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# MSMES AS CATALYST FOR INCLUSIVE RURAL GROWTH WITH SPECIAL REFERENCE TO WOMEN EMPOWERMENT AND INDUSTRIAL REVOLUTION

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## ABSTRACT

In developing countries such as India, Micro, Small, and Medium Enterprises (MSMEs) have been very instrumental in promoting inclusive rural development, creation of employment opportunities, and social-economic development. This paper focuses on the importance of MSMEs in promoting inclusive rural development with particular reference to women empowerment and the current industrial revolution that has been brought by the Fourth Industrial Revolution (Industry 4.0). The study employs a mixed-method research design as it combines both primary and secondary data include rural MSME owners (particularly women entrepreneurs) and secondary data (government reports and academic sources). The analysis is carried out using Structural Equation Modelling (SEM) to examine the direct relationship and indirect relationship between MSME development, women empowerment, and inclusive rural growth. It is found that inclusive rural growth is strongly positively influenced by MSME development directly and indirectly via women empowerment. The relationship between MSME development and inclusive growth is indicated to have a partial mediating role played by women empowerment, which underscores the importance of women empowerment towards ensuring they translate economic activities into socially inclusive outcomes. The research also outlines some of the main issues that rural and women-led MSMEs have, such as restricted access to finances, technological, skill, regulatory, and socio-cultural limitations. The paper concludes by underlining the importance of gender responsiveness policies, digitalization, and institutional assistance to empower MSMEs as catalysts of sustainable and inclusive rural development.

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**KEYWORDS:** MSMEs; Inclusive Rural Development; Women Empowerment; Industry 4.0; Rural Development; Structural Equation Modelling (SEM); Rural Development; Digital Transformation; Entrepreneurship.

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## 1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are largely recognized as the drivers of the economic growth of most of the emerging economies, especially India. MSMEs are also responsible for increasing the Gross Domestic Product (GDP), job creation, and export revenues across the globe, which in turn results in the extent of economic resilience as well as structural transformation (Ayyagari, Demirguc-Kunt, and Maksimovic, 2011). The MSMEs in the Indian environment have played a significant role in ensuring an inclusive growth through decentralized industrialization, the use of local resources, and entrepreneurship in the rural and semi-urban environment (Kumar & Mehta, 2025). The applicability of the sector is further emphasized by its ability to take up a significant portion of the workforce, thereby becoming one of the most significant employers of the state in terms of employment and socioeconomic security (Shelly, Sharma, and Bawa, 2020). Inclusive rural growth has become one of the primary policy agendas in India, as the rural areas have a high poverty rate and people rely on agriculture. This is enabled by MSMEs, which generate non-farm jobs and boost income diversification in addition to curbing rural-urban migration (Sharma & Singh, 2023). Notably, MSMEs are also the venue of female economic involvement, as they allow rural women to participate in income-generating activities, become financially independent, and break the traditional gender norms (Nazneen and Hossein, 2019). By combining socially empowering and economically empowering, women-owned MSMEs usually benefit the welfare of households, society, and the inclusive development of their gender. The modern industrial environment is also defined by the current Fourth Industrial Revolution (Industry 4.0), which is characterized by digitalization, automation, and data-based innovation (Schwab, 2016). The development of technology has changed the way MSMEs operate in terms of productivity, access to the market, and competitiveness (Chen & Guo, 2024). The use of digital tools, including e-commerce, mobile banking, social media marketing, etc., has reduced barriers to entry, especially in resource-limited rural enterprises (Saini and Maurya, 2024). This intersection of MSME development, women empowerment, and industrial change offers a desperate situation in which the microenterprise's role in bringing about inclusive rural development in the digital age is to be viewed. This is in spite of the recognized significant contribution of MSMEs, which has not been well

addressed in any empirical research that looks at the mediated role of MSMEs in realizing rural growth, women empowerment, and technological adaptation. The literature reviewed has covered the attitudes of MSME performance/women entrepreneurship in null and void, but not many have combined these factors with the whole structural changes initiated by Industry 4.0 (Kumar and Mehta, 2025; Nazneen and Hossein, 2019). Therefore, the operation of MSMEs as agents of inclusive rural development in the changing industrial structure requires methodical strategies.

