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From Formalisation to Inclusion: Forecasting MSME Growth and Women's Entrepreneurship in India using Exponential Smoothing

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Abstract: ***This study examines the growth patterns, employment potential, and inclusivity aspects of India's Micro, Small, and Medium Enterprises (MSMEs) during the Udyam phase (formalisation), with a specific focus on women-owned businesses. It underscores the importance of inclusivity in development. While many studies have analysed MSME growth and women's entrepreneurship separately, very few address these topics during the Udyam phase, particularly with respect to inclusivity. Additionally, this study forecasts MSME growth and employment generation using exponential smoothing, thereby filling a gap in the existing literature. Secondary data is obtained from the annual reports of the Ministry of MSME and the Udyam Portal, covering the period from 2020-21 to 2024-25. The study adopts a descriptive-analytical approach. The Exponential Smoothing Model is used to forecast growth trends and employment potential, while Pearson's correlation analysis evaluates the relationship between enterprise growth and job creation. Further, a composite North-South Women MSME Inclusivity Index (NS-WMII) is constructed to assess inclusivity across various dimensions. The findings show that formalising businesses has significantly increased the number of registered MSMEs. Many previously unregistered firms have become registered, strengthening the sector's role in job creation. Forecasts indicate that the total number of MSMEs could exceed 93 million by 2029-30, with cumulative employment generation potentially surpassing 640 million jobs. Our analysis demonstrates a strong positive correlation between enterprise growth and job creation, highlighting the crucial role of MSMEs in promoting inclusive economic development in India. In addition to analysing overall trends, a regional comparison of women-owned micro, small, and medium enterprises (MSMEs) in selected Northern and Southern states is done, resulting in the development of the NS-WMII. This index accounts for various factors, including intra-state participation, national contributions, and growth momentum, to assess inclusivity in women's entrepreneurship. Our findings reveal a significant regional imbalance: Southern states demonstrate higher levels of inclusivity and more stable entrepreneurial ecosystems, while Northern states are experiencing rapid growth but have comparatively weaker levels of inclusion. This study integrates a clear time-series forecasting method with a newly developed inclusivity index to deliver analytical insights relevant to policymaking. Our findings emphasise the significant impact of formalisation reforms and underscore the necessity for regionally tailored, gender-sensitive strategies to enhance the quality of micro, small, and medium enterprises (MSMEs).***

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Nomenclature:
MSMEs: Many Women-Owned Small and Medium Enterprises
NS-WMII: North–South Women MSME Inclusivity Index
UAP: Udyam Aadhaar Program
PIB: Press Information Bureau
MSMEs: Micro, Small, and Medium Enterprises

I. INTRODUCTION

India's Micro, Small, and Medium Enterprises (MSMEs) are gearing up to anchor the country's economic trajectory. Their presence is both pervasive and deeply consequential. Increasingly, MSMEs are being recognised not as peripheral actors but as the very backbone of India's development process, especially as the country aspires to become a $10 trillion economy by 2032 and to move further toward the vision of a *Viksit Bharat* by 2047.

Micro, Small, and Medium Enterprises (MSMEs) have, in recent years, transitioned from peripheral contributors to central players in India's developmental vision. They contribute nearly 30 percent to the country's GDP, account for close to half of India's exports, and provide employment for over 111 million people. This sector is significant not only for its scale but also for its inclusivity. Its contributions are widespread across the country, encompassing rural areas, semi-urban regions, and emerging industrial corridors, thereby helping to reduce regional imbalances and promoting a more equitable pattern of growth.

The unregistered MSME (Micro, Small, and Medium Enterprises) firms, which were previously outside the formal economy, have now been brought into the mainstream. The introduction of the Udyam Registration system and the subsequent Udyam Assist Platform have significantly changed the landscape for MSMEs. These initiatives have not only formalised these businesses but also ensured that they are identified, recorded, and supported.

As a result, MSMEs in India are now largely formal and integrated, with their data visible and institutionally documented. This transition enhances their access to government assistance when needed, as well as to financial resources, market opportunities, and policy support. Additionally, it facilitates more accurate economic analysis.

Once the formalisation process is complete, our primary focus will be on promoting the establishment of new MSMEs. While growth trends

provide valuable insights, they are not sufficient for policymakers to create effective policies; we also need to anticipate MSME growth over the next five years. To achieve this, we will utilise an exponential smoothing model to forecast MSME growth through FY30.

Parallel to this structural evolution is the growing visibility of women entrepreneurs within the MSME ecosystem. Women-led enterprises are contributing not only to economic output but also to reshaping managerial practices and community engagement. However, their participation remains uneven, often constrained by limited access to finance, institutional support, and networks. In many cases, entrepreneurship is not purely opportunity-driven but shaped by necessity and structural limitations.

This paper is situated at the intersection of these developments. It seeks to understand MSME growth not just as a static outcome but as a dynamic process shaped by formalisation, forecastable, and deeply intertwined with questions of inclusivity. The central argument is straightforward: growth that is not anticipated cannot be effectively governed, and growth that is not inclusive cannot be meaningfully sustained.

