 (34%) or between Rs. 1,00,001 and 2,00,000 (25%), while there is also a reasonable number of households in the income bracket Rs. 50,000–1,00,000 (23%). The percentage of those reporting an income of more than Rs. 3,00,000 is only marginal (2%). Such a distribution is indicative of the fact that most of the survey participants are likely to be from the lower and middle-income strata of the society.

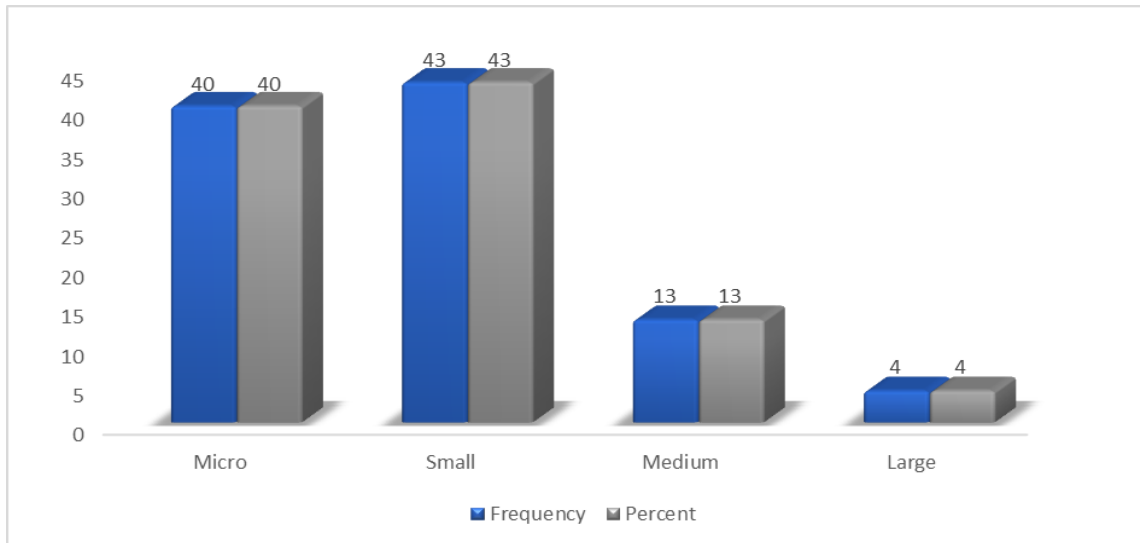


Figure 4.10: Distribution of Respondents by Enterprise Type

Source: Author

Most of the respondents, as indicated in Figure 4.10, run micro (40%) or small enterprises (43%) with a few medium (13%) and large (4%) enterprises. The dominance of small-scale entrepreneurial activities in the community can be inferred from this which is a reflection of the issues and prospects that the owners of micro and small businesses encounter.

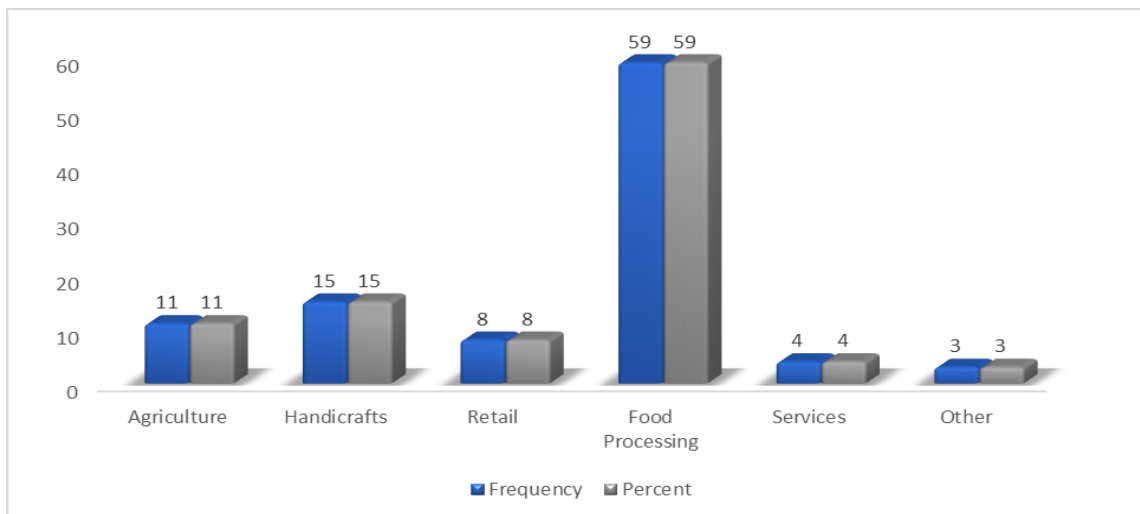


Figure 4.11: Distribution of Respondents by Enterprise Sector

Source: Author

Figure 4.11 shows that most companies are in the food processing sector (59%), the next are handicrafts (15%) and agriculture (11%). Retail, services, and other sectors are only a few companies each. This predominance reveals a firm commitment to food-related entrepreneurship, which could imply the effect of regional specialisation and local market demand.

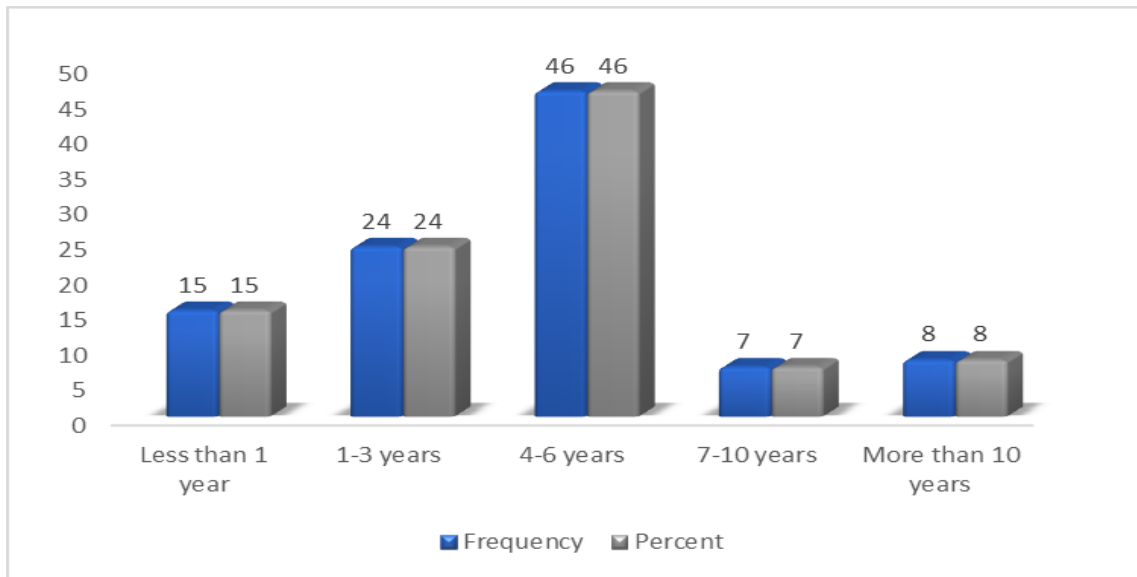


Figure 4.12: Distribution of Respondents by Enterprise Operation Duration

Source: Author

Figure 4.12 explains that a majority of the enterprises have been running for 4-6 years (46%), with 1-3 years (24%) coming next. Those enterprises that were less than 1 year old made up 15%, and the ones that had been operating for over 10 years were only 8%. Thus, the business age profile predominantly depicts fresh businesses which is a double-edged situation because on one side, there is potential for growth and on the other side, these businesses remain susceptible to market challenges.

4.4 Findings of Environmental Factors

This part examines how business organisations sustain by using their resources in a cost-effective manner, saving energy, and being climate-resilient. The scale in this

categorical analysis reflects SD - Strongly Disagree, D - Disagree, N - Neutral, A - Agree, and SD - Strongly Agree. The results summarized in Table 4.3 reveal that the enterprises have made a vigorous pledge to nature-friendly practices and obeying laws, while a few companies show only a moderate level of engagement in the execution of continuous environmental measures.

Table 4.3: Environmental Sustainability and Climate Resilience Practices of Enterprises

Main Variables	Statement	Category	SD	D	N	A	SA
Resource Utilization	Our enterprise efficiently uses natural resources to minimise waste.	Freq	1	17	23	23	36
		%	1	17	23	23	36
	We have implemented measures to reduce water consumption in our operations.	Freq	4	23	23	22	28
		%	4	23	23	22	28
	Energy conservation is a priority in our daily business activities.	Freq	2	6	18	25	49
		%	2	6	18	25	49
	We regularly assess our resource usage to identify areas for improvement.	Freq	4	18	20	37	21
		%	4	18	20	37	21
	Our enterprise invests in technologies that enhance resource efficiency.	Freq	19	9	8	36	28
		%	19	9	8	36	28
Environmental Impact	Our business activities have a minimal negative impact on the local environment.	Freq	5	14	15	23	43
		%	5	14	15	23	43
	We actively engage in practices that promote environmental sustainability.	Freq	0	9	20	32	39
		%	0	9	20	32	39
	We regularly assess and address the environmental risks associated with our operations.	Freq	3	8	21	28	40
		%	3	8	21	28	40
	Our enterprise complies with all environmental regulations and standards.	Freq	0	6	18	31	45
		%	0	6	18	31	45
		Freq	13	12	23	27	25

	We participate in community initiatives aimed at environmental conservation.	%	13	12	23	27	25
Climate Resilience	Our enterprise is prepared to handle the impacts of climate change on our operations.	Freq	10	12	14	33	31
		%	10	12	14	33	31
	We have strategies in place to adapt to changing environmental conditions.	Freq	8	10	28	20	34
		%	8	10	28	20	34
	Enhancing climate resilience is integral to our business planning and decision-making process.	Freq	11	5	13	33	38
		%	11	5	13	33	38
	We invest in infrastructure that improves our ability to withstand climate-related disruptions.	Freq	5	14	24	25	32
		%	5	14	24	25	32
	Our enterprise collaborates with local communities to develop climate resilience strategies.	Freq	17	16	18	27	22
		%	17	16	18	27	22

Source: Author

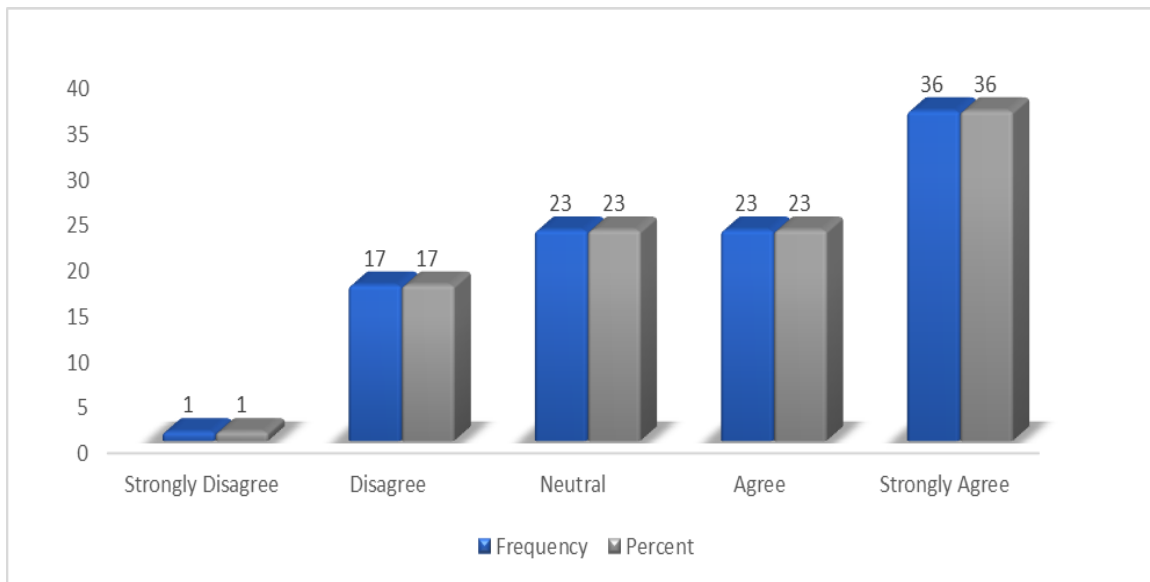


Figure 4.13: Efficient Use of Natural Resources

Source: Author

Figure 4.13 depicts a somewhat positive trend as well as inconsistency. 36% of the respondents strongly agree and 23% agree while a considerable 41% (17% D, 23% N, and 1% SD) of the respondents either stay indifferent or do not see the firm as efficient in the use of resources. It indicates that a tiny fraction of companies turning waste into fewer by-products are quite confident, while the majority of them are either uncertain or not satisfied with the level of resource utilisation.

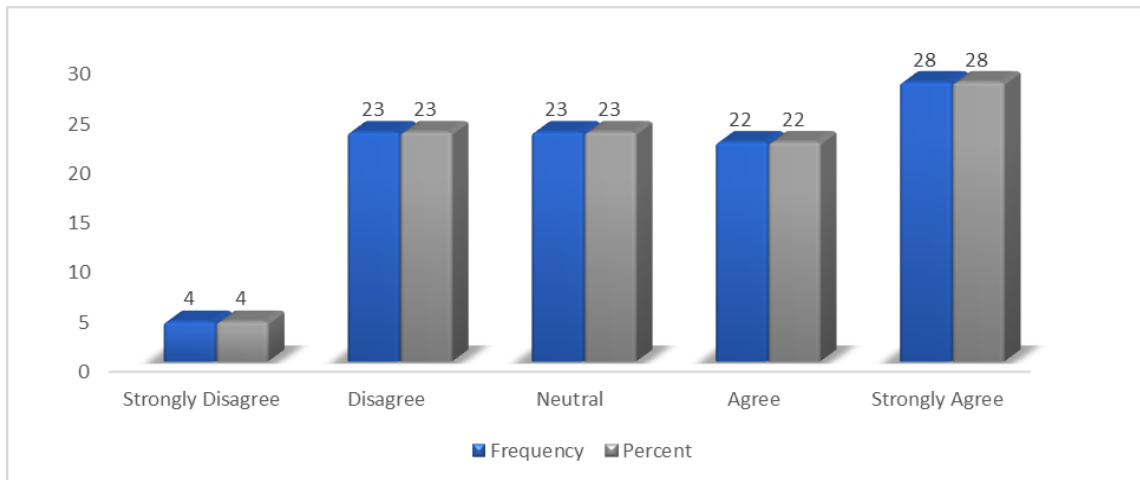


Figure 4.14: Measures to Reduce Water Consumption

Source: Author

According to the figure 4.14, responses to the statement are very split - just half of the people (22% A, 28% SA) endorse the statement, whereas 27% do not agree with it and 23% are undecided. This implies that on the one hand, a few companies have implemented water-saving measures; however, on the other hand, almost 50% have not done so or are not sure, thus pointing to an inconsistency in their water management practices.

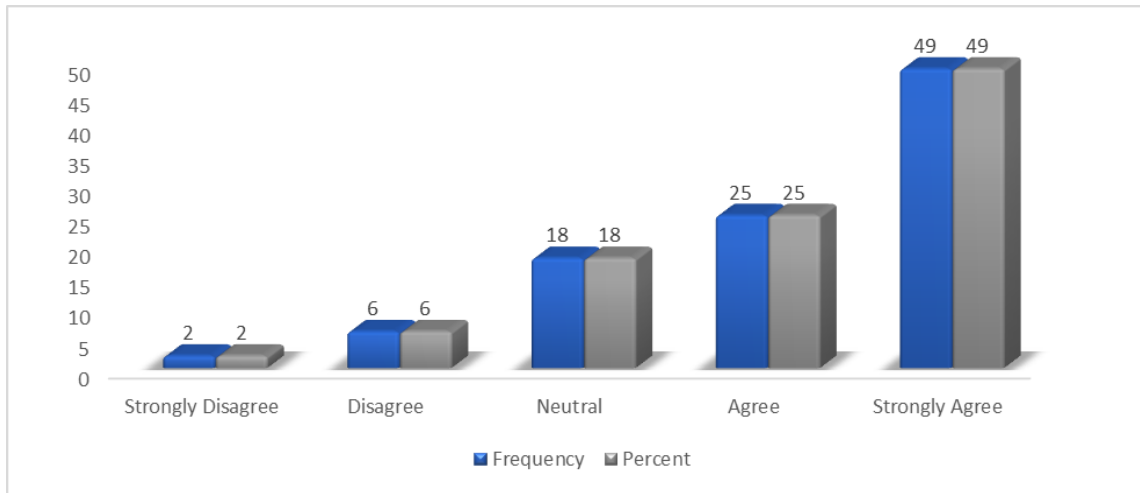


Figure 4.15: Energy Conservation as a Priority

Source: Author

Figure 4.15 illustrates that a statement was at the top of positive responses from the resource utilisation category - 74% (25% A and 49% SA), confirming that energy conservation is a business priority. Just 8% (2% SD, 6% D) of the people are against it. This indicates that an overwhelming majority of companies commit to energy efficiency.

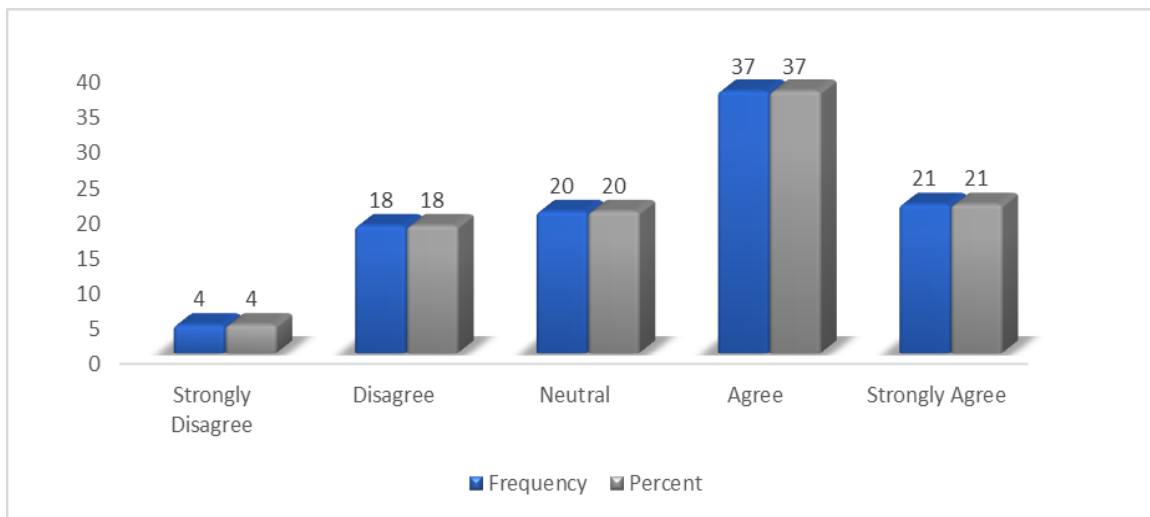


Figure 4.16: Regular Assessment of Resource Usage

Source: Author

Figure 4.16 reveals that roughly 58% (37% A, 21% SA) of respondents are actively monitoring resource usage, and 42% are neutral or negative. The result reflects a medium level of involvement in resource audits — a few businesses being on top of things and others not having a systematic review process.

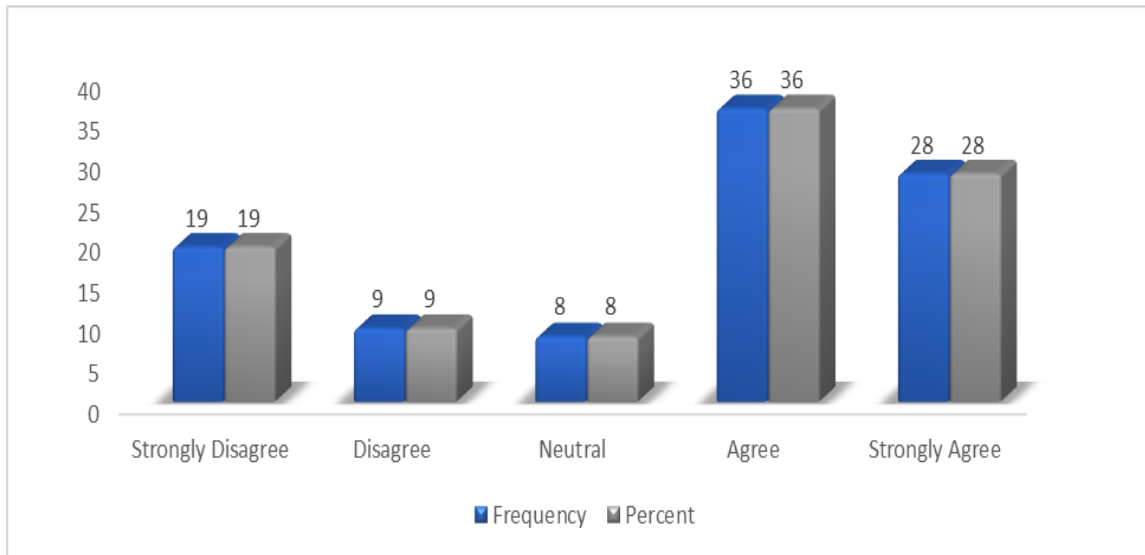


Figure 4.17: Investment in Resource Efficiency Technologies

Source: Author

Figure 4.17 shows that the reactions are not clear-cut. On the one hand, 64% (36% A, 28% SA) indicate that they have invested in the acquisition of energy and efficiency-enhancing technologies, on the other, 28% (19% SD, 9% D) do not at all. This difference indicates that, on the one hand, a lot of enterprises are progressing towards resource efficiency but, on the other hand, a considerable number of those enterprises are either lacking in technological investments or have low technological capacity.

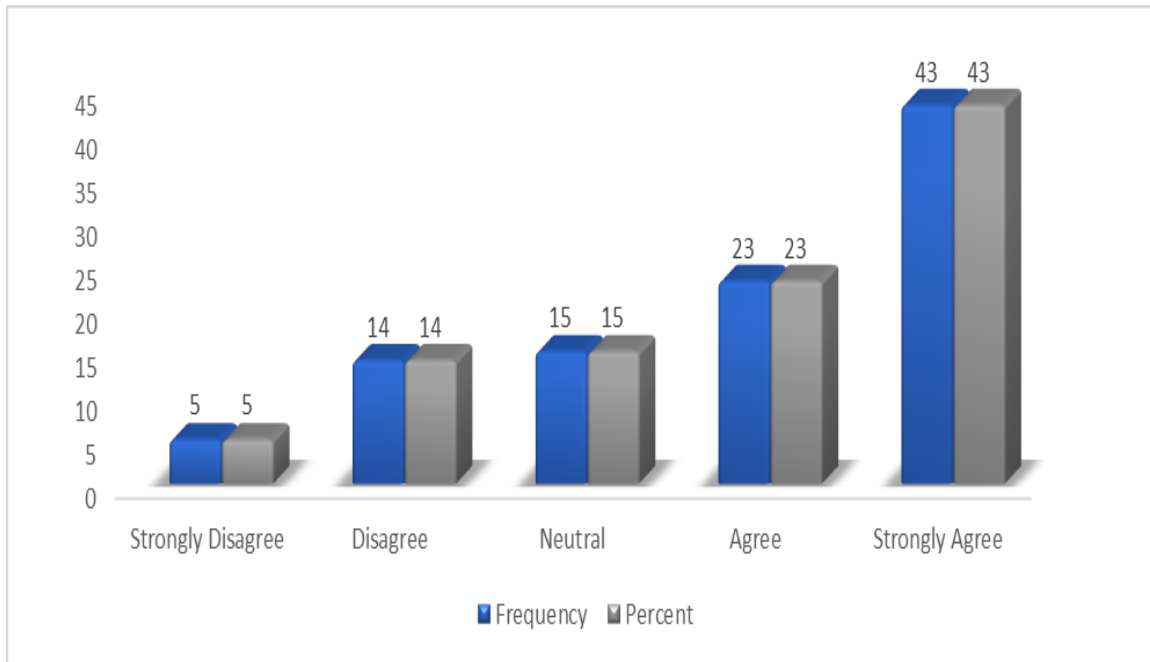


Figure 4.18: Minimal Negative Impact on Local Environment

Source: Author

Figure 4.18 shows that, 66% (43% SA, 23% A) of people think that their activities have a low environmental impact, whereas 19% disagree and 15% are N. The finding reflects that the majority of businesses are quite confident about their environmental role, however, a minority that is small but significant recognizes that there are still some negative impacts.

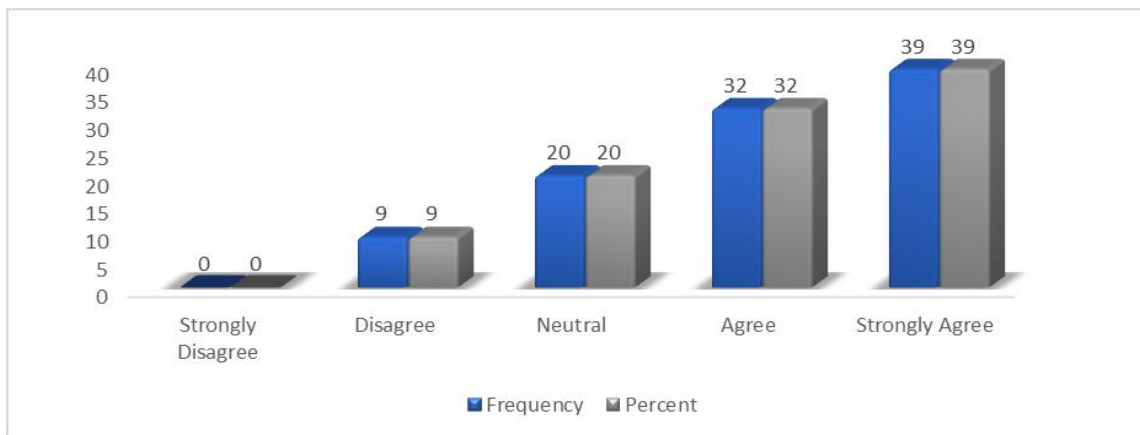


Figure 4.19: Engagement in Environmental Sustainability Practices

Source: Author

Figure 4.19 is an illustration of a very positive result — 71% (39% SA, 32% A) admit to their participation in sustainability efforts, while only 9% D. The implication is that sustainability practices are turning into the core of enterprises' operations for a large number of them.

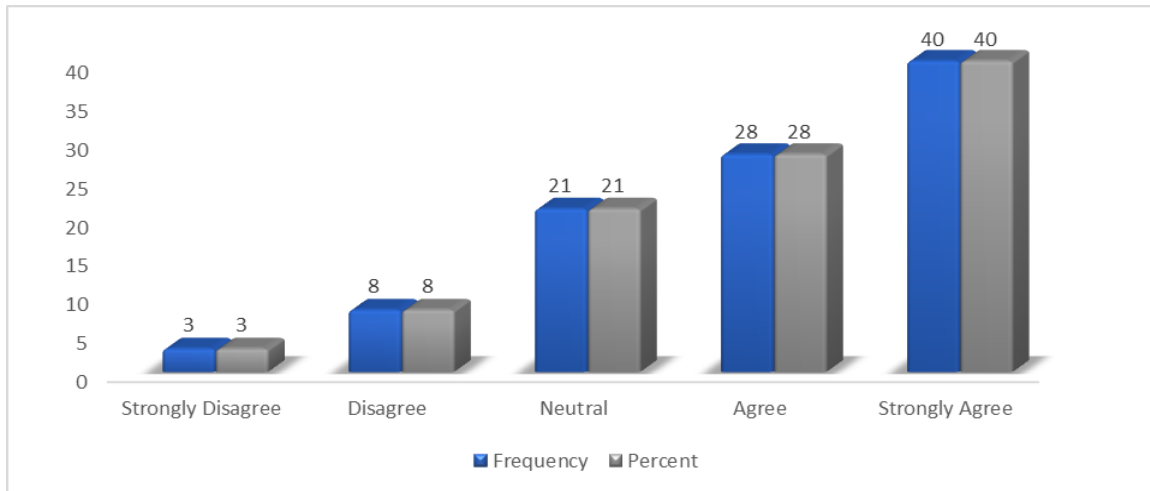


Figure 4.20: Assessment of Environmental Risks

Source: Author

Figure 4.20 shows that most people believe that we regularly evaluate and deal with the environmental risks arising from our operations. Close to 68% (28% A, 40% SA) respondents depict that risk assessments are done regularly, thus reflecting a forward-looking approach to environmental management. On the contrary, 11% (3% SD, 8% D) of the people feel that these steps have not been taken.

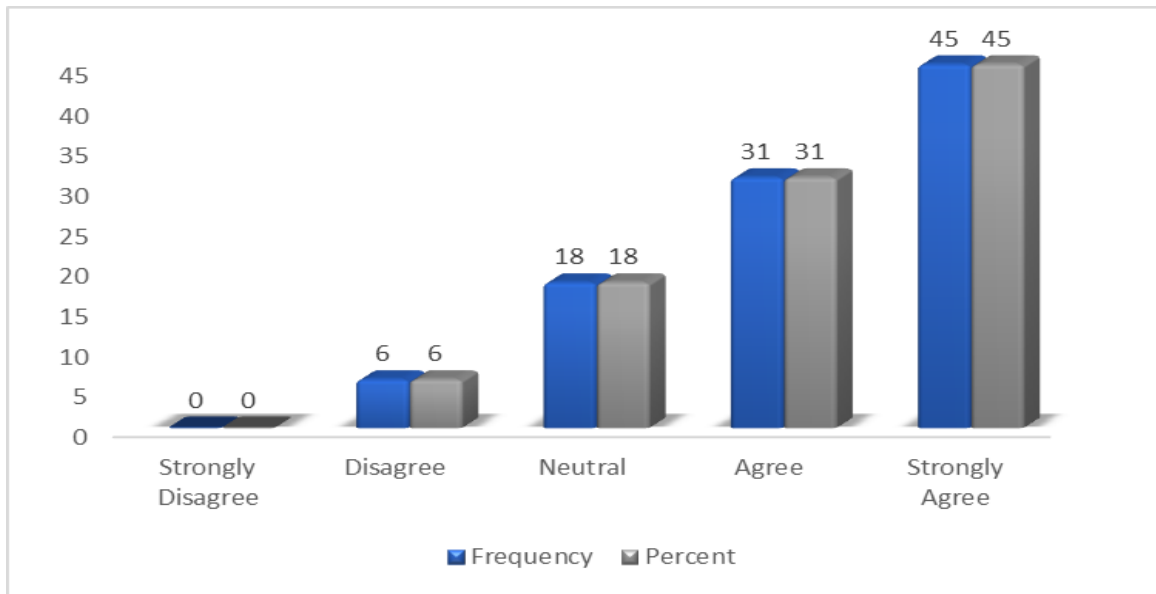


Figure 4.21: Compliance with Environmental Regulations

Source: Author

Figure 4.21 shows that this was a major and highly positive finding - 76% (45% SA, 31% A) of the respondents indicated that they completely follow the rules and only 6% of them D. This is a demonstration of the strong dedication of the law-abiding citizens concerning environmental issues among the respondents of the survey.

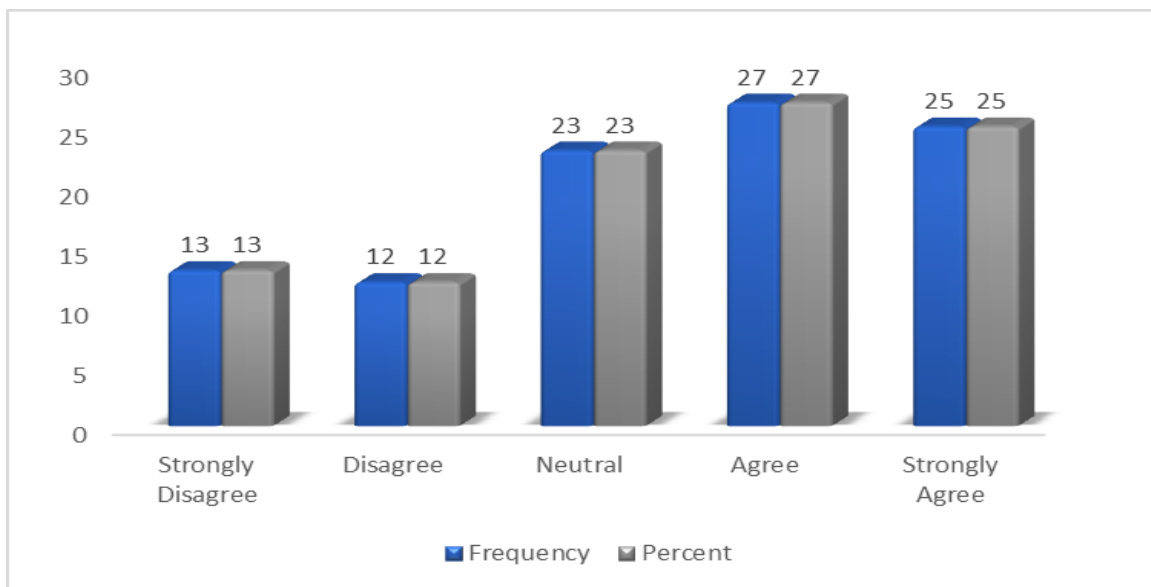


Figure 4.22: Participation in Environmental Community Initiatives

Source: Author

Figure 4.22 illustrates that the figures are not as dramatic here — 52% (27% A, 25% SA) are actively engaged in local communities, 25% are indifferent, and 25% (13% SD, 12% D) do not have such involvement. Hence, the statement serves as an indication that community involvement is not yet the usual way of enterprises.

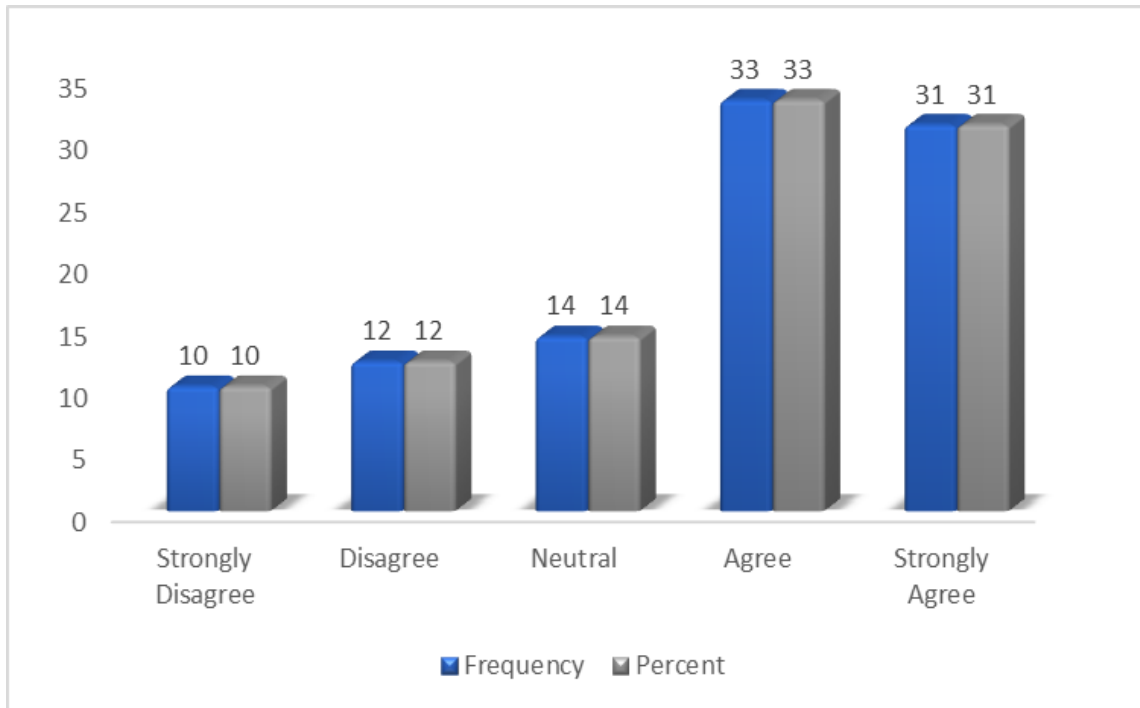


Figure 4.23: Preparedness for Climate Change Impacts

Source: Author

Figure 4.23 depicts that the answers are quite balanced. 64% (33% A, 31% SA) indicate that they are ready for climate impacts, whereas, 22% express disagreement, and 14% are N. The statement that most businesses recognise the risk of climate change, but a considerable number are not fully equipped to respond, is confirmed by this data.

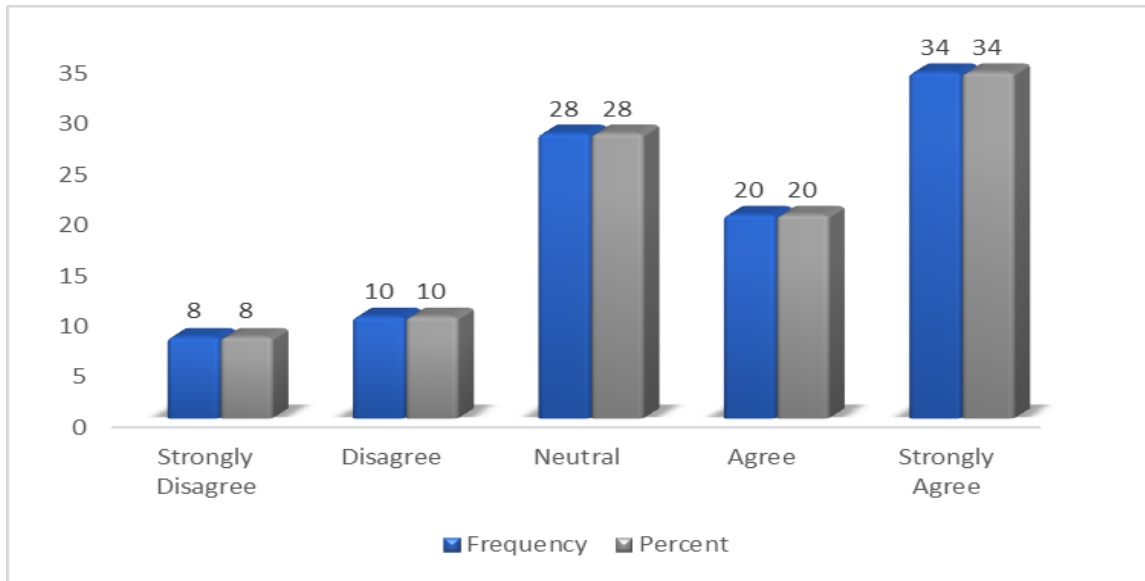


Figure 4.24: Strategies to Adapt to Changing Environmental Conditions

Source: Author

In Figure 4.24, it can be seen that more than half of the respondents (54% consisting of 20% A and 34% SA) positively acknowledge the presence of adaptive strategies, while 18% of the respondents disagree with this, and 28% remain N. This indicates a slow move towards climate adaptation and, at the same time, a few companies not having implemented their strategies fully have been brought to light.

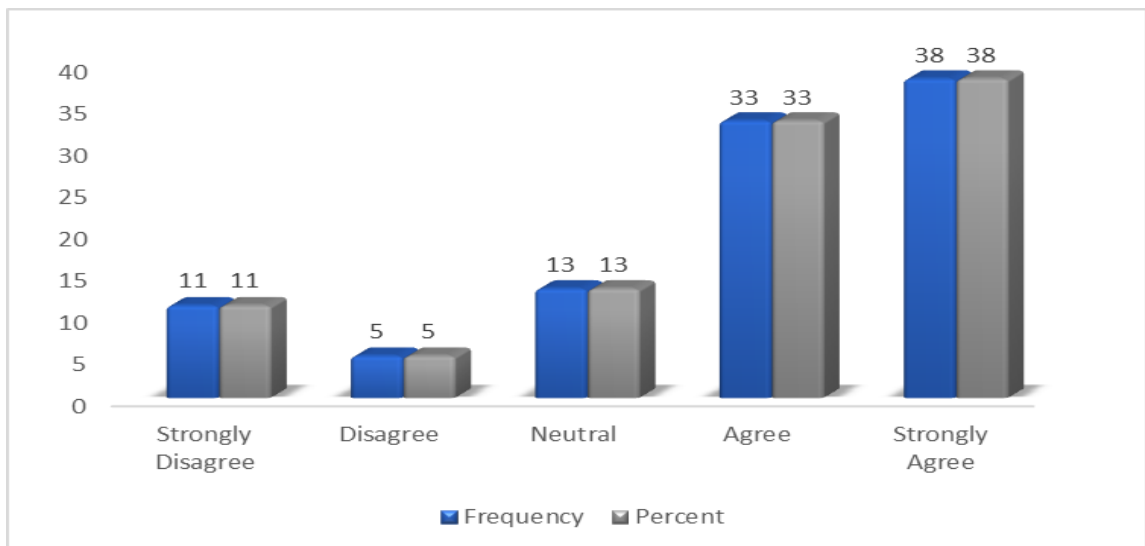


Figure 4.25: Climate Resilience in Business Planning

Source: Author

According to Figure 4.25, the most significant part of the sample (71%, with 33% A and 38% SA) declared that climate resilience is part of their business planning. A mere 16% of the respondents negated the statement, thus implying that the great majority of enterprises understand the need to strategically embed climate considerations in their business activities. This is a clear indication of a higher level of consciousness among companies that resilience planning is their survival and continuous advantage in the future market.

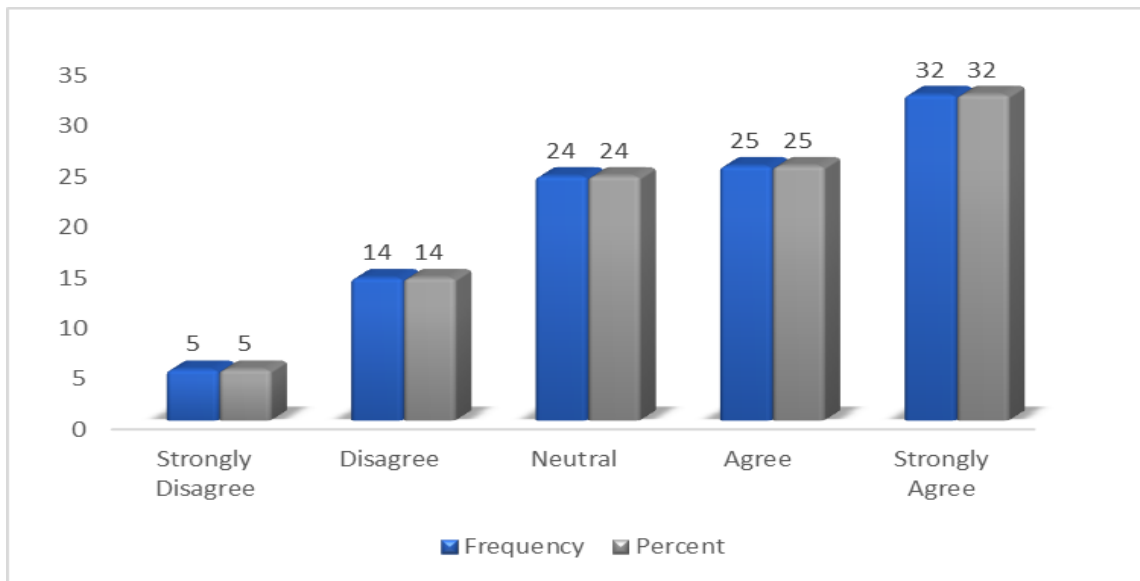


Figure 4.26: Investment in Climate-Resilient Infrastructure

Source: Author

According to the data illustrated by Figure 4.26, the majorities of the respondents (57% consisting of 25% A and 32% SA) confirmed that they have put their money into climate-resilient infrastructure. Nevertheless, 19% of them disapproved of this statement, and 24% were N, which implies that although numerous organisations are elevating their physical and operational levels to be able to face climate risks, a considerable number of those who have not made a substantial investment or are unprepared. Therefore, there is

still some space left to be fortified with strong infrastructure to guarantee sustainability during environmental upheavals.