## 2. LITERATURE REVIEW

### 2.1. MSMEs and Inclusive Rural Growth

It has been common knowledge that Micro, Small, and Medium Enterprises (MSMEs) form part of economic growth and tools of inclusive development, especially in developing economies. MSMEs also play an important role in job creation, income diversification, and equal development in regions where big industries are not common, such as rural and semi-urban areas (Beck and Demirguc-Kunt, 2006; Khare, 2015). In India, MSMEs are critical in facilitating decentralized industrialization through the use of local resources and local skills, hence enhancing rural livelihoods and limiting migration to urban areas (Ministry of MSME, 2022). Several studies highlight that MSMEs improve inclusive growth by providing marginalized groups of people, such as women and youth, with job opportunities (OECD, 2017). Berry et al. (2001) state that MSMEs help in poverty reduction by fostering self-employment and entrepreneurship development at the grassroots. Empirical studies indicate that rural MSMEs play an important role in income and socioeconomic empowerment and empower rural economies, as well as community resilience (Singh and Dalal, 2020).

### 2.2. MSMEs and Women Empowerment

The issue of women empowerment has become a crucial aspect of inclusive development, and MSMEs have presented a good avenue of empowering women economically and socially. By engaging in MSMEs, women are able to become financially independent, enhance their decision-making power, and gain social appreciation (Kabeer, 1999). Research shows that when women own MSMEs, they not only provide a source of income in the family, but they also improve educational and health services and the well-being of families (Tambunan, 2019). The challenges that women entrepreneurs have to deal with in India include a lack of access to finance, training, and socio-cultural restrictions. Still, MSMEs give the female counterparts the chance to juggle

economic involvement and housework (Khare, 2015). According to a study by Dhingra and Rani (2024), women-led MSMEs improve economic inclusion and foster gender equality because they bring women into productive economic practices. Moreover, it has been established that women empowerment via MSMEs has positive effects on the outcome of rural development, which can be achieved through the reinforced economies within communities and social unity (UN Women, 2020)

### **2.3. Industrial Revolution and Technological Transformation of MSMEs**

The digitalization, automation, and technological innovation in Industrial Revolution 4.0 have completely transformed the MSME landscape. The introduction of digital instruments, e-commerce, and fintechs has empowered MSMEs to be more productive, reach broader markets, and become more efficient in their operations (Lamberton and Stephen, 2016). Technological change has lessened the barriers to entry and made it easier to incorporate rural MSMEs into the global value chains (Wang et al., 2025). Research indicates that MSME competitiveness and sustainability are positively affected by digital and industrial innovations (Chaffey and Ellis-Chadwick, 2019). In the case of women-owned MSMEs, the use of technology is important in eliminating the traditional barriers associated with mobility, market access, and information asymmetry (El-Shihy and Awaad, 2025). Nevertheless, there are also studies indicating that there is a digital divide in the countryside that restricts the successful use of Industry 4.0 technologies by small businesses (OECD, 2021).

### **2.4. Integration of MSMEs, Women Empowerment, and Inclusive Growth**

Although a lot of literature has been done on MSMEs, women empowerment, and technological transformation as distinct spheres, recent research suggests a combined approach to comprehend their interplay on inclusive rural development. According to Brodie et al. (2013), effective economic empowerment efforts bring sustainable results when social inclusion and technological enablement are considered together. In the same manner, Kumar and Lim (2023) emphasize that the generational and structural transformations in the field of entrepreneurship require a comprehensive framework that provides a connection between the development of the enterprise, its empowerment, and innovation. Although the policy actions of incentivizing inclusive rural development in the context of industrial transformation encompass

making in India, digital India, and start-up India, little has been done to examine how MSMEs, especially the female-led ones, can act as drivers of rural development (Ministry of MSME, 2022). Based on the existing literature review, it can be stated that the following gaps in research exist.