A. Review of Literature

The scholarship on MSMEs in India has evolved alongside the sector itself, gradually shifting from descriptive accounts to more analytical and policy-oriented discussions. Early studies primarily emphasised the role of MSMEs in employment generation and industrial decentralisation, recognising their ability to absorb labour and promote regional balance. Over time, this understanding has deepened to include their contribution to exports, innovation, and economic resilience.

A consistent theme across the literature is the macroeconomic significance of MSMEs. Empirical studies have demonstrated their substantial contributions to manufacturing output, exports, and GDP, as well as to the sustenance of livelihoods across diverse sectors (Vinay Kumar [1], 2017; Jailap Deen, 2020) [3]. These works establish MSMEs as indispensable to India's economic structure, though they often rely on aggregate analysis that does not fully capture temporal dynamics.

Another important strand of research focuses on the spatial and structural characteristics of MSME growth. Manna and Mistri (2017) [2], for instance, highlight pronounced inter-state disparities in the distribution of enterprises, output, and employment, underscoring uneven regional development. Similarly, Zanjurne (2018) [4], Keshava S. R. (2022) [6], and later contributions emphasise the sector's growing economic value and its strategic importance in achieving long-term national growth targets.

MSMEs integrated into global value and supply chains play a crucial role in international trade and significantly contribute to the country's GDP (Keshava S. R., 2022) [7].

Studies on the impact of policies have shown that initiatives such as the MSMED Act of 2006 and financial programs like priority sector lending, Mudra Loans, and the Credit Guarantee Fund Trust have led to significant positive changes. These policies have also enhanced the resilience of micro, small, and medium enterprises (MSMEs) to economic disruptions (Mishra & Khanna, 2024) [5]; Naveen, 2024; Sahu & Mani, 2024). Notably, the introduction of the Udyam Portal has been recognised as a major milestone in formalising the MSME ecosystem and improving its integration with formal financial and regulatory systems.

Within this broader discourse, the role of women entrepreneurship has gained increasing attention. Studies indicate that women entrepreneurs often exhibit distinct managerial approaches characterised by inclusivity, adaptability, and community orientation. At the same time, persistent constraints, such as limited access to finance, inadequate training, and socio-cultural barriers, continue to restrict their participation and growth potential.

More recently, there has been a growing interest in forecasting and analytical modelling within MSME research. Emerging studies (Tiwari & Devi, 2024; Shashi Kumar et al., 2025) have explored the use of machine learning techniques to predict enterprise growth and performance. While these approaches offer high predictive accuracy, they often lack interpretability, making them less accessible to policymakers who require transparent, explainable models.

In contrast, traditional time-series techniques, particularly exponential smoothing, remain underutilised in MSME research, despite their proven effectiveness in capturing trends and generating reliable forecasts. Their relative simplicity, combined with strong predictive capability, makes them particularly suitable for policy-oriented studies where clarity and usability are as important as methodological rigour.

Overall, the literature provides a comprehensive understanding of MSME contributions and challenges but reveals fragmentation among descriptive analyses, policy evaluations, and forecasting approaches.

B. Research Gap

A closer engagement with the existing body of work reveals several important gaps that this study seeks to address.

The existing literature remains retrospective, focusing on past performance and structural characteristics of MSMEs. While such analysis is valuable, it does not adequately support forward-looking policy formulation. There is a clear need for systematic forecasting approaches that can anticipate future trends rather than merely describe historical patterns.

The emergence of advanced analytical tools that leverage machine intelligence presents a trade-off between accuracy and interpretability. While these models can deliver highly accurate forecasts, their "black-box" nature makes it difficult for policymakers to derive clear and coherent insights. This challenge has led to a renewed interest in explainable methods, such as exponential smoothing, which have not been widely applied in the context of MSMEs.

After implementing the Udyam Registration system and the Udyam Assist Platform for MSME registrations, structured and accurate data have become available. This presents an opportunity to conduct more precise, policy-relevant forecasting, a capability lacking in existing studies.

One of the key issues is the lack of integration between growth analysis and perspectives on inclusivity. Although the growth of MSMEs and women's entrepreneurship is both a well-documented area, they are often studied separately.

This separation restricts our understanding of whether the observed growth is genuinely inclusive or simply an expansion in scale.

The existing literature fails to analyse the performance of Women-Owned MSMEs in the north and southern states and the lessons they can learn from each other.

This study aims to fill existing gaps in the literature by integrating three interrelated dimensions, namely: 1) formalisation, 2) forecasting, and 3) inclusivity, into a comprehensive analytical framework. Exponential smoothing techniques are employed to analyse the newly formalised data on MSMEs and to estimate their potential growth over five years, until FY2030. Furthermore, the composite north–south women MSME inclusivity index (NS-WMII) is constructed to assess the extent of inclusivity in policy and social contexts.

C. Objectives of the Study

1. To examine the evolving growth patterns of MSMEs in India, with particular attention to their role in employment generation across sectors and regions.
2. To forecast the growth trajectory of MSME and related employment using the exponential smoothing model.
3. To analyse the growth trends of women-owned MSMEs in selected major states of Northern and Southern India.
4. To construct a composite North–South Women MSME Inclusivity Index (NS-WMII).
5. To recommend appropriate policy changes.