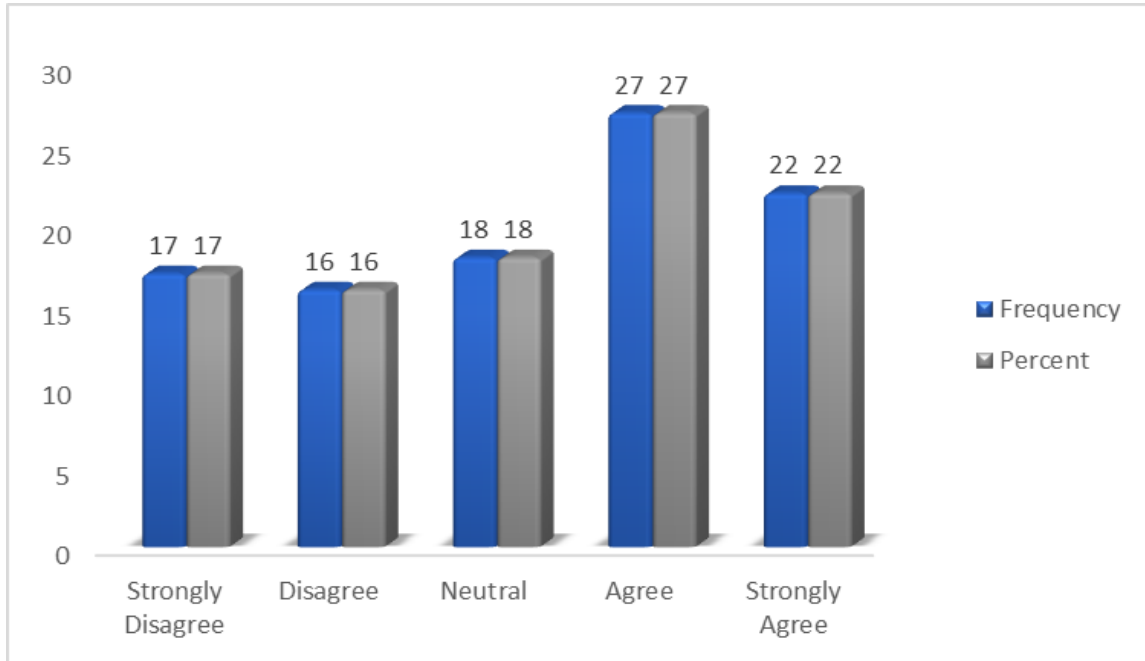


Figure 4.27: Collaboration with Communities for Climate Resilience

Source: Author

Figure 4.27 indicates that this was the least supported statement among those in the climate category. Just 49% (27% A and 22% SA) of respondents confirmed community collaboration, whereas 33% (17% SD, 16% D) stated that they do not engage, and 18% were N. The data here clearly show that while a handful of businesses acknowledge the significance of community partnerships, a large number of them are still isolated from the local resilience initiatives, thus pointing out the necessity of strengthening collaboration to enhance collective climate adaptability.

4.5 Findings of Social Factors

The segment illustrates the societal aspects that affect the functioning of enterprises, with special emphasis on community development, the inclusion of all, preserving culture, and the well-being of employees. The texts show a picture of enterprises

as agents of social welfare, champions of diversity, backers of local traditions, and promoters of fairness in their organisations and communities in the provision of opportunities.

Table 4.4: Social Responsibility and Community Engagement Practices of Enterprises

Main Variable	Statement	Category	SD	D	N	A	SA
Community Impact	Our enterprise contributes positively to the development of the local community.	Freq.	10	8	17	34	31
		%	10	8	17	34	31
	We engage in initiatives that improve the quality of life in our community.	Freq.	7	12	9	34	38
		%	7	12	9	34	38
	Our business operations create employment opportunities for local residents.	Freq.	0	8	11	39	42
		%	0	8	11	39	42
	We collaborate with community members to address local challenges.	Freq.	16	13	17	25	29
		%	16	13	17	25	29
	Our enterprise supports local education and training programs.	Freq.	4	9	5	47	35
		%	4	9	5	47	35
Empowerment and Inclusivity	Our enterprise promotes gender equality and empowers women within the organisation.	Freq.	15	7	5	23	50
		%	15	7	5	23	50
	We provide equal opportunities for all employees, regardless of their background.	Freq.	17	13	6	27	37
		%	17	13	6	27	37
	Our business supports initiatives that enhance the skills and capabilities of marginalised groups.	Freq.	15	15	16	34	20
		%	15	15	16	34	20
	We foster an inclusive workplace culture that values diversity.	Freq.	21	8	13	25	33
		%	21	8	13	25	33

	Our recruitment practices ensure representation from various community groups.	Freq.	16	9	19	27	29
		%	16	9	19	27	29
Cultural Sustainability	Our enterprise respects and preserves the cultural heritage of the tribal community.	Freq.	11	18	17	25	29
		%	11	18	17	25	29
	We incorporate traditional knowledge and practices into our business operations.	Freq.	15	16	11	30	28
		%	15	16	11	30	28
	Our products reflect the cultural identity of the tribal community.	Freq.	23	12	18	20	27
		%	23	12	18	20	27
	We engage with cultural leaders to ensure our business practices align with community values.	Freq.	25	9	6	32	28
		%	25	9	6	32	28
	Our enterprise participates in cultural events and festivals to support local traditions.	Freq.	9	16	11	22	42
		%	9	16	11	22	42
Social Well-Being	Our enterprise contributes to improving the health and well-being of our employees.	Freq.	0	5	12	39	44
		%	0	5	12	39	44
	We support social initiatives that enhance the welfare of the broader community.	Freq.	6	20	16	25	33
		%	6	20	16	25	33
	Our business practices promote a work-life balance for our employees.	Freq.	3	5	5	30	57
		%	3	5	5	30	57
	We provide access to healthcare resources for our workforce.	Freq.	1	5	13	34	47
		%	1	5	13	34	47
	Our enterprise engages in activities that reduce social	Freq.	21	9	7	35	28
		%	21	9	7	35	28

	inequalities within the community.						
--	------------------------------------	--	--	--	--	--	--

Source: Author

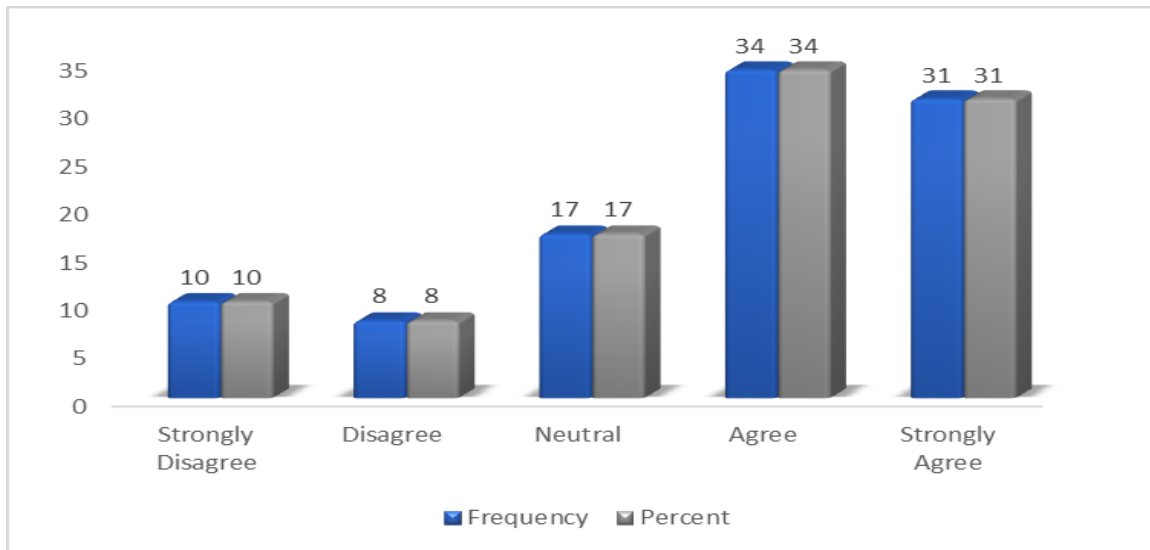


Figure 4.28: Contribution to Local Community Development

Source: Author

As depicted in Figure 4.28, most of the respondents (65% consisting of 34% A and 31% SA) are of the opinion that their enterprise brings positive changes to the local community through the development process, whereas 18% dissent and 17% are N. Such results suggest that the majority of the companies are aware of their duty towards society, however, a small number of them still need to show the impact they have made in the community.

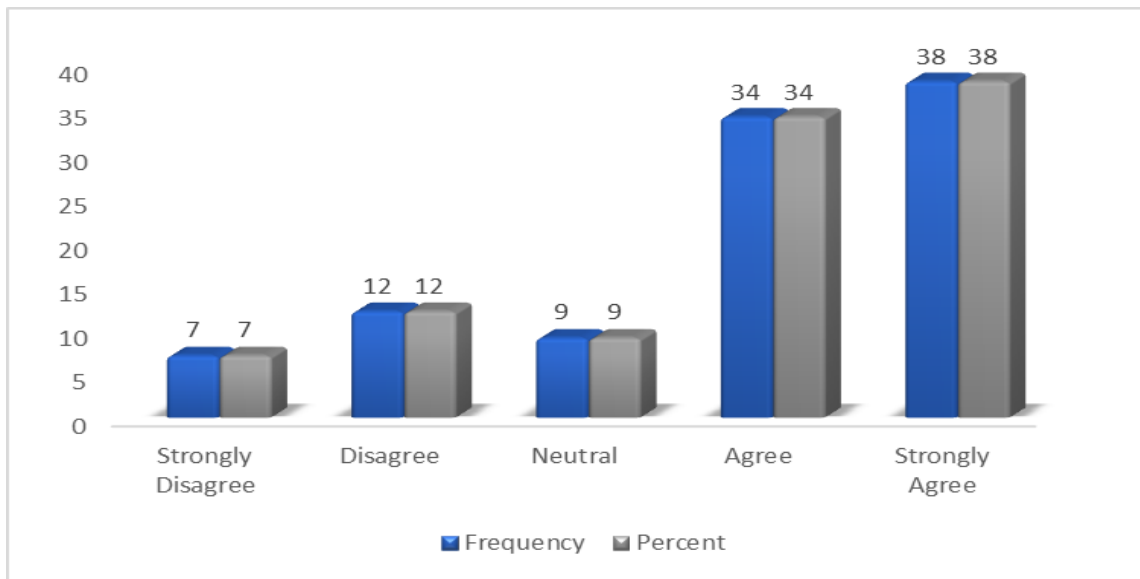


Figure 4.29: Engagement in Initiatives to Improve Community Life

Source: Author

According to Figure 4.29, it can be said that the engagement here is very strong. About 72% of people (34% A, 38% SA) affirmed that they took part in quality-of-life initiatives. Just 19% of the people are not in agreement, which indicates that community upliftment has been the main focus of a good number of enterprises, and there have been real and visible efforts towards social welfare and development.

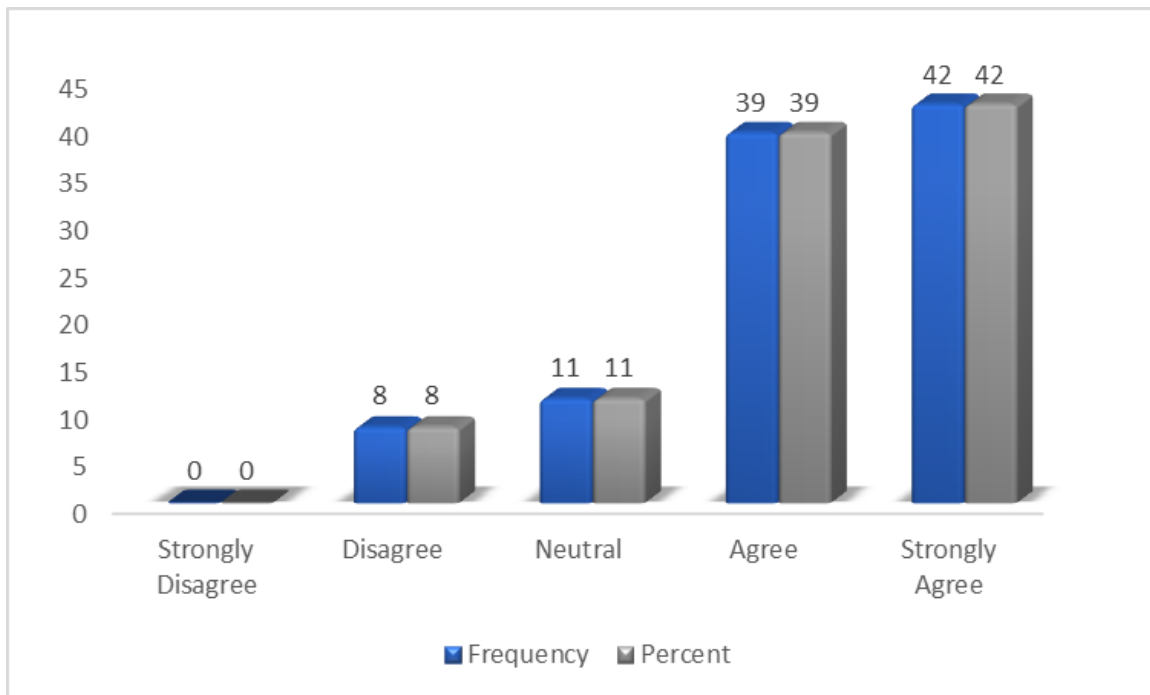


Figure 4.30: Creation of Employment Opportunities for Local Residents

Source: Author

Figure 4.30 represents a great majority of the positive responses, as 81% (39% A, 42% SA) recognized that their companies are the source of local employment. Just 8% of people who disagreed, thus indicating that the issue of employment through business activities is still among the top ways by which enterprises can have a positive impact on their communities.

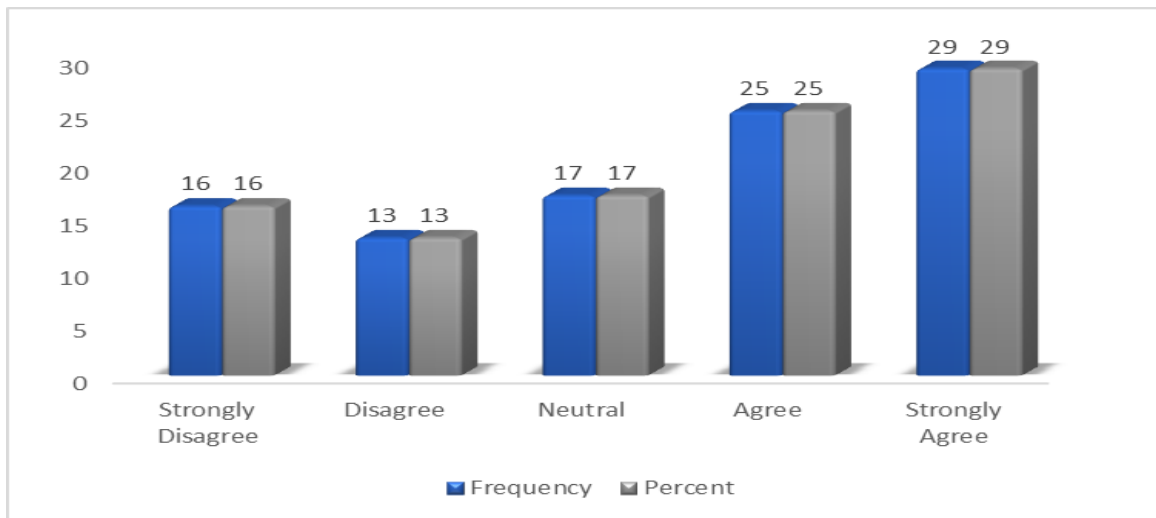


Figure 4.31: Collaboration with Community Members to Address Local Challenges

Source: Author

Figure 4.31 depicts a variety of answers - 54% (25% A, 29% SA) of the respondents confirm collaboration, whereas 29% (16% SD, 13% D) of people indicate the opposite, and 17% remain N. This means that on the one hand, certain organizations recognize the importance of collaboration with the community, and on the other hand, there are still those that have not progressed beyond the traditional way of dealing with social or developmental issues without involving the locals.

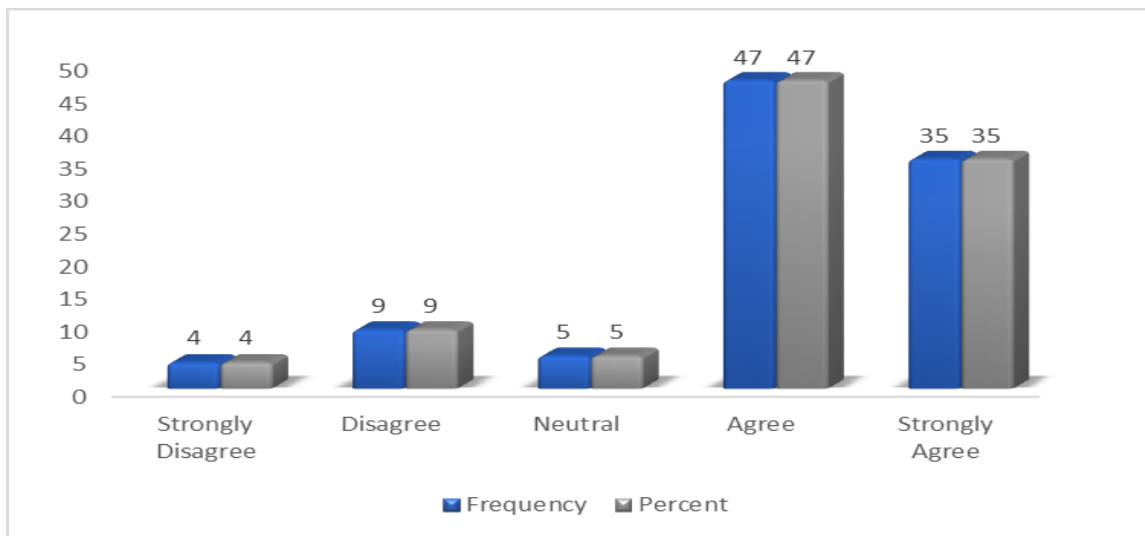


Figure 4.32: Support for Local Education and Training Programs

Source: Author

Figure 4.32 reveals that a powerful 82% (47% A, 35% SA) of the respondents endorse educational and skill-based programs, which implies that companies consider education as a definite future investment in local community development. A very small number of people disagreeing (13% in total) reflects that there is a strong and steady consensus regarding the importance of human capital development at the community level.

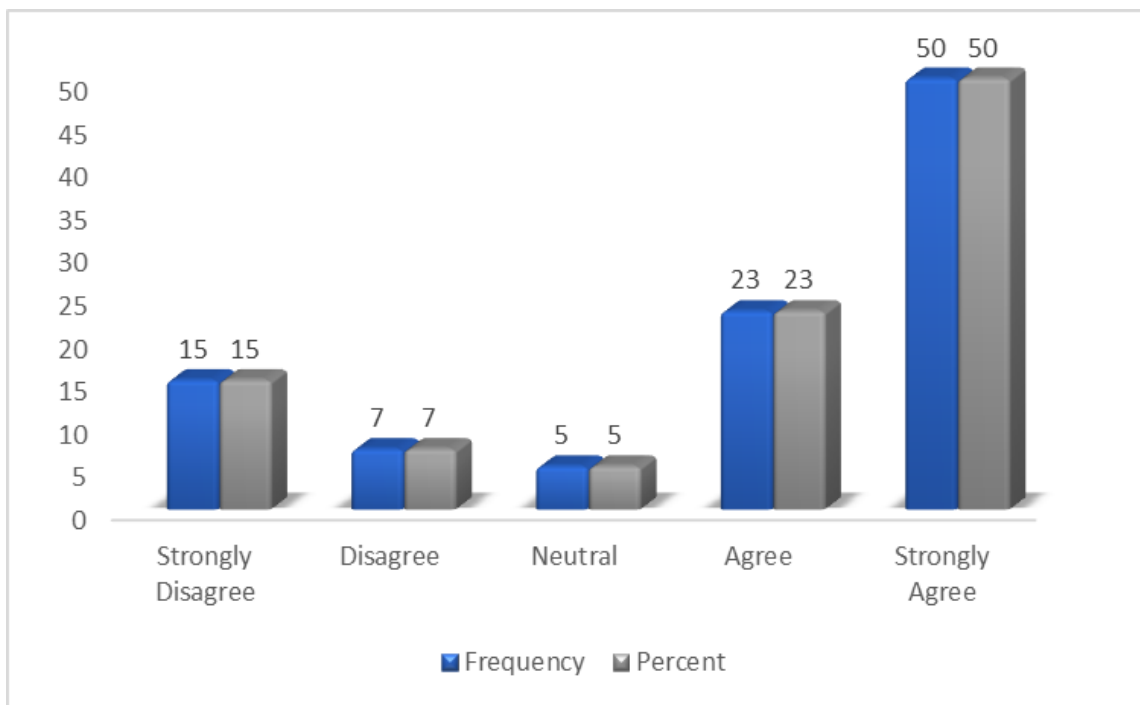


Figure 4.33: Promotion of Gender Equality and Empowerment of Women

Source: Author

As per the Figure 4.33, this claim is quite well supported - 73% (23% A, 50% SA) of the respondents are in favor of gender equality promotion, whereas only 22% of them are against it. This is a strong indication that the emphasis on female empowerment and gender inclusion has become the core of the company's values and has been considerably integrated into the work culture.

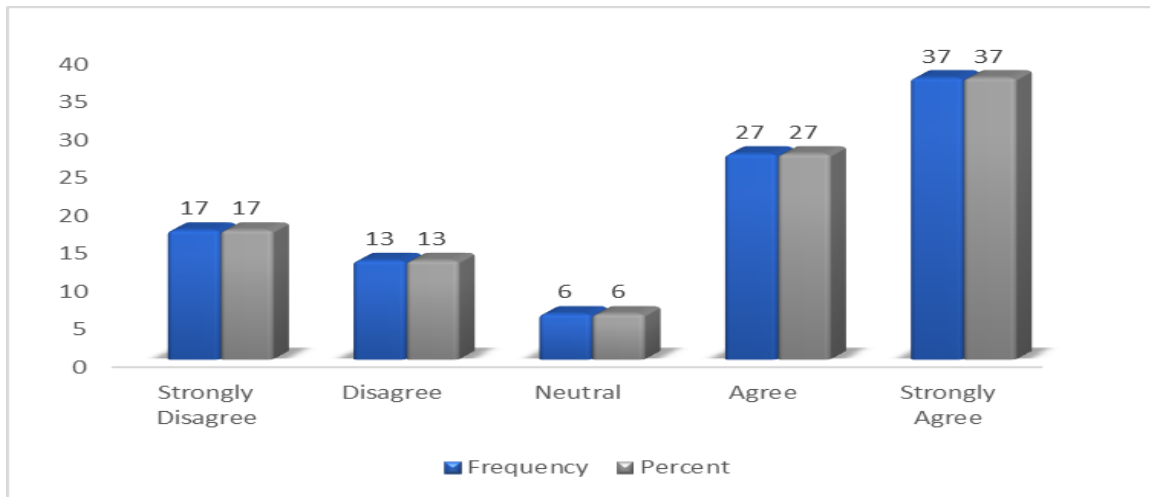


Figure 4.34: Provision of Equal Opportunities for All Employees

Source: Author

The chart in figure 4.34 illustrates that 64% (27% A, 37% SA) of people support the statement, while a significant 30% (17% SD, 13% D) have a contrasting opinion. This suggests that a majority of companies trying to be fair, still some of them, appear to have difficulties in maintaining unvarying practices of equal opportunities.

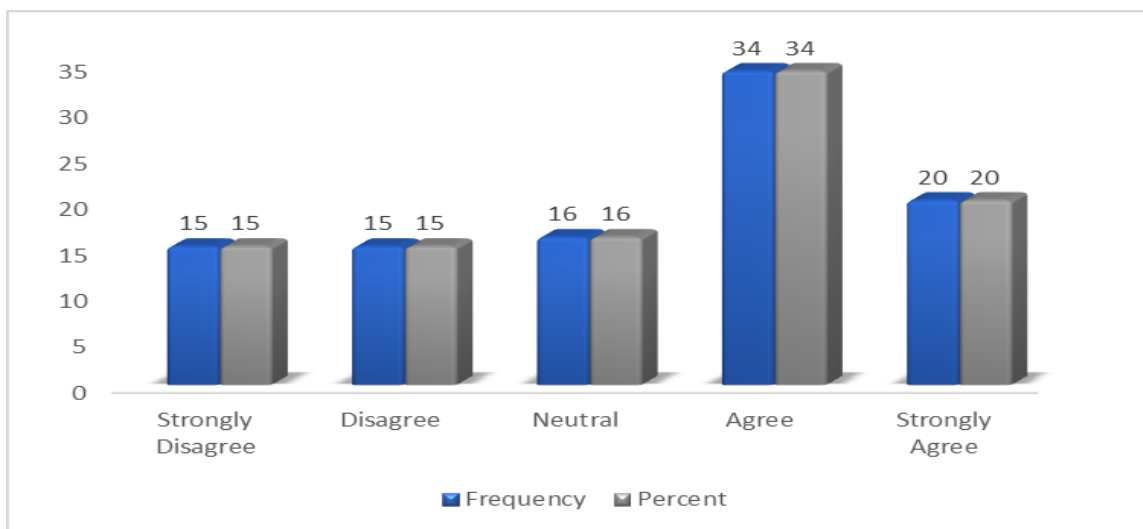


Figure 4.35: Support for Skills Development of Marginalized Groups

Source: Author

Figure 4.35 illustrates that the responses manifest a moderate level of engagement. A total of 54% (34% A, 20% SA) are in favour of inclusivity programs. On the other hand, 30% of the respondents are against, and 16% are N. The data implies that although a few companies are zealously driving the empowerment of the differently-abled groups, there are still some which have not gone beyond the stage of integrating such initiatives in the way they operate.

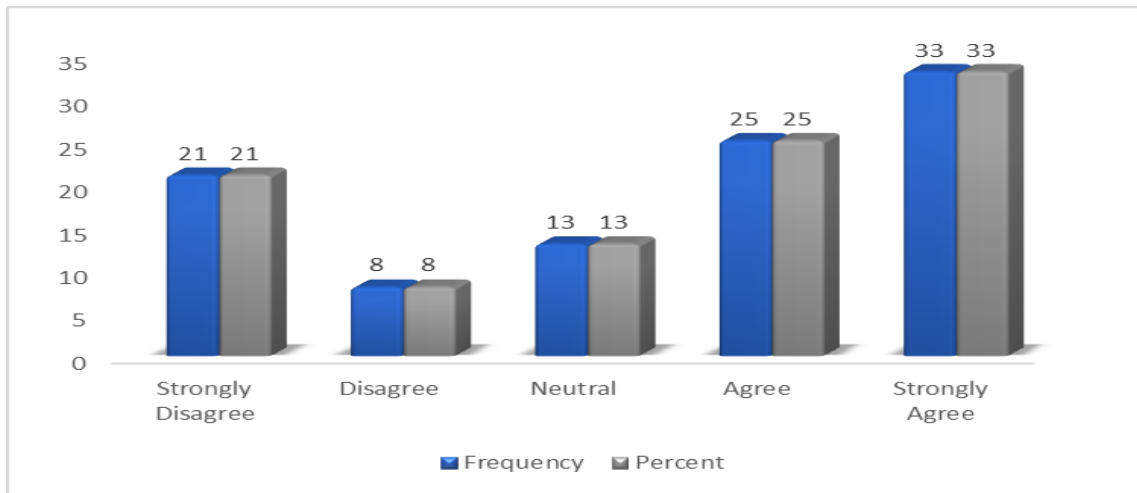


Figure 4.36: Fostering an Inclusive Workplace Culture

Source: Author

Figure 4.36 shows that 58% (25% A, 33% SA) are in agreement, while 29% (21% SD, 8% D) do not agree. The findings suggest that, on the one hand, inclusion is acknowledged to a great extent, but on the other hand, the actual application of diversity-related measures is at a different level in organizations.

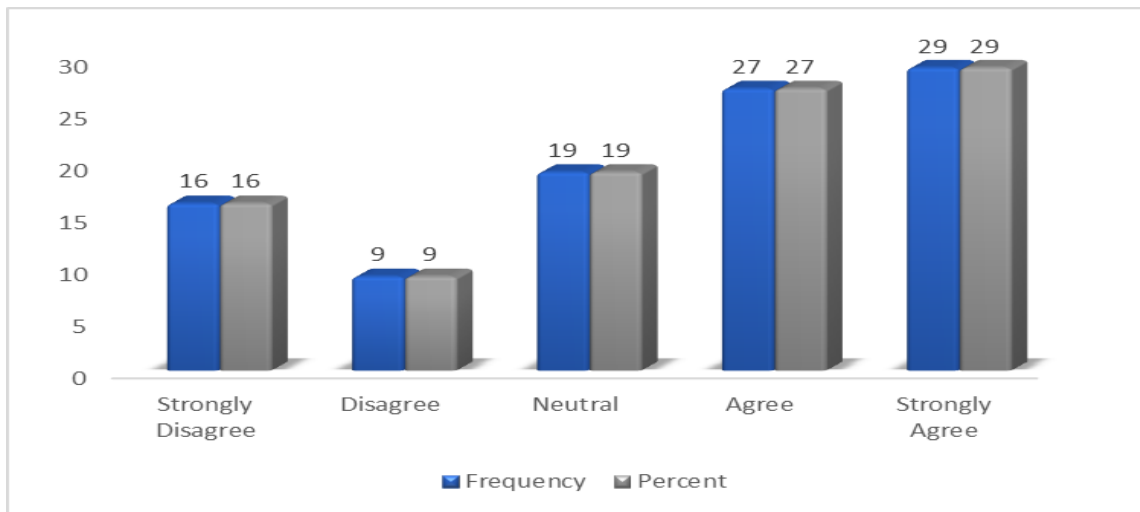


Figure 4.37: Recruitment Practices Ensuring Community Representation

Source: Author

As per Figure 4.37, 56% (27% A, 29% SA) of people notice that hiring is diverse, whereas 25% (16% SD, 9% D) do not share this view and 19% of the people remain neutral. It is indicative of a gradual though not fully accomplished move towards making sure that there is fair representation and equal employment opportunities.

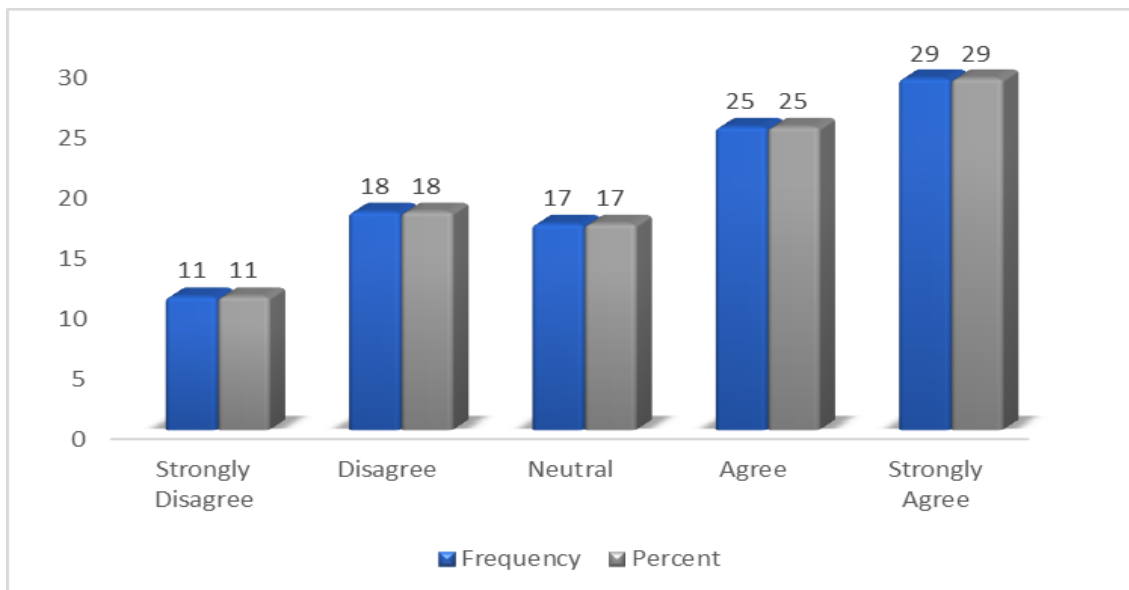


Figure 4.38: Respect and Preservation of Cultural Heritage

Source: Author

Figure 4.38 displays that approximately 54% (25% A, 29% SA) of the respondents stated that their business is respectful of the local culture. On the other hand, 29% (11% SD, 18% D) of the respondents do not think so. The finding indicates that maintaining culture is quite important to a certain number of businesses, however, it is still not a general practice among them.

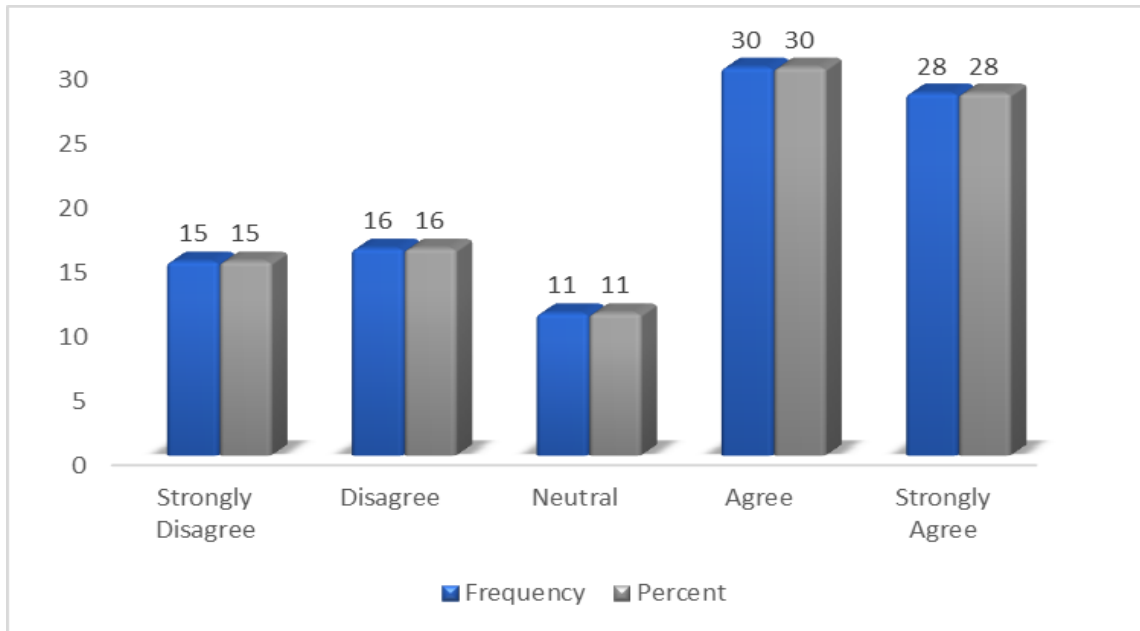


Figure 4.39: Incorporation of Traditional Knowledge in Business Operations

Source: Author

The data presented in Figure 4.39 shows that a total of 58% (30% A, 28% SA) of people feel that traditional wisdom has been integrated in their work or study, while 31% (15% SD, 16% D) think otherwise. This is an indication that indigenous practices are increasingly being acknowledged but their actual usage is still quite low.

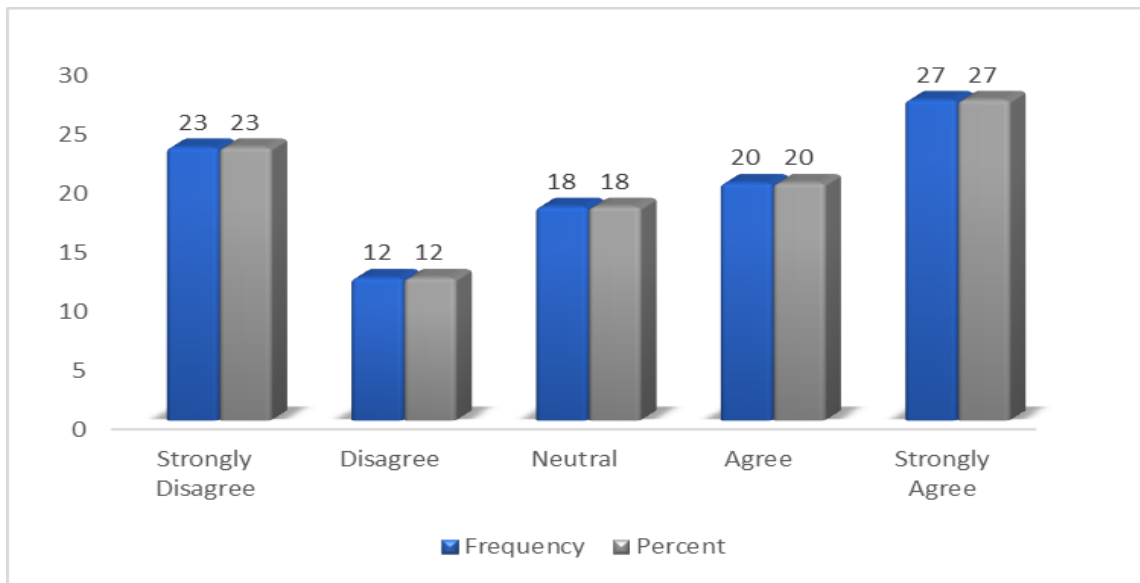


Figure 4.40: Products Reflecting Cultural Identity

Source: Author

It can be seen in figure 4.40 that 23% of the people who took part in the survey strongly disagreed. A large number of people A or SA, but this fact reveals that only a few companies effectively combine their products with the culture and tradition of the local community, thus pointing to the need for more intense cultural branding.

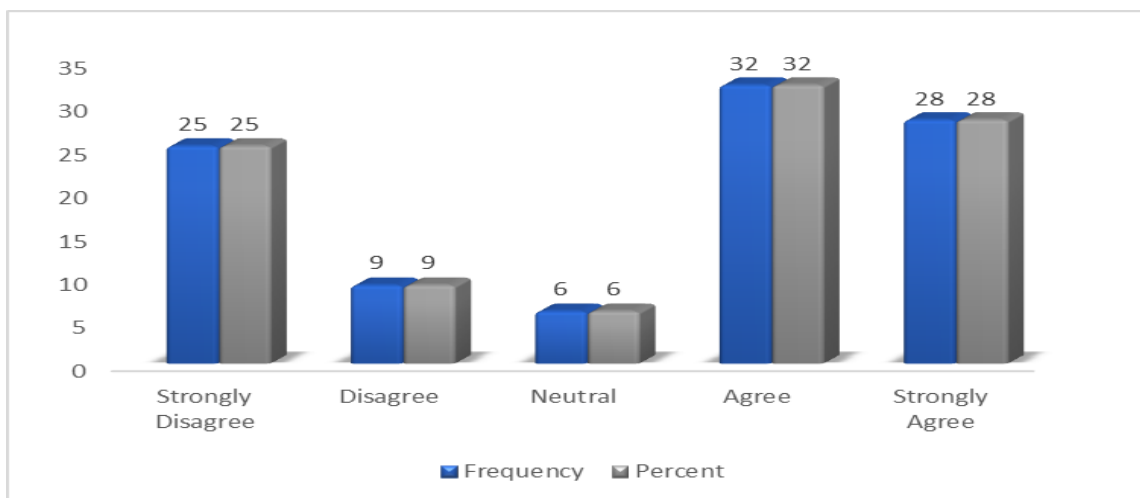


Figure 4.41: Engagement with Cultural Leaders

Source: Author

The Figure 4.41 shows that 60% of the people (32% A, 28% SA) interact with cultural leaders, whereas 34% of the people (25% SD, 9% D) do not. The difference here indicates that there are different degrees of cultural consultation - some enterprises continuing to have an exchange with the culture while others have chosen to work outside the cultural framework.

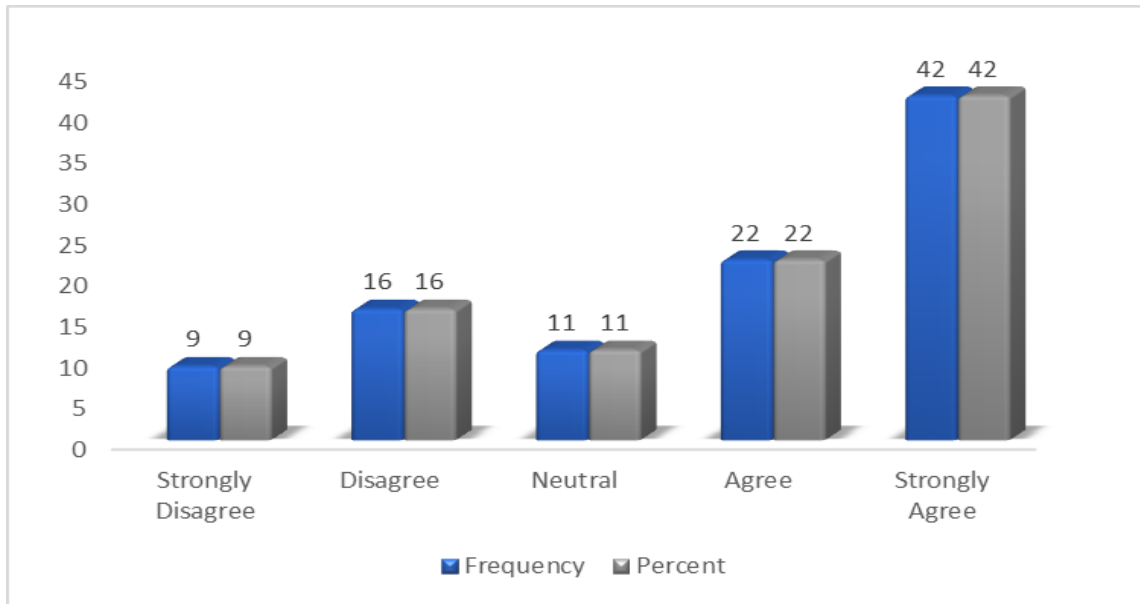


Figure 4.42: Participation in Cultural Events and Festivals

Source: Author

The statement illustrated in Figure 4.42 garnered the most significant support from the respondents - that is, 64% (22% A, 42% SA) said that they actively participate in cultural events, and 25% disagreed. The findings indicate that the majority of business units recognize the worth of engaging in culture as a way to link with the community and integrate their brand.