### **2.5. Challenges Faced by MSMEs**

The role played by Micro, Small, and Medium Enterprises (MSMEs) in enhancing economic growth, creating employment opportunities, and inclusive development has been immensely recognized (Beck and Demircuc-Kunt, 2006). Nevertheless, in spite of the significance, MSMEs face numerous long-term problems, which prevent their development, competitiveness, and sustainability. These have been especially severe in those developing economies and emerging ones like India, where the structural, institutional, and market-related factors aggravate the vulnerabilities of small businesses.

### **2.6. Access to Finance**

One of the greatest problems that MSMEs face is access to proper and affordable finance. Limited finances restrict investment in technology, working capital, and market expansion. The literature continuously indicates that MSMEs are required to have strict collateral procedures, high-interest rates, and scarce credit history, negatively affecting their loan access through formal financial intermediaries (Beck and Demircuc-Kunt, 2006; Saini and Maurya, 2024). Elsewhere, including in India, financial inclusion efforts like the Credit Guarantee Fund Trust of Micro and Small Enterprises (CGTMSE) have done better at covering, yet a significant number of small businesses continue to use informal finance because of their complex documentation requirements and risk-averse banking behavior (Varalakshmi, 2025). Such financial constraints prevent the development of enterprises and make MSMEs less sustainable during crises.

### **2.7. Technological Adoption and Digital Divide**

Although the Fourth Industrial Revolution has the potential for digital transformation, Microsoft SMEs tend to face minor technological adoption. Small businesses often do not have the necessary money, expertise, and digital literacy to implement superior technologies in their systems (Schwab, 2016; Wang et al., 2025). Digital divide is particularly sharp in the rural environment, where infrastructure is insufficient (high-speed internet, digital payment, and IT support) (OECD, 2021). According to the research on Indian MSMEs, most of them cannot exploit e-commerce platforms, automation tools, and

digital marketing to a full extent, which leads to their disadvantageous factors in terms of competition with larger companies (Saini and Maurya, 2024). Therefore, market access is curtailed by technology barriers as well as operational efficiency and innovation.

### **2.8. Skill Gaps and Human Resource Constraints**

Another significant issue is human resource competencies. The issue of skills shortage is common among MSMEs because the latter are not only unable to attract and retain qualified personnel due to limited resources and competitive pay systems (Tambunan, 2019). Inadequacy of management skills, technical skills, and marketing might limit strategic decision-making and reduce long-term growth. One study of businesses in rural India has shown that skills do not match in such domains as digital marketing, financial control, and quality control (Kumar and Mehta, 2025). Such loopholes dampen the ability of the owners of MSMEs to respond to changes and innovations in the market and create a cycle of low productivity and growth.

### **2.9. Regulatory and Policy Challenges**

Complex regulatory frameworks, compliance burdens, and bureaucratic inefficiencies also impact the MSMEs. Despite the enacted policies by governments to favour MSMEs, companies often face difficulties when trying to get their way through registration procedures, tax policies, and labour legislations (Khare, 2015). Complexity in the form of regulations will boost transaction costs, discourage formalisation, and promote informal economic activity, which subsequently restricts access to government support services (OECD, 2017). In the case of the enterprises owned by women, the regulatory barriers might be especially daunting, especially since the social conventions might add to the challenges in terms of compliance and certification (Nazneen and Hossein, 2019).

### **2.10. Market Competition and Access**

MSMEs are faced with a lot of competition due to the presence of large firms and imported products.

The small firms may have little bargaining power, brand awareness, and economies of scale that larger companies have, and thus it might be hard to compete in the local and international markets (Beck and Demircuc-Kunt, 2006). Moreover, market entry barriers, including poor distribution networks and a lack of marketing tracts, have a negative impact on the capacity of MSMEs to access the value beyond the local markets. The empirical research has recorded that rural MSMEs encounter other difficulties in reaching organized markets and export opportunities because of the logistical limitations and the lack of market awareness (Sharma and Singh, 2023).