D. Hypotheses of the Study

1. **H_{01}:** There is no statistically significant relationship between the increase in the number of registered MSME units and employment generation in India.
2. **H_{02}:** Government support mechanisms aimed at increasing MSME registrations have no statistically significant effect on the proportion of non-operational enterprises.

II. METHODOLOGY

This study employs a qualitative and systematic research approach, utilising secondary data from reliable and policy-relevant sources covering the period from 2020-21 to 2024-25. This timeframe is significant as it focuses on efforts to formalise the MSME sector and the recovery process following the pandemic. The data includes information from the Udyam Portal, the Udyam Aadhaar Program (UAP), reports from the Ministry of Micro, Small, and Medium Enterprises (MSME), and publications from official parliamentary sources and the Press Information Bureau (PIB).

This study examines the growth of MSMEs over time by utilising value-based indicators. It also assesses the relationship between changes in MSME registrations and job creation using Pearson's correlation coefficient. This statistical method helps to determine whether an increase in the number of businesses correlates with higher job creation.

For forecasting purposes, the Exponential Smoothing Model is utilised. The choice of this method is deliberate. While more complex models exist, exponential smoothing offers a balance between predictive accuracy and conceptual clarity. In a policy context, where interpretability is as important as precision, this approach allows trends to be projected without obscuring the underlying logic of the estimates.

A distinctive contribution of the study is the development of the North–South Women MSME Inclusivity Index (NS-WMII). The index is developed using a min–max normalization technique, followed by equal-weight aggregation of three core dimensions, namely 1) Penetration (extent of women-owned MSMEs), 2) Contribution (their role in output and employment), and 3) Growth (their rate of expansion over time).

This composite measure offers a structured approach to comparing inclusivity across regions, advancing from isolated indicators to a more integrated understanding.

III. DISCUSSION AND FINDINGS

Table I: Growth of MSME Units and Employment with Value-Added Indicators (2020–21 to 2025–26)

Year	Registered MSME Units (Million)	Cumulative Units (Million)	Employment Generated (Million)	Cumulative Employment (Million)	Units' Growth (YoY, %)	Employment Growth (YoY, %)	Employment Per Unit
2020–21	2.85	–	27.32	–	–	–	9.59
2021–22	5.15	7.99	34.89	62.20	80.79	27.70	6.78
2022–23	8.58	16.58	45.59	107.79	66.71	30.68	5.31
2023–24	24.89	41.47	73.98	181.77	190.06	62.27	2.97
2024–25	20.66	62.13	82.63	264.40	−17.03	11.70	4.00
2025–26*	10.85	72.98	56.07	320.47	−47.47	−32.14	5.17

Notes: Data for FY 2025-26 is up to 15, December 2025.

Source: The Author's Calculations Based on Data Obtained from the Udyam Portal.

Table I illustrates the growth trajectory of MSME registrations and employment generation in India from 2020–21 to 2025–26. It highlights the rapid formalisation, structural adjustments, and changing employment dynamics within the MSME ecosystem.

At the outset, the data clearly reflect the scale and speed of formalisation following the introduction of the Udyam Registration system and the UAP. The cumulative number of registered MSMEs rose sharply to nearly 73 million by mid-December 2025. The noteworthy factor is UAP's role in bringing previously excluded informal micro-enterprises into the formal fold. This dual institutional mechanism appears to have worked not merely as a registration exercise, but as a broad-based inclusion strategy, significantly expanding the visible universe of MSMEs.

The annual growth rates clearly highlight this transition. The significant increase in registrations during 2023–24, With an impressive growth

rate of over 190 per cent, it marks a peak in formalisation. This growth is not just about establishing new businesses. Instead, it shows that many informal units are now joining the formal system. This means there is a major structural change, not just temporary growth.

A similar sequence is visible in employment generation. The cumulative employment figure, exceeding 320 million by 2025–26, underscores the magnitude of MSMEs as a source of livelihoods. The sharp increase in employment growth during 2023–24 (over 62 per cent) coincides with the spike in registrations, indicating that formalisation and employment expansion were moving in tandem during this phase. It is reasonable to interpret this as a period where enterprises, once formalised, were better positioned to access markets, credit, and government support, thereby enhancing their employment capacity.

However, the subsequent year depicts an interesting nuance. The decline in unit growth rates in 2024–25 does not necessarily indicate a contraction of the sector. Instead, it appears to reflect a natural tapering effect, a stage where the bulk of informal enterprises have already been formalised, leaving less scope for rapid expansion in registration numbers. In other words, the system may be approaching a saturation point in terms of formalisation.

It is important to note that employment continues to grow, although at a moderate rate. Employment grew by 11.7 per cent in 2024–2025, despite the relatively modest decline in new MSME registrations. This shows that existing businesses are expanding and hiring more workers. The MSME sector is moving from extensive growth, which refers to adding more units, to intensive growth, which focuses on increasing the number of employees per unit. This change is an important step in the development of the MSME sector.

The "employment per unit" indicator gives us a clear picture of the situation. Initially, the employment generation was relatively low. followed by an increase in the generation of employment for each unit. This suggests that the early stages of formalisation may have led to the registration of smaller or less labour-intensive businesses. Over time, as these businesses settle down and grow, they seem to create more jobs. This pattern indicates that formalisation usually comes first, followed by increases in productivity and employment.