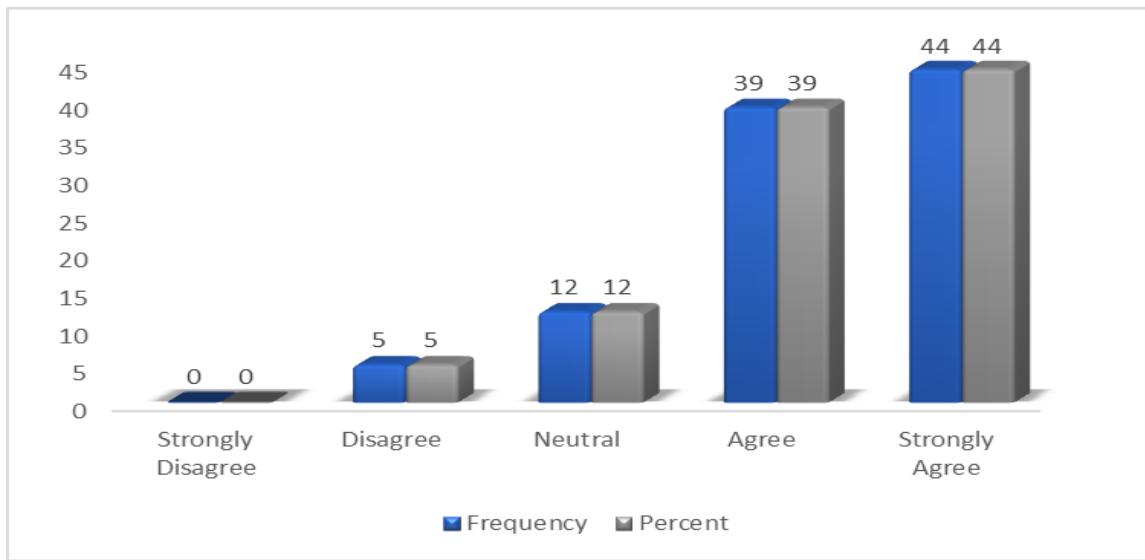


Figure 4.43: Contribution to Employee Health and Well-Being

Source: Author

Most of the people i.e. 83% (39% A, 44% SA) as presented in figure 4.43 dominantly agree and there was no strong disagreement reported. This is an indication that the provision of employee welfare has been recognized as a matter of business priority and a fundamental aspect of the organization's social responsibility.

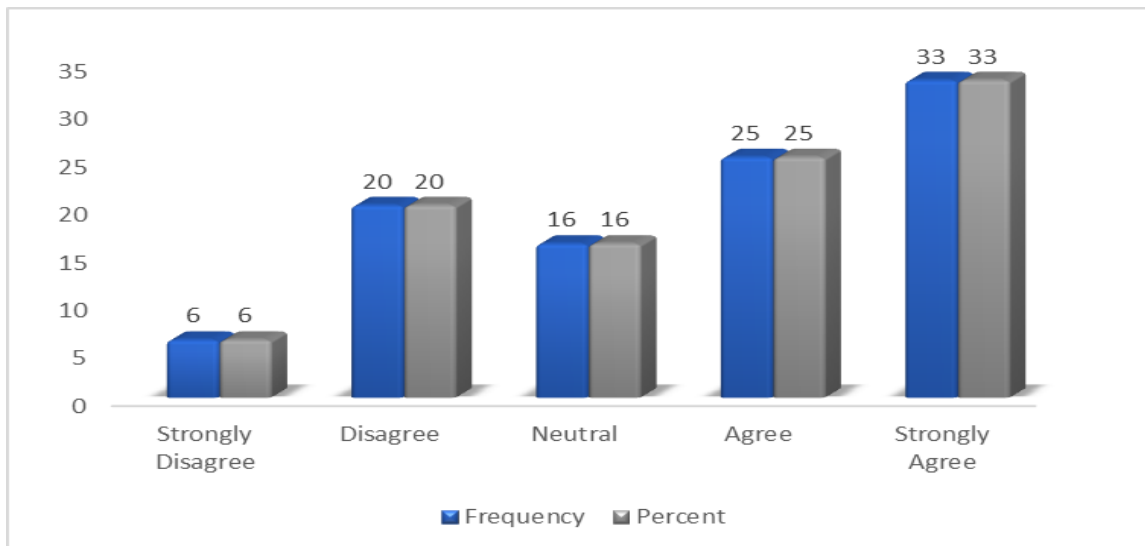


Figure 4.44: Support for Social Initiatives in the Broader Community

Source: Author

Figure 4.44 indicates that responses reflect a moderate level of commitment from the community — 58% (25% A, 33% SA) support such initiatives, whereas 26% (6% SD, 20% D) do not. This implies that a great deal of enterprises are actively participating in community welfare, whereas some are only superficially involved in social outreach.

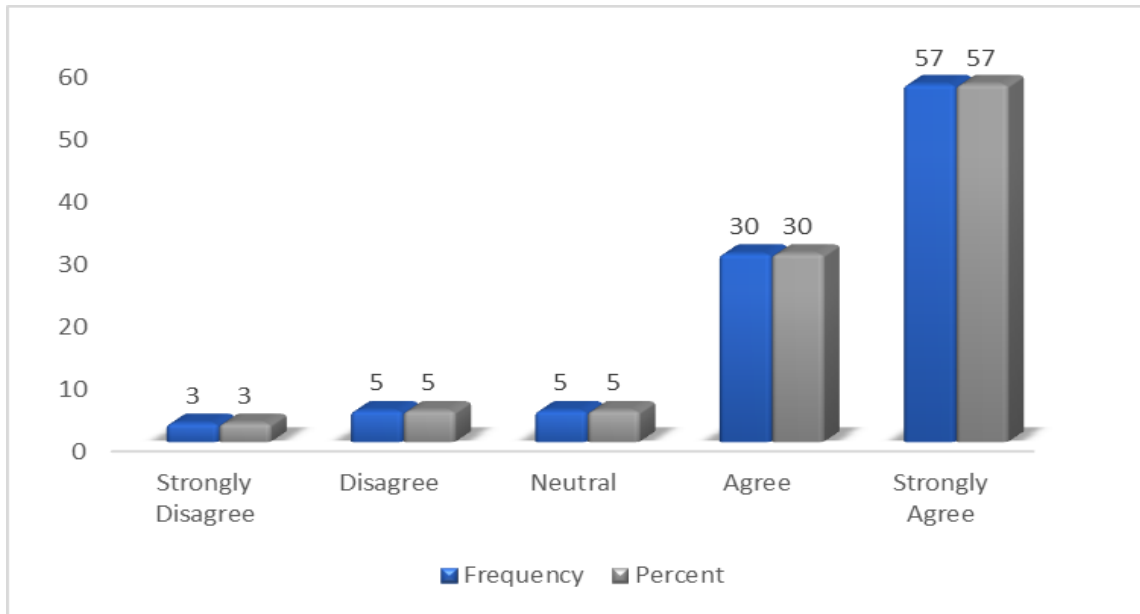


Figure 4.45: Promotion of Work-Life Balance

Source: Author

Figure 4.45 shows that just 3% of the people strongly disagreed. Most of the people either agreed or strongly agreed, thereby implying that companies are progressively becoming aware that providing work-life balance is a way to double employee productivity and general well-being.

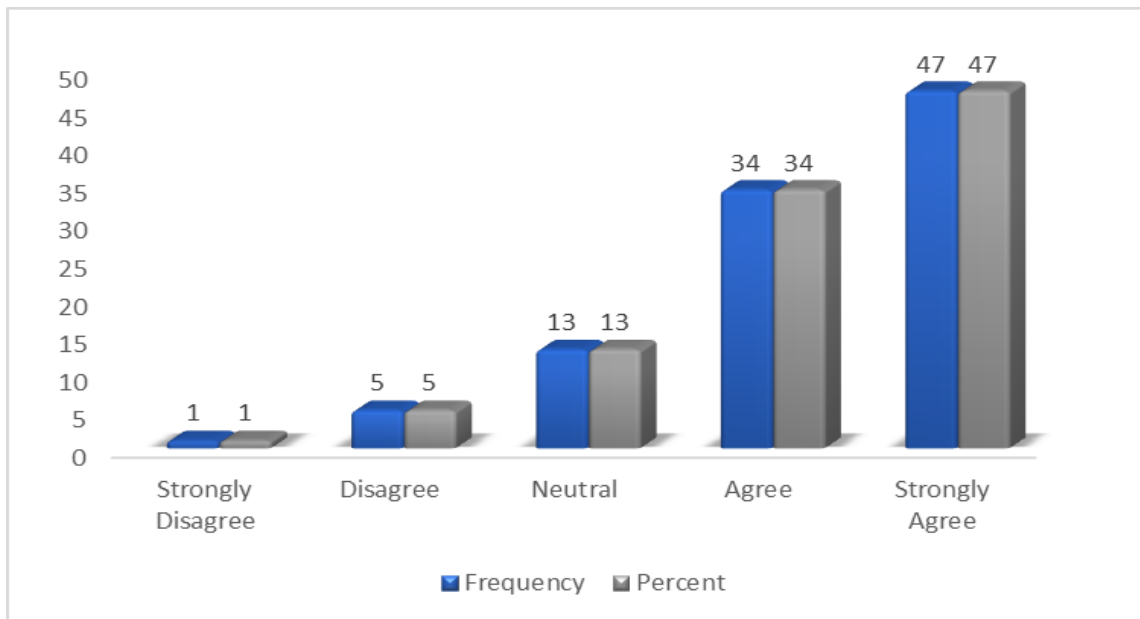


Figure 4.46: Provision of Healthcare Resources for Workforce

Source: Author

Figure 4.46 illustrates that an overwhelming majority (81%, out of which 34% A and 47% SA) indicate that they offer healthcare support while only 6% disagree. This is indicative of a robust organizational pledge towards the health and safety of the employees.

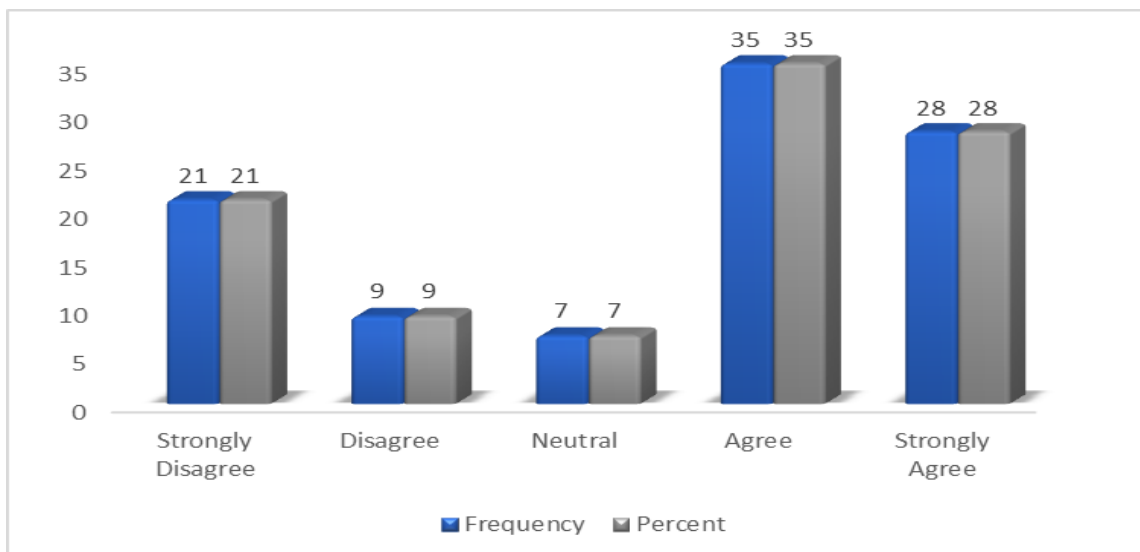


Figure 4.47: Activities to Reduce Social Inequalities

Source: Author

Per the example given in Figure 4.47, the answers are varied - 63% (35% A, 28% SA) claim to work on projects that are aimed at equity, however, 30% (21% SD, 9% D) say that they do not. This figure uncovers that a large number of organizations have the will to challenge the problem of inequality, yet a considerable percentage is still without the development of social inclusion initiatives.

4.6 Findings of Governance Factors

In this portion, the author discusses the different corporate governance features through which companies not only follow the law but also practice disclosure, engage stakeholders, and control risks. It portrays the methods that firms take to maintain compliance with laws, promote accountability, and thereby develop systematic procedures that not only extend the life of their businesses but also contribute to their being socially responsible.

Table 4.5: Governance Practices and Compliance Measures of Enterprises

Main Variable	Statement	Category	SD	D	N	A	SA
Policy and Regulation Compliance	Our enterprise adheres to all relevant government policies and regulations.	Freq	5	6	20	30	39
		%	5	6	20	30	39
	We regularly update our practices to comply with new laws and regulations.	Freq	2	9	10	38	41
		%	2	9	10	38	41
	Our business operations are transparent and align with legal requirements.	Freq	4	3	6	31	56
		%	4	3	6	31	56
	We have established procedures to ensure compliance with industry standards.	Freq	0	7	10	37	46
		%	0	7	10	37	46
	Our enterprise actively participates in policy	Freq	7	7	14	44	28
		%	7	7	14	44	28

	discussions relevant to our industry.						
Transparency and Accountability	We maintain clear and open communication with stakeholders regarding our business practices.	Freq	5	7	12	28	48
		%	5	7	12	28	48
	Our financial records are regularly audited to ensure accuracy and transparency.	Freq	15	10	12	22	41
		%	15	10	12	22	41
	We have mechanisms in place to address stakeholder concerns and feedback.	Freq	16	10	7	40	27
		%	16	10	7	40	27
	Our enterprise publishes annual reports detailing our performance and governance practices.	Freq	23	10	7	22	38
		%	23	10	7	22	38
	We have a code of ethics that guides our business operations and decision-making processes.	Freq	1	14	18	41	26
		%	1	14	18	41	26
Institutional Support	We receive adequate support from government agencies to facilitate our business operations.	Freq	14	12	16	32	26
		%	14	12	16	32	26
	Our enterprise benefits from financial assistance programs designed for MSMEs.	Freq	16	13	17	34	20
		%	16	13	17	34	20
	We have access to training and development programs offered by governmental or	Freq	3	8	12	30	47
		%	3	8	12	30	47

	non-governmental organizations.						
	Our business has established partnerships with local institutions that support MSME growth.	Freq	26	8	16	25	25
		%	26	8	16	25	25
	We actively engage with industry associations that advocate for MSME interests.	Freq	13	5	13	34	35
		%	13	5	13	34	35
Governance Structures	Our enterprise has a clearly defined organizational structure with designated roles and responsibilities.	Freq	3	8	12	32	45
		%	3	8	12	32	45
	We have established internal controls to monitor and evaluate our business operations.	Freq	15	9	17	28	31
		%	15	9	17	28	31
	Our governance framework includes mechanisms for risk management and mitigation.	Freq	3	14	24	31	28
		%	3	14	24	31	28
	We conduct regular reviews of our governance policies to ensure they remain effective and relevant.	Freq	7	10	14	38	31
		%	7	10	14	38	31
	Our leadership team is committed to upholding high standards of corporate governance.	Freq	4	3	17	41	35
		%	4	3	17	41	35

Source: Author

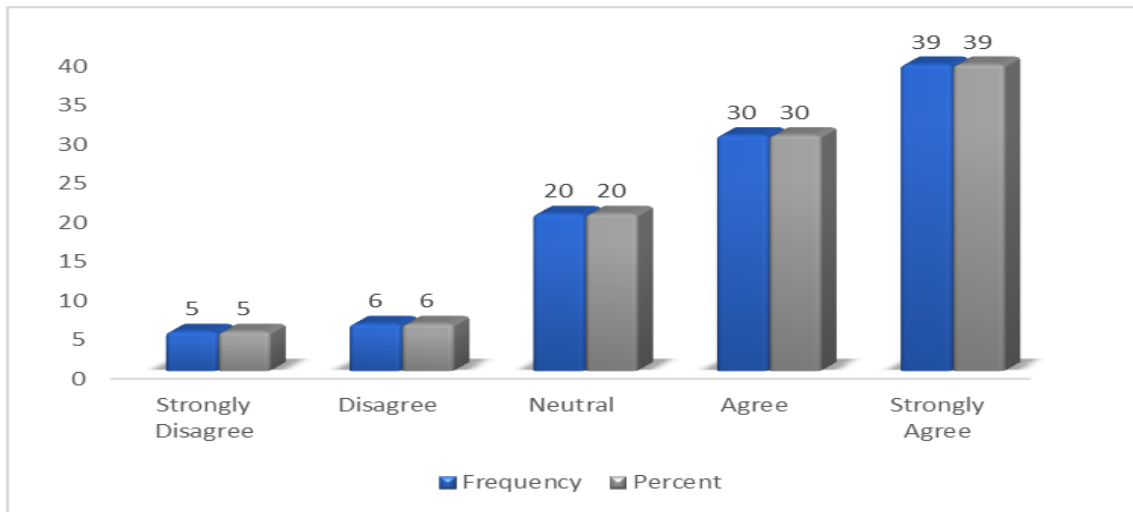


Figure 4.48: Adherence to Government Policies and Regulations

Source: Author

Based on Figure 4.48, it can be concluded that the overwhelming number of people (69%, made up of 30% A and 39% SA) agree that their companies comply with the law, while only 11% openly oppose this. This means that the issue of legality is very important to most companies.

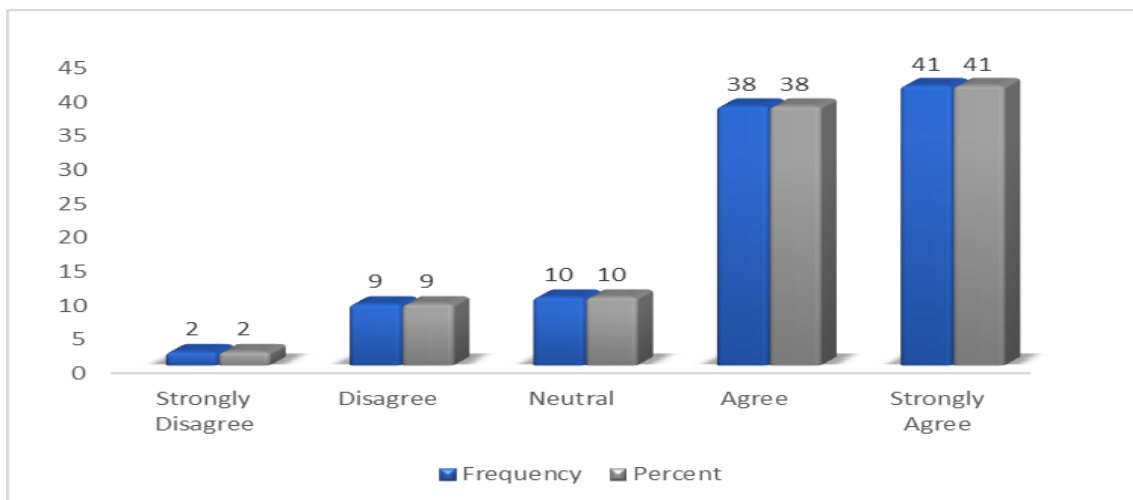


Figure 4.49: Regular Updates to Comply with New Laws and Regulations

Source: Author

The answer depicted in Figure 4.49 reveals that nearly four-fifths of the respondents (79%) indicate their firms always adjust their internal rules and practices to match new laws and changes in regulations. This implies a compliance culture that is not only proactive but also a governance policy that is agile. Only 11% of the participants rejected the statement, thus the data indicate that most organizations are still able to perform according to the legal requirements that are being changed—this is a very crucial trait for those regulatory environments that are constantly changing and are very much affecting MSMEs and small enterprises.

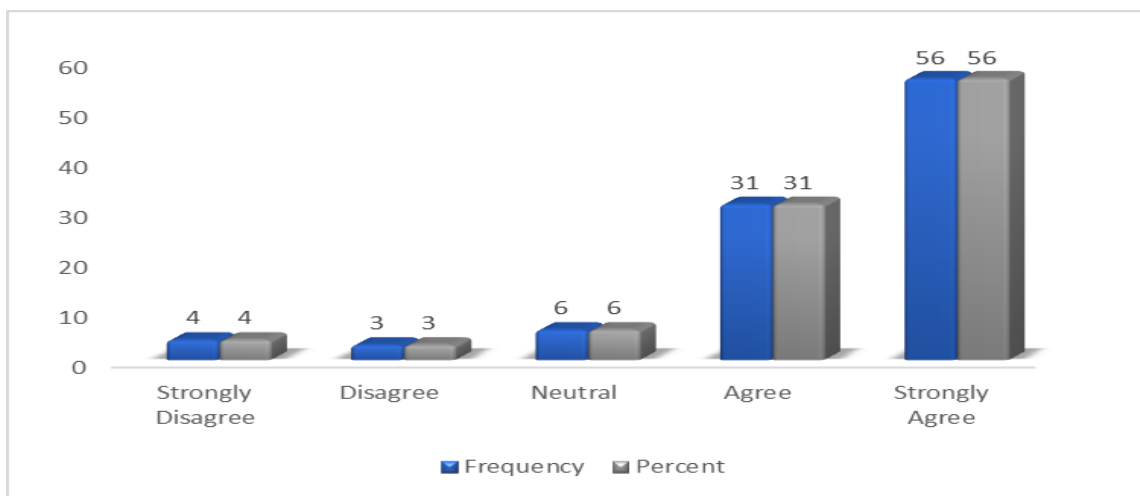


Figure 4.50: Transparency and Alignment with Legal Requirements

Source: Author

The governance of those organizations as depicted in the data shown in Figure 4.50 revolves around the main topic of transparent operations. To be more specific, 87% (31% A, 56% SA) of the organizations claim that their activities are both law-abiding and transparent. This considerable proportion points to an environment characterized by the values of openness, accountability, and honesty in dealings with customers and other stakeholders. The almost non-existent dissenting opinion (7%) makes it apparent that the

majority of businesses prioritize ethical norms and are, to a large extent, compliant with the law in their practices.

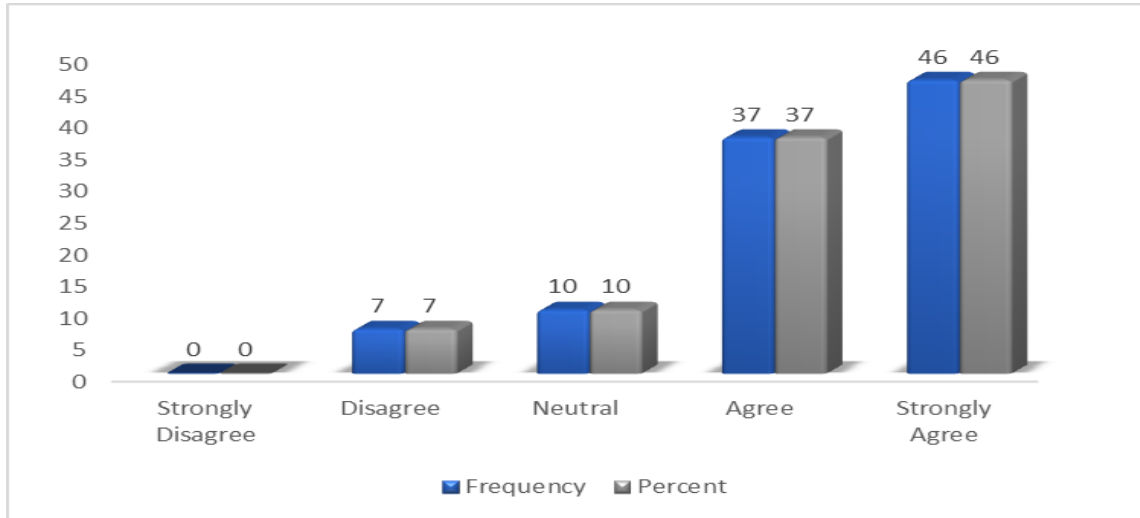


Figure 4.51: Procedures for Compliance with Industry Standards

Source: Author

The data presented in Figure 4.51 reveals that an overwhelming majority of respondents, totaling 83% (37% A, 46% SA), actually admit to having distinct processes implemented for the purpose of compliance with industry regulations. This situation denotes the existence of an effectively internal control system which can produce stable results and as a result, it can gain trust from the sector. The absence of any significant disagreement is observed; thus, it is presumed that the majority of organizations have already set up compliance mechanisms that not only assure their operational legality but also reliability in the eyes of the sector.

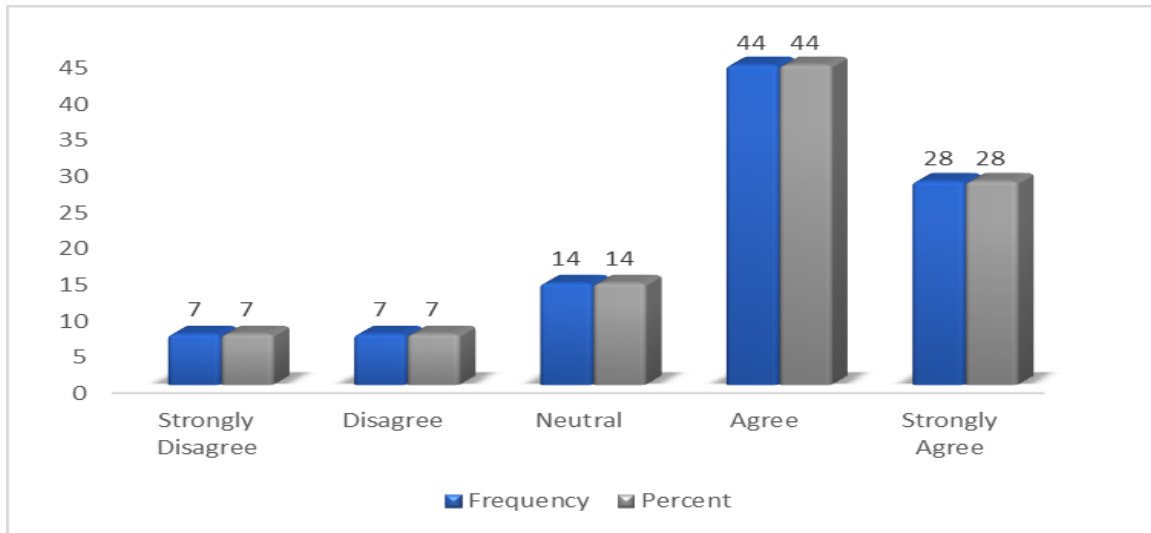


Figure 4.52: Participation in Industry Policy Discussions

Source: Author

In Figure 4.52 it is observed that 72% of the companies (44% A, 28% SA) take part in the conversations about the rules of their industry, which indicates a good degree of governments and businesses involvement. Still 14% show disagreement which implies that not every company is able or allowed to take part in such conversations. This difference highlights the necessity to involve the smaller companies more in the policy-making conversations which would determine their environment.

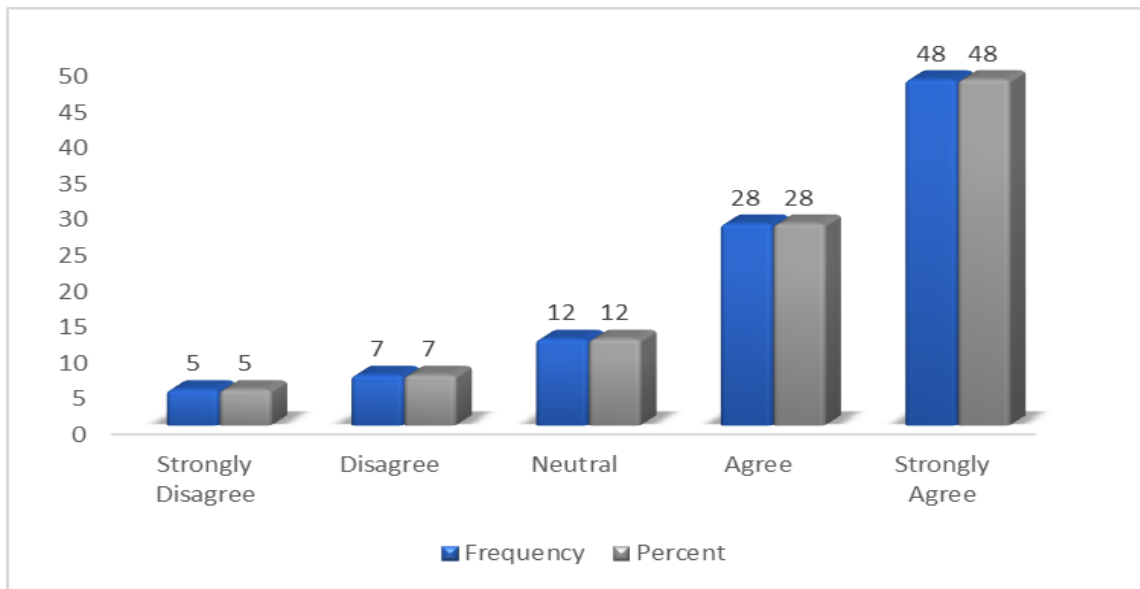


Figure 4.53: Communication with Stakeholders

Source: Author

The majority of respondents, 76% (28% A, 48% SA, Figure 4.53), indicated that stakeholder communication in their companies is carried out in a transparent manner. This reflects a very good culture being adopted for the management of the organizations in terms of openness and ethical governance. Organizations that operate in such a way are those that recognize the need to be accountable to their clients, employees, and the public at large. The minimal percentage of those who disagreed (12%) suggests that although the majority of enterprises are transparent, there could still be some that are at the stage of communication where they need to engage stakeholders further and possibly even them to a different level.

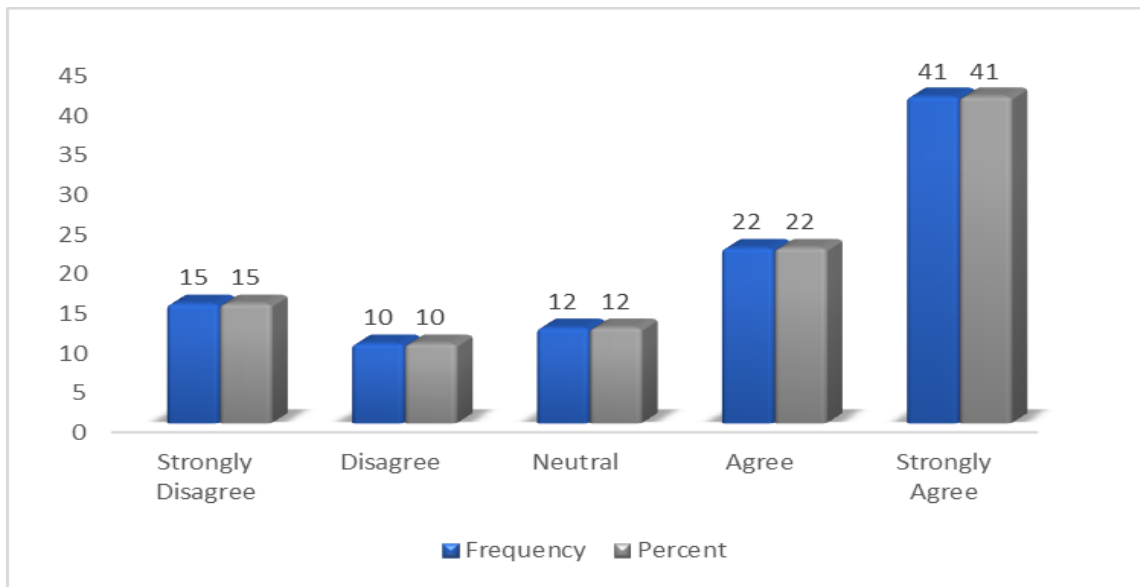


Figure 4.54: Regular Auditing of Financial Records

Source: Author

Figure 4.54 reveals that most of the enterprises (63%) state that they carry out regular audits to ensure transparency, but 25% of them express disagreement. It implies that several companies maintain financial integrity by carrying out regular audits, but there are still some that do not have a consistent financial monitoring system. The difference might be due to money problems or a lack of access to professional auditing services, particularly among small enterprises.

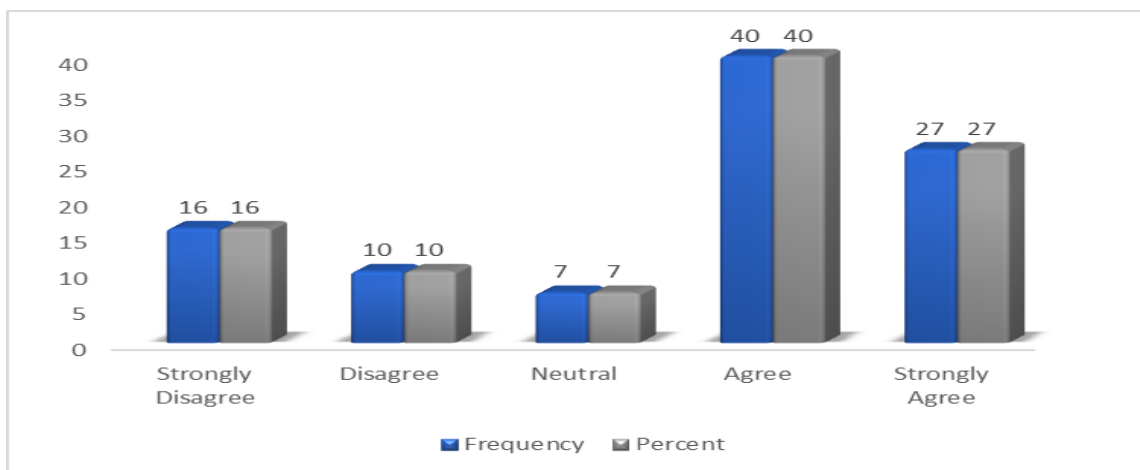


Figure 4.55: Mechanisms to Address Stakeholder Concerns

Source: Author

Two-thirds (67%, 40% A and 27% SA), as per Figure 4.55, have acknowledged that there are structures of feedback from stakeholders. This is a clear indication that the concepts of governance through participation and response to the needs of the stakeholders are increasingly being recognized. Still, 26% of enterprises have negated the statement, thus, the existence of some that have not established a formal system for engaging stakeholders which may be a barrier to the process of trust-building and organizational accountability.

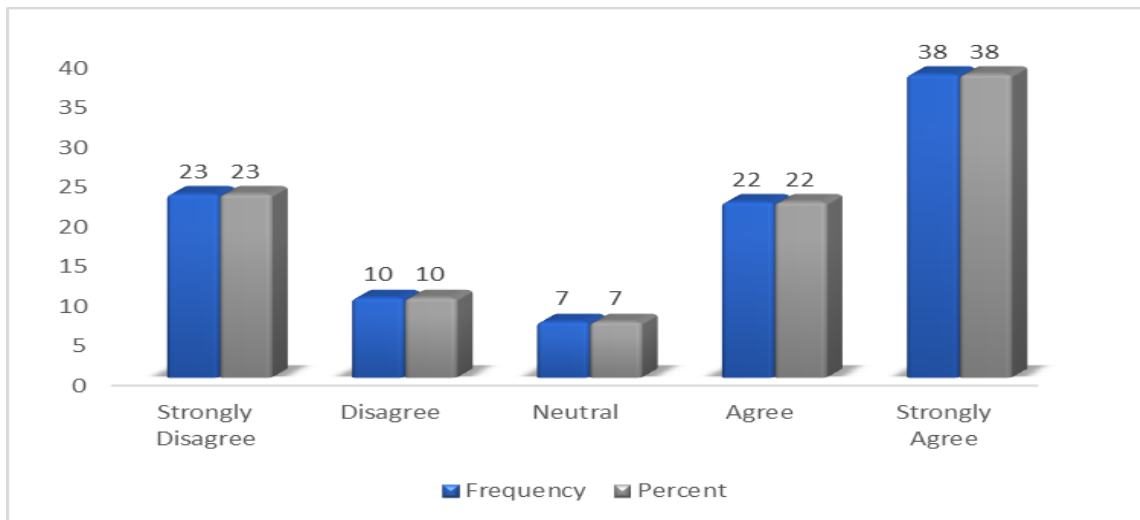


Figure 4.56: Publication of Annual Reports

Source: Author

As per figure 4.56, it can be inferred that merely 60% of the organizations (22% A and 38% SA) are in the habit of publishing annual performance and governance reports, whereas 33% of the people are not in agreement with this statement and even strongly disagree. Such a revelation points towards a situation where the disclosure of information is not uniform and there might be scantiness in the reporting of these smaller firms. The low level of establishment of annual reporting can be attributed to the limitation of

resources or the lack of sufficient regulatory enforcement, thus, it is an area that can be excellently served by governance training.

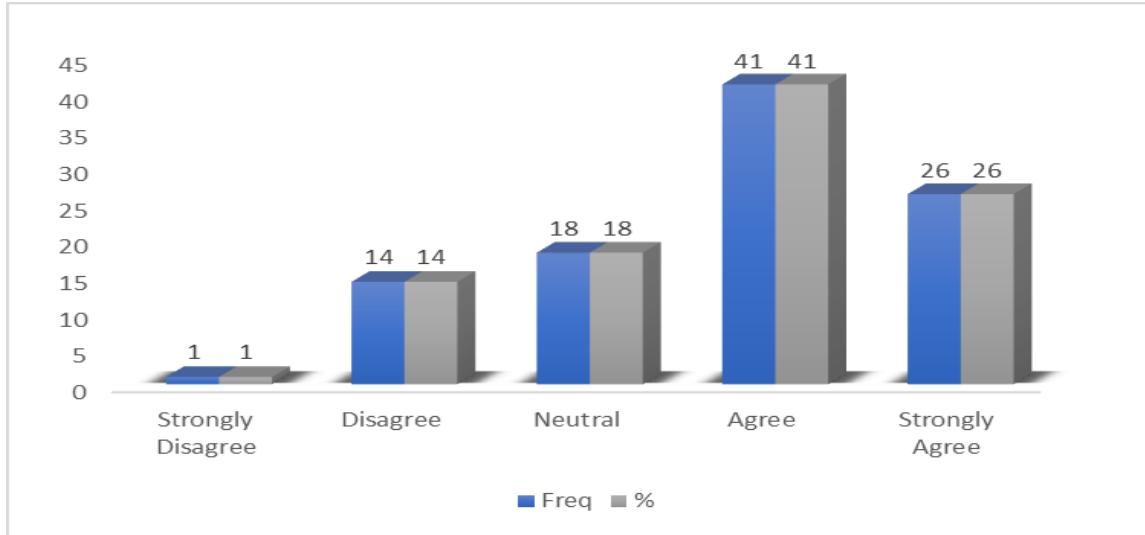


Figure 4.57: Existence of a Code of Ethics

Source: Author

Figure 4.57 illustrates that a moderate majority of 67% (41% A, 26% SA) are governed by a formal code of ethics. It signifies a move in the right direction of well-organized ethical management, however, the fact that 15% of the respondents disagreed and 18% remained neutral indicates that not all businesses have formalized their ethical guidelines. The implementation of ethical codes in different organizations can provide a firm base for moral principles and uniformity in making decisions.

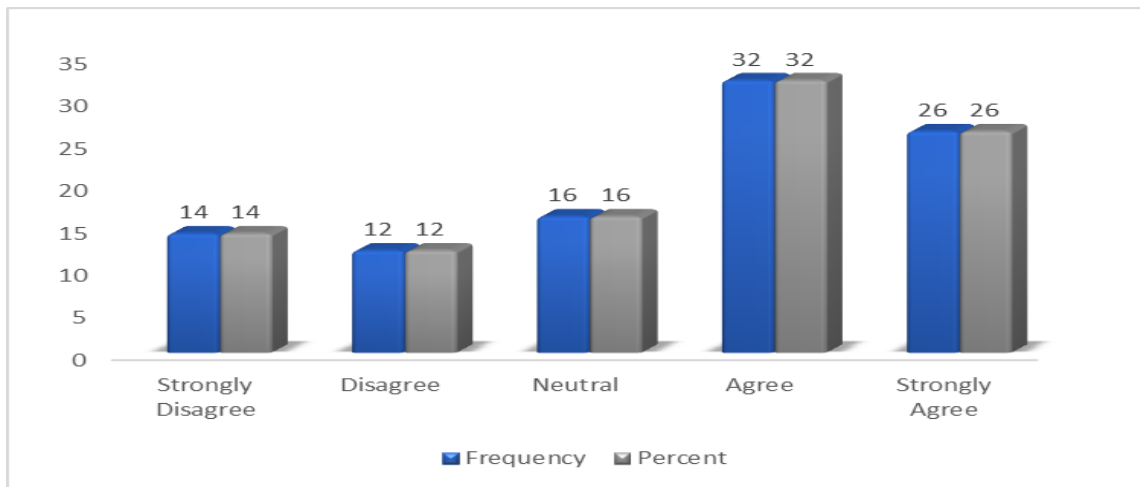


Figure 4.58: Support from Government Agencies

Source: Author

As depicted in Figure 4.58, a little more than half of the respondents (58%, comprising 32% A and 26% SA) consider that they receive enough support from government agencies. On the other hand, nearly a quarter of the population (26%) are unhappy with the situation, which indicates that there are still some areas where the government has not been able to reach out or make support services easily accessible. The above-described situation implies that on the one hand some companies have a nice ride through the journey with the help of facilitation programs, and on the other hand, there are those who are still finding it difficult to face the bureaucratic and administrative hurdles.

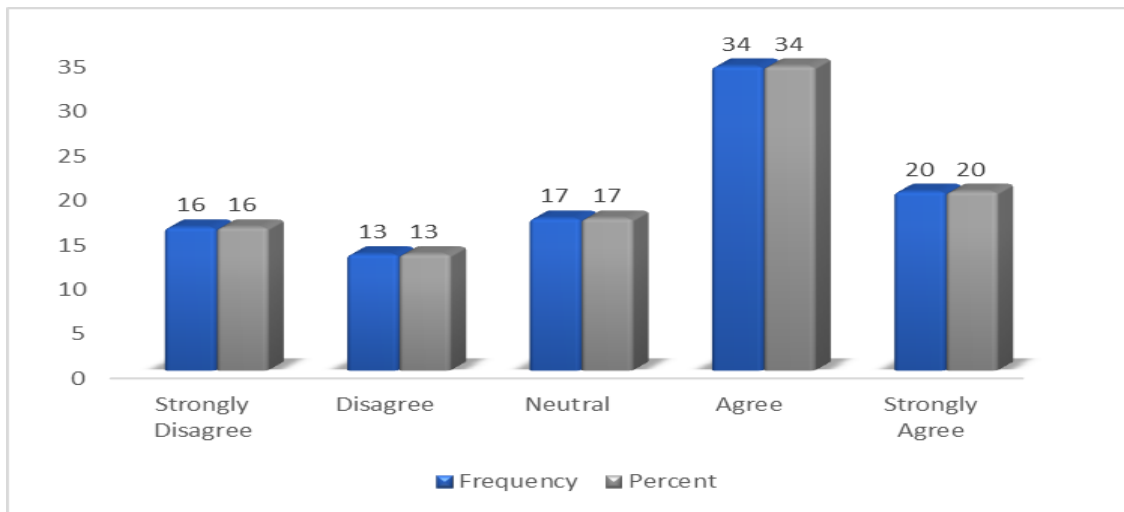


Figure 4.59: Access to Financial Assistance Programs

Source: Author

According to Figure 4.59, just 54% of people (34% A, 20% SA) indicated that they benefited from financial aid programs, whereas 29% disagreed. Such a gap points to a restricted knowledge of or access to the local government MSME projects. There could be a lot of small businesses that are not qualified for the requirements or are unaware of the application process, thus it is necessary to make the distribution of the schemes of financial support more accessible.