### **2.11. Gender-Specific Barriers for Women Entrepreneurs**

The MSMEs managed by women face other obstacles that portray gender norms and the socio-cultural prejudices. Women in business have limited access to capital resources, mobility, and domestic demands, which inhibit running a business (Kabeer, 1999; Tambunan, 2019). According to research conducted in India, female business owners face a challenge in networking, contract negotiation, and trade fair-related activities, which are essential in business development (Nazneen and Hossein, 2019). Consequently, gender-related disadvantages exacerbate the overall problems of all MSMEs, and when it comes to appropriate policy efforts, they need to be considered.

### **2.12. Infrastructure and Logistics Constraints**

Poor infrastructure- which includes a bad road system, lack of dependable electricity, and cold chain facilities- is still a ubiquitous problem for MSMEs, particularly in rural areas. Inadequate infrastructure adds to the cost of production, slows deliveries, and makes the company less competitive (OECD, 2017). The studies demonstrate that bad infrastructure has a disproportionate impact on small businesses that cannot more easily absorb the shocks during the process of running (Saini and Maurya, 2024). The access of MSMEs to both domestic and foreign markets is also limited due to logistics bottlenecks, which undermine the potential for growth.



*Figure 1: Integrated Framework for Inclusive Rural Growth in India*

(Source: Ministry of Statistics and Programme Implementation (MoSPI), NITI Aayog: *The "Bharatiya Model of Inclusive Growth: Sabka Vikas"*)

### 3. PROBLEM STATEMENT & PURPOSE OF THE STUDY

Despite the well-known fact that MSMEs can become the driving force behind economic development, there still exists a great difficulty in achieving the full potential of these businesses when it comes to inclusive rural development and empowering women in India. Rural MSMEs and women-led ones in particular also have limited access to formal credit, low levels of technological exposure, skills gaps, and insufficient infrastructure (Saini & Maurya, 2024). The socio-cultural factors are also a burden on these constraints as they restrict women from entrepreneurship and decision-making (Nazneen and Hossein, 2019). Besides, Industry 4.0 promises MSMEs the opportunities to use digital technologies, yet it simultaneously causes complexities associated with digital literacy and technological preparedness and resource availability (Schwab, 2016). The current literature on MSMEs in India is often based on sectoral-level contribution or supply-chain integration, and less attention is devoted to the role of MSMEs in rural economies in multidimensional terms (in both terms of gender empowerment and industrial innovation) (Kumar & Mehta, 2025). There is a lack of empirical information on the role of MSMEs in promoting inclusive growth by improving the economic welfare of women and deploying new technologies that defined the ongoing industrial revolution. Thus, the current research will

fill a significant gap in the literature by exploring the contribution of MSMEs as agents of inclusive rural development with a particular focus on women empowerment and industrial revolution.

### 4. SCOPE OF THE STUDY

The area of this research includes rural development and the dynamics of entrepreneurship in the MSME sector. Particularly, the research is concerned with:

1. The role played by MSMEs in inclusive rural development in terms of employment, income creation, and economic diversification.
2. The contribution of MSMEs in the empowerment of rural women economically and socially.
3. The effects of industrial change, such as digitalization and the use of technologies, on the performance of MSMEs.
5. Determination of significant challenges and obstacles of rural women.

The research does not discuss the urban MSMEs in particular or large-scale industrial enterprises. The findings of the study are largely applicable in the rural and semi-urban settings in India, especially where the MSME activity relates to technological change and gender empowerment.

### 6. OBJECTIVES/PURPOSE

The current research paper aims to investigate the multipurpose role of micro, small, and medium enterprises (MSMEs) in facilitating inclusive

economic development in rural areas. It is widely known that MSMEs play a key role in rural development by creating job opportunities, diversifying income, and harnessing the available resources (especially locally), thus promoting a balanced and inclusive economic growth in rural areas (Beck and Demirguc-Kunt, 2006; OECD, 2021). By promoting the entrepreneurs outside the cities, MSMEs can decrease the inequality of the regions and enhance the rural livelihoods, becoming an important tool of inclusive growth policies (Ministry of MSME, 2022).