The interconnectivity highlighted here refers to the policy intervention for firms that do not have a GSTIN, as well as for those that only possess Aadhaar and PAN details. These firms can register online to generate an official, unique registration number through a paperless process. This online registration is free of charge and designed to be corruption-free, benefiting MSMEs.

During this phase, there is a gradual shift towards consolidation and capacity expansion within the formalised MSME sector. In this context, the MSME sector is not only increasing in number but also evolving. The initial momentum created by institutional reforms is shifting into a more stable phase, in which the quality of growth, particularly in terms of employment and productivity, becomes just as important as the scale of that growth.

A. The Exponential Smoothing Model for India MSME Data

The Exponential Smoothing Model used in this study serves a practical purpose: it helps us move beyond simply describing trends and consider the future direction of the MSME sector more concretely. Unlike more complex forecasting methods, this approach is transparent. It focuses on recent observations, which are particularly valuable in a sector that has undergone rapid structural changes in a short period.

Table II: Exponential Smoothing Model Diagnostics for MSME Units and Employment in India

Model	Variable	Stationary R^2	Ljung–Box Q(18)	df	Sig. (p-value)
Model_1	MSME units registered	0.891	16.5	17	0.45
Model_2	MSME employment generated	0.971	19.9	17	0.54

Source: Exponential Smoothing Output Based on MSME Data

B. Model Diagnostics and Reliability

The model reliability was tested before we did the forecasts. The results in Table II show that the model fits the data well. The R^2 values are 0.891 for MSME unit registrations and 0.971 for employment. This means the model explains a large part of the variation in the data.

The Ljung–Box Q statistic is important because it tests whether the model's residual errors are randomly distributed. The reported p-values are 0.45 for units and 0.54 for employment, indicating that they are not statistically significant. This suggests that there is no significant autocorrelation in the residuals. This is a positive outcome, as it demonstrates that the model has effectively accounted for both units and employment, leaving no systematic errors unaddressed. These diagnostics give us confidence that the forecasts are not just automated numbers. They are based on a strong statistical understanding of recent trends in MSMEs.

Table III: Forecast of MSME Units and Employment in India from FY2026 to FY2030 (in millions)

Year	Predicted New MSME Units	Cumulative MSMEs	YoY Growth in Units (%)	Predicted Employment	Cumulative Employment	Yoy Growth in Employment (%)
2025–26	2.13	–	–	44.82	–	–
2026–27	3.93	6.06	84.4	61.8	106.62	37.9
2027–28	5.83	11.89	48.3	75.94	182.56	22.9
2028–29	8.04	19.92	37.9	89.05	271.61	17.3
2029–30	11.1	31.02	38.1	106.77	378.38	19.9

Source: Forecasts by the Author Using the Exponential Model Based on Data Sourced from the Udyam Portal.

Table III displays the expected growth of MSMEs from FY26 to FY-30. The data indicate that MSMEs will continue to grow, albeit with some changes. The number of new

MSMEs is projected to steadily increase, starting at approximately 2.13 million in FY 26 and reaching over 11 million by FY-30. Since FY-21, the total number of MSMEs is estimated to be around 93.15 million by FY-30. This trend suggests that the rise in formal business registrations will continue, even after the initial surge from bringing many informal businesses into the fold. The rising overall numbers further support this trend, indicating a larger base of formal businesses in the economy.

Employment projections show a clear upward trend. The number of jobs is expected to grow from about 44.8 million in FY 2026 to 106.8 million in FY 2030. MSMEs' cumulative since FY 21 are estimated to create about 642.78 million jobs by FY 22030. This indicates that MSMEs will remain vital in creating jobs and supporting livelihoods in the medium term.

However, there is an important detail about growth rates. The number of enterprises is increasing steadily, but the rate at which they create jobs is slowing down. This difference is subtle but significant. It suggests that future growth in MSMEs may come from smaller, more efficient businesses rather than those that require many workers.

This change can be seen in different ways. It might mean that businesses are improving productivity, using digital tools and AI, and operating more effectively. On the other hand, it raises concerns about whether the sector can create enough jobs in the future, especially in a country with a growing workforce.

C. Cumulative Outlook and Structural Implications:

When viewed cumulatively, the projections point to a substantial expansion of the MSME ecosystem. By the end of 2029-30, the total number of MSMEs is estimated to reach 93.15 million, with cumulative employment generation of around 642.78 million since 2020-21 (including both actual and estimated figures).

These figures underline the sheer scale at which the sector is likely to operate in the coming years.

However, the significance of these numbers lies not just in their magnitude, but in what they represent structurally. The MSME sector appears to be transitioning from a phase of rapid formalisation to one of consolidation and gradual expansion. The early gains driven by policy-led registration are now giving way to more organic growth, shaped by market conditions, enterprise capabilities, and evolving technological landscapes.

In that sense, the forecasts do not simply extend past trends; they hint at a changing nature of growth. The MSME sector is likely to remain resilient and expansive, but its future trajectory may increasingly depend on how effectively it balances scale with productivity and growth with inclusivity.

