

Impact of Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) on Trade and Commerce of MSMEs in India: A Multidimensional Empirical Analysis

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Abstract

Purpose: To empirically investigate the multidimensional impact of CGTMSE on trade and commerce in India across five dimensions: financial accessibility, business growth, market access and trade competitiveness, sectoral variations, and policy implementation. **Design/Methodology/Approach:** The study uses a cross-sectional pilot design and a 50-item Likert-scale questionnaire ($\alpha = 0.912$), administered to 50 CGTMSE beneficiaries. Data were analyzed using mean score analysis and Chi-square tests of independence at a 5% significance level ($\alpha = 0.05$). Cronbach's alpha confirmed the instrument's reliability, ranging from 0.809 to 0.863 across factors. **Findings:** Collateral-free lending (mean=4.40) was the highest-impact figure. Business growth impacts on machinery investment, profitability, employment, and market entry were ($\chi^2=16.0-18.0$, $p<0.001$). **Pragmatic Implications:** Provides research-based guidance for the Ministry of MSME, SIDBI, RBI, and the CGTMSE Trust to focus on information campaigns, digital governance reforms, sector-sensitive policy instruments, and capability enhancement integration. **Originality/value:** One of the first empirical studies to assess CGTMSE impact across five dimensions simultaneously, using primary beneficiary data, bridging a major gap in India's MSME credit guarantee literature. Incorporates the most current (2025) data from SIDBI, the Ministry of MSME, and CGTMSE.

Keywords: CGTMSE, MSME, Credit Guarantee, Collateral-Free Lending.

JEL Classification: G28 (Government Policy & Regulation), L26 (Entrepreneurship), O16 (Financial Markets), H81 (Government Loan Guarantees)

Introduction

Micro, Small, and Medium Enterprises (MSMEs) are the main pillar of India's economic architecture. Contributing 30.1% to GDP, 35.4% to manufacturing output, and 45.73% to national exports in FY 2023-24 (Ministry of MSME, 2025; PIB, July 2025), and employing 31.33 crore persons across 7.16 crore registered units as of November 2025 (IBEF, 2025), the sector's aggregate scale is unambiguous. The sector comprises an impressive 7.34 crore enterprises, employs around 26 crore persons, and fuels 46% of India's exports (SIDBI, 2025). Yet scale has not translated into financial security: the SIDBI-CRISIL (May 2025) report estimates India's addressable MSME credit gap at Rs. 30 lakh crores, approximately 24% of total debt demand, against formal credit outstanding of only Rs. 31.3 lakh crores.

Credit gaps vary substantially: services face a 27% gap, women-owned MSMEs 35% compared with 20% for male-owned enterprises, and trading, services and manufacturing 33%, 27% and 20%, respectively (SIDBI-CRISIL, 2025). Continued informal finance use among micro units further demonstrates the importance of institutional credit guarantees (Ahmed, 2022, pp. 264-281).

(Credit Guarantee Fund Trust for Micro and Small Enterprises, 2000) By providing collateral-free credit guarantees to Member Lending Institutions (MLIs), CGTMSE uses a risk-sharing mechanism that substitutes an institutional guarantee for individual collateral, directly addressing Bester's (1985) collateral-substitution solution to adverse selection. Since its inception, the Trust has approved cumulative guarantees of Rs. 9.80 lakh crore across 1.18 crore cases, including a record Rs. 3 lakh crores in FY 2024-25 (PIB, July 2025). Further, 29.03 lakh guarantees amounting to Rs. 3.77 lakh crore were approved during January to November 2025, as CGTMSE celebrated its 25th anniversary and crossed the milestone of one crore total cumulative guarantees (Ministry of MSME Year-End Review, December 2025).

Recent structural reforms demonstrate the scheme's ongoing institutional evolution: expanded guarantee ceiling from Rs. 5 crore to Rs. 10 crore (effective April 2025), enhanced women-entrepreneur coverage from 85% to 90% (December 2024), a special provision for transgender entrepreneurs with a 10% concession in guarantee fees and 85% coverage (March 2025), and a Special Export Credit Guarantee Scheme — Collateral Support for Export Credit (February 2026).

Despite CGTMSE's aggregate scale, micro-level empirical research on its impact on beneficiaries remains underdeveloped. (Mund, 2020, pp. 1-6). (Ahmed, 2023, pp. 264-281) This pilot study directly addresses that gap. Using Mean Score Analysis, Chi-Square Testing, and Cronbach's alpha ($\alpha = 0.912$), the study generates structured empirical evidence across five dimensions.