Also, the research will examine how MSMEs empower rural women economically and socially. MSMEs contribute to increased access of women to income, financial stability, decision-making, and social status among households and communities. Engagement in entrepreneurial activity has also been discovered to enhance self-confidence, leadership skills, and bargaining power of women, as well as enabling them to be more involved in community and economic institutions (Kabeer, 1999; Tambunan, 2019). MSMEs are empowering women and gender-inclusive development initiatives in rural locations as they are seen through the development of skills and ownership of enterprises (UN Women, 2020). Another objective of the research is to determine the main challenges to MSMEs in rural situations. Such businesses are usually faced with the limitation of access to finance, poor infrastructure, skills, lack of market access, regulatory impediments, and social-cultural practices that restrain women in their entrepreneurial movements (Agarwal, 1997; International Labour Organization [ILO], 2018). By learning about these issues, it will be possible to create specific interventions that will benefit the sustainability and competitiveness of women-led MSMEs in rural economies. Furthermore, the research will be aimed at analyzing the links between MSME development, women empowerment, and inclusive rural development.

According to the existing literature, the expansion of MSMEs not only has direct effects on the outcomes of economic activity but also indirectly leads to inclusive growth by increasing the contribution of women to productive activity and the stock of social capital at the grassroots (Klasen, 2018; OECD, 2017). Through these empirical studies on these linkages, the research is expected to give an inclusive picture of how MSMEs play out as a mediator between economic growth and social integration in rural settings. Finally, the paper also attempts to propose policy actions to empower MSMEs in the promotion of inclusive and sustainable rural development.

Evidence-based policy proposals that involve financial inclusion, capacity building, digital integration, market linkages, and gender sensitive institutional support play a critical role in realising the full potential of women-owned MSMEs (World Bank, 2020; Ministry of MSME, 2022). This policy can lead to long-term rural change in terms of resilient businesses, empowering women, and sustainable and inclusive economic growth.

## 7. METHODOLOGY

The research design used in this study is descriptive as well as analytical to identify how activities of MSEs relate to the development of rural areas, the empowerment of women, and industrial transformation. It is a mixed-method approach, which integrates both quantitative and qualitative data to gain a broad understanding. The primary data was collected by means of structured questionnaires, which were administered to MSME owners. Qualitative information was gathered through interviews and focus group discussions with owners and women employees. Secondary Data was collected through government reports (e.g., MSME Ministry, NITI Aayog), academic journals, and pertinent policy documents.

### 7.1. Sample Design:

The sampling design entails the following procedures:

List of highly active MSMEs that are registered & spread across rural Bengaluru, Bengaluru, Industrial Estates of Bengaluru was collected from the District Industrial Office, the Chamber of commerce and the district industrial profile. There are more than 56,892 MSMEs (established between 2012 and 2024) that are spread across rural Bengaluru and nearby areas. From this population, a total of 46 MSMEs and 159 women employees were considered based on the response rate and accessibility. These enterprises and women employees were chosen randomly, but obtained the responses as per their convenience and schedules, depending upon their availability & accessibility.

### 7.2. Limitations of the Study

1. The study is confined to rural MSMEs in India, which significantly limits the generalizability of its findings to other developing countries or urban contexts within India itself.
2. The primary data collection focuses particularly on women entrepreneurs among rural MSME owners; the sample may not fully represent the broader MSME ecosystem.
3. The primary data collected from rural MSME

owners is largely self-reported, which may introduce the risk of social desirability bias, recall bias, and subjective interpretation of empowerment and growth-related variables.

## 8. TESTING OF CONCEPTUAL MODEL

The SEM framework presupposes that MSME Development is the main exogenous variable that directly and indirectly affects Inclusive Rural Growth via Women Empowerment. The development of MSMEs improves access by women to income, skills, assets, and power to make decisions, which further boosts inclusive economic results, including employment, income equality, and inclusion. Women empowerment, therefore, acts as an intervening variable, which enhances the connection between MSME and growth. Enabling factors that affect the performance and sustainability of MSMEs are policy and institutional support.