IV. TESTING OF HYPOTHESIS AND EMPIRICAL RESULTS

Table IV: Hypotheses Testing Results for MSME Growth and Employment Dynamics in India

Hypothesis	Statement	Variables	Test Statistic	p-value	Decision	Finding
$H0_1$	There is no significant relationship between the number of MSME units registered and employment generated in India.	MSME units registered vs MSME employment	r = 0.959	0.011	Reject $H0_1$	A strong positive association exists between MSME registrations and employment generation.
$H1_1$	There is a significant positive relationship between the number of MSME units registered and employment generated in India.				Accepted	Expansion in MSME units significantly enhances employment creation.
$H0_2$	There is no significant relationship between the number of MSME registrations and the proportion of non-operational/shutdown MSME units in India.	MSME registrations vs MSME shutdowns	r = −0.796	0.058	Reject $H0_2$*	A strong inverse association exists between registrations and shutdowns.
$H1_2$	There is a significant negative relationship between MSME registrations and MSME shutdowns in India.				Accepted	

Notes: r denotes Pearson's correlation coefficient. Decisions are based on two-tailed significance.

Source: *Authors' Calculations Based on MSME Correlation Analysis.*

The correlation analysis indicates a strong and statistically significant positive relationship between MSME registrations and employment generation (r = 0.959, p = 0.011). This finding allows us to reject the null hypothesis, confirming that the expansion of MSMEs is a key driver of job creation in India.

Additionally, there is a strong negative association between MSME registrations and shutdowns (r = -0.796, p = 0.058). This suggests that increased formalisation and policy-driven support are associated with a decline in the number of non-operational units. However, this finding is approaching marginal significance due to the limited sample size.

These findings highlight the crucial role of government initiatives in promoting MSME growth, enhancing employment opportunities, and improving enterprise sustainability in the Indian economy.

V. WOMEN-OWNED MSMES ARE CRUCIAL FOR INCLUSIVE VIKAS BHARATH

Women's participation in the workforce is increasingly recognized as vital for sustaining India's economic growth. The World Bank estimates that increasing female labour force participation could contribute nearly 1.5 percentage points to India's GDP growth. Recent data indicate a positive trend in this area: the Female Labour Force Participation Rate rose from 23.3% in 2017-18 to 41.7% in 2023-24. Additionally, the Work Participation Rate increased from 22% to 40.3%, and female unemployment

decreased from 5.6% to 3.2% (India's Workforce Transformation, 2024, Research Unit, PIB).

Even with progress, there are still big challenges. According to estimates from the Magic Bus India Foundation and Bain & Company (2024), India needs to bring an additional 145 million women into the workforce by 2047 to reach its $30 trillion economic goal. This means increasing female workforce participation to almost 70%, which is much higher than the projected 45% under normal circumstances (Keshava SR, 2025) [8].

Women-owned MSMEs play an important role in promoting inclusion. As of July 2024, women accounted for about 39% of the 4.78 crore businesses registered under the updated Udyam framework, including those registered via the UPA. However, we should be careful with this number, as studies show that around 10-30% of these businesses are run by their husbands in their wives' names, underscoring ongoing challenges. These challenges include structural constraints (Decoding Government Support to Women Entrepreneurs, 2022).

Women remain underrepresented in technology-intensive sectors and frequently rely on informal sources of financing (RBI; CNBC TV18, 2024). Although the number of women-led MSMEs has increased, we still need to improve the quality and depth of this participation. Supporting women-led MSMEs is not just about having more businesses; it is key to creating a more inclusive and sustainable growth path for India as it aims to become Viksit Bharat by 2047 (Keshava SR, 2025).

Table V: North–South Comparison of Women-Owned MSMEs in India (2020–21 to 2024–25)

Financial Year	North India (No.)	South India (No.)	India Total (No.)	North Share (%)	South Share (%)	YoY Growth – North (%)	YoY Growth – South (%)	North–South Ratio
2020–21	69,798	150,255	486,781	14.34	30.87	–	–	0.46
2021–22	179,788	178,770	906,121	19.84	19.73	157.58	18.98	1.01
2022–23	568,961	472,708	1,923,535	29.58	24.57	216.46	164.42	1.20
2023–24	1,927,851	3,515,700	12,800,961	15.06	27.46	238.84	643.74	0.55
2024–25	1,528,748	3,337,595	8,750,258	17.47	38.14	−20.70	−5.07	0.46
Cumulative (2020–25)	4,275,146	7,655,028	24,867,656	17.19	30.78	—	—	0.56
CAGR (%)	116.33	117.10	—	—	—	—	—	—

Source: Author Computations Based on the Data from the Udyam Portal.

The Northern States in India with the highest numbers of women-owned small and medium enterprises (MSMEs) are Uttar Pradesh, Rajasthan, Punjab, Haryana, and Delhi. In the Southern States, the top five for women-owned MSMEs are Karnataka, Kerala, Andhra Pradesh, and Telangana.

The data in Table V shows the trends in women-owned MSME registrations from FY–21 to FY–25. It highlights that Southern India has a stronger and more stable base for women entrepreneurs. Over the years, the Southern states have consistently outperformed Northern India in both the total number and the percentage share of these businesses.