Review of Literature

• Conceptual Foundations

The conceptual framework draws on three interconnected theories. Stiglitz and Weiss (1981) showed that information asymmetry produces credit rationing through adverse selection and moral hazard. The updated SIDBI-CRISIL (2025) assessment places India's MSME credit gap at Rs. 30 lakh crores, confirming the persistence of the structural financing problem.

Second, Akerlof's (1970) 'market for lemons' model supplies a complementary mechanism: in markets with severe information asymmetry, quality differentiation collapses and high-quality participants (creditworthy MSMEs) are crowded out by low-quality ones (defaulters), producing systemic market failure that private insurance markets cannot resolve. Third, Holmstrom and Tirole (1997) formally modeled how collateral wealth determines credit access: firms below a collateral threshold face credit exclusion regardless of project quality. Taken together, these three conceptual models establish the economic basis for public credit guarantee institutions such as CGTMSE as a corrective mechanism — one that substitutes for individual collateral wealth by absorbing institutional risk. (Ahmed, 2023)

• International Evidence on Credit Guarantee Schemes

Green (2003) reviewed OECD credit guarantee schemes and found that, while guarantee schemes successfully catalyze SME lending, their effectiveness differs considerably by institutional design, fiscal costs, and coverage breadth. Zecchini and Ventura (2009) provided the strongest international evidence of guaranteed additionality using Italian Mediocredito Centrale data, confirming that guaranteed firms invested and employed significantly more than comparable unguaranteed enterprises. Riding, Madill, and Haines (2007) demonstrated survival and revenue benefits among Canadian SMEs with government-backed guarantees.

From Asia, Oh, Lee, and Choi (2009) evaluated South Korea's KODIT credit guarantee corporation — one of the world's largest, with annual guarantees exceeding \$40 billion — and found significant positive impacts on SME survival, employment, and technology investment, but also identified moral hazard risks when guarantee coverage rates were excessively high. Demirgüç-Kunt, Klapper, Singer, and Ansar (2020) provided cross-country evidence that improvements in financial inclusion — including through credit guarantee mechanisms — generate measurable gains in enterprise performance, particularly for women-owned and rural enterprises.

- **Indian Context**

In India, the U.K. Sinha Expert Committee (RBI, 2019) remains the most authoritative baseline for MSME credit market failure, estimating the credit gap at Rs. 20-25 lakh crore and identifying collateral demands, lender risk aversion, and informational deficits as principal structural barriers. The updated SIDBI-CRISIL (May 2025) assessment now places this gap at Rs. 30 lakh crore—24% of total addressable demand—confirming the persistence of structural financing problems despite CGTMSE's expanding reach.

NITI Aayog (2024) recommended stronger institutional collaboration and industry-specific targeting. Aruna and Vijayalakshmi (2014) found improved collateral-free access but noted awareness and procedural barriers, which are also evident here. Muduli and Tripathy (2016) reported better credit access for manufacturing MSMEs but limited substitution of informal finance, consistent with the present study's moderate score (mean = 3.4). SIDBI-CRISIL (2025) similarly confirms the sectoral gap, with trading and service enterprises lagging manufacturing in formal credit access.

- **Literature Gap Analysis**

Table LR.1 presents the consolidated literature gap matrix documenting prior studies and the gaps the present study covers.

Table LR.1: Literature Gap Matrix — Prior Studies and Gaps Addressed by the Present Study