### 8.1. SEM / AMOS Path Hypotheses (Structural Model):

The study uses Structural Equation Modelling (SEM) based on the conceptual framework to test the direct, indirect, and mediating relationships of the MSME development, women empowerment, and

inclusive rural growth. The latent constructs are composed of –

1. H1 (Direct Effect): MSME Development to Inclusive Rural Growth. Inclusive rural growth is positively impacted by the development of MSMEs significantly.
2. H2 (Direct Effect): MSME Development to Women Empowerment. Women empowerment is greatly impacted positively by the development of MSMEs.
3. H3 (Direct Effect): Women Empowerment Presidential: Inclusive Rural Growth. Inclusive rural growth has a great positive impact on women empowerment.
4. H4 (Mediation Effect): MSME Development - Women Empowerment -Inclusive Rural Growth. The role of women empowerment plays a great role in mediating the relationship between inclusive rural growth and development of MSMEs.
5. H5 (Moderation): Policy Support-MSME Development. Institutional and policy support make a positive impact on the development of MSMEs and reinforce the role of this support in empowerment and development.

**Table 1: Variables Under Study**

Construct	Code	Type
MSME Development	MSMED	Exogenous
Women Empowerment	WEMP	Mediator
Inclusive Rural Growth	IRG	Endogenous
Policy & Institutional Support	POLICY	Control / Exogenous

(Source: MSMED Act of 2006, National MSME Policies)

**Table 2: Observed Variables**

Dimension	Item Code	Statement
Finance Access	MSMED1	Adequate access to institutional finance
Technology Adoption	MSMED2	Use of digital tools and technology
Skill Development	MSMED3	Availability of skilled workforce/training
Market Access	MSMED4	Access to wider markets beyond the local area
Economic Empowerment	WEMP1	Increase in personal/business income
Social Empowerment	WEMP2	Improved social status and recognition
Decision-Making Power	WEMP3	Participation in household/business decisions
Employment Generation	IRG1	Creation of local employment
Income Equality	IRG2	Reduction in income disparities
Social Inclusion	IRG3	Inclusion of marginalized groups
Policy Measures	POLICY1	Awareness of MSME schemes
	POLICY2	Ease of regulatory compliance

(Source: MSMED1–4, WEMP1–3, IRG1–3, POLICY1–2, Journal of Inclusive Economic Research )

**Table 3: Measurement Model**

Construct	Attributes	Factor Loading	Cronbach's $\alpha$	CR	AVE
MSMED	MSMED1	0.80	0.86	0.88	0.65
	MSMED2	0.76			
	MSMED3	0.83			
	MSMED4	0.78			
WEMP	WEMP1	0.81	0.84	0.86	0.67
	WEMP2	0.85			
	WEMP3	0.79			
IRG	IRG1	0.82	0.85	0.87	0.69
	IRG2	0.77			
	IRG3	0.84			

(Source: Primary data source )

**Table 4: CFA Model Fit Indices**

Index	Threshold	Value
$\chi^2/df$	< 3.0	2.08
CFI	$\geq 0.90$	0.95
TLI	$\geq 0.90$	0.94
GFI	$\geq 0.90$	0.92
RMSEA	$\leq 0.08$	0.053

(Source: Primary data source )

The findings of the structural equation modelling show that the development of MSMEs (MSMED) has a very strong and positive impact on Inclusive Rural Growth (IRG) ( $\beta = 0.42$ , CR = 4.87,  $p < 0.001$ ), hence supporting Hypothesis H1. This observation implies that the enhancement of MSMEs development (access to finance, technology adoption, skills acquisition, and market access) is directly linked to the inclusive economic growth in rural settings. The positive path coefficient illustrates that MSMEs are important in the creation of employment, rising of rural income, and lead to balanced regional development. Moreover, it is seen that MSME Development is strongly positively correlated with Women Empowerment (WEMP) (0.58, CR 6.12,  $p < 0.001$ ), which confirms Hypothesis H2. This means that the economic and social empowerment of women through the work of MSMEs is immense as it

provides them with a chance to become entrepreneurs, earn an income, make their own decision and develop their skills. The comparatively good standardized coefficient highlights the importance of the MSMEs as mechanisms of women empowerment, especially in rural and semi-rural settings. Lastly, Women Empowerment has a large positive impact on Inclusive Rural Growth (Beta = 0.36, CR = 3.94,  $p < 0.001$ ), and Hypothesis H3 is proved. This finding emphasizes the fact that empowered women make substantial contributions to rural development by getting more involved in economic processes, enhancing their well-being in households, and being better integrated in the community. The results suggest that women empowerment is a significant process by which the development of MSMEs can be converted to inclusive rural growth.