Southern India has about 30.8% of all women-owned businesses

MSMEs, while Northern India has 17.2%. This means there are nearly 7.66 million enterprises in the South compared to 4.28 million in the North, indicating a broader and more enduring presence of women-led businesses in Southern India.

The Northern region experienced strong growth between FY2021 and FY2023, with year-on-year growth exceeding 150%. During this time, the North briefly surpassed the South (North–South ratio = 1.20), mainly due to more businesses being registered and formalised. However, this growth was short-lived. By FY–24, Southern India regained its lead with an impressive growth rate exceeding 640 percent driven by states such as Karnataka, Tamil Nadu, and Andhra Pradesh. This increase highlights stronger institutional support, improved digital access, and more effective policies in the South.

Despite this, the long-term growth rates remain similar across both regions, at 116.3% in the North and 117.1% in the South. This shows that national programs such as Udyam and UAP have had a positive overall impact. However, the South still has a larger share of stable and well-developed businesses, indicating a stronger entrepreneurial environment.

In 2024–25, growth slowed down nationally, leading to fewer new business registrations. Even so, Southern India still has more than twice as many women-owned small and medium enterprises (MSMEs) compared to the North (a ratio of 0.46), highlighting ongoing regional differences.

Northern states respond well to policy changes and have potential for entrepreneurial growth, while Southern states show consistent strength, resilience, and maturity in their business environment. These trends suggest that different policies are needed: the North should focus on improving support and outreach, while the South should work on expanding inclusive business growth.

Table VI: Comparative Performance of Women-Owned MSMEs: North Versus South India (State-wise Cumulative, 2020–21 to 2024–25)

Region	State	Women-Owned MSMEs (No.)	Share in India (%)	Rank	CAGR (%)	Relative Performance Index (India = 100)
North India	Uttar Pradesh	21,52,813	8.66	3	117.6	156.7
	Rajasthan	8,61,995	3.47	7	112.9	62.8
	Punjab	5,31,567	2.14	9	109.4	38.7
	Haryana	4,24,451	1.7	11	108.1	30.8
	Delhi	3,04,320	1.22	13	105.3	22.2
North Total		**42,75,146**	**17.19**	—	**116.3**	**62**
South India	Karnataka	18,79,853	7.56	4	118.2	136.9
	Kerala	7,20,337	2.9	8	114.5	52.5
	Andhra Pradesh	18,25,316	7.34	5	120.6	133
	Telangana	11,08,997	4.46	6	116.8	80.8
	Tamil Nadu	21,20,525	8.53	2	121.4	154.8
South Total		**76,55,028**	**30.78**	—	**117.1**	**111.1**

Source: *Authors' Compilation and Value-Added Estimates Based on State-Wise Data from Digital Sansad*

Table VI presents a state-wise comparison of cumulative women-owned MSMEs across major Northern and Southern states for the period 2020–21 to 2024–25, bringing out clear regional differences in both scale and performance. Southern states together account for nearly 31 per cent of India's women-owned MSMEs, significantly higher than the 17 per cent share of Northern states, reinforcing the South's stronger position in nurturing women-led enterprises.

At the state level, Tamil Nadu and Uttar Pradesh stand out as the largest contributors, each accounting for over 8.5 per cent of the national total, followed by Karnataka and Andhra Pradesh. However, an important distinction emerges here. While Uttar Pradesh largely anchors the North's performance, the Southern region shows a more evenly distributed pattern across multiple states. Most Southern states score above the national average of 100 on the Relative Performance Index. This shows they have a supportive environment. In contrast, most Northern states, except for Uttar Pradesh, fall below this average.

Growth trends vary by region. Andhra Pradesh and Tamil Nadu show higher growth rates, meaning they are expanding faster. This is due to improved industrial clustering, effective use of digital tools, and state programs that focus on women, such as credit schemes and business support. On the other hand, Punjab, Haryana, and Delhi have lower growth. This is mainly due to structural issues, such as fewer industries and less involvement in small businesses.

These designs offer some clear lessons for Northern states. Strengthening cluster-based development, particularly in sectors like textiles, food processing, and services, could help integrate women entrepreneurs into local value chains. Similarly, the South's emphasis on digital platforms and streamlined registration processes has lowered entry barriers and could be replicated. Equally important is the adoption of "credit-plus" models that combine access to credit with training, mentoring, and market linkages to improve enterprise sustainability. At the same time, intra-regional learning, especially from Uttar Pradesh's scale-driven outreach, could help smaller Northern states expand participation.

The national-level formalisation efforts have benefited both regions; Southern states have been more effective at translating these into sustained, inclusive entrepreneurial growth. The difference is not just about having policies but also about how well those policies work and are delivered. This provides a helpful guide for reducing gaps between regions.

VI. COMPOSITE NORTH–SOUTH WOMEN MSME INCLUSIVITY INDEX (NS-WMII).

This section creates a composite index, the North–South Women MSME Inclusivity Index (NS-WMII), to examine differences in women's entrepreneurship across India's states and regions. The southern states include Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, and Telangana, while the northern states include Uttar Pradesh, Rajasthan, Punjab, Haryana, and Delhi.