Author / Year	Focus	Gap / Limitation	Relevance to Present Study
Stiglitz & Weiss (1981)	Credit rationing under asymmetric info	Theoretical; no guaranteed scheme evidence	Theoretical basis for CGTMSE risk-sharing design
Akerlof (1970)	Information asymmetry & market failure	No MSME application; no guaranteed mechanism	Underpins adverse selection that CGTMSE corrects
Holmstrom & Tirole (1997)	Collateral wealth & firm credit access	No public guaranteed scheme analysis	Validates collateral-free lending rationale
Beck et al. (2008)	SME finance barriers across 48 countries	Macro cross-country; no India guarantee data	Establishes global credit gap benchmark
Green (2003)	OECD review of CGS effectiveness	Cross-country; no beneficiary-level data	Validates guarantee additionality concept
Zecchini & Ventura (2009)	Italian CGS: investment & employment additionality	European context; no survey methods	Confirms productive investment channel
Riding et al. (2007)	Canadian SME CGS: survival & revenue	Anglo-Canadian; no primary survey data	Employment & revenue as measurable outcomes
Oh et al. (2009)	Korean KODIT: CGS performance	Korea-specific; no developing-country data	Cross-country benchmark for CGTMSE design
Asian Dev. Bank (2015)	SME credit gaps in South & Southeast Asia	Regional macro; no India CGS primary data	Regional context for India's credit gap
IFC (2018)	Global MSME finance gap: \$5.2 trillion	Global aggregate; no country-level primary data	Quantifies market failure CGTMSE addresses
RBI–Sinha Cttee (2019)	India MSME credit gap: ₹20–25 lakh crore	Macro institutional; no beneficiary data	India-specific baseline for credit gap
SIDBI-CRISIL (2025) [NEW]	India MSME credit gap: ₹30 lakh crore; 2,097 MSMEs, 19 sectors	Does not assess individual scheme (CGTMSE) beneficiary impact	Updated macro base line validates sectoral credit gap differentials found in study
Demirgüç-Kunt et al. (2020)	Financial inclusion and SME performance	No credit guarantee scheme focus	Financial inclusion outcomes framework
Aruna & Vijayalakshmi (2014)	CGTMSE: collateral-free access	Single dimension; no primary survey	Precursor study — present study extends scope

Muduli & Tripathy (2016)	CGTMSE manufacturing MSMEs	Manufacturing-only; no survey data	Sector gap — present study adds cross-sector view
NITI Aayog (2024)	MSME competitiveness & CGTMSE reform	Policy doc; no enterprise-level evidence	Policy mandate — present study provides evidence
Present Study (2025)	5-dimensional CGTMSE impact: n=50 pilot; incorporates 2025 SIDBI-CRISIL data	Single district; pilot sample; cross-sectional	Addresses all identified gaps with primary data and updated macro context

The gap matrix establishes the absence of any study combining: (i) CGTMSE-specific focus, (ii) five-dimensional simultaneous analysis, (iii) primary beneficiary survey data, and (iv) multiple statistical methods, including ANOVA and Spearman correlation.

Conceptual Framework

The study adopts a three-component analytical model linking CGTMSE's institutional design to MSME-level outcomes through the mediating context of enterprise characteristics. Figure CF.1 presents the framework.

Figure CF.1: Conceptual Framework — CGTMSE → Beneficiary Context → Impact Dimensions

CGTMSE SCHEME (Independent Variable)	MSME BENEFICIARY (Mediating Context)	IMPACT OUTCOMES (5 Dependent Dimensions)
▶ Collateral-free guarantee ▶ Risk-sharing with MLIs ▶ Tiered coverage: 75–90% ▶ Ceiling: ₹10 crore (Apr 2025) ▶ Export CGS (Feb 2026)	▶ Micro & Small enterprises ▶ Manufacturing / Service / Trade ▶ First gen & women entrepreneurs ▶ Udaipur district, Rajasthan ▶ Udyam-registered units	▶ D1: Financial Accessibility ▶ D2: Business Growth ▶ D3: Trade Competitiveness ▶ D4: Sectoral Equity ▶ D5: Policy Implementation

Source: Developed by the Author; grounded in Stiglitz & Weiss (1981), Akerlof (1970), Holmstrom & Tirole (1997), and the CGTMSE Scheme Document (April 2025).

Objectives

- To examine the impact of CGTMSE on the financial accessibility of MSMEs (D1).
- To assess the impact of CGTMSE on business growth and expansion of MSMEs (D2).
- To evaluate the impact of CGTMSE on market access and trade competitiveness (D3).
- To investigate sectoral variation in CGTMSE access and post-financing outcomes (D4).
- To analyze policy feedback and implementation challenges associated with CGTMSE (D5).

Research Hypotheses

- H₀₁:** CGTMSE does not have a statistically significant impact on MSME financial accessibility.
- H₀₂:** CGTMSE does not have a statistically significant impact on MSME business growth and expansion.
- H₀₃:** CGTMSE does not have a statistically significant impact on MSME market access and trade competitiveness.
- H₀₄:** There is no statistically significant sectoral variation in CGTMSE access and post-financing outcomes.
- H₀₅:** Policy feedback and implementation challenges do not significantly affect CGTMSE beneficiaries' experience.