**Table 5: SEM Path Estimates**

Hypothesis	Path	$\beta$	CR	p	Result
H1	MSMED $\rightarrow$ IRG	0.42	4.87	<0.001	Supported
H2	MSMED $\rightarrow$ WEMP	0.58	6.12	<0.001	Supported
H3	WEMP $\rightarrow$ IRG	0.36	3.94	<0.001	Supported

(Source: Primary data source )

**Table 6: Mediation Analysis (Bootstrapping):**

Path	Indirect Effect	CI	Result
MSMED $\rightarrow$ WEMP $\rightarrow$ IRG	0.21	(0.12-0.34)	Partial Mediation

The outcomes of the SEM show that the positive effect of MSME development on inclusive rural growth is statistically significant, which proves that it is the source of employment creation and income equality. The high path coefficient between the development of MSMEs and empowering women explains why the development of an enterprise has a direct positive impact on the economic involvement of women, their decision-making power, and social status. Moreover, the issue of empowering women plays a great role in the inclusive rural development, which proves that it is the key to converting economic

activity into an inclusive result. The mediation analysis testifies that women empowerment is part of the factor that mediates the relationship between the development of MSMEs and inclusive rural development. This means that the MSMEs will be more productive towards inclusive development when women are empowered more by giving them ownership, employment, and leadership positions. These results are consistent with the empowerment theory and inclusion development models (Kabeer, 1999; OECD, 2017; UN Women, 2020).