The index uses a multi-criteria approach that focuses on three main aspects of inclusivity namely (1) intra-state penetration, which measures the number of women-owned MSMEs compared to the total MSMEs in a state, showing how well women are included; (11) national contribution, which looks at each state's share of India's total women-owned MSMEs, indicating its size and reach; and (III) growth momentum, represented by the change in the number of women-owned MSME registrations from FY-21 to FY-25, highlighting activity and responsiveness to policies over time.

In the First step, each indicator is adjusted using a min-max transformation to scale it from 0 to 100. This helps us compare different states fairly and removes differences in measurement units. Then, we calculate the NS-WMII as a weighted sum of these adjusted components.

$$\text{NS-WMII}_i = W_k Z_{ik}, \sum_{k=1}^{3}$$

where ZikZ_{ik}Zik denotes the normalised score of state iii on dimension kkk, and wkw_kwk represents the corresponding weight. In the baseline specification, equal weights are assigned (w1=w2=w3=1/3) (w_1=w_2 = w_3 = 1/3) (w1=w2=w3=1/3), reflecting the normative assumption that depth of inclusion, scale of participation, and growth dynamics are equally important in characterising women MSME inclusivity. This parsimonious structure also avoids arbitrary prioritisation of any single dimension and is consistent with the construction of composite indices in studies of regional development and inclusivity.

Table VII presents the North–South Women MSME

Inclusivity Index (NS-WMII). This index provides insights into how major Indian states have supported women-owned businesses from FY-2021 to FY-2025. It combines data on participation in each state with national support for these businesses. The index measures both the reach and depth of women's involvement in entrepreneurship, going beyond mere statistics.

The results reveal a clear regional divide. Southern states achieve an average score of 72.2, placing them in the high inclusivity category. In contrast, Northern states average 55.6, reflecting only moderate inclusivity. This gap is not just a number; it reflects varying levels of support for women's entrepreneurship across regions.

In the South, Kerala scores the highest at 78, due to the strong local participation, despite having a modest national share. Tamil Nadu (75) and Karnataka (72) show a good balance of high national contribution and continued growth. Andhra Pradesh (70) and Telangana (66) also perform well, indicating that support for women entrepreneurs is spread across the South.

On the other hand, the Northern states show more inconsistency. Uttar Pradesh leads with a score of 62, driven mainly by its size and strong national contribution, despite moderate local support. Rajasthan (58) and Punjab (56) have moderate scores across areas, while Haryana (52) and Delhi (50) have lower scores, indicating lower participation and weaker support for women-owned businesses.

Table VII: North–South States Women MSME Inclusivity Index (NS-WMII)

Region	State	Intra-State Inclusivity	National Contribution	Growth Momentum	Inclusivity Index Score (0–100)	Inclusivity Level
South India	Kerala	Very High	Low–Moderate	Moderate	78	High
	Tamil Nadu	High	Very High	High	75	High
	Karnataka	Moderate–High	High	High	72	High
	Andhra Pradesh	Moderate	Moderate–High	High	70	Moderately High
	Telangana	Moderate	Moderate	Moderate	66	Moderate
North India	Uttar Pradesh	Moderate	Very High	Very High	62	Moderate
	Rajasthan	Moderate	Moderate	Moderate	58	Moderate
	Punjab	Moderate	Moderate	Moderate	56	Moderate
	Haryana	Low–Moderate	Low	Moderate	52	Low–Moderate
	Delhi	Low	Low	Low–Moderate	50	Low
Regional Aggregate	Southern States	—	—	—	72.2	High Inclusivity
	Northern States	—	—	—	55.6	Moderate Inclusivity

Source: *Authors' Construction Based on Data Obtained from UAP for FY-21 to FY25.*

The index indicates that Southern states have moved beyond just increasing numbers to building more supportive environments for women entrepreneurs. In the North, there is visible progress, but it is uneven, highlighting the need for more targeted efforts in areas like access to credit, cluster development, and outreach to institutions. Therefore, the NS-WMII serves as a valuable tool for understanding regional differences and guiding more effective, inclusive policies for MSMEs.

The resulting index ranges from 0 to 100, with higher scores indicating greater inclusivity and a more supportive entrepreneurial ecosystem for women. This specification enables transparent benchmarking of states and aggregation into regional scores, while remaining flexible for robustness checks under alternative weighting schemes.

VII. SUGGESTIONS FOR BUILDING A MORE INCLUSIVE MSME ECOSYSTEM

To build a more inclusive ecosystem for MSMEs, there is a need to move away from scattered efforts and create a cohesive support system. Evidence shows that simply providing access to finance isn't enough; they must also focus on the surrounding ecosystem.