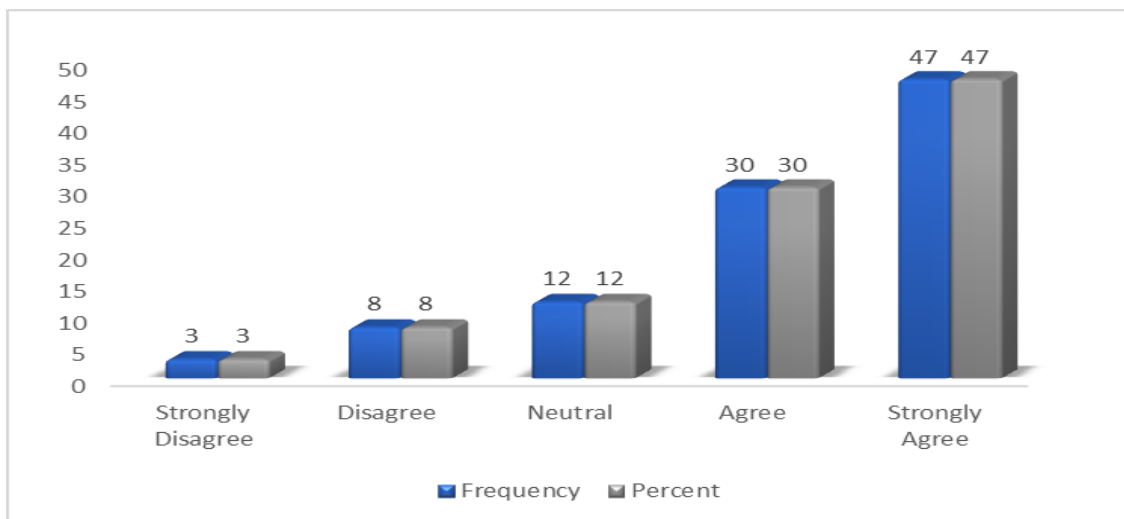


Figure 4.60: Access to Training and Development Programs

Source: Author

According to Figure 4.60, a robust 77% (30% A, 47% SA) of people have reported access to external training initiatives, which is a clear indication of effective collaboration between organizations and supporting institutions. It is going to mean that the programs designed to build the capacities of the enterprises are going to a broad segment of companies which will then be able to innovate, comply and be resilient by having the necessary skills. The small proportion of disagreement (11%) serves as a confirmation of the good performance of these developmental partnerships.

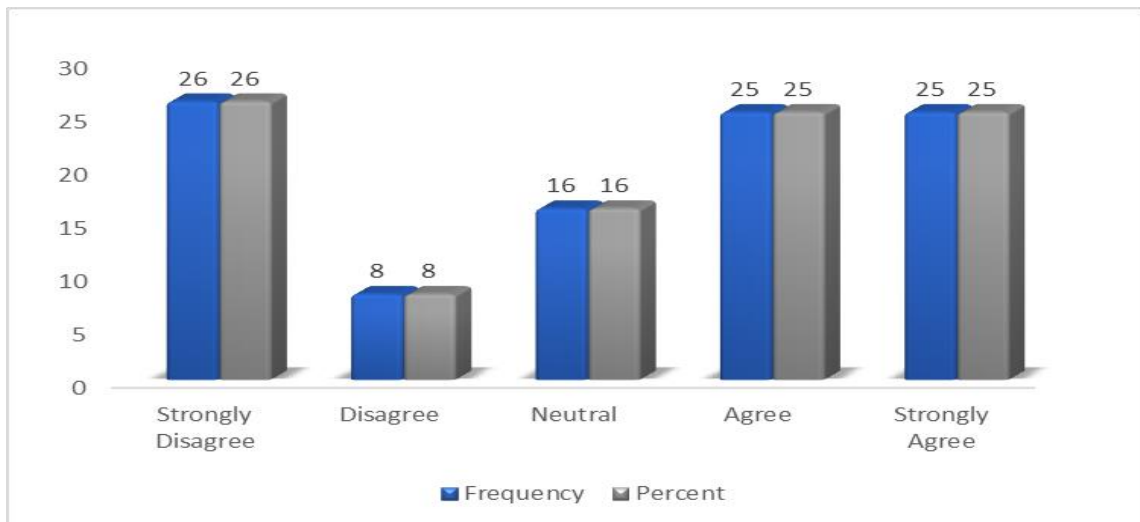


Figure 4.61: Partnerships with Local Institutions

Source: Author

Partnerships with local institutions that promote the development of MSMEs are acknowledged by half of the respondents (50%) as shown in Figure 4.61. However, 34% (26% SD, 8% D) state that there are no such collaborations. The fact that these partnerships have become a source of support for a few enterprises, whereas many still operate without institutional backing, may imply that the latter are at risk of being left behind in terms of resource sharing and regional economic integration.

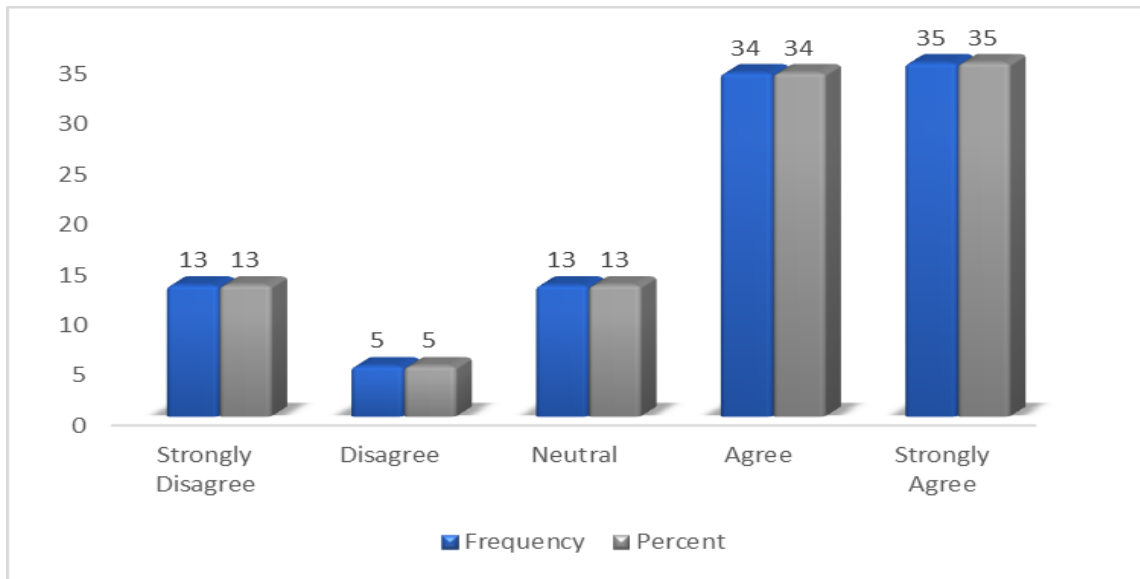


Figure 4.62: Engagement with Industry Associations

Source: Author

As per Figure 4.62, around 69% of the respondents (34% A, 35% SA) have declared that they are very much involved in the work of industry associations, thus indicating an increasingly strong group feeling among MSMEs. Such involvement enables the companies to have a say in the policy and get the shared resources. Nonetheless, 18% of the people are still at a distance from the scene, thus mirroring the possible obstacles in the form of lack of information, account of the fees, or even the sentiment of the futility of such associations.

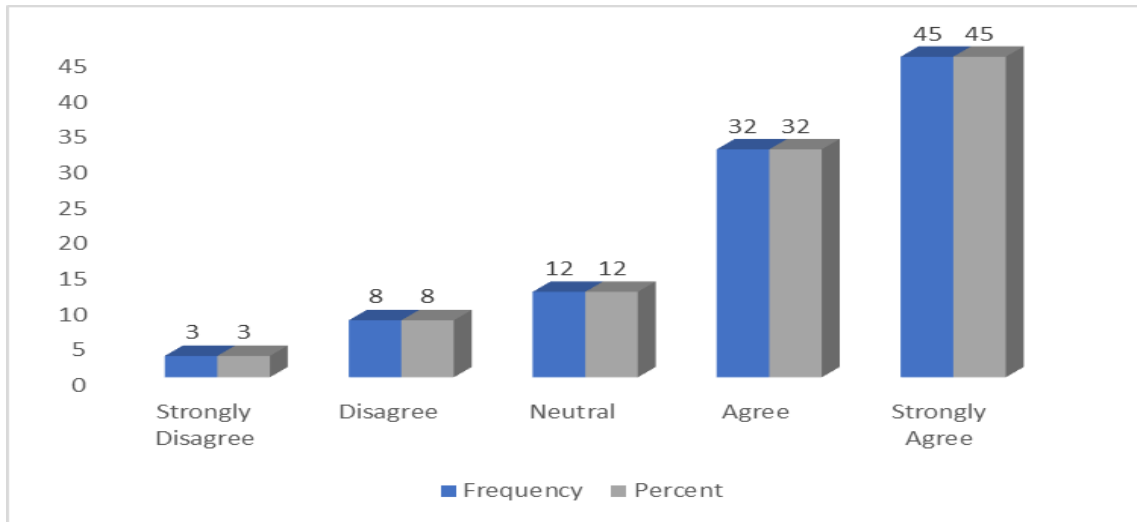


Figure 4.63: Defined Organizational Structure

Source: Author

Figure 4.63 shows that 77% of the people (32% A, 45% SA) were positive about the fact that the internal structures are well-defined, which is a good indication that companies have strong management systems and are clear about who is accountable. Just 11% of the people have a dissenting view, which means that the majority of organizations have set up internal structures to facilitate their functioning and to raise their level of effectiveness.

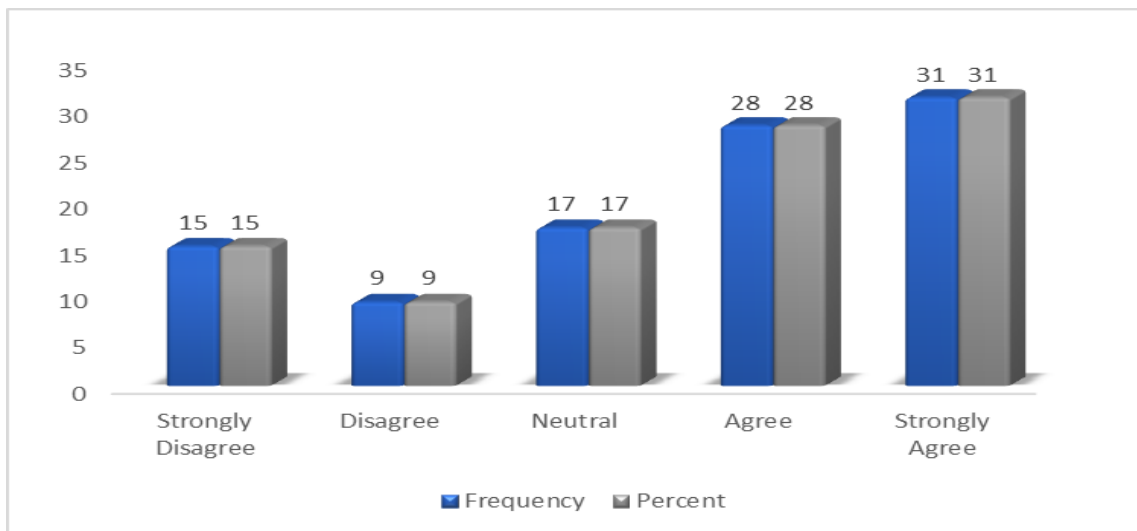


Figure 4.64: Internal Control Mechanisms

Source: Author

From the information displayed in Figure 4.64, it can be inferred that 31 individuals (31%) were strongly of the opinion and 28 (28%) were of the opinion that there are internal controls to supervise and assess business operations. Approximately 24% of people disagreed with the statement, and 17% were neutral, indicating that a few companies are still lacking sufficient internal monitoring systems.

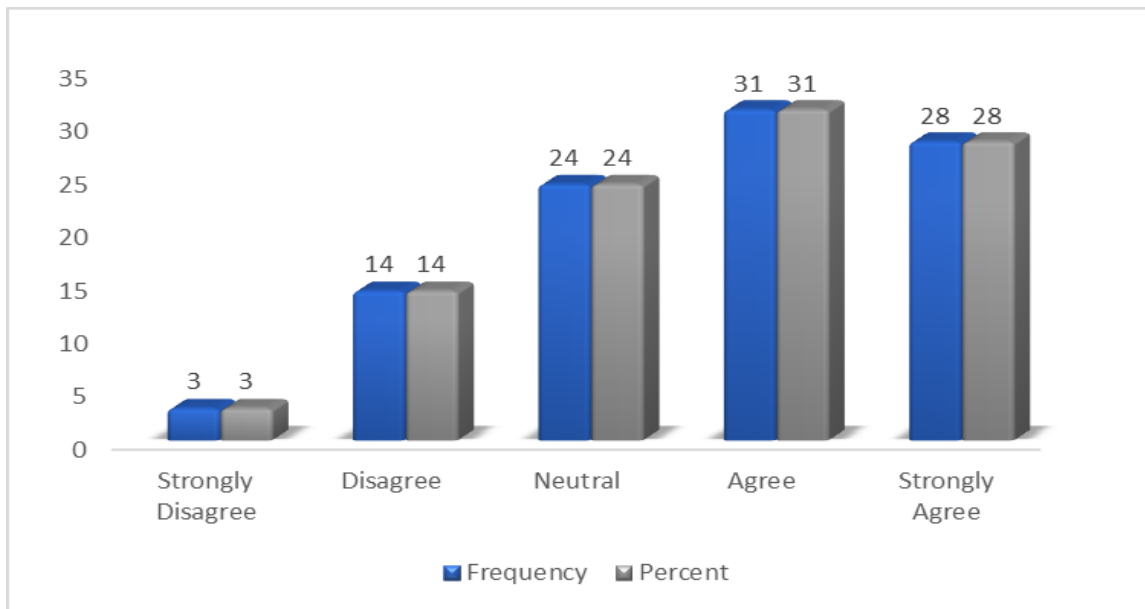


Figure 4.65: Governance and Risk Management Framework

Source: Author

As per the data shown in Figure 4.65, 28 respondents (28%) SA and 31 (31%) A that their governance framework comprises of risk management mechanisms. Nevertheless, 17% of the people disagreed and 24% were neutral, thus indicating that the organization has made only moderate progress in formal risk governance.

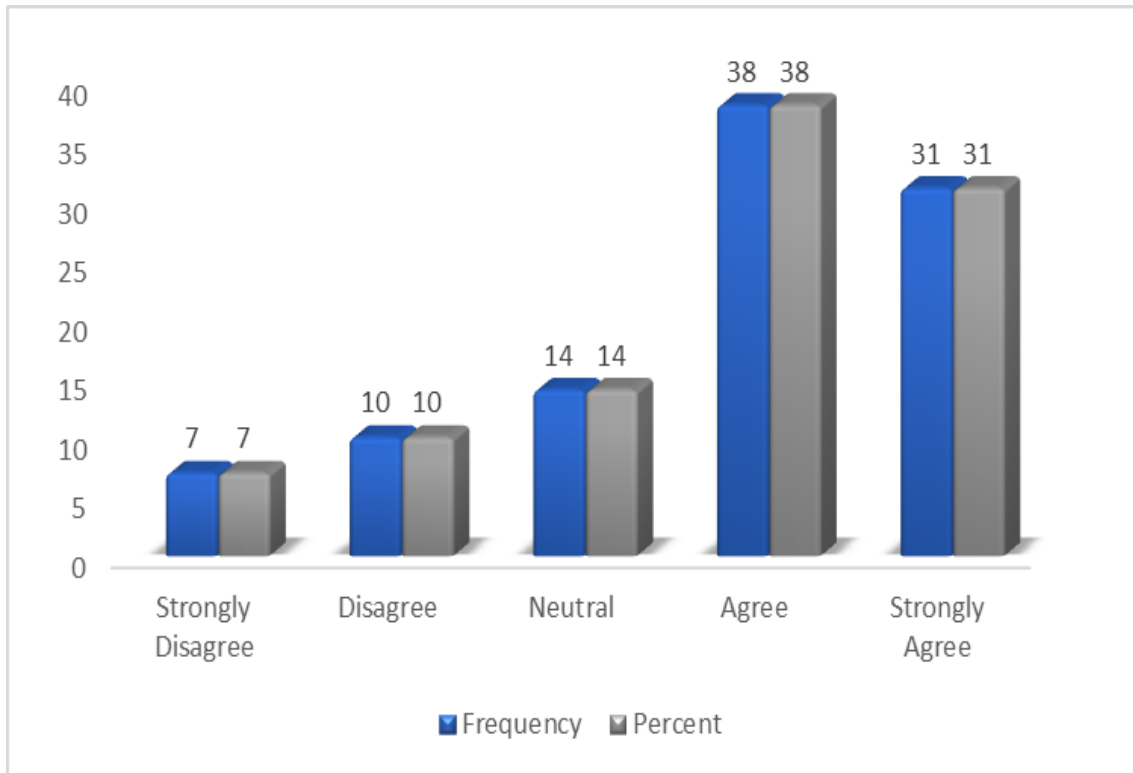


Figure 4.66: Review of Governance Policies

Source: Author

Figure 4.66 illustrates that 31 people (31%) SA and 38 people (38%) A to the statement that their enterprises regularly review governance policies. Approximately 17% of the people disagreed, and 14% of them were neutral, which shows that most of the respondents have a consistent evaluation of the policy.

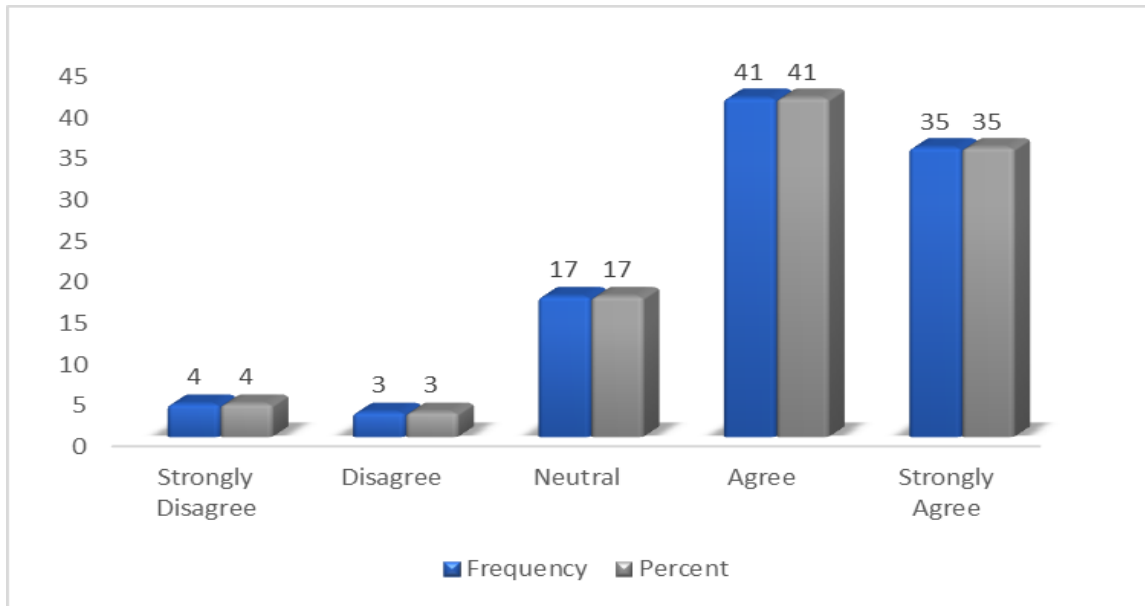


Figure 4.67: Leadership Commitment to Corporate Governance

Source: Author

As per Figure 4.67, 35 respondents (35%) SA and 41 (41%) A that their leadership teams are committed to high standards of corporate governance. Just 7% of the people disagreed, and 17% were N. This is indicative of a social framework of ethical leadership and corporate accountability that has been well established.

4.7 Findings of Financial Factors

The discussion revolves around the financial aspects of business ventures, especially considering the ways to acquire capital, micro-financing options, financial knowledge, investment skills, and the ability to cope with the ups and downs of the economy. The study reveals companies' management of resources, their obtaining of financial assistance, operational optimization, and endurance in competitive and ever-changing markets.

Table 4.6: Financial Access, Management, and Performance of Enterprises

Main Variable	Statement	Category	SD	D	N	A	SA
		Freq	21	5	18	45	11

Access to Micro-Financing or Credit Facilities	Our enterprise has easy access to micro-financing options tailored for women entrepreneurs.	%	21	5	18	45	11
	We have received financial support from government schemes designed for MSMEs.	Freq	18	11	8	41	22
		%	18	11	8	41	22
	Our business has benefited from micro-credit programs aimed at promoting entrepreneurship among tribal women.	Freq	18	4	13	30	35
		%	18	4	13	30	35
	We have access to affordable credit facilities to invest in business expansion.	Freq	29	6	16	31	18
		%	29	6	16	31	18
	Our enterprise has been able to secure loans without the need for collateral.	Freq	20	5	28	31	16
		%	20	5	28	31	16
Financial Literacy Among Tribal Women	We have received training on financial management and budgeting.	Freq	3	6	4	33	54
		%	3	6	4	33	54
	Our enterprise has access to resources that enhance our understanding of financial planning and investment.	Freq	4	6	13	44	33
		%	4	6	13	44	33
	We are aware of various financial products and services available to	Freq	1	6	15	48	30
		%	1	6	15	48	30

	support our business operations.						
	Our business has benefited from financial literacy programs aimed at women entrepreneurs.	Freq	5	9	22	24	40
		%	5	9	22	24	40
	We have the skills to effectively manage our business finances and make informed financial decisions.	Freq	3	7	13	39	38
		%	3	7	13	39	38

Source: Author

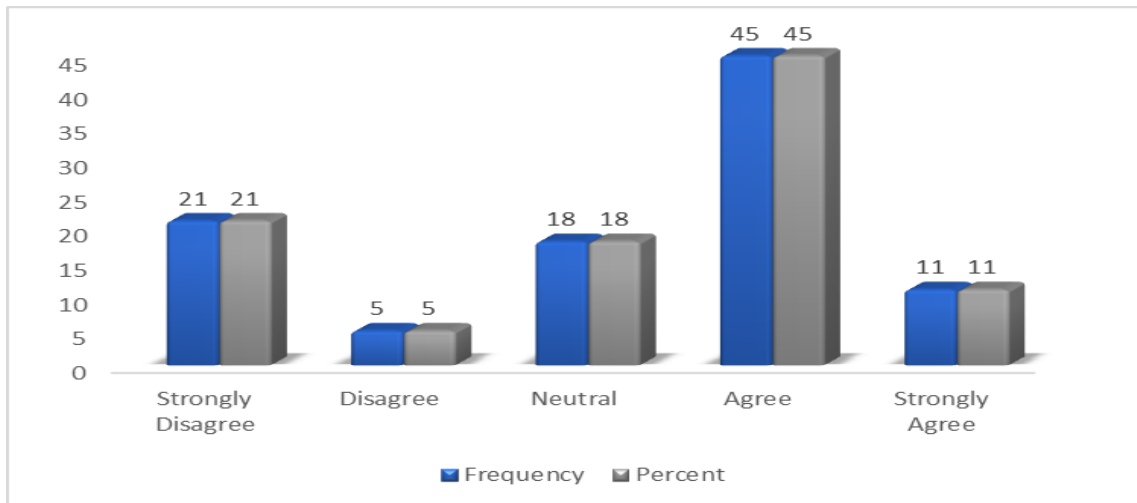


Figure 4.68: Access to Micro-Financing Options for Women Entrepreneurs

Source: Author

Figure 4.68 illustrates that over half of the respondents, 56% (45% A, 11% SA), stated that they have access to micro-financing opportunities that are specifically designed for women, which implies that these types of programs are somewhat reaching the target audience. Yet, as much as 26% of the respondents (21% SD, 5% D) indicated that they had very limited access to such facilities, thus, posing that the availability and openness to

different enterprises may still be at the different sides of the fence. As a result, this is drawing attention to the problem of a continuous gap in the range and effectiveness of gender-focused micro-finance schemes.

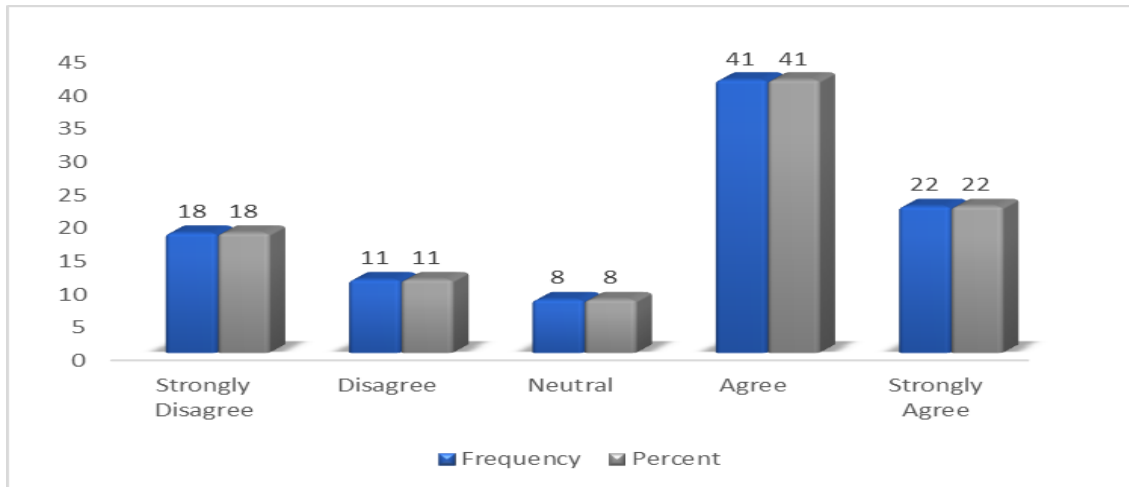


Figure 4.69: Financial Support from Government MSME Schemes

Source: Author

The most part of 63% (41% A, 22% SA) as depicted in Figure 4.69, are those who confirm that they have received financial assistance through government programs for MSMEs. It is an indication of the increasing importance of publicly funded financial support instruments as a means of promoting enterprise development. However, 29% (18% SD, 11% D) have not benefited, thus implying that there may be some barriers such as the difficulty of the administration, lack of awareness, or limitation of the eligible that close the way to the full participation of these people.

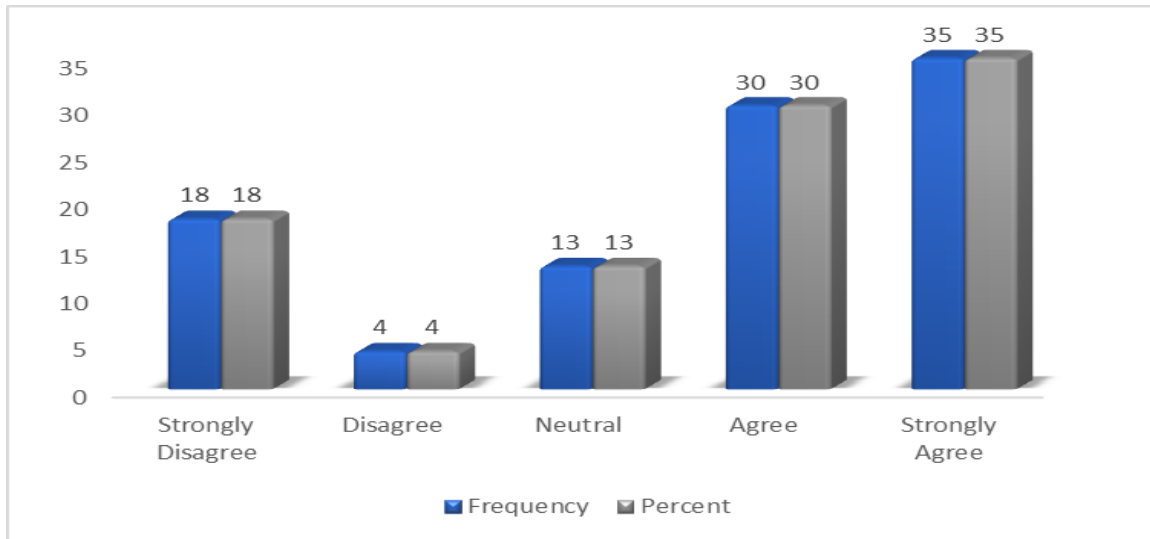


Figure 4.70: Benefits from Micro-Credit Programs for Tribal Women Entrepreneurs

Source: Author

The data in Figure 4.70 reveals a picture of the sample respondents' perception regarding the benefits derived from the mentioned programs. Out of the total respondents, 65% (30% A, 35% SA) indicate that they have profit from such initiatives; on the contrary, 22% (18% SD, 4% D) assert that they have not, and 13% are N. The results show that micro-credit programs have gone some way in influencing the tribal women entrepreneurs to be financially independent and to experience the growth of their enterprises. Nevertheless, the remaining portion of respondents who have been left out indicates that there is still a need to strengthen the dissemination of these targeted programs in terms of both reaching more people and informing them.

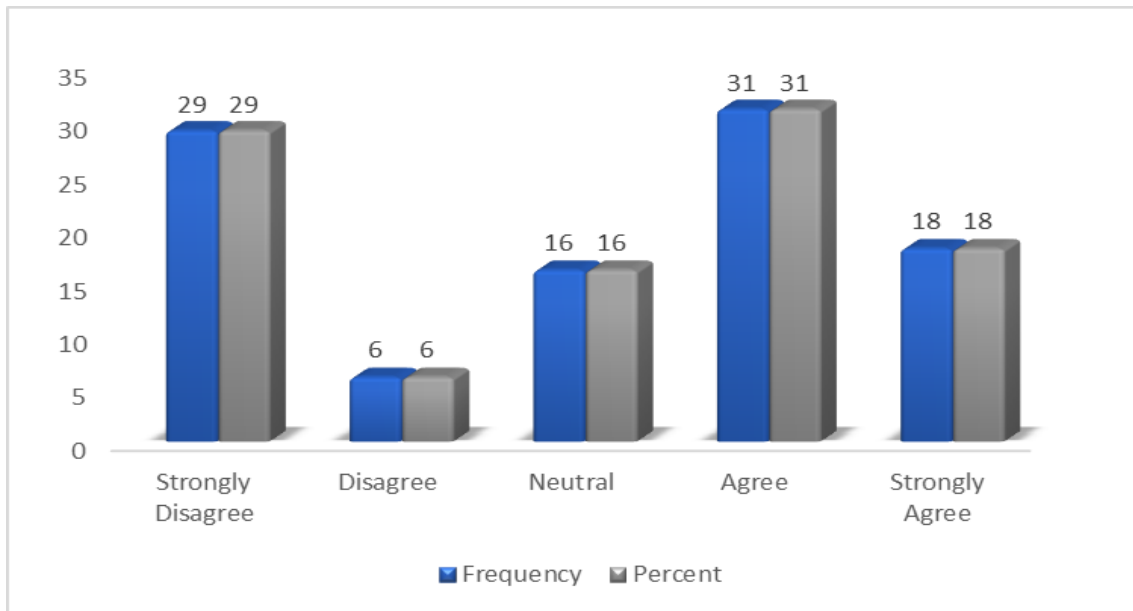


Figure 4.71: Access to Affordable Credit for Business Expansion

Source: Author

As per Figure 4.71, 31 people (31%) A, and 18 (18%) SA that they had access to affordable credit facilities for business expansion. On the other hand, 29 people (29%) strongly disagreed, and 16 (16%) were neutral, showing that obtaining affordable financing is still a major issue for many businesses.

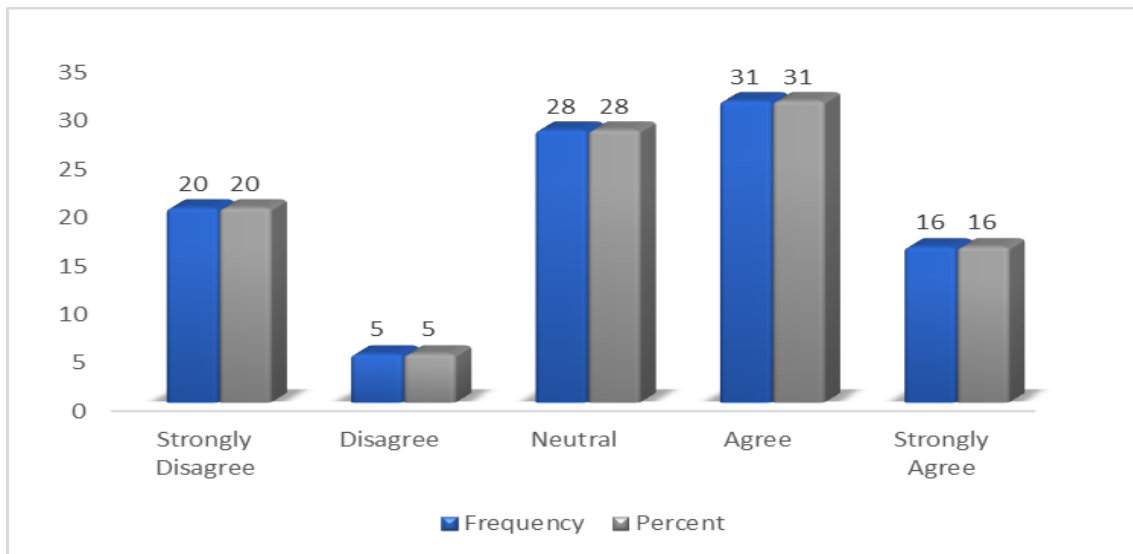


Figure 4.72: Ability to Secure Loans Without Collateral

Source: Author

According to Figure 4.72, only 47% (31% A, 16% SA) of respondents claimed that they were able to get loans without collateral, while 25% of them disagreed and 28% remained neutral. The main reason for these mixed responses is that there are still structural barriers in the credit systems where collateral is required for most formal loans. On the one hand, the widespread use of collateral-free loans and the introduction of flexible guarantee instruments can be a great source of empowerment to small and women-led enterprises.

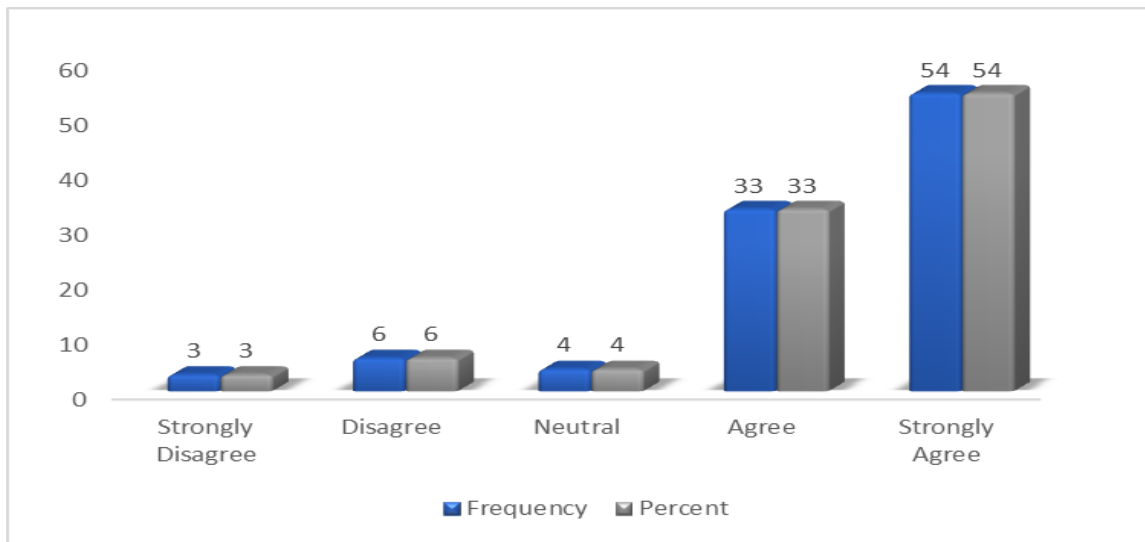


Figure 4.73: Training on Financial Management and Budgeting

Source: Author

An overwhelming 87% (33% A, 54% SA) of respondents stated that they had received training in financial management and budgeting, as shown by Figure 4.73. This is the main evidence for the success of the various capacity-building programs in the area of business acumen. A mere 9% of the people have said that they were not trained, which is a clear indication that the entrepreneurs have been effectively made to be self-sufficient through the training initiatives in financial planning and management of resources.

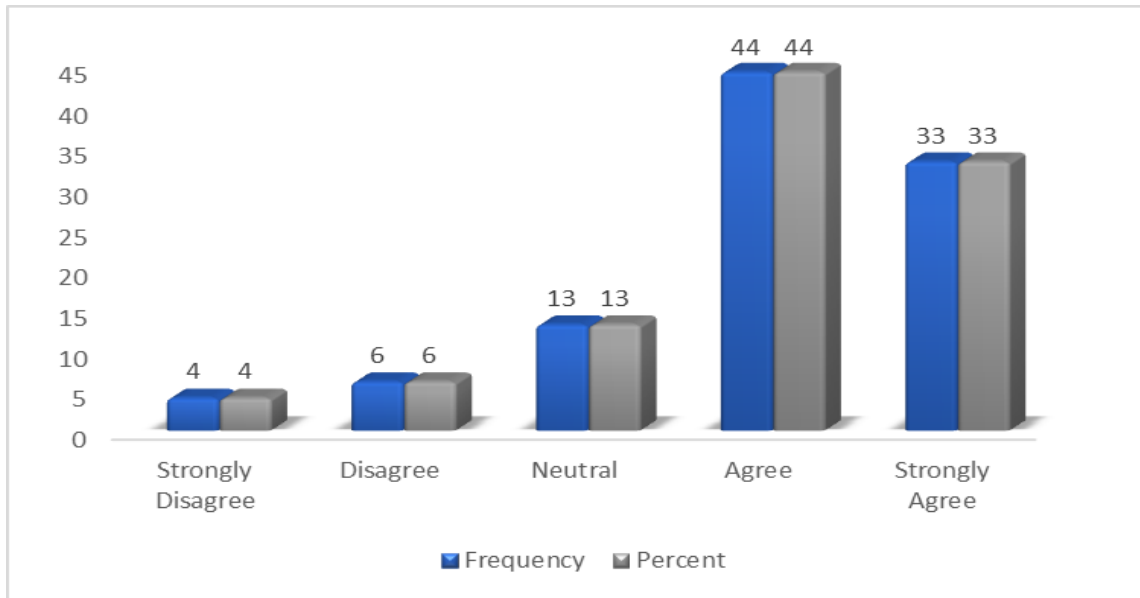


Figure 4.74: Access to Financial Planning and Investment Resources

Source: Author

Figure 4.74 indicates that a significant proportion of people (77%, 44% A, 33% SA) have access to educational and advisory resources that help them acquire financial literacy and plan their investments. This can be interpreted as the supply of resources getting better and that business owners becoming more and more self-reliant to take the right financial decisions. The 10% of people who disapprove of the statement may represent small pockets of areas where access to facilities is limited, maybe because of the geographical location or the absence of the local community support.

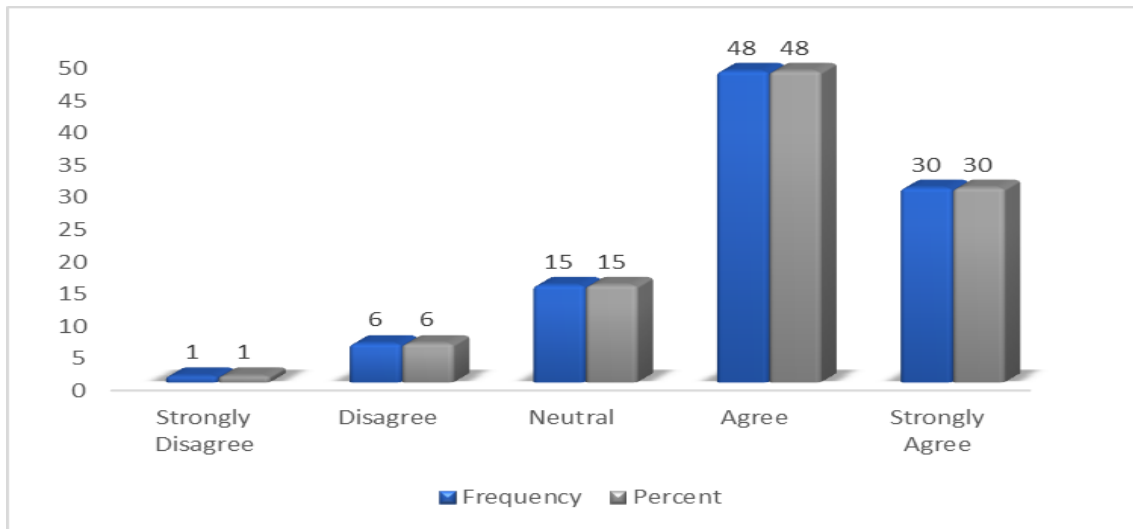


Figure 4.75: Awareness of Financial Products and Services

Source: Author

Most of the respondents, a massive 78% (48% A, 30% SA) as shown in Figure 4.75, claim to be aware of such financial products that are specifically designed for the growth of a business. This situation points out that the effort and the campaigns of information by the financial institutions have been very effective in reaching the people. Just 7% of people are not aware, thus the extending of financial education activities might result in almost complete familiarity of the business community with such products.

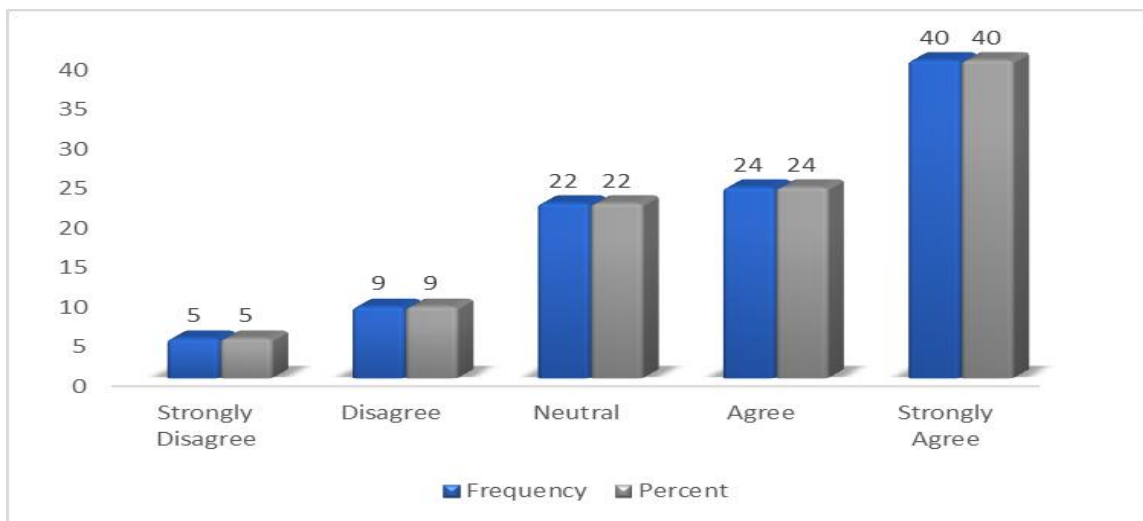


Figure 4.76: Benefit from Financial Literacy Programs

Source: Author

As per the Figure 4.76, close to two-thirds of the population, i.e., around 64% (24% A, 40% SA), perceive a real and measurable positive impact of such initiatives. The data shows that these targeted empowerment programs have had a strong positive effect on women-led enterprises. Though, a 14% figure is still observed for those who have chosen to remain indifferent or unaware, thus pointing towards the necessity for more extensive outreach of these programs and additional support in the form of follow-ups to secure lasting financial literacy.