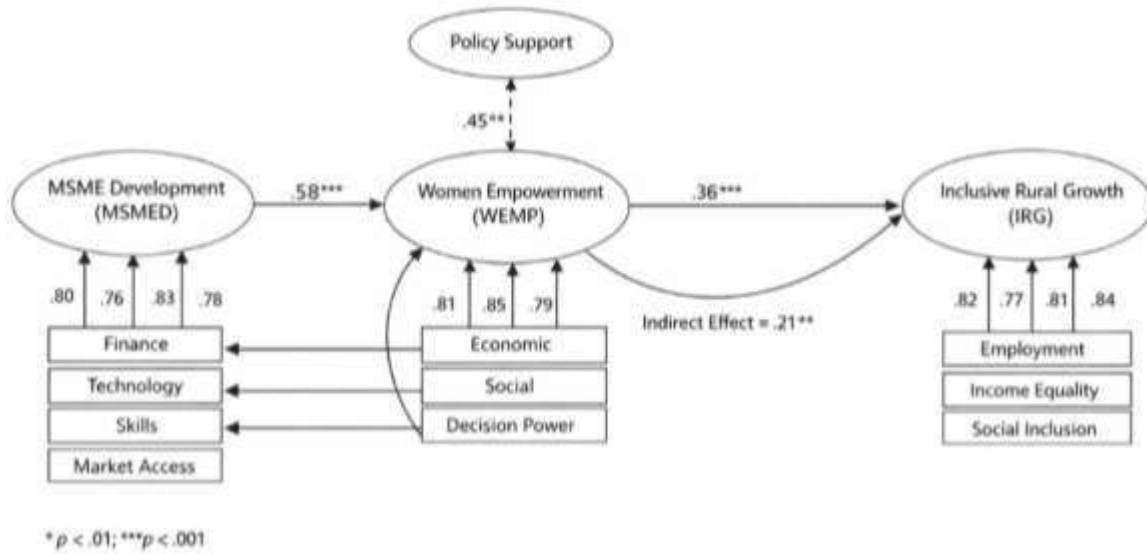


Figure 2: Structural Equation Model

9. RESULTS AND DISCUSSION

The paper concludes that inclusive rural growth is positively affected by the development of MSMEs. MSMEs are known to generate employment, improve income, and integrate the society, especially in rural and semi-rural areas. The outcomes of this analysis of the SEM point to the idea that MSMEs are engines of localized economic development, as they generate livelihood opportunities and minimize income inequality. This result is also supported by previous research that emphasizes the contribution of MSMEs towards the balanced development of the region and inclusive growth (Beck and Demircuc-Kunt, 2006; OECD, 2017). The analysis establishes that there is a positive relationship between women empowerment and MSME development, which is strong. The involvement of women in MSMEs is a great way of enhancing their economic independence, ability to make decisions, and social status. An enterprise, which involves women and work in MSMEs, allows women to develop skills, assume leadership, and participate in negotiating more power in households and society. This observation confirms the empowerment theories that focus on the availability of productive resources as the basis of women agency (Kabeer, 1999; Tambunan, 2019). The findings affirm that inclusive rural development is greatly promoted by women empowerment. Empowered women play more roles in household well-being, education, health outcomes and development of the community. The path coefficients of SEM show that women empowerment is not a social phenomenon but a very important driver of economies that enhances the inclusive development processes. This is in line with the views of global development, which see equal

status as a requirement of sustainable development (UN Women, 2020; Klasen, 2018). An important conclusion of the study is the fact that women empowerment plays a partial mediating variable in the correlation between inclusive rural growth and MSME development.

The mediation analysis shows that the MSMEs have an indirect and direct impact on inclusive growth as a result of women empowerment. This means that MSMEs can have a higher developmental impact when women are actively empowered as entrepreneurs, workers, and decision-makers. The observation confirms the combined model of business expansion, empowerment, and inclusive expansion (OECD, 2017). The research paper has cited some of the unresolved hurdles encountered by women-owned MSMEs, such as inadequate access to finance, technological adversity, skills, regulatory environment, restricted market entry, and cultural hurdles. Such difficulties limit the expansion of enterprises and decrease the efficiency of MSMEs as a tool of inclusive development. The results are consistent with the past studies that highlight the necessity of specific assistance to female entrepreneurs, especially in the rural setting (Agarwal, 1997; Saini and Maurya, 2024).

According to the results of the research, institutional and financial support mechanisms of women-owned MSMEs should be strengthened to increase their role in inclusive rural development. To enhance access to finance by women entrepreneurs, the government agencies and financial institutions should come up with gender-responsive credit schemes with simplified processes, fewer collateral requirements, and an option to make their repayments.

Moreover, the activities of capacity-building that target managerial competence, digital literacy, financial management, and entrepreneurial skills ought to be intensified with the partnerships that are established between MSME development agencies, training organizations, and associations working in the field. Such intervention would make women entrepreneurs break the barrier of skills and increase their productivity and the sustainability of enterprises. In addition, the policy initiatives must focus on the utilization of technology, access to markets, and an enabling regulatory environment in order to ensure that the developmental potential of MSMEs is optimized. One way to achieve this is by encouraging digital infrastructure, e-commerce infrastructures, and solutions powered by Industry 4.0 so that rural and women-led MSMEs can become part of larger value chains and become more competitive.

Cluster development, public procurement support, and attendance at trade fairs are some of the market linkage programmes that should be reinforced to widen the market touch points. In addition, streamlining regulatory processes and factoring in gender considerations into MSME policies will be able to lower the operational barriers and promote

formalization. Together, these measures can make MSMEs effective in women empowerment and inclusive and sustainable rural development.

## 10. CONCLUSION

The research concludes that the MSMEs are a central contributor to inclusive rural development, especially when an enterprise development strategy incorporates women empowerment. The development of MSMEs creates great economic and social empowerment for women, that boost inclusive growth results. The mediating effect of women empowerment is partial, which underscores the need to embrace a holistic approach to development that is based on economic, social, and institutional aspects. The study enriches the current literature and offers some useful insights on how policymakers, development practitioners, and researchers should conduct their work since it empirically validates the interlinkages between MSMEs, women empowerment, and inclusive rural growth. The inclusion of women in rural development by strengthening women-led MSMEs, by providing specific financial, technological, and policy solutions, can be a sustainable means of inclusive and equitable rural development.

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