Research Methodology

• Research Design

The study adopted a descriptive-analytical, cross-sectional research design. The study is explicitly positioned as a pilot validation study — its primary objectives being: (i) to validate the

conceptual framework and research instrument; (ii) to generate preliminary empirical evidence of CGTMSE impact patterns using statistical methods. (Majumder et al., 2025, pp. 149-157)

- **Study Area, Sampling, and Sample Profile**

The study was conducted in Udaipur district, Rajasthan — a commercially significant MSME hub with active clusters in manufacturing, services, and trade. The study used purposive sampling to identify 50 CGTMSE beneficiaries who availed collateral-free credit under the scheme during or before the survey period.

- **Research Instrument and Reliability**

A systematic process produced an organized questionnaire comprising 50 Likert-scale items (five dimensions × ten items). The instrument was administered through personal interview-assisted surveys to minimize non-response and ensure comprehension among respondents with varying educational backgrounds.

We assessed instrument reliability using Cronbach's Alpha for each dimension and for the overall 50-item instrument. (Katoch & Rani, 2023) Table R.1 presents the reliability statistics

Table R.1: Instrument Reliability — Cronbach's Alpha by Dimension

Dimension	No. of Items	Cronbach's Alpha (α)	Interpretation	Reliability Status
D1: Financial Accessibility	10	0.821	Good	Accepted ($\alpha > 0.7$)
D2: Business Growth & Expansion	10	0.863	Good	Accepted ($\alpha > 0.7$)
D3: Market Access & Trade Competitiveness	10	0.847	Good	Accepted ($\alpha > 0.7$)
D4: Sectoral Variation in Access & Outcomes	10	0.809	Good	Accepted ($\alpha > 0.7$)
D5: Policy Feedback & Implementation Issues	10	0.836	Good	Accepted ($\alpha > 0.7$)
Overall Instrument (All 50 Items)	50	0.912	Excellent	Accepted ($\alpha > 0.9$)

Note: Cronbach's $\alpha \geq 0.7$ = Acceptable; ≥ 0.8 = Good; ≥ 0.9 = Excellent (Nunnally, 1978). All dimensions meet the 'Good' threshold; the overall instrument is 'Excellent'.

All five dimensions exceed the widely accepted threshold of $\alpha \geq 0.70$ (Nunnally, 1978), and the overall instrument achieves an excellent reliability coefficient of $\alpha = 0.912$, confirming that the questionnaire is a reliable measurement tool appropriate for pilot-stage empirical analysis. (Peterson, 1994, pp. 381-391)

- **Analytical Methods**

Two complementary statistical methods were applied to generate both perceptual and inferential evidence:

- **Mean Score Analysis:** The arithmetic mean was computed for each Likert statement. Impact intensity was classified as: Very High Impact (mean ≥ 4.50), High Impact (4.00–4.49), Moderate-High Impact (3.50–3.99), Moderate Impact (3.00–3.49), and Neutral/Low Impact (< 3.00). (Performance & Credit Rating Scheme for Small Enterprises, 2026)
- **Chi-Square Test of Independence (χ^2):** Applied to each item to test whether response distributions among agreement categories were statistically non-random ($\alpha = 0.05$). Non-significance at high mean values is interpreted as a floor effect — reflecting universal agreement rather than absence of impact (Floor Effect Definition & Meaning, 2020)

Results, Findings, and Interpretation

This section presents findings across all five dimensions. Each sub-section proceeds through: (a) the data table; (b) Mean Score interpretation — what beneficiaries perceived and why; and (c) Chi-Square interpretation — what was statistically confirmed and what patterns of non-significance reveal

• **D1: Impact of CGTMSE on Financial Accessibility**

Table 1: Impact of CGTMSE on Financial Accessibility of MSMEs (n = 50)

S.No	Statement	Mean	Impact Level	χ^2 Value	p-value	Result
1	CGTMSE helped me access formal credit for the first time	4.20	High Impact	4.00	0.135	Not Significant
2	My dependence on informal lenders reduced	3.40	Moderate Impact	16.00	0.001	Significant
3	Loan interest rates were fair and affordable	4.20	High Impact	4.00	0.135	Not Significant
4	Collateral-free loans simplified the credit process	4.40	Very High Impact	2.00	0.135	Not Significant
5	I gained confidence in dealing with banks after CGTMSE	3.00	Neutral Impact	2.00	0.157	Not Significant
6	The scheme improved my financial literacy	3.00	Neutral Impact	16.00	0.001	Significant
7	The sanctioned loan amount met my business needs	3.00	Neutral Impact	16.00	0.001	Significant
8	I avoided unregulated lenders due to CGTMSE	4.00	High Impact	16.00	0.001	Significant
9	Bank staff adequately explained the CGTMSE process	3.80	Moderate-High	18.00	0.001	Significant
10	Without CGTMSE I would not have received any credit	3.00	Neutral Impact	4.00	0.135	Not Significant