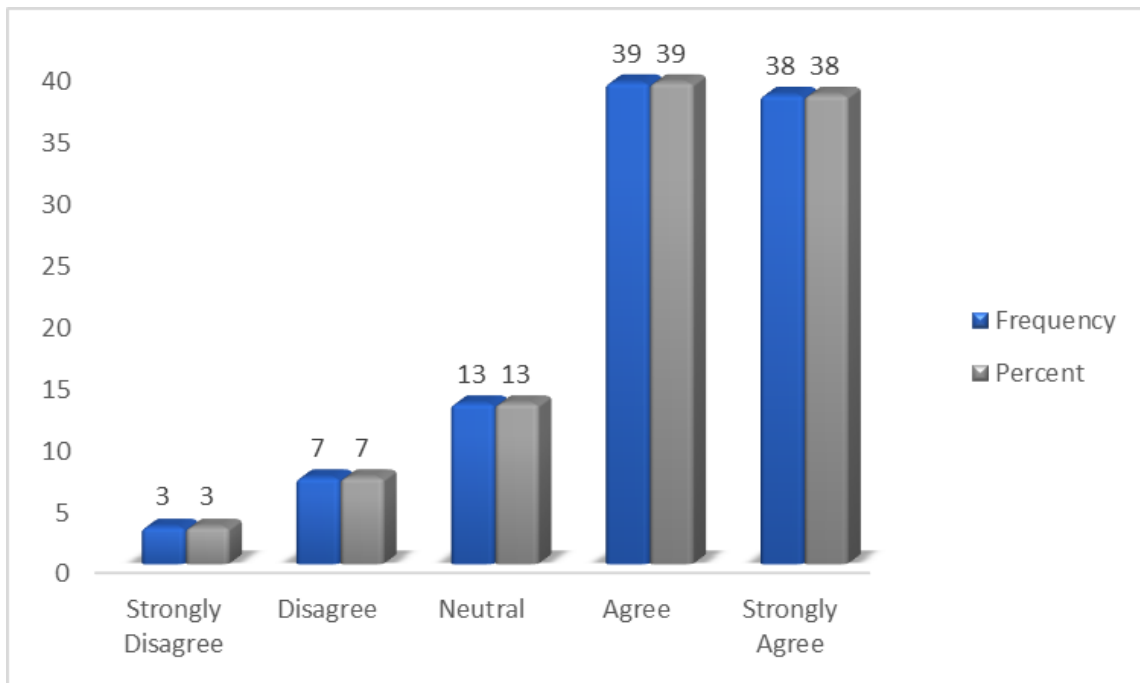


Figure 4.77: Financial Management and Decision-Making Skills

Source: Author

As depicted in Figure 4.77, an impressive 77% (39% A, 38% SA) of people express that they are very confident in the way they handle their finances, as a result of the comprehensive effect of training, financial literacy initiatives, and easy access to information. Merely 10% of the people are not satisfied with this, showing that the majority

of entrepreneurs are in a position to make good financial decisions and handle business funds in a proper way.

4.8 Findings of Business Performance and Sustainability Indicators

This part of the report shows the evaluation of business performance and the sustainability of the social, economic, and environmental dimensions that mainly focus on how enterprises deal with recovery, adaptability, financial efficiency, and environmental responsibility. The results reveal the views of the respondents regarding their organization's resilience, market responsiveness, resource management, and commitment to sustainable practices. By these indicators, the research is looking into the general condition and the extended survival of the companies that have been surveyed.

Table 4.7: Business Performance and Sustainability Indicators

Statement	Category	SD	D	N	A	SA
Our business has been able to recover quickly from economic downturns.	Freq	20	27	19	13	21
	%	20	27	19	13	21
Our customers recommend our products/services to others.	Freq	1	3	12	38	46
	%	1	3	12	38	46
Our enterprise is quick to adapt to changing market conditions.	Freq	5	8	18	39	30
	%	5	8	18	39	30
Our business has been able to respond effectively to new competitors entering the market.	Freq	7	8	33	33	19
	%	7	8	33	33	19
Our enterprise effectively manages its resources to minimize wastage.	Freq	4	5	24	28	39
	%	4	5	24	28	39
Our production processes are optimized for cost-efficiency.	Freq	1	9	9	50	31
	%	1	9	9	50	31
	Freq	9	15	10	39	27

Our enterprise generates sufficient revenue to cover costs and generate profits.	%	9	15	10	39	27
Our business is able to access adequate funding for expansion and growth.	Freq	22	14	10	30	24
	%	22	14	10	30	24
Our enterprise implements practices that minimize its environmental impact.	Freq	3	3	25	34	35
	%	3	3	25	34	35
Our business contributes to the local community's environmental well-being.	Freq	0	7	17	44	32
	%	0	7	17	44	32

Source: Author

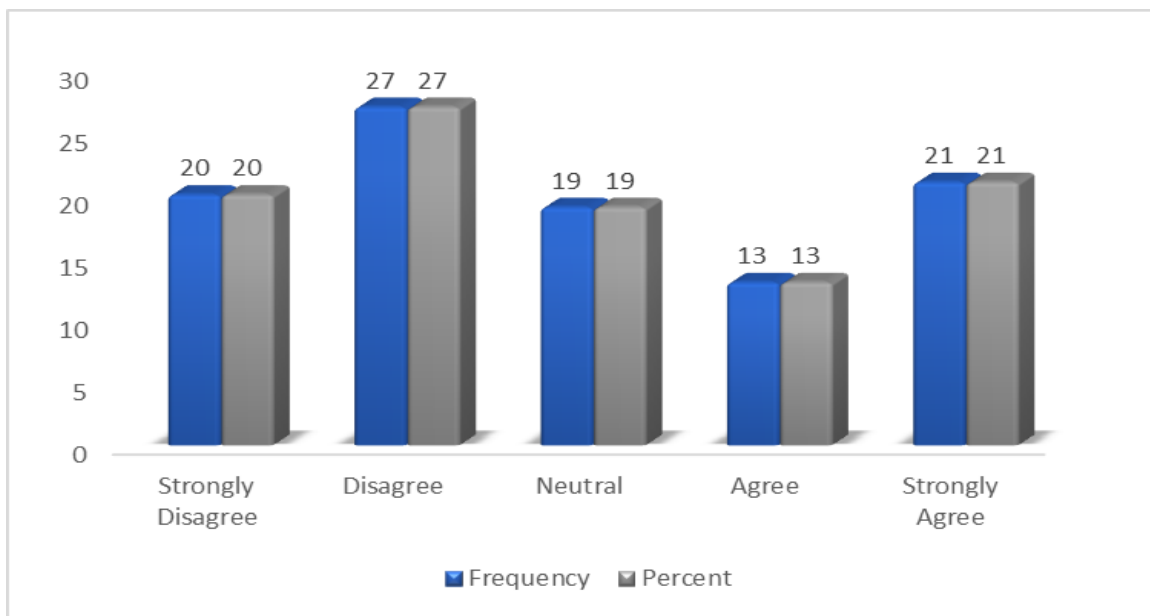


Figure 4.78: Business Recovery from Economic Downturns

Source: Author

Responses as depicted in Figure 4.78 indicate that merely 34% of the business (13% A, 21% SA) consider their business capable of quickly recovering from economic downturns, whereas a maze of 47% (20% SD, 27% D) finds it difficult to do so. It indicates that a considerable number of businesses are struggling to keep up with financial resilience

and operational continuity during market crises. The information suggests that there is a demand for better financial reserves, diversification of strategies, and crisis management planning to be able to recover quickly.

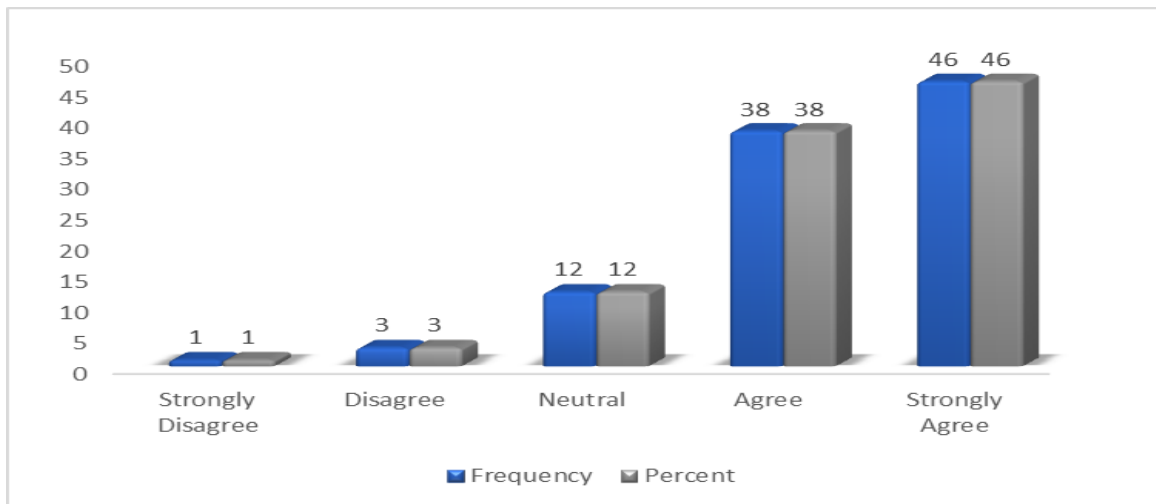


Figure 4.79: Customer Recommendations

Source: Author

According to Figure 4.79, the majority of respondents (84%) affirm that customer satisfaction is very high and this is leading to recommendations (38% A and 46% SA), only 4% of respondents indicated disagreement and 12% were neutral. Such a robustly positive reaction suggests that largely these companies have become the most trusted, have delivered product reliability, and have built a favourable brand reputation for customers. Advocating a brand through word of mouth is usually a sign of customer loyalty and continual service quality which in turn is the basis for business sustainability and natural growth.

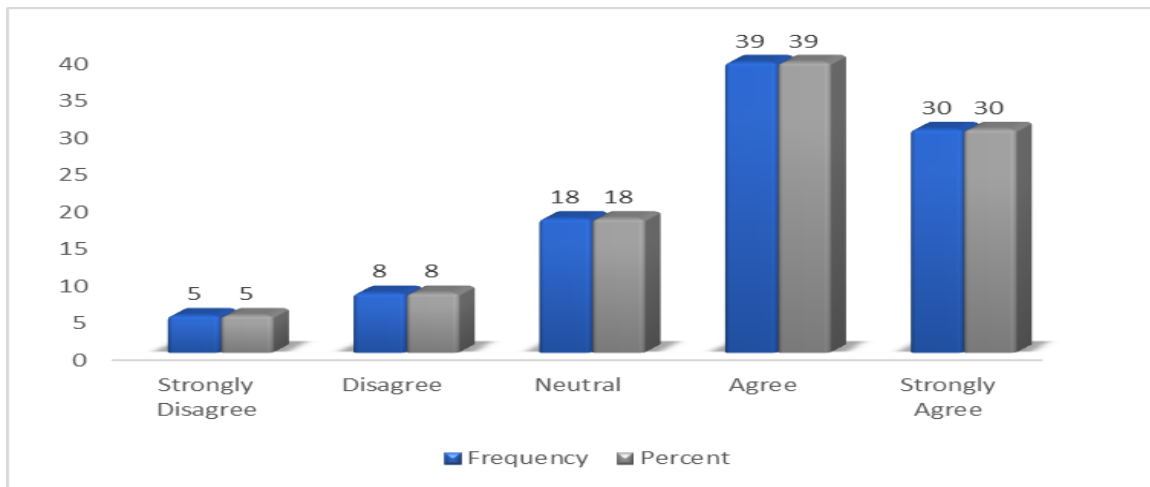


Figure 4.80: Adaptability to Market Changes

Source: Author

Most of the respondents (69% which is made up of 39% A and 30% SA), as shown in Figure 4.80, think that their companies are flexible, while 13% disagree and 18% are N. It means that the majority of businesses have enough flexibility in their operations to react properly to changing customer preferences, new technologies, or changes in the policy. The rest, who are struggling with adaptability, could greatly benefit from better market research, innovation, and digital transformation strategies.

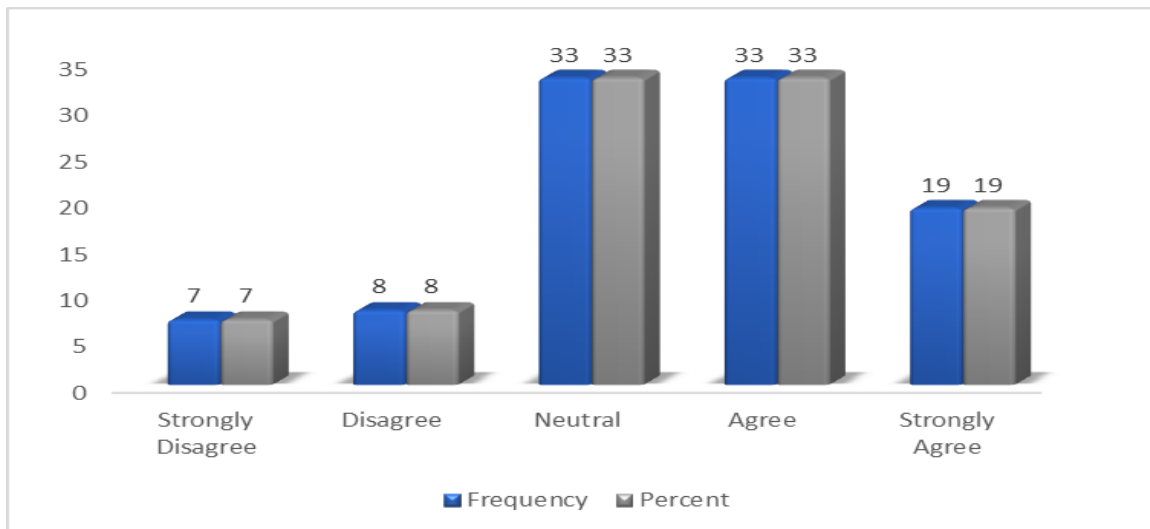


Figure 4.81: Response to New Competitors

Source: Author

As per Figure 4.81, only 52% of the people (33% A, 19% SA) think that they are in a position to respond effectively to a new competition, while 15% express their disagreement, and 33% remain neutral. The conflicting answers in these surveys show that on the one hand, many companies are able to compete effectively, and on the other hand, some companies are finding it difficult to innovate or differentiate. Therefore, this highlights the issue of the paramount importance of strategic agility, improving product quality, and customer retention practices.

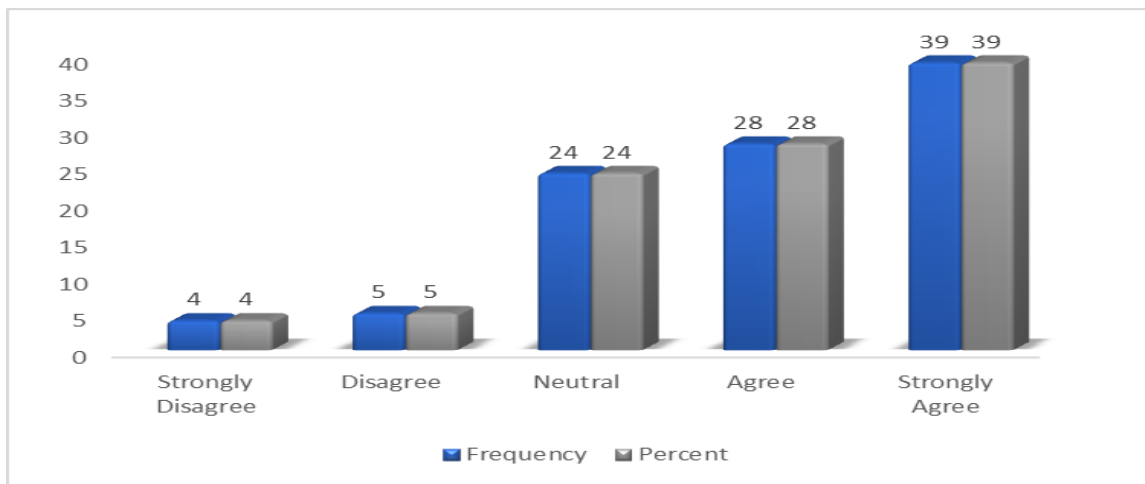


Figure 4.82: Efficient Resource Management

Source: Author

According to the results shown in Figure 4.82, a total of 67% (28% A, 39% SA) of the survey respondents are very convinced of the fact that their companies are managing resources in an efficient way, and just 9% hold the opposite view. This shows that the majority of the respondents still think that their organizations are very disciplined in operations and have great environmental awareness. Efficient use of resources is beneficial for both the organization as it reduces costs and shows commitment to sustainable practices and profit making in the long run.

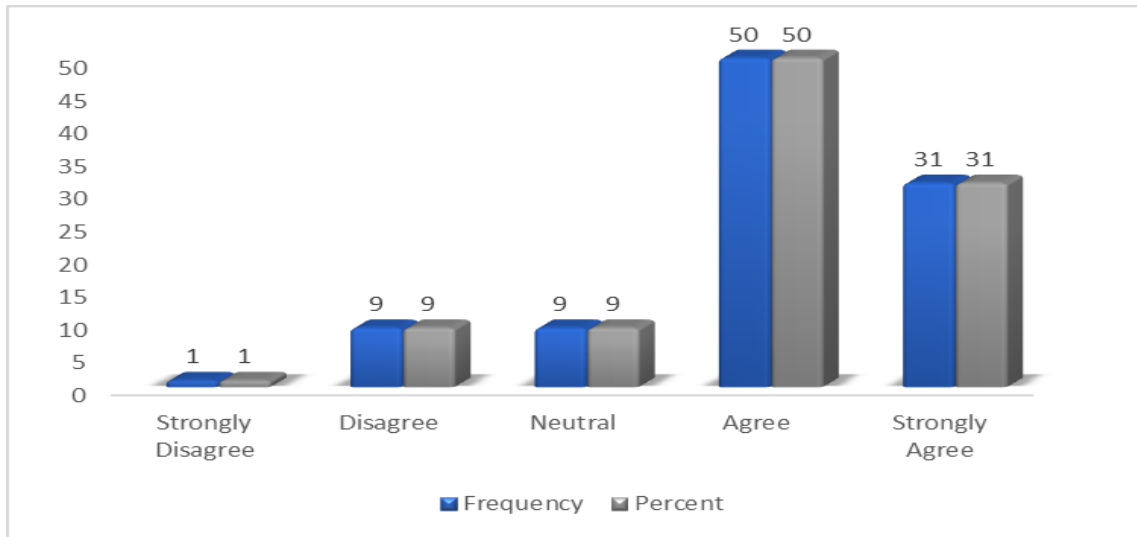


Figure 4.83: Cost-Efficient Production Processes

Source: Author

According to figure 4.83, a commendable 81% (50% A, 31% SA) of the respondents consider their production processes to be cost-efficient, while merely 10% of them express disagreement. The statement is indicative of well-established operational management practices, emphasis on lean production, and good financial management. In addition, it is an indication that the companies are taking steps to simplify production and increase profit margins in spite of the competition.

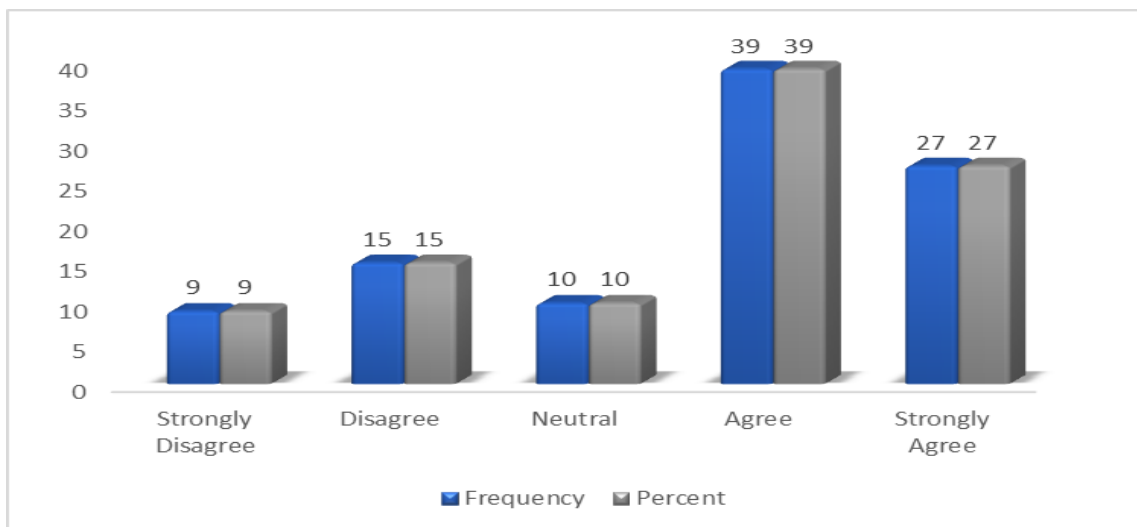


Figure 4.84: Revenue Generation and Profitability

Source: Author

According to Figure 4.84, 39 individuals (39%) affirmed, and 27 (27%) strongly affirmed that their organizations create enough revenue to not only cover the costs but also make a profit. Nevertheless, 24% of the people disagreeing with this statement and 10% of them being neutral, which implies that most enterprises are financially stable to a moderate extent and this stability is quite consistent.

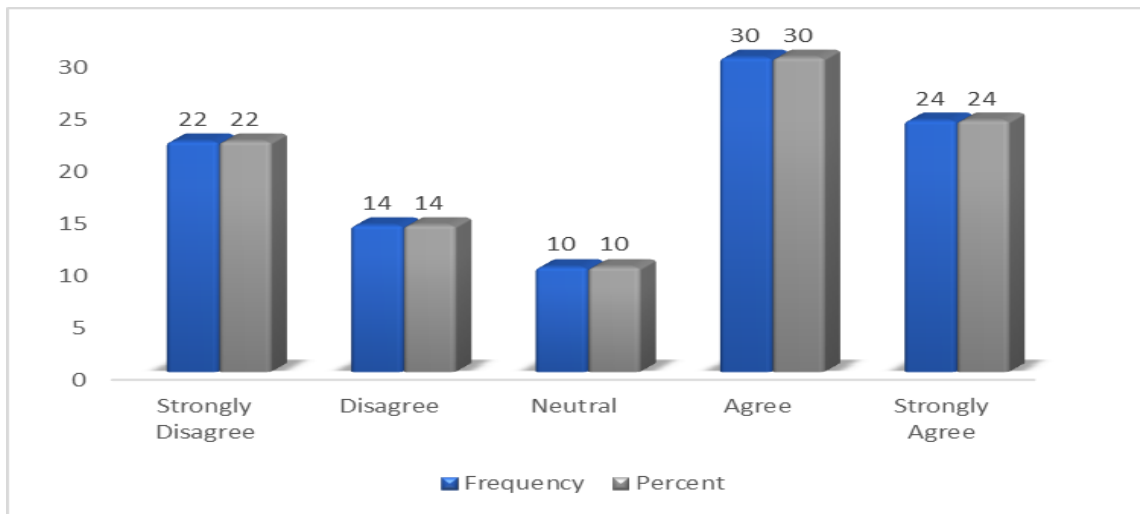


Figure 4.85: Access to Funding for Growth

Source: Author

Figure 4.85 illustrates that just 54% (30% A, 24% SA) of the respondents indicated that they had sufficient access to funding, whereas 36% were negative. This indicates that although a few enterprises may get financial assistance, a large number of them still have to deal with difficulties like lack of security, and lack of awareness, and institutional support. This underlines that there is still a need for financial instruments that are accessible to all and for lending policies that are friendly to MSMEs.

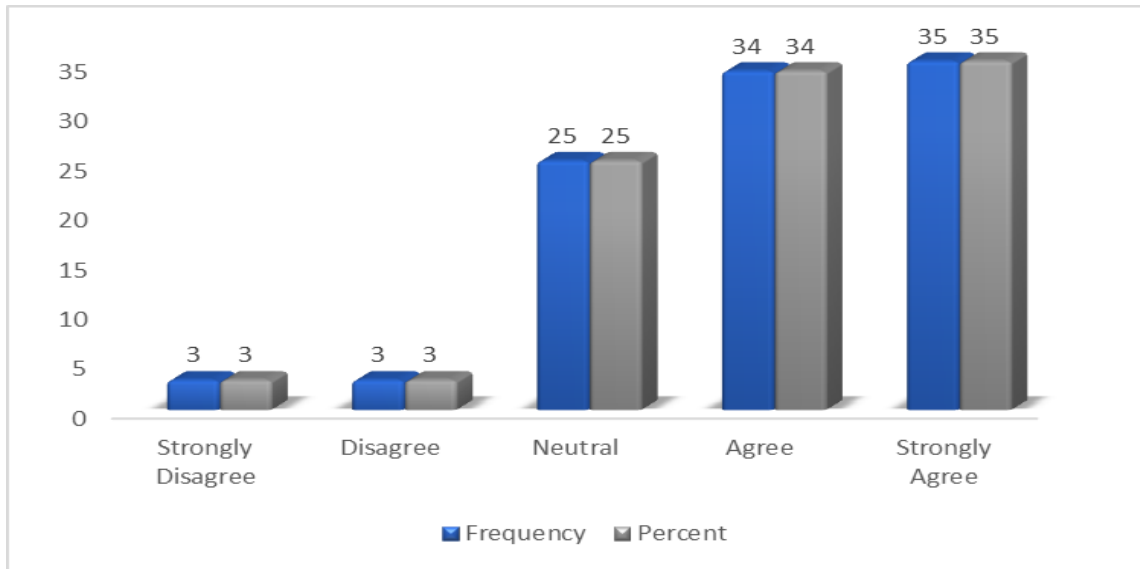


Figure 4.86: Environmental Impact Minimization

Source: Author

As per Figure 4.86, overall 69% (34% A, 35% SA) of the people said that they have been environmentally responsible in their practices whereas only 6% of them have expressed their disagreement. This is a clear indication of a positive trend of moving towards sustainable operations, which reflects the acknowledgment of environmental stewardship and observance of regulations. Besides, such practices make the company's reputation better and its relationships with the community stronger.

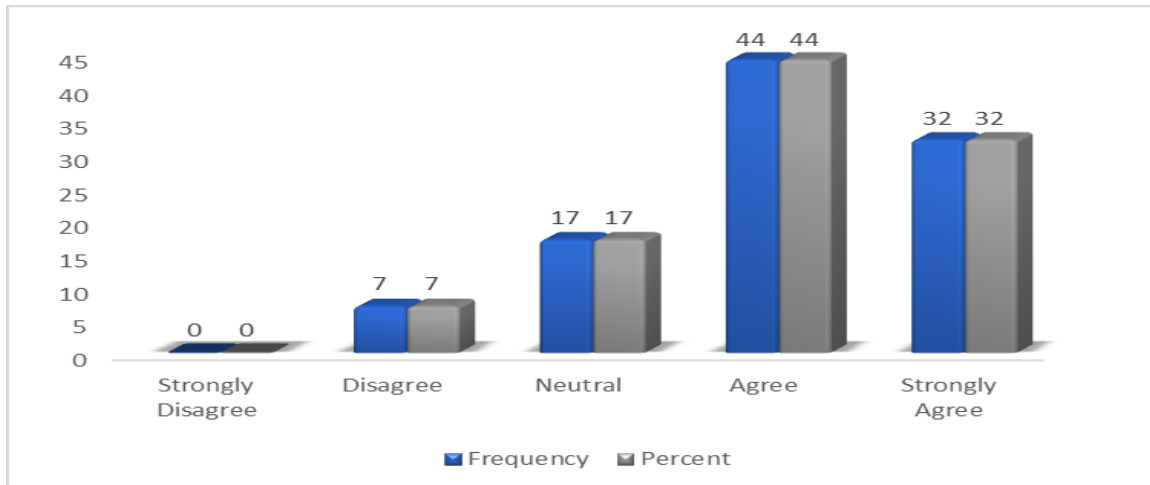


Figure 4.87: Contribution to Community Environmental Well-being

Source: Author

As shown in Figure 4.87, most people (76%, with 44% A and 32% SA) stated that their business has a positive impact on the local environment, whereas only 7% disagreed. This is an indication of active participation in the community and acknowledgment of CSR by the community. Enterprises are becoming more committed to embedding environmental concerns in their business models, thus not only helping the environment but also gaining social esteem.

4.9 Descriptive analysis

Here is a description of the people's characteristics as well as the traits of their enterprises based on the information gathered from the survey. The description features the main aspects of the variables such as place, age, marital status, education, family income, and details of enterprises. Knowing the participant's general profile and the type of enterprises they run has become easier through this description as it shows the size, differences, and the direction of the sample.

Table 4.8: Descriptive Statistics of Demographic Factors

Demographic Factors	N	Mean		Std. Deviation
		Statistic	Std. Error	
Name of the Village	100	5.89	.310	3.101
Name of the Gram Panchayat	100	5.18	.242	2.418
Name of the Mandal	100	5.63	.306	3.064
Name of the District	100	4.30	.204	2.042
What is your age?	100	2.10	.086	.859
What is your current marital status?	100	1.91	.075	.753
What is your highest level of education completed?	100	3.10	.183	1.829
What is the primary source of income for your household?	100	1.83	.111	1.111

What is your approximate annual household income?	100	2.29	.116	1.157
What type of enterprise do you manage?	100	1.81	.081	.813
In which sector does your enterprise operate?	100	3.39	.121	1.214
How long has your enterprise been in operation?	100	2.69	.107	1.070

Source: Author

The descriptive statistics in Table 4.8 offer a detailed overview of the demographic characteristics of the sample of respondents (N=100). The mean values for village (M=5.89, SD=3.10), gram panchayat (M=5.18, SD=2.42), mandal (M=5.63, SD=3.06), and district (M=4.30, SD=2.04) suggest that there is moderate geographical diversity across the sample. The mean age (M=2.10, SD=0.86) points to a majority of young adults in the participant group. Marital status (M=1.91, SD=0.75) reflects a small range of variation, thus indicating a balanced mix of married and unmarried respondents. Educational attainment (M=3.10, SD=1.83) shows that the respondents have different levels of education, with a moderate level being the most common. The main household income source (M=1.83, SD=1.11) and annual income (M=2.29, SD=1.16) reveal that the sample is economically diverse but within a modest range. Most respondents are running small enterprises (M=1.81, SD=0.81) that are active in multiple sectors (M=3.39, SD=1.21), and their businesses have been around for a few years (M=2.69, SD=1.07), thus depicting a stable and at the same time, emerging entrepreneurial base.

Table 4.9: Descriptive Statistics of Key Factors

Key Factors	N	Mean		Std. Deviation
		Statistic	Std. Error	
Resource Utilization	100	4.0200	.07652	.76515
Environmental Impact	100	4.1900	.08127	.81271

Climate Resilience	100	3.9400	.10330	1.03299
Community Impact	100	4.1700	.08652	.86521
Empowerment and Inclusivity	100	3.8800	.12971	1.29708
Cultural Sustainability	100	3.7800	.11771	1.17705
Social Well-Being	100	4.3300	.07255	.72551
Policy and Regulation Compliance	100	4.4300	.06854	.68542
Transparency and Accountability	100	4.0700	.11124	1.11242
Institutional Support	100	3.9900	.09045	.90448
Governance Structures	100	4.2500	.08572	.85723
Access to micro-financing or credit facilities	100	3.6300	.12922	1.29221
Financial literacy among tribal women	100	4.4000	.07247	.72474
Business Sustainability of MSMEs	100	4.1300	.07057	.70575

Source: Author

The descriptive statistics presented in Table 4.9 reveal that the respondents had mostly positive perceptions of sustainability-related factors among MSMEs (N=100). The highest mean scores were recorded for Policy and Regulation Compliance (M=4.43, SD=0.69), Financial Literacy among Tribal Women (M=4.40, SD=0.72), and Social Well-Being (M=4.33, SD=0.73), which implies a strong conformity to governance norms, an increase in financial awareness, and the achievement of positive social outcomes. Moreover, Governance Structures (M=4.25, SD=0.86) and Environmental Impact (M=4.19, SD=0.81) indicate strong institutional and ecological considerations as well. The respondents had moderate perceptions of Resource Utilization (M=4.02, SD=0.77), Transparency and Accountability (M=4.07, SD=1.11), and Business Sustainability (M=4.13, SD=0.71), which show that the operational efficiency was stable but had room for improvement. On the other hand, the means for Empowerment and Inclusivity (M=3.88, SD=1.30), Cultural Sustainability (M=3.78, SD=1.18), and Access to Micro-

financing (M=3.63, SD=1.29) were lower, and their deviations were higher, thus pointing to the existence of gaps in the inclusiveness and financial accessibility. In general, the findings represent well-maintained but also somewhat unbalanced strides towards achieving the various aspects of sustainability.

4.10 Hypothesis Analysis

This part of the paper examines the hypotheses that have been proposed to determine the relationships of the key variables governing the business sustainability of MSMEs led by tribal women farmer groups in Telangana. The paper through correlation analysis measures the degree and thus the significance of the relationships, hence, it is an important source of evidence on the extent to which the mentioned factors have led the business to the desired outcomes.

Hypothesis 1

- **H1:** There is a significant positive relationship between critical factors (such as leadership, skills, innovation, and resource management) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

Table 4.10: Correlation Between Critical Factors and Business Sustainability of MSMEs

			Business Sustainability of MSMEs	Critical Factors
Spearman's rho	Business Sustainability of MSMEs	Correlation Coefficient	1.000	.673**
		Sig. (2-tailed)	.	.000
		N	100	100
	Critical Factors	Correlation Coefficient	.673**	1.000
		Sig. (2-tailed)	.000	.
		N	100	100
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: Author

The correlation table 4.10 shows coefficient of 0.673 indicates a strong positive and statistically significant relationship between critical factors—such as leadership, skills, innovation, and resource management—and the business sustainability of MSMEs operated by tribal women farmer groups in Telangana. The significance value ($p = 0.000$) confirms that this relationship is not due to chance. This suggests that enhancing these critical factors can meaningfully contribute to improving the long-term growth, stability, and overall sustainability of these MSMEs, highlighting the importance of managerial competence and innovation in their success.

Hence, the alternate hypothesis, **H1**: There is a significant positive relationship between critical factors (such as leadership, skills, innovation, and resource management) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India, is accepted.

Hypothesis 2

- **H2**: There is a significant positive relationship between environmental factors (such as resource utilization, environmental impact, and climate resilience) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

Table 4.11: Regression Model Fit and Pseudo R-Square for Business Sustainability of MSMEs

Category	Statistic	Value
Model Fitting Information	-2 Log Likelihood (Intercept Only)	159.047
	-2 Log Likelihood (Final)	57.964
	Chi-Square	101.083
	df	3
	Sig.	0.000
Goodness-of-Fit	Pearson Chi-Square	34.088 (df = 63, Sig. = 0.999)

	Deviance	36.136 (df = 63, Sig. = 0.997)
Pseudo R-Square	Cox and Snell	0.636
	Nagelkerke	0.728
	McFadden	0.489

Source: Author

Table 4.11 shows the indicate that the model is statistically significant and provides a good fit to the data. The decrease in the -2 Log Likelihood value from 159.047 (intercept-only model) to 57.964 (final model) shows a substantial improvement in model fit. The Chi-square value of 101.083 with 3 degrees of freedom and a significance level of 0.000 confirms that the predictors significantly improve the model. Both the Pearson (Sig. = 0.999) and Deviance (Sig. = 0.997) tests indicate an excellent model fit, as their p-values are well above 0.05. The pseudo-R-square values—Cox and Snell (0.636), Nagelkerke (0.728), and McFadden (0.489)—suggest that the model explains between 49% and 73% of the variation in the dependent variable, reflecting a strong predictive and explanatory capacity.

Table 4.12 Parameter Estimates for Predictors of Business Sustainability of MSMEs

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[BS_MSMEs = 2.00]	8.586	2.139	16.116	1	.000	4.394	12.778
	[BS_MSMEs = 3.00]	11.983	2.117	32.031	1	.000	7.833	16.133
	[BS_MSMEs = 4.00]	18.595	2.983	38.859	1	.000	12.748	24.441
Location	RU	2.202	.614	12.882	1	.000	1.000	3.405
	EI	.180	.391	.212	1	.645	-.587	.947
	CR	1.680	.436	14.878	1	.000	.826	2.534
Link function: Logit.								

Source: Author

The parameter estimates in Table 4.12 show that the model, using a logit link function, effectively distinguishes between the levels of business sustainability (BS_MSMEs), as shown by the highly significant threshold values for categories 2.00, 3.00, and 4.00 ($p < 0.001$). The variables RU (Estimate = 2.202, $p = 0.000$) and CR (Estimate = 1.680, $p = 0.000$) are the ones that had the strongest positive effects and are the most significant in relation to business sustainability, indicating that the better the resource utilization and customer relationships, the more important MSMEs will be in the future. In contrast, EI shows a weak and statistically insignificant relationship (Estimate = 0.180, $p = 0.645$), implying that it does not have a notable impact within this model. Overall, the findings highlight that effective resource use and strong customer relations are key drivers of business sustainability for MSMEs.

Hence, H2: There is a significant positive relationship between environmental factors (such as resource utilization, environmental impact, and climate resilience) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India, is accepted.

Hypothesis 3

- **H3:** There is a significant positive relationship between social factors (such as community support, empowerment, inclusivity, cultural sustainability, and social well-being) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

Table 4.13: Logistic Regression Model Fit and Pseudo R-Square for Business Sustainability of MSMEs

Category	Statistic	Value
Model Fitting Information	-2 Log Likelihood (Intercept Only)	180.227
	-2 Log Likelihood (Final)	65.510
	Chi-Square	114.717
	df	4

	Sig.	0
Goodness-of-Fit	Pearson Chi-Square	69.908 (df = 107, Sig. = 0.998)
	Deviance	50.148 (df = 107, Sig. = 1.000)
Pseudo R-Square	Cox and Snell	0.682
	Nagelkerke	0.781
	McFadden	0.555

Source: Author

The ordinal regression in Table 4.13 shows that the model fits the data very well and is statistically significant. The decrease in -2 Log Likelihood from 180.227 (intercept-only) to 65.510 (final model) indicates a substantial improvement in model performance. The Chi-square value of 114.717 with 4 degrees of freedom and a significance level of 0.000 confirms that the independent variables collectively have a significant effect on the dependent variable. The Pearson (Sig. = 0.998) and Deviance (Sig. = 1.000) values demonstrate an excellent goodness of fit, suggesting the model accurately represents the observed data. The pseudo R-square values—Cox and Snell (0.682), Nagelkerke (0.781), and McFadden (0.555)—indicate a high explanatory power, showing that the model explains approximately 68–78% of the variation in the dependent variable, reflecting strong predictive capability and reliability.

Table 4.14: Parameter Estimates of Predictors for Business Sustainability of MSMEs

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[BS_MSMEs = 2.00]	12.167	2.526	23.209	1	.000	7.217	17.117
	[BS_MSMEs = 3.00]	16.910	3.100	29.751	1	.000	10.833	22.986
	[BS_MSMEs = 4.00]	25.251	4.398	32.969	1	.000	16.632	33.870
Location	CI	1.942	.547	12.599	1	.000	.870	3.014
	E_I	.246	.403	.374	1	.541	-.543	1.036
	CS	1.625	.471	11.901	1	.001	.702	2.548

	SWB	1.581	.488	10.498	1	.001	.625	2.538
Link function: Logit.								

Source: Author

The parameter estimates in Table 4.14 indicate that the parameter estimates reveal that the model, based on the logit link function, significantly differentiates between the levels of business sustainability (BS_MSMEs), as indicated by the highly significant threshold values for categories 2.00, 3.00, and 4.00 ($p < 0.001$). CI, CS, and SWB were three of the most important factors that influenced business sustainability among which they showed statistically significant positive effects with the p-values of 0.000, 0.001, and 0.001, respectively. The result implies that business MSMEs that reveal more local involvement, greater customer satisfaction, and higher social well-being tend to be more sustainable. On the other hand, E_I have a negligible and statistically insignificant effect (Estimate = 0.246, $p = 0.541$) thus, in this model, it is not considered a significant contributing factor to the occurrence of sustainability. To sum up, the results give the main attention to the roles that community engagement, customer relations, and well-being factors have in increasing the sustainability of MSMEs.

Hence, the alternate hypothesis **H3**: There is a significant positive relationship between social factors (such as community support, empowerment, inclusivity, cultural sustainability, and social well-being) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

Hypothesis 4

- **H4**: There is a significant positive relationship between governance factors (such as policy compliance, transparency, accountability, institutional support, and governance structures) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

Table 4.15: Logistic Regression Model Fit and Pseudo R-Square for Predictors of Business Sustainability of MSMEs

Category	Statistic	Value
Model Fitting Information	-2 Log Likelihood (Intercept Only)	168.267
	-2 Log Likelihood (Final)	76.901
	Chi-Square	91.366
	df	4
	Sig.	0
Goodness-of-Fit	Pearson Chi-Square	100.183 (df = 110, Sig. = 0.738)
	Deviance	59.638 (df = 110, Sig. = 1.000)
Pseudo R-Square	Cox and Snell	0.599
	Nagelkerke	0.686
	McFadden	0.442

Source: Author

Table 4.15 show a statistically significant and well-fitting model. The reduction in –2 Log Likelihood from 168.267 (intercept-only) to 76.901 (final model) demonstrates a substantial improvement in model fit. The Chi-square value of 91.366 with 4 degrees of freedom and a significance level of 0.000 confirms that the predictors contribute meaningfully to explaining the dependent variable. The Pearson (Sig. = 0.738) and Deviance (Sig. = 1.000) goodness-of-fit tests both show high p-values, suggesting the model fits the observed data well. The pseudo R-square values—Cox and Snell (0.599), Nagelkerke (0.686), and McFadden (0.442)—indicate that the model explains roughly 60–69% of the variance in the dependent variable, reflecting a strong explanatory and predictive capacity.

Table 4.16: Parameter Estimates of Governance and Policy Predictors for Business Sustainability of MSMEs

Parameter Estimates						
	Estimate		Wald	df	Sig.	95% Confidence Interval

			Std. Error				Lower Bound	Upper Bound
Threshold	[BS_MSMEs = 2.00]	10.028	2.188	21.005	1	.000	5.739	14.316
	[BS_MSMEs = 3.00]	13.985	2.477	31.879	1	.000	9.131	18.840
	[BS_MSMEs = 4.00]	20.047	3.214	38.902	1	.000	13.747	26.346
Location	PRC	1.183	.421	7.888	1	.005	.358	2.009
	TA	1.001	.372	7.260	1	.007	.273	1.729
	IS	.909	.382	5.673	1	.017	.161	1.658
	GS	1.175	.462	6.476	1	.011	.270	2.081
Link function: Logit.								