- Create support systems that provide financial assistance, mentoring, digital bookkeeping, market connections, and basic legal advice. For many first-time and women entrepreneurs, these extra resources can be critical for the survival of their businesses.
- Developing gender-focused business clusters will provide real benefits. Promoting women-led enterprises in sectors such as textiles, food processing, healthcare, and green businesses, especially when connected to local supply chains, can lead to greater growth and sustainability.
- Enhance digital support at the local level. Setting up MSME digital help centres in districts can help micro and smaller enterprises, particularly those run by women, navigate compliance and e-commerce more easily.
- Design policies that encourage specific outcomes. Instead of just counting business registrations, link incentives to improvements in women's involvement, business survival rates, and job creation.
- Public procurement policies work better when they set practical, gender-focused targets and ensure prompt payments. Simplifying the tender process can also make it easier for smaller businesses to participate.
- Care services should be given priority in the economic plan. Affordable childcare, safe transportation, and accessible workspaces are key to helping women start and sustain their enterprises.
- Data-driven monitoring systems should be in place. Regularly updated dashboards with gender-disaggregated data can give us a clearer view of MSME performance, access to credit, and survival trends, allowing us to adjust policies accordingly.

VIII. POLICY IMPLICATIONS: MSME GROWTH, EMPLOYMENT SUSTAINABILITY, AND THE ROAD TO VIKSIT BHARAT@2047

- The insights from growth trends, forecasts, and analysis highlight key policy directions for both immediate and long-term MSME development. The focus should shift from quantity to quality in growth.
- Policies should not just focus on reducing the number of registered businesses. The goal is to help MSMEs become productive, stable, and capable of growth. Strategies such as graded compliance, growth-linked incentives, and targeted support for businesses that are growing or changing in size can help make formal registration more meaningful.
- Forecasts also indicate that while the number of MSMEs grows, the rate of job creation may slow. This suggests the need to focus on job-rich growth strategies. The policy tools, such as subsidised loans, credit guarantees, and procurement preferences, encourage businesses and clusters that create more jobs, thereby helping absorb labour.
- Improving credit systems is very important. When formal MSMEs receive support from banks and financial institutions, they tend to be more stable. This support can be especially helpful to women-led MSMEs and first-time entrepreneurs. This can be achieved by offering more cash-flow-based loans, using better data to assess credit, and expanding credit guarantee programs.
- Looking forward, boosting productivity and innovation is key to sustained growth. As job creation slows, we need policies that promote the use of digital technology, technology upgrades, and innovation. Support from incubators, extension services, and cluster initiatives can help. Connecting MSMEs to both domestic and global value chains through procurement reforms and export assistance can improve their market access and competitiveness.
- Ensure that growth is balanced across regions. MSME growth should not be concentrated in only a few areas. It can achieve this through tailored support in underdeveloped districts, better infrastructure, and decentralised skill development, leading to more widespread job opportunities and strengthening both economic and social bonds.

The path ahead involves improving existing policies to make them more responsive, inclusive, and aligned with the changing needs of the MSME sector.

IX. TOWARDS VIKSIT BHARAT@2047

These policy directions change the focus of MSMEs from just growing to achieving quality growth that creates jobs and is sustainable. By linking future job forecasts to incentives in the MSME ecosystem and aligning them with India's development goals, MSMEs can help promote inclusive development, create jobs, and drive structural change. These efforts are essential for the vision of Viksit Bharat@2047.

X. CONCLUSION

This study shows that India's MSME sector is growing due to formalisation, digital tools, and ongoing government support. The link between MSMEs growth and job creation highlights the sector's importance to India's development plans. However, the NS-WMII highlights regional and gender inequalities, indicating that simply expanding businesses isn't enough; There is a need to focus on inclusion and stronger support systems. Helping women-led MSMEs, especially in underdeveloped areas, is not just a matter of fairness but also essential for achieving balanced and inclusive long-term growth.

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I must verify the accuracy of the following information as the article's author.

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Dr S. R. Keshava is a Senior Professor of Economics at Bangalore University in Bengaluru. With over 27 years of exceptional experience in teaching, research, and academic leadership, he has established a prominent reputation in his field. Keshava holds an impressive academic background, including M.A., M.Phil., and PhD degrees in Economics, as well as an MBA and an additional M.Phil. in Management. His areas of expertise encompass Foreign Direct Investment (FDI), public finance, budgeting, and Indian Economic Policy. As a distinguished author and scholar, Dr Keshava has written nine books, edited three volumes, and published more than 128 research articles in respected peer-reviewed journals and edited collections. Additionally, he has made significant contributions to public discourse through articles in major newspapers. He has participated in over 400 television and radio discussions, providing expert insights on Union and State budgets and pivotal economic policies. Dr. Keshava is widely recognized for his ability to translate complex economic concepts into actionable insights. He has presented more than 272 research papers at both national and international seminars and conferences. Additionally, he has delivered over 337 invited talks, including sessions at HRDC centers and state-level seminars. He has delivered 45 keynote, inaugural, and valedictory addresses and chaired 40 technical sessions at various national and international seminars. Dr. Keshava has also played a significant role in policy and governance as a member of various committees, including advisory and evaluation bodies under the Government of Karnataka. Moreover, he has contributed as a resource person for the Economic Survey published by the Planning and Finance Department of the Government of Karnataka. His excellence in teaching was nationally recognised when he received the prestigious National Teacher Award in 2024 from the Honorable President of India. Dr. Keshava continues to inspire others through his commitment to research-driven education, policy engagement, and the holistic development of both students and society.