Source: Author

The parameter estimates in Table 4.16 highlight that the model differentiates various levels of business sustainability (BS_MSMEs) efficiently when employing a logit link function, as evidenced by the significantly high threshold values for categories 2.00, 3.00, and 4.00 ($p < 0.001$). Four predictors, namely PRC, TA, IS, and GS, have shown to be influential and statistically significant factors positively affecting business sustainability, with the p-values being less than 0.05. In detail, PRC (Estimate = 1.183, $p = 0.005$), TA (Estimate = 1.001, $p = 0.007$), IS (Estimate = 0.909, $p = 0.017$), and GS (Estimate = 1.175, $p = 0.011$) were the variables that significantly explained the changes in the levels of MSMEs' sustainability. The outcomes of these analyses signal that along with policy-related capacity, technical skills, innovation, and government support, targeted interventions in these areas will undoubtedly lead to MSMEs achieving higher business sustainability levels.

Hence, the H4: There is a significant positive relationship between governance factors (such as policy compliance, transparency, accountability, institutional support, and

governance structures) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India

Hypothesis 5

- **H5:** There is a significant positive relationship between financial factors (such as access to micro-financing, credit facilities, and financial literacy) and the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India.

Table 4.17: Logistic Regression Model Fit and Pseudo R-Square for Financial and Micro-Financing Predictors of Business Sustainability of MSMEs

Category	Statistic	Value
Model Fitting Information	-2 Log Likelihood (Intercept Only)	144.948
	-2 Log Likelihood (Final)	99.264
	Chi-Square	45.684
	df	2
	Sig.	0
Goodness-of-Fit	Pearson Chi-Square	87.021 (df = 31, Sig. = 0.000)
	Deviance	77.114 (df = 31, Sig. = 0.000)
Pseudo R-Square	Cox and Snell	0.367
	Nagelkerke	0.42
	McFadden	0.221

Source: Author

Table 4.17 shows the model is statistically significant but shows only a moderate fit. The reduction in –2 Log Likelihood from 144.948 (intercept-only) to 99.264 (final model) and the Chi-square value of 45.684 with 2 degrees of freedom ($p = 0.000$) confirm that the predictors significantly improve the model over the baseline. However, the Pearson

(Sig. = 0.000) and Deviance (Sig. = 0.000) tests suggest that the model does not fit the data particularly well, as both are statistically significant. The pseudo-R-square values—Cox and Snell (0.367), Nagelkerke (0.420), and McFadden (0.221)—indicate that the model explains about 37–42% of the variance in the dependent variable, reflecting a moderate explanatory power and suggesting that additional variables may be needed to improve the model’s fit and predictive strength.

Table 4.18: Parameter Estimates for Financial Access and Literacy Predictors of Business Sustainability of MSMEs

Parameter Estimates								
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[BS_MSMEs = 2.00]	4.929	1.563	9.947	1	.002	1.866	7.992
	[BS_MSMEs = 3.00]	7.669	1.573	23.775	1	.000	4.586	10.752
	[BS_MSMEs = 4.00]	11.590	1.943	35.571	1	.000	7.781	15.399
Location	AMFCF	.048	.164	.086	1	.769	-.274	.370
	FLATW	2.284	.412	30.767	1	.000	1.477	3.091
Link function: Logit.								

Source: Author

The parameter estimates in Table 4.18 show the model, using a logit link function, significantly distinguishes between different levels of business sustainability (BS_MSMEs), as indicated by the significant threshold values for categories 2.00, 3.00, and 4.00 ($p < 0.01$). Among the predictors, FLATW has a very strong positive and statistically significant impact (Estimate = 2.284, Wald = 30.767, $p = 0.000$), indicating that higher FLATW values are correlated with a higher degree of business sustainability of

MSMEs. On the other hand, AMFCF has a small and statistically insignificant impact (Estimate = 0.048, $p = 0.769$), meaning that it does not play a significant role in the variations of sustainability. The results, in general, signify that FLATW is a major factor influencing MSME sustainability, whereas AMFCF is a minor factor in this model.

Consequently, the H5: Financial factors (like the availability of micro-financing, credit facilities, and financial literacy) have a significant positive impact on the business sustainability of the MSMEs operated by tribal women farmer groups in Telangana, India.

4.11 Summary of Findings

The analysis of the hypothesis concentrated on the different factors that interacted with the business sustainability of the MSMEs run by tribal women farmers in Telangana. One of the main insights referred to the crucial factors, namely, leadership, skills, innovation, and resource management, which were shown to have a very strong and positive effect on the sustainability of MSMEs ($\rho = 0.673$, $p < 0.01$). This indicates that the emphasis laid on these management and operational areas causes a great leap in overall sustainability and the enterprises' potential for growth. Environmental or nature factors, however, still played a significant role in determining the outcome, where resource utilization and climate resilience had positive effects that were statistically significant ($p = 0.000$). But, the environmental impact was not statistically significant which means that effective resource use and being climate-friendly still bring about business sustainability but just lowering the environmental impact will not necessarily lead to business outcomes.

Environmental results were also determined by social and governance factors. The research disclosed that social aspects such as collective impact, cultural sustainability, and social well-being pointed out a very strong positive influence ($p \leq 0.001$) which empowered by a high model explanatory power (Nagelkerke $R^2 = 0.781$) as well. Actually, it thus shows how community backing, empowerment, and social inclusion become the

key elements not only for business survival but also for the persistence of the enterprise. The same was true for governance-related factors when policy compliance, transparency, institutional support, and governance structures were quantitatively assessed by researchers with respect to sustainability ($p < 0.05$). The demand for accountability and institutional support which, on one hand, are critically important for the long-term viability of tribal women-led MSMEs and, on the other hand, are the products of a well-organized and transparent governance structure, thus embody the center of such a structure.

Financial factors exhibited a moderate and meaningful influence on business sustainability. In particular, financial literacy among tribal women had a significant positive impact ($p = 0.000$), whereas the situation for access to micro-financing and credit facilities did not reveal any significant statistical difference ($p = 0.769$). This is to say that increasing financial knowledge and budgeting skills might turn out to be more helpful in the MSE sector's sustainability than just providing access to funds. The analysis, therefore, finds that the sustainability of business in the tribal women-led MSMEs sector depends on the presence of good leadership, social cohesion, governance, and financial awareness with environmental adaptability as a factor to community development.

CHAPTER V: DISCUSSION

5.1 Discussion of Results

The current research study has examined the parameters affecting the sustainability of businesses of tribal women farmer groups operating MSMEs in Telangana, India. The ESG framework is utilized in the composition of the four most significant dimensions which are environment, social, governance, and financial. The study points out that tribal women entrepreneurs, who are dealing with numerous limitations such as scarcity of resources, financial difficulties, and institutional drawbacks, are gradually forming a sustainable approach to enterprise management.

The environment was found to have a large impact on the general sustainability of the MSMEs. The respondents concurred that their businesses are involved in responsible use of resources, reduction of waste, and conservation of the environment. This shows that there is an increasing consciousness of tribes of the importance of green business among tribal entrepreneurs. The strong focus on conserving energy and the observance of environmental standards is also indicative of the proliferation of the sustainable business norms and even rural enterprises. These results are echoed by Agbakwuru et al. (2024), who underlined the importance of incorporating environmental management practices in increasing long-term business performance and credibility among stakeholders. Nonetheless, some respondents responded neutral about any involvement in environmental community programs indicating that external cooperation in environmental projects is still low.

Under social factors, the findings show the contribution that the enterprises make to the community development, inclusivity, and cultural preservation. According to many respondents, their businesses create jobs to the local community, contribute to gender

equality, and facilitate education and training programs. This is in line with the results of (Naveen, Parida, and Panda 2023) who discovered that when tribal women are empowered through entrepreneurship, it creates economic and social capital assimilated to build resilience in the community. The transfer of knowledge and the continuation of tribal culture in business activities also demonstrates the existence of social and cultural sustainability and the development of the enterprise. However, the inconsistency in the practices of inclusivity is an indication that although awareness is there, the systemic practice in all enterprises is yet to be implemented.

There are also governance factors that are important when it comes to the sustainability of the MSME. The majority of the respondents reported that their businesses are regulated by the government, are transparent, and are governed through organized governance structures. This is a sign of growing formalization and professionalism of tribal women-led MSMEs. Internal control system, code of ethics and regular audits are some of the governance practices that boost accountability and investor trust. These results align with the perspectives of (Shelly, Sharma, and Bawa 2020), who reported that good governance and policy adherence were important contributors to the operational and ethical base of MSMEs. However, the lack of involvement in policy debates and professional associations presupposes the necessity to become more involved in institutional systems and advocacy tools.

Financial considerations were reported as a facilitator as well as a limitation. Although many of the respondents have noted the increase in financial literacy and knowledge of government schemes, access to microfinance and credit facilities is still an issue. Such restricted access has an impact on the growth and maintenance of businesses in bad economic times. These results support Sahu et al. (2024) who have noted that even with the government initiative of microcredit programs, tribal women entrepreneurs

continue to have challenges related to inadequate collateral, complicated processes, and insufficient institutional facilitation. The high financial literacy of the respondents, however, is a sign of progress in capacity building and informed decision making, which is relevant to long-term sustainability.

The higher value of Cronbach's alpha indicates the instrument's reliability and, consequently, the internal consistency of the constructs measured, thus giving more credit to the results. All evidences confirm the theory that integrating environmental, social, governance, and financial factors leads to the performance of MSMEs that are more resilient and sustainable, thus, better off tribal women entrepreneurs.

5.2 Discussion of Research Question One

RQ1: What are the critical factors that contribute to the sustainability of MSMEs run by tribal women farmer groups?

The research defines environmental awareness, financial literacy, civic engagement, institutional governance, and access to credit as the most significant factors that cause sustainability among MSMEs managed by tribal women farmer groups. The findings are consistent with Mahmood & Seth (2023) who state that the ability to learn new things seems to be the main factor for sustainability, among the factors and variables considered. The deepening layer of social empowerment of tribal women thus also elevates the sustainability results, and community-based entrepreneurship is a brand-new model in the rural sector for the type of growth that is inclusive.

The research shows that the survival time of MSMEs of tribal women farmer groups is determined by a diverse mixture of environmental, social, governance, and financial factors. Respondents showed great enthusiasm for the implementation of environmentally friendly practices such as waste management, energy conservation, and resource optimization. These changes show that tribal women entrepreneurs are slowly internalizing

the concept of sustainability in their business operations. Besides, it is revealed that tribal women entrepreneurs have started to consider green entrepreneurship as a viable and socially responsible business strategy. This matches the global research on green micro-enterprises where sustainability is regarded not only as a necessity but also as a means of market differentiation and gaining the trust of the community.

Socially, these are the main sources through which power, community growth, and fairness are distributed. People interviewed said that through their business activities, they are creating local jobs, promoting gender equality, and contributing to the well-being of the communities in which they operate. Naveen, Parida, and Panda (2023) have also indicated that the emergence of tribal women as entrepreneurs is not only a way to get economic independence, social resilience, and cultural preservation. The development of both the business and the industrial world is very much dependent on the development of education in society. Education continues to be a vital factor in improving people's life skills. Besides that, a good number of new businesses have decided to use the ancient knowledge systems in their production and branding as a means of both guaranteeing cultural continuity and winning local markets. The use of such cultural components not only helps the sustainability of the tribal women-led MSMEs to have a distinctive character but also links the economic side with cultural identity.

The research that dealt with the aspect of government and management of finance made it possible to see very clearly the ethically correct business practices, the companies to have very obvious internal control mechanisms, and to be very compliant with the regulations. The presence of these governance structures uplifts the transparency and accountability to the highest levels; so the trust becomes the most important thing among the parties involved. One of the main reasons for the sustainability achieved by the improvement of decision-making and finance management was the financial literacy level

of the respondents. Nevertheless, the issue of limited access to affordable credit and lack of support from institutions is still lingering and thus, the matter of scalability remains unresolved. The findings also align with the study done by Purwoko et al. (2023) that delves into the complicated interrelations that are market performance, customer awareness, regulatory compliance, and the sustainable practices of MSMEs. Therefore, the survival of tribal women-led MSMEs is not only about their finances but also involves the socio-cultural preservation and moral upliftment aspects.

Therefore, the research findings provide evidence that the survival of tribal women-led MSMEs is a complicated idea which involves not only the economic aspect but also the environmental one, the social empowerment, cultural preservation, and ethical governance. These tribal women-led MSMEs are not only financially profitable but also constitute a socio-cultural and moral developmental process.

5.3 Discussion of Research Question Two

RQ2: How do the environmental factors influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?

Environmental factors have been identified as a major and multidimensional sustainability determinants of the surveyed MSMEs. Most of the respondents agreed that their businesses mainly concentrated on the efficient use of resources, waste reduction, and compliance with environmental regulations. Such results indicate the rising awareness of the environment and the shift to eco-friendly business practices among tribal women entrepreneurs. Agbakwuru et al. (2024) discovered that companies that integrate environmentally sustainable practices across their operations, reduce environmental footprints and at the same time increase their long-term profitability and brand value. This implies that companies are required to evaluate and disclose their exposure to climate risks that encompass not only physical risks resulting from climate change (e.g., extreme

weather events) but also transitional risks associated with the move to a low-carbon economy. Grasping these risks is crucial for setting strategies and ensuring sustainability in the far future. Therefore, detailed environmental reporting concerning carbon emissions, resource efficiency, waste management, and climate risks should be the priority of organisations that intend to improve their sustainability practices and stay transparent with their stakeholders. The study also evidences that the sustainability-driven MSMEs receive the mentioned advantages by gaining community trust, efficient use of resources, and being strengthened against market and climate changes.

Most of the enterprises significantly emphasised, in addition, the adoption of renewable energy, the use of water-efficient irrigation practices, and the implementation of waste recycling systems, which, to a large extent, illustrates the gradual transition of their traditional practices to sustainable production models. The shift to green business models signals a change in the rural business strategies of the past where the production process was more dependent on the direct exploitation of natural resources. It is also an indicator of greater cultural respect towards the environment, based on tribal beliefs of ecological balance and harmony with nature. The findings are in line with those of Pedraza, (2021), Pointed out that MSMEs play a central role in many countries' economic and environmental development. In Nema & Verma (2019) also pointed out that environmental awareness is the foundation of sustainable economic progress in the rural economy. The integration of the principles of sustainability into the activities of MSMEs represents the step towards the larger objectives of the “United Nations Sustainable Development Goals” (SDGs), specifically, Goal 12 (Responsible Consumption and Production) and Goal 13 (Climate Action).

Nevertheless, the results have also shown that not every enterprise is active in environmental community activities or has developed eco-technologies. The adoption of

advanced green technologies is usually hindered by limited financial capacity and a lack of technical training. This underlines the necessity of such programs to be backed, which are environmentally innovative MSMEs organised by the government and non-governmental organisations and provide technical assistance as well as money. A joint partnership between government, NGOs, and academia can close the gap of environmental knowledge and make women entrepreneurs able to lead the sustainable transition. In this regard, Karthi (2024) study communal women involved in the above-mentioned activities like eco-friendly agriculture, forest management, water conservation, and biodiversity preservation, while also dealing with socio-cultural and political challenges. The research addresses the influence of altered government policies, the changing environment, and other circumstances on women's environmental positions in the niche of tribal societies. Furthermore, the results reveal the connection between gender, culture, and environmental care, as well as the need for eco-friendly politics that acknowledge and empower the ongoing participation of native women in nature protection. In a way, the study is all about empowering indigenous women through their inclusion in the decision-making process not only concerning but also in the broader realm of conservation and environmental policy.

In a nutshell, the direct and indirect impacts of environmental elements on the sustainability of tribal women-led micro, small, and medium enterprises are through the modulation of the operational ethics, cultural identity, and resilience of the firms. By providing more robust institutional and financial support, the companies will be in a more favorable position to adopt eco-friendly business practices and consequently, be a major player in the sustainability agenda of the region.

5.4 Discussion of Research Question Three

RQ3: What is the role of social factors in influencing the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?

Social factors were found to have a significant, complex and changing influence on the sustainability of MSMEs by the means of community empowerment, inclusivity, gender equity and cultural preservation. According to the study, the enterprises of tribal women have a significant impact on the socio-economic development of the areas where they live. The majority of respondents stated that their companies are creating jobs for the local people and contributing to the improvement of the standard of living in general. As per Naveen, Parida, and Panda (2023) the study presented is a comprehensive analysis of the various facets involved in the empowerment of tribal women through entrepreneurial activities which eventually leads to their economic independence, social inclusion, and community development. This research is in line with the above viewpoint and reveals that the initiation of the business by the tribal women is more likely to be a vehicle for the socio-economic progress of their communities rather than just a way to increase their individual wealth.

These MSMEs are additionally the gender-inclusive leader model, a woman figure in the governing structures decision-making processes directly confront the traditional patriarchal structures. The increase of female entrepreneurs from the tribal community is not only a good thing for the economy but also a way of gender equality and social integration which leads to the tribal societies becoming more resilient and empowered. Eventually, if tribal women become businesswomen, it will be a great contribution to society, and the social capital will be improved rather than just empowerment of themselves. Such social contributions have become very important in the tribal sector, where the availability of recurrent employment and income has always been a challenge.

The entrepreneurs, through their firms, also showed their support for equal rights between the genders and the inclusion of all people in their businesses. To say that women-led MSMEs are sources of attractive and engaging activities is an understatement, as such activities become more and more participatory while at the same time the elimination of the old-time barriers that would serve as models for other tribal entrepreneurs of the next generations takes place. One can easily see the transformation of the tribal community into a power and a collective through the installation of training and development programs to them. These results align with the views of Paldon (2024), who argued that creating an inclusive environment in the workplace leads to better employee performance and higher spirits and that, at the same time, good morale and performance make a more inclusive workplace culture. Moreover, these companies are becoming agents of social cohesion and are helping to solve the problem of inequalities locally by involving the community of the socially marginalized in their workforce. Therefore, social inclusiveness becomes one of the ethical as well as organizational elements of the MSME sustainability framework.

The other strong social aspect that emerged was cultural sustainability. Participants mentioned that they took pride in upholding tribal customs and integrating them in their business operations. Culture-focused products and services not only provide the means for the local culture to be preserved but also cater to the niche audience that values authenticity. This aids in brand differentiation and motivates local entrepreneurship by the blending of culture and business. However, some businesses mentioned that they experienced challenges in balancing the traditional ways with new business requirements. In order to balance this, policy makers must create training programs that combine maintaining the culture and having the current market skills. In other words, the social side of the tribal women-run MSMEs is not only a matter of social responsibility, but a complex

developmental concept that is at the intersection of economic growth, cultural conservation, and social well-being.

Basically, the social sustainability of tribal women management-run MSMEs is far from the concept of CSR. It is an integrated developmental model that connects the economic empowerment, social justice, and cultural preservation. Through strengthening community relationships and implementing inclusive practices, such MSMEs become instrumental in the creation of vibrant local economies and socially stable societies.

5.5 Discussion of Research Question Four

RQ4: How do the governance factors influence the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?

Governance factors have been a major positive and strong influence on the sustainability of MSMEs. From the analysis, it is evident that most of the enterprises as per the respondents are compliant with government policies, and are also transparent and ethical in business. The survey results revealed that the business sector showed a high degree of adherence to government regulations, respect for moral/ethical standards, and a strong pledge to the transparency of their activities. It was reported that the organizations' efficient performance and the reduction of confusion at the management level were brought about by well-functioning internal control systems, clearly defined roles, and the existence of structures for accountability. Internal controls, a governance system of organization, and clearly defined roles are some of the factors that lead to the efficiency and accountability of an entity. These findings are consistent with those of Shelly, Sharma, and Bawa (2020), who stressed that corporate governance structures provide the means MSMEs can use to overcome regulatory challenges and gain the trust of investors. Good governance goes further than just compliance to include also strategic stability whereby small businesses can survive market uncertainties.

There is a lot of empirical evidence supporting the argument that digitalization is crucial in the modern world and among its benefits is that it has improved access to the market. Linked research points out that MSMEs that got help from the government in the form of relief packages, subsidies, or loans during the pandemic had a considerably higher chance of continuing their operation and also recovering at a faster rate. The availability of money through loans, grants, and automatic packages is one of the most vital aspects that directly influence the survival of small companies in difficult times. The research on the environmentally friendly measures taken by MSMEs like energy-efficient usage, reduction in waste, and adoption of circular economy models, indicates that their survival has become more certain and they have turned out to be more immune to the occurrence of new crises (Gunawan, Soetjipto, and Sudhartio 2023).

To put it differently, good governance in tribal women-led MSMEs is not only compliance but also the adaptability, ethical stewardship, and risk resilience that are all necessary for maintaining sustainability even during the ups and downs of the market.

Conversely, the management techniques, such as performing routine audits, having ethical norms in place, and interacting with stakeholders, are also credited with maintaining the organisation's internal integrity and reducing the likelihood of its activities being disorganized. Organisations that practised transparent reporting and stakeholder engagement received the advantages of increased community trust and the facilitation of their business activities. The results highlight the deep professionalisation of women-led MSMEs in tribal communities, which is a mix of community-centric traditional values and the management principles of the modern business world. But the study also revealed that these tribal women have limited engagement only at a minor level in the institutional and policy-level platforms, which hinders advocacy and policy influence. The absence of a shift from internal governance toward external representation and engagement in policy making

thus shows that while tribal women are progressing well in terms of internal governance, they still need to strengthen their external representation and involvement in policy formation.

In addition, governance affects other aspects like financial and social inclusivity. Open governance will attract financial resources, greater credit accessibility, and collaboration with development institutions. Governance effectiveness is directly proportional to sustainability outcomes because it ensures the ethical management of resources and facilitates constant adjustments to policy changes. According to Sanyal (2006), partnership and capacity building have become popular strategies among intermediary nongovernmental organisations (NGOs). In general, governance is the support system of sustainability that offers a strategic and ethical framework that enables long-term survival and development of tribal women-led MSMEs in Telangana.

Consequently, governance is the core of the sustainability system— it supplies a strategic, ethical, and operational framework that is instrumental for the long-term survival, growth, and social recognition of the tribal women-led MSMEs in Telangana.

5.6 Discussion of Research Question Five

RQ5: What is the effect of financial factors on the business sustainability of MSMEs run by tribal women farmer groups in Telangana, India?

Financial factors were identified as both a foundational enabler and a major constraint to the sustainability of MSMEs led by tribal women farmer groups. It has been established that financial aspects were the basis and the biggest limitation towards business sustainability of tribal women-led MSMEs. The financial literacy of respondents was fairly high, with knowledge of budgeting, financial planning, and cost control. This is a clear signal that financial literacy has yielded good results as a result of the various training programs as well as the government-initiated programs that aimed at increasing financial

literacy. Sahu et al. (2024) have argued that women entrepreneurs with higher levels of financial literacy are the right people to take investment decisions that are informed, to allocate resources efficiently and to keep up with financial discipline which is one of the essential long-term business sustainability factors. The ability of the respondents to handle their business finances has been recognised as a good indication of self-reliance and economic independence.

When women entrepreneurs are financially literate, they can cleverly use their resources, handle their cash flow, and reduce their financial risks, thus making the survival of their businesses over time viable. Knowledge of financial matters is a major factor that determines the survival of business enterprises led by women as it opens up the avenues for proper financial management and increased business resistance to challenges. One study found that women entrepreneurs who understand finance well are capable to get a loan, manage the business expenses in a proper way, and also draft a plan for the up-coming business growth, in this way making less likely their business to fail (Mayr et al. 2021). In addition, knowledge in finance allows women to overcome tough situations in finance like getting a small amount of credit and being discriminated against because of their gender by becoming more confident and strong when dealing with well-known financial institutions (Patnaik, Patnaik, and Pradhan 2024).

Among the different problems, the availability of external funding has been a continual issue. Most of the respondents have indicated that they have faced difficulties in getting loans or credit facilities, in particular, those without collateral. In the research of Chetiya (2024), the condition of limited access to credit becomes the source of obstacles that hinder female economic empowerment and limit their ability to be a source of the society's economic growth. Traditionally, Indian women have been in a disadvantaged position when it comes to accessing formal financial services. Female entrepreneurs from

the countryside and tribal areas are often subjected to various kinds of systemic hurdles such as lack of access to financial services, difficult banking procedures, and the need for securities, etc. There are various microfinance schemes and government programs but still, a large number of tribal women remain unbanked due to lack of awareness and also because of institutional inefficiencies. The gap between policy and practice is the main reason these women-led MSMEs do not get the opportunity to grow and contribute to the economy.

An additional significant point of observation relates to the self-financing and informal credit network of the respondents. Even though these means offer a temporary solution, they lack sustainability in the business in the long run. The findings indicate that the deployment of microcredit programs focusing on tribal women, simplifying loan access, and offering financial help without the need for a guarantee would therefore have a far-reaching impact on the continuation of businesses. The different kinds of enterprises such as Micro, Small and Medium Enterprises which still have a number of issues among which is the problem of structural difficulties that hinder their access to finance, is an instance of a major concern. To cite a few instances, these entities could not have enough properties to be used as collateral, they might not have or have a little credit history, besides that, they might not possess the necessary expertise to deal with the banking processes. Simply stating, the development of women-led businesses in the tribal areas of Telangana as well as their survival over time is dependent on financial empowerment of these women via institutional frameworks that are functioning properly.

In short, the ability to control one's own finances is, essentially, the major factor that tribal women-led MSMEs are able to maintain their sustainability over a long period of time. A solid partnership with well-established institutions will ensure that the trio of financial literacy, access to credit at reasonable terms, and well-targeted policy instruments

will not only put an end to the financing gap but also boost the stability of such enterprises in the market over time.

5.7 Conclusion

The study has revealed that the persistence of the tribal women farmer groups who are backed by MSMEs in Telangana is the result of a very intricate interaction with different facets of the environment including social, governance, and financial conditions. It is surprising to see the tribal women entrepreneurs keeping pace with the progressive adoption of green business practices and thus they are indicating their commitment to it by Energy-efficient consumption, waste reduction, and eco-friendly business operations. The firms have not only become the lifeline of the marginalized groups but have also contributed to the communities through their community-focused programs. They have thus gone back to the core of the sustainability concept that it should not only be accounted for in terms of economic benefits but also in terms of social and cultural resilience by transforming communities, establishing gender equality, and perpetuating the culture. To a certain extent, governance mechanisms like internal regulations, moral norms, and clarity have won back the confidence and honesty of people slowly but surely, while financial literacy has been a powerful weapon for women to make sensible choices even when they have to deal with the restrictions of the formal credit system and the lack of support from institutions. The combination of these factors points to a holistic model of sustainability that embraces ethical management, community participation, and nature conservation.

It can be inferred from the results that the eco-friendly practices have been the main features of the aforementioned tribal women-led small ventures, yet still they are in need of advanced green tech, formal financing, and policy advocacy as their challenges. The study highlights that skill training, institutional backing and community-based initiatives are the main factors of both economic and social development.

In short, the study highlights that the tribal women-led MSMEs in Telangana are no longer a mere economic activity but a development model that brings along environmental care, social inclusion, ethical governance, and financial empowerment as human rights. Thus, the study acts as a pledge to these enterprises' continuation and advancement, alongside concern for nature conservation, social inclusion, good governance, and financial empowerment, and thus, making the tribal women entrepreneurs the major drivers of sustainable rural development in India.

CHAPTER VI: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

The study looked into the different complex factors that influenced the durability of the tribal women farmer groups in Telangana, India over the period of time. Since women-led businesses constitute the main pillar of rural and tribal development, the study has analyzed the four fundamental areas of such businesses, namely, environmental, social, governance, and financial, and the way each of these aspects can be a source of sustainability of women-led enterprises. The overarching goal was to find out how these factors contribute to the continuation, resilience, and inclusiveness of Micro, Small and Medium Enterprises (MSMEs) in tribal communities over the long term.

One of the main findings was that environmental issues e.g. the efficient utilization of resources, ecological consciousness, and climate adaptability are the key factors that influence the functioning of green businesses. Tribal MSMEs adopting green practices and green strategies were found to have better long-term performance of their operations. Besides, these actions served to reduce the risk of environmental uncertainties, and at the same time, they increased the productivity and favor of the community.

The social side of the story revealed that the long-term survival of the earth depends on these three things: empowerment, inclusivity, and respect for the culture. The participation of tribal women in the leadership and decision making thus created among them a feeling of ownership and identification with the group, which in turn, business continuity was substantially deepened. Moreover, social welfare and community encouragement were equally important as MSMEs that were embedded in the supportive communities had more opportunities to thrive, expand their markets, and retain their workforce.

Governance, compliance with local policies, support from the institution, and transparent administrative frameworks were the main factors influence of these. The MSMEs which operated under well governance systems were the most efficient in allocation of resources, they were responsible in financial management, and also they were more open to receive the external assistance in the form of government and non-governmental programs.

In addition, money matters such as being able to get small loans, credit, and knowledge about money were very important for the continuation of the growth of MSMEs. The capacity of tribal women to understand financial systems, use credit, and prepare budgets had a very strong influence on the scaling and the resilience of their enterprises. Lack of financial literacy and limited access to formal financing have been identified as major barriers, thus highlighting that local community has a potential to become a crucial area for policy interventions.

The research has mostly shown that the long-term success of MSMEs run by indigenous women is a complex problem that is affected by many different aspects, including ecological, social, institutional, and financial ones. The present research is an extra point in the wide range of sustainability studies for MSMEs, which has been increasingly supported by recent publications. Lastly, it shows the real, living, breathing processes of the tribal women's business works in India as against the changing socio-economic reality.

6.2 Implications

In this research, you will find, among other things, very significant pieces of information regarding green business practices, which will act as a pulling together manual for the tribal women-led businesses integrating the environment, social, governance, and financial (ESG + F) standards. The author through modern rewriting along with co-ed

concepts and native wisdom, and entrepreneurial toughness, takes the business sustainability to the point where it becomes the main, if not the only, small goal. Such a huge-scale approach is already determining the future of the whole model-creation process, which will easily explain the trends of cultural norms and the rise of environmental sensitivity as the consequences of adopting green practices in poor neighbourhoods. The study offers the very notion of sustainable entrepreneurship frameworks that not only recognize the interdependence of cultural identity, environmental consciousness, and ethical governance but also see them as the major pillars that keep businesses alive in native communities.

At the management layer, the research advises that small and medium enterprises use the incorporation of sustainability aspects into their daily business operations as their local contribution, instead of perceiving it as a change imposed on them from the outside. Consequently, managers and politicians ought to create and maintain programs that provide the opportunity for participants to acquire new competences in subjects such as financial literacy, environmental sustainability, and institutional governance. The creation of a few complete and participatory training modules, micro-financing schemes, and well-defined methods of administering the government might suffice to assist indigenous women in expanding their businesses. Besides, the construction of a robust network among local governments, NGOs, and microfinance institutions can facilitate the smooth functioning of markets together and the sharing of resources. Therefore, this study is a crucial step towards the creation of targeted interventions that would contribute to the survival of businesses and the increase of tribal women's social power as entrepreneurs in India.

In order to manage the impacts of such phenomena, a comprehensive policy framework is very much required, which would not only safeguard the economy's long-term viability but also promote social development. Accordingly, the entrepreneurial

ecosystems of tribal women together with environmental consciousness, financial literacy, and ethical governance would result in the formation of MSMEs that are socially inclusive and economically viable at the same time. However, these MSMEs can serve as the vehicle for rural sustainable development and gender-equal economic growth, thus benefiting India in return.

6.3 Recommendations for Future Research

The results of the study were such as to suggest to recommend the next steps for further research and practical application to enhance the eco-friendly practices of the rural MSMEs run by women groups of tribes in India:

Future Research Recommendation:

- **Regional Comparative Studies:** Future researchers, by extending their investigation to larger tribal areas, could very well show the sustainability and socio-economics problems in practice that Indian tribal regions reveal as outlined by them.
- **Longitudinal Analysis:** Engage in a thorough exploration having a long duration that will aid in discerning and building up the new traits of the environment, money and social issues, and their joint effect on a company's sustainability.
- **Qualitative Exploration:** By means of qualitative research methods, such as interviews and case studies, qualitative research methods will be applied to obtain information about native women's personal experiences, cultural views and problems related to business world.
- **Inclusion of Technological Factors:** he examination of e-commerce, mobile banking, and digital literacy among the technological advancements and

platforms reserved for tribal MSME will lead to an understanding of the extent to which these technologies support sustainability.

- **Behavioral and Psychological Dimensions:** The main components of motivation, leadership and innovation capacity can be integrated into future research to create a favourable perspective towards sustainable entrepreneurship.

Future Research Recommendation in Managerial Practice:

- **Capacity-Building Programs:** It is essential that government agencies and non-governmental organizations provide training programs regarding money handling, technology usage, and resource utilization that benefit the environment.
- **Better Access to Finance:** Offer specific microfinance programs and credit services to indigenous women who want to start their own businesses.
- **Institutional Support:** To improve the implementation of policies and transparency, local governments, self-help groups, and cooperatives should work together.
- **Market Linkage Development:** Enhance market accessibility to tribal MSMEs via online systems, cooperatives and government-sponsored trade fairs.
- **Environmental and Social Integration:** MSMEs should be promoted to be environmentally and socially friendly and practical in their production, ensuring long-term social and ecological sustainability.

6.4 Conclusion

The aim of the present research was to understand how "Micro, Small and Medium Enterprises" (MSMEs) operated by tribal women farmer groups in India can maintain their

sustainability over time. The outcome indicates that such a venture must be conceived as a single business model that spans four dimensions - environmental, social, governance, and financial - and the interdependence of these factors forms the foundation for its endurance over time. The individual contribution of each dimension to the eventual sustainability of these enterprises is different, and it is the total effect that determines the level of overall business success. The environment, the efficient and frugal use of natural resources, and the adjustment to the changing climate are the three main factors that sustain the existence of where the operations take place. Furthermore, such factors that are closely interlinked and delicately integrated form a social fabric that is responsible for the management practices which in turn depend on the concepts of ownership, cooperation, and trust thus resulting in the company's socio-economic success and long-term stability being joined together.

Governance attributes like transparency, institutional backing, and compliance with the rules were the primary reasons for the emergence of the notions of accountability and efficiency. Not only have tribal women supported their businesses, but also they've increased them through acquiring finance knowledge and becoming creditworthy. The mentioned results show that sustainability is not only a socio-economic program; it is a socio-cultural movement that comes from empowerment and self-reliance.

The research provides a strong basis both in theory and practice by giving a thorough discussion on sustainable entrepreneurship in the low-income and disadvantaged sectors. Demanding the ground for policy instruments and funding supports and community programmes, but driven by local inhabitants along with the women entrepreneurs in mind. There is no doubt that promoting green technology-based tribes and eco-friendly MSMEs among women is one way to achieve gender parity in the corporate

world and is also very critical for India to fulfil her goals of social justice, economic empowerment, and environmental sustainability in rural and tribal areas.

REFERENCES

- Abdouli, Mohamed, and Sami Hammami. 2017. "The Impact of FDI Inflows and Environmental Quality on Economic Growth: An Empirical Study for the MENA Countries." *Journal of the Knowledge Economy*. doi: 10.1007/s13132-015-0323-y.
- Adeniran, Adetayo Olaniyi. 2019. "Application of Likert Scale Type and Cronbach's Alpha Analysis in an Airport Perception Study." 2(4):1–5.
- Afdal, Zul, Menik Kurnia Siwi, Tri Kurniawati, and Marwan. 2021. "MSMEs Business Sustainability: A Literature Review." *Proceedings of the Seventh Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship* 192(Piceeba):317–22.
- Afsar, Rita. 2020. "Bringing Women Entrepreneurs In Policy Focus For SME Development In Bangladesh." *Pakistan Journal of Gender Studies* 2. doi: 10.46568/pjgs.v2i1.359.
- Agarwal, Bina. 2018. "Can Group Farms Outperform Individual Family Farms? Empirical Insights from India." *World Development*. doi: 10.1016/j.worlddev.2018.03.010.
- Agarwal, Mohini. 2016. "Entrepreneurs in India." 4(1):4–6.
- Agarwal, Sucheta, and Usha Lenka. 2018. "Why Research Needed in Women Entrepreneurship in India: A Viewpoint." *International Journal of Social Economics* 45. doi: 10.1108/IJSE-07-2017-0298.
- Agarwal, Vernika, K. Mathiyazhagan, Snigdha Malhotra, Busayamas Pimpunchat, 2023. "Building resilience for sustainability of MSMEs post COVID-19 outbreak: An Indian handicraft industry outlook. " *Socio-Economic Planning Sciences*, Volume 85,
- Agarwal Vidhi. 2003. "From Tradition to Transformation: ESG Initiatives in Indian Corporate Landscape." *Chartered Secretary* (October):81–87.
- Agarwala, Varuna, Sudarshan Maity, and Tarak Nath Sahu. 2022. "Female

Entrepreneurship, Employability and Empowerment: Impact of The Mudra Loan Scheme.” *Journal of Developmental Entrepreneurship* 27(01). doi: 10.1142/S1084946722500054.

Agbakwuru, Victoria, Obinna Barnabas Onyenahazi, Bernard Owusu Antwi, and Kabir Oyewale. 2024. “The Impact of Environmental, Social, and Governance (ESG) Reporting on Corporate Financial Performance.” *International Journal of Research Publication and Reviews* 5(9):3629–44. doi: 10.55248/gengpi.5.0924.2710.

Agrawal, Anirudh, and Prajakta Khare. 2019. “Social Entrepreneurship in India: Models and Application.” in *Social Enterprise in Asia: Theory, Models and Practice*.

Agustian, Kresnawidiansyah, Endang Saefuddin Mubarak, Agustian Zen, Wiwin Wiwin, and Aulia Januar Malik. 2023. “The Impact of Digital Transformation on Business Models and Competitive Advantage.” *Technology and Society Perspectives (TACIT)* 1(2):79–93. doi: 10.61100/tacit.v1i2.55.

Agyei, Samuel Kwaku. 2018. “Culture, Financial Literacy, and SME Performance in Ghana” edited by C. Nsiah. *Cogent Economics & Finance* 6(1):1463813. doi: 10.1080/23322039.2018.1463813.

Ahmad, Saleem, Noman Arshed, Sultan Salem, Yousaf Ali Khan, Kamran Hameed, and Sanda Kam. 2022. “Role of Globalization Defining the Incidence of Entrepreneurship.” *PLoS ONE*. doi: 10.1371/journal.pone.0265757.

Ahmad, Syed Zamberi, and Afida Mastura Muhammad Arif. 2015. “Strengthening Access to Finance for Women-Owned SMEs in Developing Countries.” *Equality, Diversity and Inclusion: An International Journal* 34(7):634–39. doi: 10.1108/EDI-11-2012-0104.

Aind, Thomas. 2013. “Economic Empowerment of Tribal Women in Jharkhand – An Analysis.” V(I):2013.

- Akehurst, Gary, and Enrique Simarro. 2012. "Women Entrepreneurship in Small Service Firms: Motivations, Barriers and Performance." *Service Industries Journal - SERV IND J* 32:1–17. doi: 10.1080/02642069.2012.677834.
- Akhter, Jesmin, and Kun Cheng. 2020. "Sustainable Empowerment Initiatives among Rural Women through Microcredit Borrowings in Bangladesh." *Sustainability (Switzerland)*. doi: 10.3390/su12062275.
- Alberti, F.G., Ferrario, S. and Pizzurno, E. 2018. "Resilience: resources and strategies of SMEs in a new theoretical framework", *International Journal of Learning and Intellectual Capital*, Vol. 15, No. 2, pp.165–188.
- Al-Haddad, Lara, Muhammad Sial, Imdad Ali, Rahmat Alam, Khuong Nguyen Vinh, and Thai Khanh. 2019. "The Role of Small and Medium Enterprises (SMEs) in Employment Generation and Economic Growth: A Study of Marble Industry in Emerging Economy." *International Journal of Financial Research* 10:174. doi: 10.5430/ijfr.v10n6p174.
- Aldowaish, Alaa, Jiro Kokuryo, Othman Almazyad, and Chin Goi. 2022. "Environmental, Social, and Governance Integration into the Business Model: Literature Review and Research Agenda." *Sustainability* 14:20. doi: 10.3390/su14052959.
- Alvi, Muzna, Prapti Barooah, Shweta Gupta, and Smriti Saini. 2021. "Women's Access to Agriculture Extension amidst COVID-19: Insights from Gujarat, India and Dang, Nepal." *Agricultural Systems* 188:103035. doi: <https://doi.org/10.1016/j.agry.2020.103035>.
- Ana, Tur-Porcar, Norat Roig-Tierno, and Anna Llorca Mestre. 2018. "Factors Affecting Entrepreneurship and Business Sustainability." *Sustainability* 10(2):452. doi: 10.3390/su10020452.
- Anandhi. 2022. "A Study on Challenges and Problems Faced by Women Entrepreneurs."

Technoarete Journal on Accounting and Finance 2(4):31–32. doi: 10.36647/TJAF/02.04.A004.

Baburao, Keloth, and Teelavath Mangilal. 2018. “Gender Development and the Status of Tribal Women : A Study Of.” 05(04):1263–76.

Bakar, Muhammad Fauzan Abu, Majharul Talukder, Ali Quazi, and Irfanuzzaman Khan. 2020. “Adoption of Sustainable Technology in the Malaysian SMEs Sector: Does the Role of Government Matter?” *Information* 11(4):215. doi: 10.3390/info11040215.

Bakker, Frank. 2005. “A Bibliometric Analysis of 30 Years of Research and Theory on Corporate Social Responsibility and Corporate Social Performance.” *Business & Society* 44:283–317. doi: 10.1177/0007650305278086.

Bakos, Joseph, Michele Siu, Adalberto Orengo, and Narges Kasiri. 2020. “An Analysis of Environmental Sustainability in Small & Medium-sized Enterprises: Patterns and Trends.” *Business Strategy and the Environment* 29. doi: 10.1002/bse.2433.

Balaria, Dr. Felipe E., Dr. Marivic N. Villegas, Jorivel N. Villegas, Kristine Joy P. Balite, and Andrea C. Ramos. 2020. “Awareness of Micro, Small, and Medium Enterprises on the Salient Features of Magna Carta for Msmes, Barangay Micro Business Enterprises Act, and Go Negosyo Act in the Philippines.” *International Journal of Advanced Engineering, Management and Science*. doi: 10.22161/ijaems.66.3.

Bansal, Sanchita, Tapan Sarker, Anshita Yadav, Isha Garg, Mansi Gupta, and Harsha Sarvaiya. 2024. “Indigenous Communities and Sustainable Development: A Review and Research Agenda.” *Global Business and Organizational Excellence* 43(4):65–87. doi: 10.1002/joe.22237.

Barhate, G. H., and Madhavi S. Patgaonkar. 2012. “Rural Women Entrepreneurs in the Informal Sector of India.” *The IUP Journal of Entrepreneurship Development*.

Basu, S. 2000. “Dimensions of Tribal Health in India.” 23:61–70.

- Bayraktar, Murat, and Nese Algan. 2019. "The Importance Of SMEs On World Economies." Pp. 56–61 in.
- Behera, Hruday Ballav, Pranabesh Ghosh, Jyotirmoy Koley, and Sanjukta Chakraborty. 2024. "Rural Marketing, Self-Help Groups and Women Entrepreneurships in Birbhum District, West Bengal, India: A Brief Review." *International Journal of Research in Marketing Management and Sales* 6(2):73–77. doi: 10.33545/26633329.2024.v6.i2a.178.
- Bhat, Suhail Ahmad, and Shambhavi Singh. 2020. "Role of MSMEs in Social and Economic Development in India." *UGC Care Journal* 40(March 2020):01–11.
- Bhukya, Krishna Nayak. 2021. "Empowerment of Rural Tribal Women: A Path for Entrepreneurship Development." 10(2250):01–04. doi: 10.36106/paripex.
- Bisogno, Marco, Beatriz Cuadrado-Ballesteros, and Isabel Sánchez. 2017. "Financial Sustainability in Local Governments: Definition, Measurement and Determinants." Pp. 57–83 in *Financial Sustainability in Public Administration: Exploring the Concept of Financial Health*.
- Biswas, Abhijeet. 2015. "Opportunities and Constraints for Indian MSMEs." *International Journal of Research* 2(1).
- Biswas, P. K. 1993. "Forest, People and Livelihoods: The Need for Participatory Management." *Fao* 6.
- Boakye, Danquah, Ishmael Tingbani, Gabriel sam Ahinful, Isaac Damoah, and Venancio Taurigana. 2020. "Sustainable Environmental Practices and Financial Performance: Evidence from Listed Small and Medium-sized Enterprise in the United Kingdom." *Business Strategy and the Environment* 29. doi: 10.1002/bse.2522.
- Botzen, W. J. Woute., Olivier Deschenes, and Mark Sanders. 2019. "The Economic Impacts of Natural Disasters: A Review of Models and Empirical Studies." *Review of*

Environmental Economics and Policy.

- Braun, Ernest, and David Wield. 1994. "Regulation as a Means for the Social Control of Technology." *Technology Analysis & Strategic Management* 6(3):259–72. doi: 10.1080/09537329408524171.
- Braungardt, Sibylle, Rainer Elsland, and Wolfgang Eichhammer. 2016. "The Environmental Impact of Eco-Innovations: The Case of EU Residential Electricity Use." *Environmental Economics and Policy Studies*. doi: 10.1007/s10018-015-0129-y.
- Brush, Candida, Patricia G. Greene, Lakshmi Balachandra, and Amy E. Davis. 2014. *Women Entrepreneurs 2014: Bridging the Gender Gap in Venture Capital*.
- Cai, Aixin, Shiyong Zheng, Liang Hua Cai, Hongmei Yang, and Ubaldo Comite. 2021. "How Does Green Technology Innovation Affect Carbon Emissions? A Spatial Econometric Analysis of China's Provincial Panel Data." *Frontiers in Environmental Science*. doi: 10.3389/fenvs.2021.813811.
- Cantele, Silvia, and Alessandro Zardini. 2018. "Is Sustainability a Competitive Advantage for Small Businesses? An Empirical Analysis of Possible Mediators in the Sustainability–Financial Performance Relationship." *Journal of Cleaner Production* 182:166–76. doi: 10.1016/j.jclepro.2018.02.016.
- Cappucci, Michael. 2017. "The ESG Integration Paradox." *SSRN Electronic Journal*. doi: 10.2139/ssrn.2983227.
- Castes, Scheduled, and Scheduled Tribes. 2009. *Critical Issues in Tribal Development*.
- Čepel, Martin. 2019. "Social and Cultural Factors and Their Impact on the Quality of Business Environment in the SME Segment." *International Journal of Entrepreneurial Knowledge*. doi: 10.2478/ijek-2019-0005.
- Chakraborty, Mainak. 2024. "MSMEs in India: Growth and Challenges." *International*

Journal of Multidisciplinary Trends 6(3):16–20. doi: 10.22271/multi.2024.v6.i3a.388.

Chatterjee, R., AR Choudhury, and A. Bhattacharjee. 2023. “Breaking the Gender Bias in MSME Sector: A Step Towards Social Inclusion of Women Entrepreneurs in Tripura.” *Brainwave: A Multidisciplinary Journal* 4(1):320–34.

Chaturvedi, Ankita, and Ms Pooja Meena. 2021. “Opportunities in Tribal Entrepreneurship & Msmes.” *Wesleyan Journal of Research* 14(09).

Chen, Wanyi, Yuchuan Xie, and Kang He. 2024. “Environmental, Social, and Governance Performance and Corporate Innovation Novelty.” *International Journal of Innovation Studies* 8(2):109–31. doi: <https://doi.org/10.1016/j.ijis.2024.01.003>.

Chetiya, Anuradha Rajkonwar. 2024. “FINANCIAL INCLUSION OF WOMEN: BARRIERS, CHALLENGES, AND POLICY INTERVENTIONS IN INDIA.” *International Journal of Advanced Research* 12(10):160–68. doi: 10.21474/IJAR01/19630.

Chhetri, Ajay. 2024. “Sustainable Rural Renaissance: Fostering Women’s Empowerment through Organic Agro-Tourism.” *Current Agriculture Research Journal* 12(2):973–87. doi: 10.12944/CARJ.12.2.38.

Chien, Fengsheng. 2022. “The Role of Corporate Governance and Environmental and Social Responsibilities on the Achievement of Sustainable Development Goals in Malaysian Logistic Companies.” *Economic Research-Ekonomska Istraživanja* 36:1–21. doi: 10.1080/1331677X.2022.2090407.

Chinmayee, Panda, and Riya Mariam Varghese. 2022. “Evolution of Women-Led MSMEs and Challenges Faced by Them.” *International Journal of Policy Science and Law* 2(2):3506–45.

Chironga, Mutsa, Jacob Dahl, Tony Goland, Gary Pinshaw, and Marnus Sonnekus. 2012.

- “Micro-, Small and Medium-Sized Enterprises in Emerging Markets: How Banks Can Grasp a \$350 Billion Opportunity.” *Mckinsey* 1–58.
- Dana, Leo-Paul, Hamid Etemad, and Richard Wright. 2001. “The Global Reach of Symbiotic Networks.” *Journal of Euromarketing* 9:1–16. doi: 10.1300/J037v09n02_01.
- Das, Maitreyee, K. Rangarajan, and Gautam Dutta. 2020. “Corporate Sustainability in SMEs: An Asian Perspective.” *Journal of Asia Business Studies* 14(1):109–38. doi: 10.1108/JABS-10-2017-0176.
- Das, Malika. 2000. “Women Entrepreneurs from India: Problems, Motivations and Success Factors.” *Journal of Small Business & Entrepreneurship* 15:67–81. doi: 10.1080/08276331.2000.10593294.
- Datta, Punita Bhatt, and Robert Gailey. 2012. “Empowering Women Through Social Entrepreneurship: Case Study of a Women’s Cooperative in India.” *Entrepreneurship: Theory and Practice*. doi: 10.1111/j.1540-6520.2012.00505.x.
- De, Nabanita, and Tapas Mondal. 2018. “Micro , Small & Medium Enterprises (MSMEs) and Potential Women Entrepreneurs for Inclusive Growth in India.” *International Journal of Research in Management, Economics and Commerce*.
- Deb, Rajat, and Devi Baruah. 2022. “Working Capital Financing for MSMEs in the Pandemic Era: Challenges and Opportunities.” *SEDME (Small Enterprises Development, Management & Extension Journal): A Worldwide Window on MSME Studies* 49:097084642210972. doi: 10.1177/09708464221097224.
- Deen, S. Jailap. 2020. “An Analysis of Growth of Msmes in India and Their Contribution In Employment and GDP of The Country.” 65.
- Deng, Jinqian, Huiling Chi, and Tiantian Zhang. 2024. “Effects of Entrepreneurial Activities on Rural Revitalization: Based on Dissipative Structure Theory.”

Agriculture 14(9):1474. doi: 10.3390/agriculture14091474.

- Desai, Gayatri, Ankit Anand, Dhiren Modi, Shobha Shah, Kalpana Shah, Ajay Shah, Shrey Desai, and Pankaj Shah. 2017. "Rates, Indications, and Outcomes of Caesarean Section Deliveries: A Comparison of Tribal and Non-Tribal Women in Gujarat, India." *PLoS ONE*. doi: 10.1371/journal.pone.0189260.
- Dhal, Sangita. 2018. "Situating Tribal Women in Gender Discourse: A Study of the Socio-Economic Roots of Gender Violence in Odisha." *Indian Journal of Public Administration* 64(1):87–102. doi: 10.1177/0019556117735459.
- Dhamija, Gaurav, Punarjit Roychowdhury, and Binay Shankar. 2023. "Urbanization and Women Empowerment: Evidence from India." (1323).
- Doshi, Piyush, Rahul Ahluwalia, Ronak Pol, Akshita Singh, and Nitya Srinath. 2024. "Boosting Exports From MSMEs." 03:03–75.
- Dungdung, Kiran, and B. K. Pattanaik. 2020. "Tribal Development Disparities in Odisha: An Empirical Analysis." *South Asia Research* 40(1):94–110. doi: 10.1177/0262728019894129.
- Fabiyi. E.F, Danladi B.B, Kemi Eunice Akande, and Yonis Salih Mahmood. 2007. "Role of Women in Agricultural Development and Their Constraints: A Case Study of Biliri Local Government Area, Gombe State, Nigeria." *Pakistan Journal of Nutrition* 6. doi: 10.3923/pjn.2007.676.680.
- Eccles, Robert G., Ioannis Ioannou, and George Serafeim. 2014. "The Impact of Corporate Sustainability on Organizational Processes and Performance." *Management Science*. doi: 10.1287/mnsc.2014.1984.
- Edman, Fanny Lange, and Liisa Punkari. 2020. "The Role of Female Entrepreneurs in a Changing Society-Investigating a Business Field That Has Experienced Rapid Change during the Past Decades."

- Efthymiou, Leonidas, Ambika Kulshrestha, and Sandeep Kulshrestha. 2023. "A Study on Sustainability and ESG in the Service Sector in India: Benefits, Challenges, and Future Implications." *Administrative Sciences* 13(7):165. doi: 10.3390/admsci13070165.
- Emon, Md Mehedi Hasan, and Tahsina Khan. 2023. "The Impact of Cultural Norms on Sustainable Entrepreneurship Practices in SMEs of Bangladesh." *Indonesian Journal of Innovation and Applied Sciences (IJIAS)*. doi: 10.47540/ijias.v3i3.962.
- Engert, Sabrina, and Rupert J. Baumgartner. 2016. "Corporate Sustainability Strategy - Bridging the Gap between Formulation and Implementation." *Journal of Cleaner Production*. doi: 10.1016/j.jclepro.2015.11.094.
- Eswaran, Mare, R. Jansirani, Murugan Asokhan, K. Mani, and M. R. Duraisamy. 2017. "Participation of Tribal Women in the Developmental Programmes for Their Livelihood Security." *International Journal of Current Microbiology and Applied Sciences* 6(5):2181–85. doi: 10.20546/ijcmas.2017.605.245.
- Eyraud, Luc, Benedict Clements, Abdoul Wane, 2013. "Green investment: Trends and determinants, Energy Policy", Volume 60, Pages 852-865
- Falle, Susanna, Romana Rauter, Sabrina Engert, and Rupert Baumgartner. 2016. "Sustainability Management with the Sustainability Balanced Scorecard in SMEs: Findings from an Austrian Case Study." *Sustainability* 8(6):545. doi: 10.3390/su8060545.
- Fansuri, Moh. Hamzah. 2023. "Rational Choice Practices for Village Women as MSMEs in Kediri Regency in Improving the Family Economy." *Sodality: Jurnal Sosiologi Pedesaan*. doi: 10.22500/11202345522.
- Flaminiano, John Paul, Jamil Paolo Francisco, and Christopher Ed Caboverde. 2021. "Road to Recovery and Resilience for Philippine MSMEs During the COVID-19

- Pandemic.” *SSRN Electronic Journal*. doi: 10.2139/ssrn.3821248.
- Freeman, R. Edward Edward, and John McVea. 2005. “A Stakeholder Approach to Strategic Management.” *SSRN Electronic Journal*. doi: 10.2139/ssrn.263511.
- Friede, Gunnar. 2019. “Why Don’t We See More Action? A Metasynthesis of the Investor Impediments to Integrate Environmental, Social, and Governance Factors.” *Business Strategy and the Environment* 28. doi: 10.1002/bse.2346.
- Friedman, Andrew, Samantha Miles, and Cameron Adams. 2000. “Small and Medium-Sized Enterprises and the Environment: Evaluation of a Specific Initiative Aimed at All Small and Medium-Sized Enterprises.” *Journal of Small Business and Enterprise Development* 7:325–42. doi: 10.1108/EUM00000000006849.
- Gade, Surendar. 2018a. “MSMEs’ Role in Economic Growth-a Study on India’s Perspective.” *International Journal of Pure and Applied Mathematics*.
- Gade, Surendar. 2018b. “MSMEs’ Role in Economic Growth -a Study on India’s Perspective.” *International Journal of Pure and Applied Mathematics* 118:1727–42.
- Giudice, Manlio Del, Zaheer Khan, Muthu De Silva, Veronica Scuotto, Francesco Caputo, and Elias Carayannis. 2017. “The Microlevel Actions Undertaken by Owner-managers in Improving the Sustainability Practices of Cultural and Creative Small and Medium Enterprises: A United Kingdom–Italy Comparison.” *Journal of Organizational Behavior* 38(9):1396–1414. doi: 10.1002/job.2237.
- Gong, Mengfeng, Yuan Gao, Lenny Koh, Charles Sutcliffe, and John Cullen. 2019. “The Role of Customer Awareness in Promoting Firm Sustainability and Sustainable Supply Chain Management.” *International Journal of Production Economics* 217:88–96. doi: <https://doi.org/10.1016/j.ijpe.2019.01.033>.
- Gufron, Moh, and Wahyu Nengsih. 2023. “Empowering Women Through Micro, Small and Medium Enterprises (MSMEs) to Help The Family Economy in Pisangan, East

- Ciputat.” *PANCASONA* 2(2):415–28. doi: 10.36456/pancasona.v2i2.7577.
- Gunawan, Michael, Budi Soetjipto, and Lily Sudhartio. 2023. “How to Link Organizational Resilience to Transformational Entrepreneurship Behavior as Theoretical Framework Gap - A Systematic Literature Review.” *F1000Research* 12:761. doi: 10.12688/f1000research.133459.1.
- Gunwal, Isha, and Payal Mago. 2019. “Role of Women in Environment Conservation.” *SSRN Electronic Journal*. doi: 10.2139/ssrn.3368066.
- Gupta, Rashmi. 2020. “Small Scale Industries and Tribal Women of Jharkhand: A Sociological Analysis.” *East African Scholars Journal of Education, Humanities and Literature* 3(12):548–54. doi: 10.36349/easjehl.2020.v03i12.001.
- Haddad, Rafa Kahlifah. 2013. “A Critical Analysis of the Experiences of Female Business Owners in the Development and Management of Tourism-Related Micro and Small Handicraft Businesses in an Islamic Society:The Hashemite Kingdom of Jordan.” (March).
- Harahap, Muhammad Ade Kurnia, Sutrisn, Itot Bian Raharjo, Rini Novianti, and Abu Muna Almaududi AUSA. 2021. “The Important Role of MSMEs in Improving The Economy in Ramadan.” *South East Asia Journal of Contemporary Business, Economics and Law* 24(6):52–59.
- Hazarika, Bhabesh, and Kishor Goswami. 2018. “Micro-Entrepreneurship Development in the Handloom Industry.” *International Journal of Rural Management* 14(1):22–38. doi: 10.1177/0973005218754437.
- Hemalatha, M., S. Tajvar Furzana, and S. Senthil Nayaki. 2014. “Application of Datamining for Estimating the Marketing Success of the Women Entrepreneurs.” *Journal of Contemporary Research in Management* 9(2):45–55.
- Hemasrikumar, D. R., Karunambikai, and M. S. Anju. 2018. “The Impact of

- Entrepreneurship for The Empowerment of Tribal Women-with Special Reference To Toda Women in Nilgiri District.” *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)* 23(1):46. doi: 10.9790/0837-2301014651.
- Hendrawan, Satya, Afdhal Chatra, Nurul Iman, Soemarno Hidayatullah, and Degdo Suprayitno. 2024. “Digital Transformation in MSMEs: Challenges and Opportunities in Technology Management.” *Jurnal Informasi Dan Teknologi* 141–49. doi: 10.60083/jidt.v6i2.551.
- Hörisch, Jacob, Matthew P. Johnson, and Stefan Schaltegger. 2015. “Implementation of Sustainability Management and Company Size: A Knowledge-Based View.” *Business Strategy and the Environment* 24(8):765–79. doi: 10.1002/bse.1844.
- Hossain, Syed, Ahsan Akbar, Shehnaz Tehseen, Petra Poulová, Syed Arslan Haider, Faisal Sheraz, and Fakhra Yasmin. 2021. “Evaluation of Entrepreneurs Success: A Special Reference to Women Entrepreneurs in Bangladesh.” *Academy of Entrepreneurship Journal* 27:2021.
- Hosseini, Gholamhossein, and Ali Ramezani. 2016. “Factors Influencing Sustainable Entrepreneurship in Small and Medium-Sized Enterprises in Iran: A Case Study of Food Industry.” *Sustainability (Switzerland)* 8(10). doi: 10.3390/su8101010.
- Iipinge, Selma Mupeniwo, and Ritu Narang. 2022. “Growth and Development of Indigenous Entrepreneurship in India: A Contextualised Institutional Support Model.” *Journal Social Science* 70(3):21–32. doi: 10.31901/24566756.2022/70.1-3.2289.
- Imasiku, Katundu, Valerie Thomas, and Etienne Ntagwirumugara. 2019. “Unraveling Green Information Technology Systems as a Global Greenhouse Gas Emission Game-Changer.” *Administrative Sciences*. doi: 10.3390/admsci9020043.
- International, CUTS. 2020. *Enhancing the Capacity of Women Traders in the Borders of Northeast India*.

- Isensee, Carmen, Frank Teuteberg, Kai-Michael Griesse, and Corrado Topi. 2020. "The Relationship between Organizational Culture, Sustainability, and Digitalization in SMEs: A Systematic Review." *Journal of Cleaner Production* 275:122944. doi: 10.1016/j.jclepro.2020.122944.
- Iyer, L., T. Khanna, and A. Varshney. 2013. "Caste and Entrepreneurship in India." *Economic and Political Weekly* 48:52–60.
- Jaiswal, Jagriti. 2014. "Environmental Impact on SMEs Growth and Sustainability-Challenges and Opportunities." *Journal of Studies in Dynamics and Change (JSDC)* 1(2):101–12.
- Jana, Sila, and Dipak K. Midya. 2024. "Socio-Cultural Factors Influencing Women Empowerment: A Cross-Sectional Study Among an Ex-Criminal Tribe in West Bengal, India." *The Oriental Anthropologist: A Bi-Annual International Journal of the Science of Man* 24(2):303–21. doi: 10.1177/0972558X241276763.
- Mohanty, Jeeban Jyoti. 2018. "A Study on Micro, Small and Medium Enterprises (MSMEs) in India: Status and Its Performance." *International Journal of Research and Scientific Innovation (IJRSI)*.
- Jegadeeswari, S., J. Sudarvel, and R. Velmurugan. 2020. "Factors Influencing Sustainability of Micro Small Medium Enterprise Entrepreneurs." *International Journal of Scientific and Technology Research*.
- Journeault, Marc, Alexandre Perron, and Laurie Vallières. 2021. "The Collaborative Roles of Stakeholders in Supporting the Adoption of Sustainability in SMEs." *Journal of Environmental Management*. doi: 10.1016/j.jenvman.2021.112349.
- Kabeer, Naila. 2012. "Women ' s Economic Empowerment and Inclusive Growth : Labour Markets and Enterprise Development." 1–65.
- Kabiraj, Rahul. 2018. "Globalization and Its Impact on Tribal Society in India." 2(1):15–

27.

- Kadaba, Mahesh K. ., P. S. Aithal, and Sharma K. R. S. 2022. "Impact of Sustainable Finance on MSMEs and Other Companies to Promote Green Growth and Sustainable Development." *International Journal of Applied Engineering and Management Letters*. doi: 10.47992/ijaeml.2581.7000.0120.
- Kamar, Karnawi, Novalien Carolina Lewaherilla, Abu Muna, Almaududi Ausat, Kurweni Ukar, and Silvy Sondari Gadzali. 2022. "The Influence of Information Technology and Human Resource Management Capabilities on SMEs Performance." *International Journal Of Artificial Intelegence Research*.
- Kapur, Radhika. 2019. Gender Inequality in Education. https://www.researchgate.net/publication/334162862_Gender_Inequality_in_Education
- Karthi, Harish. 2024. "Exploring the Role of Tribal Women in Environmental Sustainability and Conservation."
- Katiki, Srikar, Asokhan M, Karthikeyan C, and Patil S G. 2021. "Constraints Perceived and Suggestions Offered by the Members of Tribal Farmer Producer Groups (FPGs)." *Madras Agricultural Journal* 108(Special). doi: 10.29321/MAJ.10.000356.
- Kaur., Harvinder. 2005. "Socio-Economic Status of Women and Fertility." 6(1):695–700.
- Kaur, Gurneet. 2017. "Economic Reforms and Micro, Small and Medium Enterprises." *International Journal of Research -GRANTHAALAYAH*. doi: 10.29121/granthaalayah.v5.i5.2017.1875.
- Kaur, Lavjit, and Aman Kaur. 2024. "Problems of Women Entrepreneurs in India: A Review of Literature." *International Journal of Agriculture Extension and Social Development* 7:193–204. doi: 10.33545/26180723.2024.v7.i6c.690.
- Kennedy, Christina M., Brandie Fariss, James R. Oakleaf, Stephen T. Garnett, Álvaro Fernández-Llamazares, Julia E. Fa, Sharon Baruch-Mordo, and Joseph Kiesecker.

2023. "Indigenous Peoples' Lands Are Threatened by Industrial Development; Conversion Risk Assessment Reveals Need to Support Indigenous Stewardship." *One Earth* 6(8):1032–49. doi: <https://doi.org/10.1016/j.oneear.2023.07.006>.
- Baker, Kent, H., Satish Kumar, and Purnima Rao. 2020. "Financing Preferences and Practices of Indian SMEs." *Global Finance Journal* 43:100388. doi: <https://doi.org/10.1016/j.gfj.2017.10.003>.
- Khan, Javed G., and R. S. Dalu. 2015. "Role of Small & Medium Enterprises in Industrial Development of Vidarbha Region." *International Journal of Engineering Technology* 3(7):2349–4476.
- Khan, Mohd. Asif. 2011. "Msme's and Their Role in Ensuring Sustainable Economic Development in India." *International Journal of Management Research and Development (IJMRD)* 1(1):41–52.
- Khandelwal, Rakhi, and Ashutosh Priya. 2024. "Digital Transformation to Spur Women Empowerment in Msme: A Case Study Approach." *ShodhKosh: Journal of Visual and Performing Arts* 5(1). doi: 10.29121/shodhkosh.v5.i1.2024.1605.
- Khanum, Romaza, Muhammad Salim Al Mahadi, and M. Serajul Islam. 2022. "Empowering Tribal Women through Entrepreneurship in Sylhet Region of Bangladesh." *GeoJournal* 87(4):3387–3402. doi: 10.1007/s10708-020-10361-7.
- Khatri, Pooja. 2019. "A Study of the Challenges of the Indian MSME Sector." *IOSR Journal of Business and Management (IOSR-JBM)* 21(2):05–13.
- Khurana, Sonal, Abid Haleem, Sunil Luthra, and Bisma Mannan. 2021. "Evaluating Critical Factors to Implement Sustainable Oriented Innovation Practices: An Analysis of Micro, Small, and Medium Manufacturing Enterprises." *Journal of Cleaner Production* 285:125377. doi: 10.1016/j.jclepro.2020.125377.
- Khurana, Sonal, Abid Haleem, and Bisma Mannan. 2019. "Determinants for Integration of

- Sustainability with Innovation for Indian Manufacturing Enterprises: Empirical Evidence in MSMEs.” *Journal of Cleaner Production*. doi: 10.1016/j.jclepro.2019.04.022.
- Kiran, P. Rav., Akriti Chaubey, and Rajesh Shastri. 2023. “Incorporating the ESG Framework to Analyse Entrepreneurial Opportunities among Tribal People.” *Management of Environmental Quality: An International Journal* 35. doi: 10.1108/MEQ-08-2023-0247.
- Knorr, Helena. 2011. “From Top Management to Entrepreneurship: Women’s next Move?” *International Journal of Manpower* 32:99–116. doi: 10.1108/01437721111121251.
- Koneru, Kalpana. 2018. “Women Entrepreneurship in India - Problems and Prospects.” *SSRN Electronic Journal*. doi: 10.2139/ssrn.3110340.
- Kot, Sebastian. 2018. “Sustainable Supply Chain Management in Small and Medium Enterprises.” *Sustainability (Switzerland)*. doi: 10.3390/su10041143.
- Krishnan, Suneeta, Megan S. Dunbar, Alexandra M. Minnis, Carol A. Medlin, Caitlin E. Gerdts, and Nancy S. Padian. 2008. “Poverty, Gender Inequities, and Women’s Risk of Human Immunodeficiency Virus/AIDS.” *Annals of the New York Academy of Sciences* 1136:101–10. doi: 10.1196/annals.1425.013.
- Kriti, Komal, Aarti Singh, Akansha Yadav, and Supriya Yadav. 2023. “Status of Tribal Women with Special Reference to Challenges Faced in Governance.” 12(10):1693–97.
- Kumar, E. M., and B. Bhuvaneswari. 2016. “Challenges of Women Entrepreneurs.” *Primax International Journal of Commerce and Management Research* 3(2):29–30.
- Kumar, Raj, Saumya Singh, and Nitam Singh. 2012. “Successful Women Entrepreneurs in India: Attributes Based Analysis.” *Asian Journal of Managerial Science* 1:57–62. doi:

10.51983/ajms-2012.1.1.1093.

Kumar, Suraj, Ashok Nimesh, and Mamoni Banerjee. 2023. "The Contribution of Tribal Women Entrepreneurs to Long-Term Economic Growth: A Bibliometric Analysis and Prospects for Future Study." P. 9 in *The 2nd International Online Conference on Agriculture*. Basel Switzerland: MDPI.

Kumar, Vijay, and Sukanta Kumar. 2024. "Financial Empowerment of Tribal Women : An Inquiry into Sustainable Economic Justice Initiatives and Pathways towards Inclusive Development." 24(4):182–94. doi: 10.9734/AJEBA/2024/v24i41272.

Kumar, Vinaya, Narendrasinh Chauhan, and Jayendrakumar Patel. 2018. "Doubling the Small and Marginal Farmers Income: Issues, Challenges and Strategies."

Kumari, Suman, and Vasu Siotra. 2023. "Indian Females in the Twenty-First Century: How They Have Fared? An Analysis Using Geospatial Techniques." *GeoJournal* 88(4):4279–95. doi: 10.1007/s10708-023-10865-y.

Lakshmi, R, Vasantha, Hanuman S. Kennedy, and Corresponding Author. 2018. "Sustainable Business Model: A Theoretical Framework for Manufacturing Firms." *International Journal of Business and Management Invention (IJBMI)* ISSN 7(5):1–04.

Lal, B. Suresh. 2020. "Economic Empowerment of Tribal Women A Study in Telangana State."

Lather, Anu Singh, Shilpa Jain, and Sona Vikas. 2009. "Women Empowerment in Urban India:A Study of Working Women Professionals in Delhi." *Delhi Business Review* 10(2):1–15. doi: 10.51768/dbr.v10i2.102200911.

Letters, European Economic. 2023. "Tribal Entrepreneurship Opportunities and Development : A Review From." 13(5):1023–35.

Light, Audrey, and Robert Munk. 2018. "Business Ownership versus Self-Employment."

- Industrial Relations: A Journal of Economy and Society* 57. doi: 10.1111/irel.12213.
- Likhita, Ch. 2025. "Tribal Women Entrepreneurs-Issues and Challenges with Due Emphasis of TRICOR in Telangana State- A Discussion." 14(1):40–43. doi: 10.35629/8028-14014043.
- Lohith, C. P., R. Srinivasan, Rajeshwar S. Kadadevaramath, and S. Shrisha. 2017. "Innovation the Key to Success: A Literature Review on Indian MSME's." *Indian Journal of Science and Technology* 10(11):1–6. doi: 10.17485/ijst/2017/v10i11/106136.
- López-Pérez, María Eugenia, Iguácel Melero-Polo, Rosario Vázquez-Carrasco, and Jesús Cambra-Fierro. 2018. "Sustainability and Business Outcomes in the Context of SMEs: Comparing Family Firms vs. Non-Family Firms." *Sustainability* 10(11):4080. doi: 10.3390/su10114080.
- Luqman, Sana. 2024. "The Role of Gender Equality in Achieving Sustainable Development."
- Madan, N. 2020. "A Review of Access to Finance by Micro, Small and Medium Enterprises and Digital Financial Services in Selected Asia-Pacific Least Developed Countries." *Working Paper Series ESCAP* (April):1–71.
- Mahajan, Rakesh, and A. S. Sidhu. 2020. "Status of Micro , Small and Medium Enterprises (MSMEs) in India : A Critical Evaluation." *Studies in Indian Place Names*.
- Mahajan, Ritika, Weng Marc Lim, Monica Sareen, Satish Kumar, and Rajat Panwar. 2023. "Stakeholder Theory." *Journal of Business Research* 166:114104. doi: 10.1016/j.jbusres.2023.114104.
- Mahbub, Mahbub. 2021. "Women Empowerment; Theory, Practice, Process and Importance."
- Maheshkar, Chandan, and Neha Soni. 2021. "Problems Faced by Indian Micro, Small and

- Medium Enterprises (MSMEs).” *SEDME (Small Enterprises Development, Management & Extension Journal): A Worldwide Window on MSME Studies* 48(2):142–59. doi: 10.1177/09708464211064498.
- Mahmood, Athar, and Manisha Seth. 2023. “The Dynamics of Cognition Process of Micro, Small, and Medium Enterprises (MSMEs):” *International Journal of Asian Business and Information Management* 14(1). doi: <https://doi.org/10.4018/IJABIM.325071>.
- Maiti, Sutapa, Sayeed Unisa, and Praween K. Agrawal. 2005. “Health Care and Health Among Tribal Women in Jharkhand: A Situational Analysis.” *Studies of Tribes and Tribals*. doi: 10.1080/0972639x.2005.11886518.
- Majhi, Rinki, and Binita Nanda. 2024. “Problems and Prospects of Tribal Women Entrepreneurs in Kalahandi District of Odisha.” *ComFin Research* 12(3):1–6. doi: 10.34293/commerce.v12i3.7482.
- Maji, Santi Gopal, and Prachi Lohia. 2023. “Environmental, Social and Governance (ESG) Performance and Firm Performance in India.” *Society and Business Review*. doi: 10.1108/SBR-06-2022-0162.
- Malathy, Dr. M. 2023. “A Study on Problems and Prospects of MSME’s in India.” *SSRN Electronic Journal*. doi: 10.2139/ssrn.4522672.
- Malhi, Gurdeep Singh, Manpreet Kaur, and Prashant Kaushik. 2021. “Impact of Climate Change on Agriculture and Its Mitigation Strategies: A Review.” *Sustainability (Switzerland)* 13(3):1–21. doi: 10.3390/su13031318.
- Manninen, Kaisa, and Janne Huiskonen. 2022. “Factors Influencing the Implementation of an Integrated Corporate Sustainability and Business Strategy.” *Journal of Cleaner Production*. doi: 10.1016/j.jclepro.2022.131036.
- Marchang, Reimeingam. 2019. “Economic , Occupational and Livelihood Changes of Scheduled Tribes of North East India.”

- Mareeswaran, P., R. Jansirani, M. Asokhan, and K. Mani. 2017. "Constraints Faced By Tribal Women in the Participation of Developmental Programmes." *International Journal of Agriculture Sciences* 9(22):4257–58.
- Mari, Michela, Sara Poggesi, Gianpaolo Abatecola, and Caroline Essers. 2024. "Women Entrepreneurs and Innovation: Retrospect and Prospect." *Journal of Innovation & Knowledge* 9(3):100519. doi: <https://doi.org/10.1016/j.jik.2024.100519>.
- Marshall, Donna, Lucy McCarthy, Paul McGrath, and Marius Claudy. 2015. "Going above and beyond: How Sustainability Culture and Entrepreneurial Orientation Drive Social Sustainability Supply Chain Practice Adoption." *Supply Chain Management: An International Journal* 20(4):434–54. doi: 10.1108/SCM-08-2014-0267.
- Maulana, Hartomi, Khoirul Umam, Rahma Astuti, Eko Cahyo, and Roghiebah Faradisi. 2020. "Environmental Aspects of Micro, Small and Medium Enterprises (MSMEs)." (January). doi: 10.4108/eai.13-2-2019.2286196.
- Mayr, Stefan, Christine Mitter, Alexander Kücher, and Christine Duller. 2021. "Entrepreneur Characteristics and Differences in Reasons for Business Failure: Evidence from Bankrupt Austrian SMEs." *Journal of Small Business & Entrepreneurship* 33(5):539–58. doi: 10.1080/08276331.2020.1786647.
- Meena, Ankita Chaturvedi, and Sachin Gupta. 2021. "Opportunities in Tribal Entrepreneurship & MSMEs."
- Mengstie, Belay. 2022. "Impact of Microfinance on Women's Economic Empowerment." *Journal of Innovation and Entrepreneurship* 11(1). doi: 10.1186/s13731-022-00250-3.
- Miati, Ni Luh Putu Mita, Gde Deny Larasdiputra, and I. Nyoman Sutapa. 2022. "The Use of Qris as a Payment Transaction That Facilitates the Financial Recording Process in an Effort to Increase the Accountability of MSMEs in Denpasar City, Indonesia."

- International Journal of Social Science and Human Research* 05(09):3997–4002. doi: 10.47191/ijsshr/v5-i9-04.
- Ministry of MSME. 2023. *Strategic Investment Plan (SIP) under RAMP, Telangana*.
- Mir, Ajaz Akbar, and Aijaz Ahmad Bhat. 2022. “Green Banking and Sustainability – a Review.” *Arab Gulf Journal of Scientific Research*. doi: 10.1108/AGJSR-04-2022-0017.
- Mishra, Onkar Nath, and Saurabh Gupta. 2024. “Drivers of Indigenous Entrepreneurship: An Empirical Investigation of Indian Tribal Youth.” *Journal of Enterprising Communities: People and Places in the Global Economy* 18(5):902–17. doi: 10.1108/JEC-05-2022-0074.
- Mishra, S. B. 2016. “Economic Empowerment of Tribal Women in India.” *Splint International Journal of Professionals: A Monthly Peer Reviewed International Journal of Management & IT; Bhubaneswar*.
- Mohapatra, Anil Kumar. 2009. “Theory of Feminism and Tribal Women: An Empirical Study of Koraput.” *Mens Sana Monographs* 7(1):80–92. doi: 10.4103/0973-1229.45314.
- Mosse, David. 2018. “Caste and Development: Contemporary Perspectives on a Structure of Discrimination and Advantage.” *World Development* 110:422–36. doi: <https://doi.org/10.1016/j.worlddev.2018.06.003>.
- Muafi, Muafi, and Ratna Roostika. 2022. “MSMEs Business Sustainability Models in Indonesia.” *International Journal of Sustainable Development and Planning*. doi: 10.18280/ijstdp.170120.
- Muhammed, Muhammed Hamid, and Abebe Yirga Ayenalem. 2023. “Women’s Political Participation at the Local Level in Ethiopia: Does Number Really Matter?” *Cogent Social Sciences* 9(1). doi: 10.1080/23311886.2023.2218720.

- Mukherjee, Sonia. 2018. "Challenges to Indian Micro Small Scale and Medium Enterprises in the Era of Globalization." *Journal of Global Entrepreneurship Research*. doi: 10.1186/s40497-018-0115-5.
- Mukherjee, Sumit. 2013. "Conceptualisation and Classification of Caste and Tribe by the Census of India." *Journal of the Anthropological Survey of India*, 62(2) : (805-820), 2013 62(2):805–20.
- Muthu, N. 2015. "Spatial Difference in The Distribution of Micro, Small and Medium Enterprises (MSMEs) in India."
- Mwobobia, Fridah Muriungi. 2012. "The Challenges Facing Small-Scale Women Entrepreneurs: A Case of Kenya." *International Journal of Business Administration*. doi: 10.5430/ijba.v3n2p112.
- Naddaf, Razahusain, and A. Kadakol. 2019. "A Study on Role of Financial Institutions in Developing MSME's in India."
- Nagaraja, Pallavi S. Kusugal. 2013. "Problem and Prospects of Schedule Tribe Women In Local Governance with Reference to Chitradurga District of Karnataka." *Global Research Analysis* (2277):1991–93.
- Naik, Rupla, and K. Dasaratharamaiah. 2019. "Education and Socio-Economic Development of Tribal Women: A Study." *Shanlax International Journal of Economics* 7:9–19. doi: 10.34293/economics.v7i4.608.
- Nair, Jisha D., Tesli James, and T. K. Shailendran. 2024. "International Journal of Research Publication and Reviews Empowering Indigenous Tribes : Government Initiatives and Promising Future- A Conceptual Study." 5(4):937–40.
- Nancy, Divya, and Victor Afari-sefa. 2019. "Transforming Tribal Communities in Telangana, India, into Strategic Business Enterprises — a Paradigm for Inclusive Growth."

- Nandal, Vikas. 2013. "Participation of Women in Panchayati Raj Institutions: A Sociological Study of Haryana, India."
- Nasima, Ms, and Naznin Alam. 2015. "Women Micro-Entrepreneurs in Bangladesh: Socio-Economic Aspects and Factors Affecting Their Development." *Journal of Business and Technology (Dhaka)*. doi: 10.3329/jbt.v9i1.22778.
- Nasrullah, Nakib M. 2011. "Business and Sustainable Development: The Role of CSR as a Catalyst." *Transnational Corporations Review* 3(3):96–105. doi: <https://doi.org/10.1080/19186444.2011.11658300>.
- Nasser, Alexandria Therese. 2022. "Competitiveness of Micro, Small and Medium Entrepreneurs during Economic Disruption." *JPAIR Multidisciplinary Research* 49(1):81–105. doi: 10.7719/jpair.v49i1.641.
- Natarajan, Nithya, Andrew Newsham, Jonathan Rigg, and Diana Suhardiman. 2022. "A Sustainable Livelihoods Framework for the 21st Century." *World Development*. doi: 10.1016/j.worlddev.2022.105898.
- Naveen, H. M. 2024. "Statutory Bodies and Other Attached Offices under the Ministry of Micro, Small and Medium Enterprise." *International Journal of Scientific Research in Computer Science, Engineering and Information Technology* 10(6):01–11. doi: 10.32628/CSEIT24106150.
- Naveen, S., Jayanta Kumar Parida, and Itishree Panda. 2023. "Tribal Women Empowerment through Entrepreneurship." *Frontiers in Sociology* 8. doi: 10.3389/fsoc.2023.1158770.
- Nawangsari, Lenny Christina, Indra Siswanti, and Mochamad Soelton. 2023. "Human Resources Management Strategy For Business Sustainability In Msmes." *ICCD* 5(1):514–18. doi: 10.33068/iccd.v5i1.599.
- Nayak, Meenakshi, and Dr. Tattwamasi Paltasingh. 2024. "Role of Tribal Women in

Informal Sector and Environmental Sustainability: Understanding The Nexus in The Context of Odisha.” *International Journal of Social Science & Economic Research* 09(02):461–67. doi: 10.46609/IJSSER.2024.v09i02.006.

Negrete, Moira, Marcelo Fuentes, Andrzej Kraslawski, Felipe Irarrazaval, and Sebastián Herrera-León. 2024. “Socio-Environmental Implications of the Decarbonization of Copper and Lithium Mining and Mineral Processing.” *Resources Policy* 95:105135. doi: <https://doi.org/10.1016/j.resourpol.2024.105135>.

Nema, Dinesh, Pushpa Suryavanshi, and Toran Verma. 2021. “A Study on Ever-Changing Definition of Micro, Small and Medium Enterprises (MSMEs).” doi: 10.24327/ijrsr.2021.1206.5995.

Nema, Dinesh, and Toran Verma. 2019. “Role Of Micro, Small And Medium Enterprises (MSMES) In Achieving Sustainable Development Goals.” 2454–9150. doi: 10.18231/2454-9150.2019.0189.

Nida, Desak Rurik Pradnya Paramitha, I. Wayan Chandra Adyatma, and Riza Edwindra. 2024. “MSMEs Bookkeeping Capabilities for Accounting Information Transparency.” *International Journal of Current Science Research and Review* 07(09):7229–43. doi: 10.47191/ijcsrr/V7-i9-40.

Nugrahanti, Trinandari Prasetyo, Eva Andriani, Jamaluddin Majid, Muhammad Syafri, and Samalua Waoma. 2023. “Interplay of Economics, Entrepreneurship, and Auditing: Unveiling Financial Accountability and Performance in Business Ventures.” *West Science Journal Economic and Entrepreneurship*. doi: 10.58812/wsjee.v1i03.159.

Nulkar, Gurudas. 2014. “SMEs and Environmental Performance – A Framework for Green Business Strategies.” *Procedia - Social and Behavioral Sciences*. doi: 10.1016/j.sbspro.2014.04.177.

Nuwagaba, Alfred. 2015. “Micro Financing of Small and Medium Enterprises (SMEs) in

Zambia.” *International Journal of Business and Management Invention ISSN* 4(8):48–56.

Odera, Josephine, and Judy Mulusa. 2020. “SDGs, Gender Equality and Women’s Empowerment: What Prospects for Delivery?” Pp. 95–118 in.

Ogbari, Mercy Ejovwokeoghene, Flourish Folorunso, Busola Simon-Ilogho, Olufunke Adebayo, Kofoworola Olanrewaju, Joy Efegbudu, and Michael Omoregbe. 2024. “Social Empowerment and Its Effect on Poverty Alleviation for Sustainable Development among Women Entrepreneurs in the Nigerian Agricultural Sector.” *Sustainability* 16(6):2225. doi: 10.3390/su16062225.

Oliveira, Jose A. Puppim de, and Charbel Jose Chiappetta Jabbour. 2017. “Environmental Management, Climate Change, CSR, and Governance in Clusters of Small Firms in Developing Countries.” *Business & Society* 56(1):130–51. doi: 10.1177/0007650315575470.

Onyekwelu, Phina Njideka, Godwin Imo Ibe, Francis Ezieshi Monyei, Joseph Ikechukwu Attamah, and Wilfred Isioma Ukpere. 2023. “The Impact of Entrepreneurship Institutions on Access to Micro-Financing for Sustainable Enterprise in an Emerging Economy.” *Sustainability* 15(9):7425. doi: 10.3390/su15097425.

Östlund, Ulrika, Lisa Kidd, Yvonne Wengström, and Neneh Rowa-Dewar. 2011. “Combining Qualitative and Quantitative Research within Mixed Method Research Designs: A Methodological Review.” *International Journal of Nursing Studies* 48(3):369–83. doi: 10.1016/j.ijnurstu.2010.10.005.

Pachouri, Anshul, and Sankalp Sharma. 2016. “Barriers to Innovation in Indian Small and Medium-Sized Enterprises.” *SSRN Electronic Journal*. doi: 10.2139/ssrn.2838109.

Padhy, Chitrasena. 2023. “Gender Involvement in Farm Sector-An Interpretative Study and Review.” (September 2015):76–82.

- Padma Anagol-McGinn. 1994. "Women's Consciousness and Assertion in Colonial India: Gender, Social Reform and Politics in Maharashtra." *Semantic Scholar* 1870–1920.
- Paldon, Dr. Trinley. 2024. "Impact of Workplace Inclusivity on Employee Morale and Performance." *Interantional Journal of Scientific Research in Engineering and Management* 08(03):1–5. doi: 10.55041/IJSREM29839.
- Pandey, Prerna, and Amar Kumar Chaudhary. 2024. "The Role of Micro, Small, and Medium Enterprises in India's Economic Development: A Critical Analysis." *Asian Journal of Economics, Business and Accounting* 24(7):366–84. doi: 10.9734/ajeba/2024/v24i71416.
- Pandhare, Ashwini, Praveen Naik Bellampalli, and Neelam Yadava. 2024. "Transforming Rural Women's Lives in India: The Impact of Microfinance and Entrepreneurship on Empowerment in Self-Help Groups." *Journal of Innovation and Entrepreneurship* 13(1):62. doi: 10.1186/s13731-024-00419-y.
- Pappala, Appala Naidu. 2020. "Tribal Women and Economic Significance: A Comprehensive Study." *International Journal of Research and Review* 07(11):68–81.
- Paray, Mohd Rafi. 2019. "Empowerment of Tribal Women and Gender Development in India." *International Journal of Advanced Multidisciplinary Scientific Research* 2(1). doi: 10.31426/ijamsr.2019.2.1.1114.
- Patel, Mahesh R., Arun Patel, Shri Jaydip D. Desai, and Shri Vijay B. Patel. 2016. "Social Participation of Tribal Farm Women and Its Relationship with Their Contribution in Agriculture and Animal Husbandry." 03(07):2593–95.
- Patil, Ramesh H. 2021. "The Social Status of Indian Women of Different Periods in the Patriarchal Society." *Research Ambition: An International Multidisciplinary e-Journal* 5(IV):23–31. doi: 10.53724/ambition/v5n4.06.
- Patnaik, Bijayananda, Deepti Patnaik, and Bipin Bihari Pradhan. 2024. "Women's

- Financial Literacy and Financial Inclusion Post-Pandemic.” Pp. 267–80 in *E-Financial Strategies for Advancing Sustainable Development: Fostering Financial Inclusion and Alleviating Poverty*, edited by N. Mansour, S. Baral, and V. Garg. Cham: Springer Nature Switzerland.
- Pedraza, Jorge Morales. 2021. “The Micro, Small, and Medium-Sized Enterprises and Its Role in the Economic Development of a Country.” *Business and Management Research* 10(1):33. doi: 10.5430/bmr.v10n1p33.
- Permatasari, Paulina, and Juniati Gunawan. 2023. “Sustainability Policies for Small Medium Enterprises: WHO Are the Actors?” *Cleaner and Responsible Consumption* 9:100122. doi: <https://doi.org/10.1016/j.clrc.2023.100122>.
- Prabhakar, Sonam, Ashok Nimesh, and Pawan Prabhakar. 2023a. “Assessment of Start-up Ecosystems for Tribal Women Entrepreneurs in India.” in *Diversity, Equity, and Inclusion Efforts of Businesses in Rural Areas*.
- Prabhakar, Sonam, Ashok Nimesh, and Pawan Prabhakar. 2023b. “Startup Ecosystem for Rural Development in India.” in *Socio-Economic Disparities, Vulnerable Communities, and the Future of Work and Entrepreneurship*.
- Pradha, Balaram, and Seema Rani Sethi. 2024. “Empowering Tribal Women : A Comprehensive Exploration of Their Roles and Participation in Local Government.” 6(1):106–13.
- Prah, Solomon. 2016. “Microfinance Credit Facilities and the Growth of the Small and Medium Scale Enterprises in the Cape Coast Metropolis of Ghana.” *International Journal of Economics, Commerce and Management* IV(12):719–45.
- Prasad, Shri, and Shrikant Barje. 2022. “A Report on Issues and Challenges in Financing MSME in Pune , Maharashtra.” (March).
- Priyadarshini, Priya, and Purushothaman Abhilash. 2019. “Promoting Tribal Communities

- and Indigenous Knowledge as Potential Solutions for the Sustainable Development of India.” *Environmental Development* 32:100459. doi: 10.1016/j.envdev.2019.100459.
- Priyadarshini, S., and s. Rabiyyathul Basariya. 2018. “Women Entrepreneurs-Problems and Prospects in India.” *International Journal of Civil Engineering and Technology* 9:96–102.
- Proud, Laura, and Euphrasia Suhendra. 2023. “Financial Performance and Company Values: A Study in the Banking Sector.” *Indatu Journal of Management and Accounting* 1:60–68. doi: 10.60084/ijma.v1i2.96.
- Przychodzen, Justyna, Fernando Gómez-Bezares, Wojciech Przychodzen, and Mikel Larreina. 2016. “ESG Issues among Fund Managers-Factors and Motives.” *Sustainability (Switzerland)*. doi: 10.3390/su8101078.
- Pu, Ganlin, Md. Qamruzzaman, Ahmed Muneeb Mehta, Farah Naz Naqvi, and Salma Karim. 2021. “Innovative Finance, Technological Adaptation and SMEs Sustainability: The Mediating Role of Government Support during COVID-19 Pandemic.” *Sustainability* 13(16):9218. doi: 10.3390/su13169218.
- Punam, D, and Naina Sharma. 2017. “The Role and Position of Women Ancient Society to Modern Society in India.” Pp. 127–41 in.
- Purwoko, Purwoko, Loso Judijanto, Zainal Abidin, and Sella Antesty. 2023. “Sustainability Practices in MSMEs: A Quantitative Analysis of the Impact of Green Supply Chain Management, Consumer Awareness, and Regulatory Compliance on Market Performance.” *West Science Interdisciplinary Studies* 1(10):1039–48. doi: 10.58812/wsis.v1i10.298.
- Radicic, Dragana, and Saša Petković. 2023. “Impact of Digitalization on Technological Innovations in Small and Medium-Sized Enterprises (SMEs).” *Technological Forecasting and Social Change*. doi: 10.1016/j.techfore.2023.122474.

- Raj, Saravanan, and Garlapati Sai Sree. 2023. "Promoting Women Entrepreneurship in India : Challenges , Initiatives and Strategies." XXIV(1):131–44.
- Rajamani, K, N. Akbar Jan, A. K. Subramani, and A. Nirmal Raj. 2022. "Access to Finance : Challenges Faced by Micro, Small and Medium Enterprises in India Access to Finance : Challenges Faced by Micro , Small , and Medium Enterprises in India." *Engineering Economics* 33(July):73–85. doi: 10.5755/j01.ee.33.1.2799.
- Rajamani, K., and Nirmal Raj. 2020. "Finance for Micro, Small and Medium Enterprises (MSMEs) -A Conceptual Framework." *International Journal of Economic Research* 16:367–78. doi: 10.6084/m9.figshare.12387671.v1.
- Raju, Vadithya. 2024. "Empowering Indigenous Communities : The Role of Non-Governmental Organizations in Tribal Development in India." 91–96.
- Ramli, Yanto, Dudi Permana, Mochamad Soelton, and Wei-Loon Koe. 2022. "Implementing Strategic Sustainability Business on The Micro, Small and Medium Enterprises." *ICCD (International Conference on Community Development)* 4(1):232–36.
- Ranganath, Santosh, and Koppala Venugopal. 2011. "Rural Entrepreneurship Challenges and Opportunities: An Indian Context." *SSRN Electronic Journal*. doi: 10.2139/ssrn.3430337.
- Rathi, Soni, and Praveen Kumar. 2022. "The Impact of Micro, Small and Medium Enterprises (Msmes) on Indian Economy in India." *Journal of Kavikulaguru Kalidas Sanskrit University, Ramtek* 9(2):129–40.
- Reviewed, Peer, and Refereed Journal. 2024. "Challenges and Opportunities of Women Entrepreneurs - With Special Reference to MSMES in the State of Karnataka." 4(4):100–111.
- Rinaldo, Dito, Puteri Andika Sari, Wiendy Puspita Sari, and Rediawan Miharja. 2023. "The

- Development of Good Micro, Small and Medium Enterprises Governance Indicators.” *ETIKONOMI* 22(1):93–118. doi: 10.15408/etk.v22i1.25625.
- Rink, Ute, Yabibal M. Walle, and Stephan Klasen. 2021. “The Financial Literacy Gender Gap and the Role of Culture.” *The Quarterly Review of Economics and Finance* 80:117–34. doi: 10.1016/j.qref.2021.02.006.
- Rokonuzzaman, M. 2013. “Training Needs of Tribal People in Carrying out Income Generating Activities.” *Indian Res. J. Ext. Edu* 13(1):10–16.
- Sáez-Martínez, Francisco, Cristina Díaz-García, and Ángela González-Moreno. 2016. “Factors Promoting Environmental Responsibility in European SMEs: The Effect on Performance.” *Sustainability* 8(9):898. doi: 10.3390/su8090898.
- Sahoo, Auro Kumar, Bibhuti Bhusan Pradhan, and Naresh Chandra Sahu. 2017. “Determinants of Financial Inclusion in Tribal Districts of Odisha: An Empirical Investigation.” *Social Change*. doi: 10.1177/0049085716683072.
- Sahu, Tarak Nath, Varuna Agarwala, and Sudarshan Maity. 2024. “Effectiveness of Microcredit in Employment Generation and Livelihood Transformation of Tribal Women Entrepreneurs: Evidence from PMMY.” *Journal of Small Business & Entrepreneurship* 36(1):53–74. doi: 10.1080/08276331.2021.1928847.
- Sahu, Vijay Kumar, Sukanta Kumar Baral, and Ravi Singh. 2024. “Financial Empowerment of Tribal Women: An Inquiry into Sustainable Economic Justice Initiatives and Pathways towards Inclusive Development.” *Asian Journal of Economics, Business and Accounting* 24(4):182–94. doi: 10.9734/ajeba/2024/v24i41272.
- Saini, Amit Kumar, and Ajeet Kumar Maurya. 2024. “Opportunities and Challenges For Micro , Small & Medium Enterprises (MSMEs) in India: A Detailed Study.” 915–21. doi: 10.29121/shodhkosh.v5.i6.2024.198.

- Salahange, Laura, Jesús Sánchez-Martín, María A. Dávila-Acedo, and Florentina Cañada-Cañada. 2024. "A New Validated Instrument to Assess Sustainability Perception among University Students." *Discover Sustainability* 5(1). doi: 10.1007/s43621-024-00623-6.
- Sama, Afsana A. 2017. "Women Empowerment : Issues and Challenges." 4(3).
- Sansiya, Preeti. 2013. "Women in Informal Sector: A Sociological Inquiry." *International Journal of Research in Social Sciences and Humanities*.
- Sanyal, Paromita. 2006. "Capacity Building Through Partnership: Intermediary Nongovernmental Organizations as Local and Global Actors." *Nonprofit and Voluntary Sector Quarterly* 35(1):66–82. doi: 10.1177/0899764005282480.
- Saranya, H. 2019. "A Study on Participation of Farm Tribal Women in Agriculture." *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*.
- Saraswat, Ritwik, and Remya Lathabhavan. 2020. "A Study on Women Entrepreneurship in India."
- Sarma, Gunajit. 2014. "An Analytical Study on Entrepreneurial Activity as a Tool for Socio-Economic Development of Tribal Women in BTAD Area of Assam." *IOSR Journal of Economics and Finance* 3(2):49–52. doi: 10.9790/5933-03214952.
- Sciarelli, Mauro, Silvia Cosimato, Giovanni Landi, and Francesca Iandolo. 2021. "Socially Responsible Investment Strategies for the Transition towards Sustainable Development: The Importance of Integrating and Communicating ESG." *TQM Journal*. doi: 10.1108/TQM-08-2020-0180.
- Seerangan, Chinnathambi., and Rangan Venkataravi. 2023. "Entrepreneurial Opportunities and Socio- Economic Impact in Tribal Rural India." 474–85.
- Selim, Eman. 2021. "The Role of Entrepreneurship in Economic Growth and Development Models." *Journal of Survey in Fisheries Sciences* 40(2):32–59. doi:

10.21608/caf.2021.154789.

- Serrat, Olivier. 2017. "The Sustainable Livelihoods Approach." in *Knowledge Solutions*.
- Shamna, A., P. Biswas, S. K. Jha, S. Sarkar, and Sh Kumar. 2018. "Tribal Farm Women's Participation in Agriculture and Factors Influencing It: Evidence from West Bengal, India." *Journal of Agricultural Science and Technology* 20(5):911–22.
- Shankar, Naik, Nadagowda, Swamy Mahadev, and Ramprasad Vanaja. 2004. "Women's Empowerment in Endogenous Development." *Compas Magazine*.
- Sharma, Ravindra Kumar. 2014. "Industrial Development of India in Pre and Post Reform Period." *IOSR Journal of Humanities and Social Science*. doi: 10.9790/0837-191040107.
- Shelly, Richa, Tanuj Sharma, and Simerjeet Singh Bawa. 2020. "Role of Micro, Small and Medium Enterprises in Indian Economy." *International Journal of Economics and Financial Issues* 10(5):84–91. doi: 10.32479/ijefi.10459.
- Simba, Amon, Oyedele Martins Ogundana, Eric Braune, and Léo–Paul Dana. 2023. "Community Financing in Entrepreneurship: A Focus on Women Entrepreneurs in the Developing World." *Journal of Business Research* 163(October 2022):113962. doi: 10.1016/j.jbusres.2023.113962.
- Singh, Chetna, and Raj Kumar. 2017. "Financial Literacy among Women - Indian Scenario." *Universal Journal of Accounting and Finance*. doi: 10.13189/ujaf.2017.050202.
- Singh, Manvendra Pratap, and Mousumi Roy. 2019. "A Study of Sustainability Reporting Disclosures for Manufacturing MSMEs: Evidence from India." *International Journal of Entrepreneurship and Small Business*. doi: 10.1504/IJESB.2019.104135.
- Singh, Neha. 2012. "Asian Journal of Management." *Asian Journal of Management* 3(1):05.

- Sivasakkaravarthi, P. 2024. "Women Entrepreneurship in India: Challenges and Suggestions." *Shanlax International Journal of Management* 11(iS1-Jan):61–67. doi: 10.34293/management.v11iis1-jan.7141.
- Sobir, Raniya. 2023. "Micro- , Small and Medium-Sized Enterprises (MSMEs) and Their Role in Achieving the Sustainable Development Goals." 01–44.
- Solotaroff, Jennifer L., Aphichoke Kotikula, Tara Lonnberg, Snigdha Ali, Rohini P. Pande, and Ferdous Jahan. 2019. "Female Entrepreneurship." in *Voices to Choices: Bangladesh's Journey in Women's Economic Empowerment*.
- Soni, Amit. 2019. "Status and Empowerment Of Central Indian Tribal Women." *Indian Journal of Research in Anthropology* 5:5–10. doi: 10.21088/ijra.2454.9118.5119.1.
- Srinivas, K. T. 2013. "Role of Micro , Small and Medium Enterprises in Inclusive Growth." *International Journal of Engineering and Management Research*.
- Srinivas, Lokini. 2024. "Role of Tribal Women in Local Bodies – A Study of Telangana State." 11(4):417–21.
- Stam, Erik, and Andrew van de Ven. 2021. "Entrepreneurial Ecosystem Elements." *Small Business Economics* 56(2):809–32. doi: 10.1007/s11187-019-00270-6.
- Staupoulou, A., E. Sardianou, G. Malindretos, K. Evangelinos, and I. Nikolaou. 2023. "The Effects of Economic, Environmentally and Socially Related SDGs Strategies of Banking Institutions on Their Customers' Behavior." *World Development Sustainability* 2:100051. doi: <https://doi.org/10.1016/j.wds.2023.100051>.
- Steve Hatfield-Dodds, Rohan Nelson and David Cook. 2007. "This Document Is Discoverable and Free to Researchers across the Globe Due to the Work of AgEcon Search . Help Ensure Our Sustainability ." *AgEcon Search* 18.
- Sugin, M., and K. V. Soundara Raja. 2024. "Impacts Of Msmes On Environment-An Analysis." *International Journal of Business and Management Invention ISSN*

(June):2319.

Sujeetha, T. N., N. Suganthi, and V. Ravichandran. 2017. "Constraints Expressed by Tribal Women in Farm and Home Management." 6(9):536–39.

Sultan, Suhail, and Wasim I. M. Sultan. 2020. "Women MSMEs in Times of Crisis: Challenges and Opportunities." *Journal of Small Business and Enterprise Development*. doi: 10.1108/JSBED-06-2020-0226.

Sun, Jiazhe, Shunan Wu, and Kaizhong Yang. 2018. "An Ecosystemic Framework for Business Sustainability." *Business Horizons* 61(1):59–72. doi: 10.1016/j.bushor.2017.09.006.

Supriadi, Iman, Rahma Ulfa Maghfiroh, and Rukhul Abadi. 2023. *Transforming MSMEs through Innovation and Technology: Driving Growth and Sustainability in the Digital Age*. Vol. 267. edited by I. Zutiasari and D. T. Kurniawan. Dordrecht: Atlantis Press International BV.

Suresh, P. 2023. "MSME Sector in India : A Review of Literature." 9(05):234–37.

Sutrisno, Sutrisno. 2023. "The Role of Partnerships and Business Networks in the Growth of MSMEs in the Digital Age." *Technology and Society Perspectives (TACIT)*. doi: 10.61100/tacit.v1i3.61.

Sutrisno, Sutrisno, Riko Mersandro Permana, and Ahmad Junaidi. 2023. "Education and Training as a Means of Developing MSME Expertise." *Journal of Contemporary Administration and Management (ADMAN)*. doi: 10.61100/adman.v1i3.62.

Sutrisno, Sutrisno, Ike Susanti, and Murthada. 2024. "Optimising Global Competitiveness of MSMEs through Innovative Strategies for Digital Business Development." *Journal of Contemporary Administration and Management (ADMAN)* 2(1):307–12. doi: 10.61100/adman.v2i1.124.

Taiwo, J. N., Onasanya A. Yewande, Agwu M. Edwin, and K. N. Benson. 2016. "The Role

- of Microfinance Institutions in Financing Small Businesses.” *Journal of Internet Banking and Commerce* 21(1):1–20.
- Tambunan, Tulus. 2008. *Development of SME in ASEAN with Reference to Indonesia and Thailand* 53.
- Thiruvengala, Chary D., and Rao R. Sreenivasa. 2016. “Challenges of MSMEs in India- Government Initiatives for Enhancing Competitiveness of MSMEs in India.” *5th Annual International Research Conference- 2016 Faculty of Management and Commerce- SEUSL*.
- Thomas, Anila. 2024. “The Role of Women’s Entrepreneurship in Achieving Sustainable Development Goals (SDGs): A Comprehensive Review.” *Journal of Biotechnology & Bioinformatics Research* 6:1–11. doi: 10.47363/JBBR/2024(6)174.
- Thrassou, Alkis, Demetris Vrontis, Leonidas Efthymiou, and Naziyet Uzunboyulu. 2022. “An Overview of Business Advancement Through Technology: The Changing Landscape of Work and Employment.” in *Palgrave Studies of Cross-Disciplinary Business Research, in Association with EuroMed Academy of Business*.
- Thukral, Esha. 2021. “COVID-19: Small and Medium Enterprises Challenges and Responses with Creativity, Innovation, and Entrepreneurship.” *Strategic Change*. doi: 10.1002/jsc.2399.
- Towfiq, Syed, and Mahmood Hasan. 2022. “Empowerment of Tribal Women through Entrepreneurship for Sustainable Development: Evidence from Bangladesh.” *Journal of Economics and Sustainable Development* 13(7):33–42. doi: 10.7176/jesd/13-7-05.
- Tubastuvi, Naelati, and Wida Purwidiyanti. 2023. “Performance of Women-Led Smes in Indonesia: The Role of Financial Inclusion, Financial Literacy, and Technology Adoption.” *Journal of Law and Sustainable Development* 11(12):e1899. doi: 10.55908/sdgs.v11i12.1899.

- Turek, Tomasz, Damian Dziembek, and Marcin Hernes. 2021. "The Use of It Solutions Offered in the Public Cloud to Reduce the City's Carbon Footprint." *Energies*. doi: 10.3390/en14196389.
- Ubfal, Diego. 2024. "Supporting Women-Led Businesses: Narrative Review of Recent Causal Evidence." *The World Bank Research Observer*. doi: 10.1093/wbro/lkae012.
- Uma, R., and R. Anbuselvi. 2023. "Role of Micro Small and Medium Enterprises (MSME) in Employment Generation in India." *Shanlax International Journal of Economics* 11(2):22–27. doi: 10.34293/economics.v11i2.5809.
- Unachukwu, I., and F. C. Egbunike. 2021. "Perspectives of MSMEs and Business Owners on Sustainability Challenges and Its Effect on Sustainability Outcomes." *Amity Business Review* 22(April):99–117.
- UNEP. 2012. "United Nations Environment Programme (UNEP)." (March).
- Vásquez, Jenifer, Santiago Aguirre, Edwin Puertas, Giulia Bruno, Paolo C. Priarone, and Luca Settineri. 2021. "A Sustainability Maturity Model for Micro, Small and Medium-Sized Enterprises (MSMEs) Based on a Data Analytics Evaluation Approach." *Journal of Cleaner Production*. doi: 10.1016/j.jclepro.2021.127692.
- Vincent, Gnanapragasam. 2020. "Contribution of MSMEs in Indian Economy-A Critical Evaluation."
- Wielgórka, Dariusz. 2016. "Environmental Management in the Aspect of Sustainable Development in Micro-, Small-, and Medium-Sized Enterprises." *Desalination and Water Treatment*. doi: 10.1080/19443994.2015.1017322.
- Williams, Eunice Mueni, Heini Väisänen, and Sabu S. Padmadas. 2022. "Women's Economic Empowerment in Sub-Saharan Africa: Evidence from Cross-National Population Data." *Demographic Research*. doi: 10.4054/DEMRES.2022.47.15.
- Wu, Yujuan, and Jacqueline Tham. 2023. "The Impact of Environmental Regulation,

- Environment, Social and Government Performance, and Technological Innovation on Enterprise Resilience under a Green Recovery.” *Heliyon* 9(10):e20278. doi: <https://doi.org/10.1016/j.heliyon.2023.e20278>.
- Yadav, Uma Shankar, Ravindra Tripathi, Ashish Kumar, and Rajesh Kumar Shastri. 2024. “Evaluation of Factors Affecting Women Artisans as Entrepreneurs in the Handicraft Sector: A Study on Financial, Digital Technology Factors and Developmental Strategies About ODOP in Uttar Pradesh to Boost Economy.” *Journal of the Knowledge Economy*. doi: 10.1007/s13132-024-01837-9.
- Yadav, Uma Shankar, Ravindra Tripathi, Mano Ashish Tripathi, Ashish Kumar, and Mitu Mandal. 2023. “Evaluation of Factors Affecting Entrepreneurship: A Case of Indian Women in the Handicraft Industry.” *Humanities and Social Sciences Communications*. doi: 10.1057/s41599-023-01882-w.
- Yani, Ahmad, Dewa Oka Suparwata, and Hamka. 2023. “Product and Service Innovation Strategies to Expand MSME Markets.” *Journal of Contemporary Administration and Management (ADMAN)*. doi: 10.61100/adman.v1i3.67.
- Ye, Jianmu, and KMMCB Kulathunga. 2019. “How Does Financial Literacy Promote Sustainability in SMEs? A Developing Country Perspective.” *Sustainability* 11(10):2990. doi: 10.3390/su11102990.
- Yellapu, Vikas. 2019. “Descriptive Statistics.” (April 2018). doi: 10.4103/IJAM.IJAM.
- Yu, Zhichao, Umar Farooq, Mohammad Mahtab Alam, and Jiapeng Dai. 2024. “How Does Environmental, Social, and Governance (ESG) Performance Determine Investment Mix? New Empirical Evidence from BRICS.” *Borsa Istanbul Review* 24(3):520–29. doi: <https://doi.org/10.1016/j.bir.2024.02.007>.
- Zhang, Xin, Yaoyu Xu, and Liang Ma. 2022. “Research on Successful Factors and Influencing Mechanism of the Digital Transformation in SMEs.” *Sustainability*

14(5):2549. doi: 10.3390/su14052549.

Zhao, Jun, Qingzhe Jiang, Xiucheng Dong, and Kangyin Dong. 2020. “Would Environmental Regulation Improve the Greenhouse Gas Benefits of Natural Gas Use? A Chinese Case Study.” *Energy Economics* 87:104712. doi: <https://doi.org/10.1016/j.eneco.2020.104712>.

Zhivkova, Stela. 2022. “Sustainability and The Reasons for Its Adoption in The Companies.” *Proceedings of CBU in Economics and Business* 3:75–80. doi: 10.12955/peb.v3.296.

Zhou, Kaifeng. 2024. “The Relationship Between Financial Performance And ESG: Evidence from Bloomberg.” *Highlights in Business, Economics and Management* 37:297–305. doi: 10.54097/72varc27.

APPENDIX A: DATASET

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	Name	Name	Name	Name	What	What	What	What	What	What	How	How	Our	We	Energy	We	Our	We	We	Our	We	We	We	We	We	We	We
2	Keshwap	Keshwap	Elkathurti	Hanamior	1	1	2	2	3	1	4	2	4	5	5	4	4	5	5	3	5	5	5	4	3	4	3
3	Ethuru	Ethuru	Kannayigi	Mulugu	2	2	2	1	3	1	4	3	4	5	5	2	1	5	5	5	5	5	1	1	1	1	1
4	Ethuru	Ethuru	Kannayigi	Mulugu	2	2	2	1	3	1	4	3	4	5	5	1	1	5	3	4	4	1	1	1	1	3	1
5	Ethuru	Ethuru	Kannayigi	Mulugu	2	2	2	1	2	1	4	3	4	2	5	1	2	4	4	2	4	1	1	1	1	2	1
6	Ethuru	Ethuru	Kannayigi	Mulugu	3	2	1	1	2	1	4	3	4	2	5	1	2	5	3	2	5	1	1	1	1	3	1
7	Ethurnagar	Ethurnagar	Ethurnagar	Mulugu	3	2	3	1	3	1	4	3	4	2	5	2	2	4	2	2	4	1	1	1	2	1	1
8	Ethuru	Ethuru	Kannayigi	Mulugu	3	2	1	1	3	1	4	3	5	2	5	1	1	5	5	3	5	1	1	1	1	2	1
9	Laxminag	Laxminag	Dhummug	Bhadradr	2	2	3	2	3	1	4	5	5	3	5	3	1	5	4	5	5	3	5	3	5	4	4
10	Laxminag	Laxminag	Dhummug	Bhadradr	2	2	3	1	4	1	4	5	5	3	5	2	1	5	4	4	5	2	5	5	5	5	2
11	Laxminag	Laxminag	Dhummug	Bhadradr	2	2	1	1	3	1	4	5	5	2	5	3	2	5	4	5	5	2	5	5	5	5	1
12	Laxminag	Laxminag	Dhummug	Bhadradr	3	2	1	1	3	1	4	5	5	2	5	4	1	5	4	4	5	2	4	5	4	5	1
13	Laxminag	Laxminag	Dhummug	Bhadradr	2	1	5	1	3	1	4	5	5	2	5	4	1	5	4	5	5	2	5	5	5	4	2
14	Thummal	Thummal	Aswapura	Badradi	1	1	1	1	2	2	1	2	3	2	3	4	4	4	4	4	4	4	4	4	4	4	4
15	Laxminag	Laxminag	Dhummug	Bhadradr	1	1	3	1	4	1	4	5	5	1	5	4	1	5	4	5	5	1	4	5	5	5	1
16	Laxminag	Laxminag	Dhummug	Bhadradr	2	2	3	1	3	1	4	5	5	2	5	4	1	5	4	5	5	1	4	4	5	5	2
17	Saleguda	Saleguda	Asifabad	Asifabad	3	2	2	1	1	2	4	3	2	1	3	4	4	1	4	3	5	2	1	2	3	2	1
18	Saleguda	Saleguda	Asifabad	Asifabad	3	2	2	1	1	2	4	3	3	2	3	3	3	2	3	4	4	4	4	3	3	2	1
19	Saleguda	Saleguda	Asifabad	Asifabad	4	2	7	4	1	2	4	3	3	4	5	2	4	4	3	3	3	3	3	3	3	4	1
20	Saleguda	Saleguda	Asifabad	Asifabad	3	2	3	1	2	2	4	3	3	3	4	4	4	3	5	5	4	4	5	5	3	3	4
21	Saleguda	Saleguda	Asifabad	Asifabad	3	2	1	1	1	2	4	3	3	4	3	4	5	4	5	4	4	5	3	4	4	3	2
22	Saleguda	Saleguda	Asifabad	Asifabad	4	2	1	4	1	2	4	3	3	4	3	4	4	2	4	3	4	4	3	3	4	3	3
23	Saleguda	Saleguda	Asifabad	Asifabad	3	2	3	1	1	2	4	3	3	3	4	4	5	4	5	3	4	4	2	3	5	3	4
24	Saleguda	Saleguda	Asifabad	Asifabad	4	2	7	4	1	2	4	3	2	3	4	4	4	4	3	3	3	2	3	3	2	3	4
25	Saleguda	Saleguda	Asifabad	Asifabad	4	2	7	1	1	2	4	3	2	2	3	4	4	3	3	3	2	3	3	2	3	4	3
26	Saleguda	Saleguda	Asifabad	Asifabad	4	2	7	4	1	2	4	3	2	3	1	2	3	2	3	3	2	3	4	2	3	4	3
27	Bhadrach	Bhadrach	Bhadrach	Bhadrach	4	2	3	4	3	1	4	3	5	2	5	3	1	5	5	5	5	5	4	5	4	5	3
28	Bhadrach	Bhadrach	Bhadrach	Bhadrach	3	2	2	1	4	1	4	3	5	2	5	4	1	5	5	5	5	1	4	4	5	4	2
29	Bhadrach	Bhadrach	Bhadrach	Bhadrach	2	2	1	4	3	1	4	3	5	2	5	4	1	5	5	5	5	2	4	5	4	5	2
30	Bhadrach	Bhadrach	Bhadrach	Bhadrach	3	5	1	1	4	1	4	3	5	2	5	2	1	5	5	4	5	1	5	4	5	5	1
31	Bhadrach	Bhadrach	Bhadrach	Bhadrach	2	2	3	4	3	1	4	3	5	2	5	4	1	5	5	5	5	4	4	4	1	4	1
32	Bhadrach	Bhadrach	Bhadrach	Bhadrach	2	2	3	4	3	1	4	3	5	2	5	2	1	5	5	5	5	5	4	5	5	4	1
33	Ethurnagar	Ethurnagar	Ethurnagar	Mulugu	4	2	1	1	4	1	4	3	5	1	5	3	1	5	5	5	5	4	4	4	2	3	3
34	Ethurnagar	Ethurnagar	Ethurnagar	Mulugu	3	2	3	1	4	1	4	3	5	2	5	3	1	5	5	5	5	5	2	1	1	1	2
35	Ethurnagar	Ethurnagar	Ethurnagar	Mulugu	1	2	1	4	3	1	4	3	5	2	5	2	1	5	5	5	5	5	1	1	1	1	1
36	Kothagud	Kothagud	Kothagud	Mahabub	3	2	5	1	2	1	4	2	5	4	5	2	5	5	4	5	4	5	4	5	5	5	5
37	Kothagud	Kothagud	Kothagud	Mahabub	3	2	1	1	2	1	1	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
38	Kothagud	Kothagud	Kothagud	Mahabub	3	2	1	1	2	1	4	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
39	Kothagud	Kothagud	Kothagud	Mahabub	3	2	7	1	2	1	4	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
40	Kothagud	Kothagud	Kothagud	Mahabub	3	2	1	1	2	1	4	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
41	Kothagud	Kothagud	Kothagud	Mahabub	2	2	1	1	2	1	4	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
42	Kothagud	Kothagud	Kothagud	Mahabub	2	2	1	1	2	1	4	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
43	Kuravapa	Thummal	Aswapura	Bhadradr	2	2	1	1	2	1	4	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
44	Kuravapa	Thummal	Aswapura	Bhadradr	2	2	1	1	2	1	4	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
45	Kuravapa	Thummal	Aswapura	Bhadradr	2	2	1	1	2	1	4	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
46	Kuravapa	Thummal	Aswapura	Bhadradr	2	2	1	1	2	1	4	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
47	Mominpu	Mominpu	Uthnir	Adilabad	2	2	2	1	1	2	4	3	3	3	3	4	4	2	2	2	3	3	3	3	4	2	2
48	Mominpu	Mominpu	Uthnir	Adilabad	2	2	1	1	1	2	4	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3
49	Mominpu	Mominpu	Uthnir	Adilabad	2	2	3	1	1	2	4	3	3	3	3	4	4	1	4	4	3	3	3	2	3	4	3
50	Mominpu	Mominpu	Uthnir	Adilabad	3	2	1	1	1	2	4	1	2	3	3	3	4	1	2	3	4	3	3	3	3	4	3
51	Mominpu	Mominpu	Uthnir	Adilabad	2	2	3	1	1	2	4	3	2	3	3	3	4	2	2	3	3	2	2	3	3	3	3
52	Mominpu	Mominpu	Uthnir	Adilabad	2	2	3	1	1	2	4	1	2	3	2	3	4	2	3	3	3	2	3	2	3	3	3

	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB
1	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our	We	Our
2	4	3	5	4	4	5	4	3	4	4	5	3	3	3	2	4	5	4	5	5	3	5	4	5	4	5	5
3	1	1	3	1	5	1	1	1	1	1	4	5	4	1	1	5	4	5	5	1	4	1	5	5	3	5	1
4	2	1	2	1	2	1	1	2	1	1	3	2	2	1	1	1	4	2	5	5	1	1	2	5	4	4	1
5	1	2	2	1	1	1	1	1	1	1	2	2	1	1	1	5	2	5	4	1	4	1	4	5	5	5	1
6	1	1	2	1	1	1	1	1	1	1	2	2	1	1	1	5	1	5	4	2	2	1	1	5	4	5	1
7	1	1	2	1	2	1	1	1	1	1	3	2	2	1	1	5	2	5	4	1	3	2	4	4	4	5	1
8	1	1	3	1	1	1	1	1	1	1	3	2	2	1	1	5	3	3	4	1	3	2	4	5	3	5	1
9	2	2	4	4	4	5	2	2	1	3	1	1	1	1	5	5	3	5	5	1	5	5	5	4	4	5	2
10	4	2	4	4	4	2	1	1	3	2	1	1	1	1	5	5	2	5	5	1	5	4	5	5	5	5	2
11	5	4	5	1	4	5	5	2	2	1	3	2	1	1	5	5	4	5	5	2	4	1	5	4	5	5	2
12	4	2	4	1	4	5	5	1	2	1	3	2	1	1	4	5	5	2	5	5	1	5	4	5	5	4	5
13	4	2	4	1	4	5	2	3	2	3	2	1	1	1	4	5	5	1	5	5	1	5	5	5	5	4	5
14	4	4	4	4	4	4	4	4	4	5	4	4	4	4	5	5	5	5	5	5	4	5	5	5	5	5	5
15	5	4	5	1	5	5	1	2	1	3	2	1	1														

	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	
	Our en	Our en	We ha	We re	Our en	We ha	Our bi	We ad	Our en	We ha	Our ge	We co	Our le	Our en	We ha	Our bi	We ha	Our en	We ha	Our bi	We an	Our bi	We ha	Our bi	Our en	Our en	Our bi	Our en	Our pr	Our en	Our bi	Our en	Our bi	
2	3	5	4	4	3	3	4	4	4	3	5	4	5	5	5	4	3	4	4	3	4	5	4	4	3	4	2	4	5	4	3	4	5	
3	1	1	1	4	1	5	1	1	1	2	1	2	3	1	1	1	1	1	1	1	3	1	5	2	4	3	1	1	3	4	1	4	4	
4	1	1	2	2	1	2	1	1	1	1	2	2	2	4	1	1	1	1	1	1	1	4	3	3	2	3	2	1	1	2	3	1	4	3
5	1	1	2	2	1	2	1	1	1	3	2	2	1	3	2	1	1	1	1	5	4	4	2	3	4	2	1	4	3	2	1	4	3	
6	1	1	2	2	1	4	1	1	2	1	1	1	3	1	1	1	1	1	4	2	4	1	3	3	2	1	2	1	3	2	1	1	3	
7	1	1	2	1	1	2	1	1	3	1	1	1	3	1	1	1	1	1	2	4	4	1	4	2	2	1	1	3	3	2	1	2	3	
8	1	1	2	1	1	2	1	1	4	1	2	1	3	3	1	1	1	1	5	3	4	2	4	2	4	2	1	4	3	4	2	5	4	
9	2	2	5	5	4	5	1	4	5	5	3	2	4	4	5	5	2	4	5	4	5	5	5	1	5	4	3	4	4	4	2	5	4	
10	2	2	4	5	4	5	2	5	4	5	3	5	5	4	5	4	5	3	3	5	4	5	5	4	1	5	4	3	4	5	4	2	5	4
11	2	1	2	4	3	5	1	4	4	5	2	5	4	4	4	4	2	3	5	4	4	5	5	1	5	4	3	5	4	4	2	4	2	
12	1	1	2	5	4	5	1	4	4	4	2	4	4	4	4	5	1	3	5	4	4	5	4	1	5	4	3	5	4	5	1	5	4	
13	1	2	2	4	2	5	1	4	4	4	2	4	4	4	4	5	1	3	5	4	5	4	5	1	5	4	3	5	4	4	1	5	4	
14	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	
15	2	2	3	4	4	5	1	5	4	5	3	5	4	4	5	5	1	3	5	4	4	5	5	5	1	5	4	3	5	4	4	2	5	4
16	2	2	4	2	4	5	1	4	4	5	3	5	4	4	4	5	1	3	5	5	5	5	5	1	5	4	3	5	4	4	2	5	4	
17	4	5	4	3	1	5	5	3	5	3	4	4	5	4	5	4	4	4	4	4	4	5	5	5	1	5	1	2	3	4	4	1	3	5
18	4	4	4	4	4	4	4	4	5	4	3	4	4	4	5	4	4	4	5	4	4	4	4	5	2	4	4	4	3	4	4	3	4	4
19	4	5	5	4	4	5	4	4	5	4	3	5	5	5	4	4	5	5	4	5	4	4	5	4	2	4	5	4	3	4	5	4	5	4
20	4	5	4	4	4	4	3	4	5	4	3	4	4	4	4	5	5	4	5	5	5	4	4	4	4	2	3	4	4	3	4	4	4	4
21	5	3	4	5	4	4	4	4	4	5	3	4	5	4	5	4	5	4	4	4	4	5	4	5	3	3	4	4	3	4	5	5	4	5
22	4	4	4	5	4	5	4	5	4	5	2	5	5	4	4	4	5	3	2	5	4	4	2	5	2	3	4	4	3	4	4	4	3	5
23	4	5	4	5	4	5	3	4	5	4	5	4	4	4	4	3	4	4	4	4	4	4	5	2	4	4	4	3	4	4	4	3	4	
24	4	4	5	4	3	4	4	3	5	4	3	4	4	4	3	4	5	4	4	4	5	3	5	3	2	4	3	4	3	4	4	4	3	4
25	4	5	4	5	3	4	5	4	5	4	2	3	5	4	4	5	4	3	4	5	4	5	4	2	4	3	4	3	5	4	4	3	4	4
26	4	5	4	5	4	5	4	5	4	5	4	5	5	4	4	4	5	4	4	5	4	3	4	5	2	3	3	4	3	4	4	5	3	5
27	1	1	3	5	4	5	1	1	4	5	4	5	4	4	1	5	1	1	5	4	5	3	4	1	5	5	3	5	4	2	1	5	5	5
28	1	1	3	4	4	3	1	1	1	4	3	4	1	4	4	5	1	1	5	4	4	4	4	1	5	4	3	5	4	2	1	4	4	4
29	1	1	3	4	3	4	1	4	4	1	3	2	1	5	4	5	1	1	5	4	4	4	4	1	4	4	3	5	4	2	1	4	4	4
30	1	1	3	4	4	4	1	1	2	1	3	1	1	4	4	5	1	4	5	4	4	4	4	1	5	4	3	5	4	2	1	4	4	4
31	1	1	3	3	4	5	1	2	4	1	2	1	1	1	4	4	4	1	4	5	4	4	3	4	1	5	5	3	4	4	2	1	5	4
32	2	1	4	4	4	5	1	4	2	4	3	5	4	4	4	4	1	4	5	4	3	4	4	1	5	5	3	5	4	2	1	4	4	4
33	1	2	3	2	2	3	1	1	4	1	3	1	4	4	4	4	5	3	3	5	4	4	3	4	1	4	1	3	4	3	2	2	5	4
34	1	1	3	1	2	4	1	1	4	2	3	4	4	4	2	4	1	3	5	4	3	3	4	1	4	1	3	5	4	2	1	5	4	4
35	1	1	3	2	2	4	1	1	4	4	3	4	4	4	2	4	1	3	5	4	4	4	4	1	4	1	3	5	4	2	1	5	4	4
36	3	5	5	1	1	5	5	5	5	1	5	5	5	1	1	1	1	1	5	1	1	2	5	5	5	5	5	5	5	5	4	1	5	5
37	5	5	5	1	1	5	5	5	5	1	5	5	5	5	1	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	1	5	5	5
38	5	1	5	1	1	5	5	5	5	1	5	5	5	5	5	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	1	1	5	5
39	5	1	5	1	1	5	5	5	5	5	5	5	5	5	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	1	1	5	5
40	5	1	5	1	1	5	5	5	5	1	5	5	5	5	1	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	1	1	5	5
41	5	1	5	1	1	5	5	5	5	1	5	5	5	5	1	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	1	1	5	5
42	5	5	5	1	5	5	1	5	5	5	5	5	5	5	1	1	1	5	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
43	5	5	5	1	5	5	1	1	5	5	5	5	5	5	1	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
44	5	5	5	1	5	5	1	5	5	5	5	5	5	5	1	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
45	5	5	5	1	5	5	1	5	5	5	5	5	5	5	1	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
46	5	5	5	1	5	5	1	5	5	5	5	5	5	5	1	1	1	1	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
47	4	5	4	4	4	5	4	3	5	3	4	4	4	4	2	3	3	3	4	4	4	5	5	2	4	3	4	3	4	4	4	3	4	4
48	3	4	4	3	4	5	3	4	5	3	3	4	4	4	3	4	4	4	3	4	4	4	3	4	2	4	3	4	3	4	4	4	3	4
49	4	5	4	3	3	4	3	4	5	3	4	5	4	3	4	4	4	4	3	5	4	4	4	5	3	3	2	4	3	4	4	4	3	5
50	4	5	4	3	4	5	4	3	5	3	4	5	4	3	4	4	4	5	3	4	4	4	4	2	4	4	3	4	4	4	5	5	3	4
51	4	5	3	4	2	5	4	3	5	3	3	4	4	3	3	2	4	4	2	4	3	4	3	3	1	4	3	3	3	4	4	4	4	4

Activate Windows
Go to Settings to activate Windows.