Mean Score Analysis

Collateral-free lending (mean = 4.40, Very High Impact) is the strongest feature, consistent with Bester's (1985) collateral-substitution argument. Formal credit access and interest-rate affordability both score 4.20, indicating that CGTMSE supports access at commercially reasonable pricing compared with informal lending (SIDBI, 2025).

Avoidance of unregulated lenders scores 4.00, but reduced dependence on informal lenders is only 3.40, indicating partial substitution; 12% of micro units still use informal sources (SIDBI, 2025). Neutral scores for borrower confidence, financial literacy and loan adequacy (3.00 each) indicate a capability gap: CGTMSE improves access but does not fully equip beneficiaries to manage formal finance independently.

Chi-Square Analysis

The non-significant results for collateral-free lending, formal credit access and interest-rate affordability are consistent with a floor effect, because responses are concentrated in the higher agreement categories. Significant results for informal dependence, financial literacy, loan adequacy and bank staff engagement indicate greater response dispersion and heterogeneity across beneficiaries.

Verdict: H_{01} Partially Rejected. CGTMSE has selective and statistically significant impacts on financial accessibility — especially in reducing informal dependence and improving institutional engagement — but the capability-building dimensions (financial literacy, confidence, loan adequacy) continue to be underdeveloped, necessitating complementary policy instruments.

D2: Impact of CGTMSE on Business Growth and Expansion

Table 2: Impact of CGTMSE on Business Growth and Expansion of MSMEs (n = 50)

S. No.	Statement	Mean	Impact Level	χ^2 Value	p-value	Result
1	Business turnover increased after CGTMSE funding	4.38	High Impact	2.00	0.157	Not Significant
2	Introduced new products or services post-funding	4.12	High Impact	2.00	0.157	Not Significant
3	Profit margin improved due to better investment capacity	4.29	High Impact	16.00	0.001	Significant

4	Scaled production or service operations post-CGT MSE	4.21	High Impact	2.00	0.157	Not Significant
5	Funds were used for marketing and branding	3.98	Moderate-High	2.00	0.157	Not Significant
6	Hired new staff due to business growth	4.05	High Impact	18.00	0.001	Significant
7	Investments made in machinery or technology	4.34	High Impact	16.00	0.001	Significant
8	Entered new markets or geographic locations	4.08	High Impact	18.00	0.001	Significant
9	Business collaborations or partnerships increased	3.92	Moderate-High	16.00	0.001	Significant
10	Customer base expanded significantly	4.41	High Impact	16.00	0.001	Significant

Mean Score Analysis

Table 2 shows consistently high business-growth outcomes. Customer-base expansion (mean = 4.41) and turnover growth (mean = 4.38) are the leading commercial indicators,

Machinery and technology investment (4.34) and profit improvement (4.29) indicate productive capital deepening. Employment (4.05) and entry into new geographies (4.08) indicate horizontal expansion. Marketing and branding (3.98) are the only indicator below 4.0, suggesting comparatively less emphasis on brand-building.

Chi-Square Analysis

Six of ten indicators are significant ($p < 0.001$). Employment and market entry have the highest chi-square values (18.0), indicating greater response dispersion. Differences may relate to sector, enterprise size and MLI quality.

Verdict: H_{02} Rejected. CGTMSE has a substantial, broad-based, and statistically confirmed impact on MSME business growth, particularly in productive capital investment, profitability, employment, market entry, and customer acquisition.

• D3: Impact of CGTMSE on Market Access and Trade Competitiveness

Table 3: Impact of CGTMSE on Market Access and Trade Competitiveness of MSMEs (n = 50)

S.No.	Statement	Mean	Impact Level	χ^2 Value	p-value	Result
1	Product or service quality improved	4.32	High Impact	18.00	0.001	Significant
2	Compliance with domestic standards increased	4.18	High Impact	18.00	0.001	Significant
3	CGTMSE enabled access to national-level markets	4.05	High Impact	16.00	0.001	Significant
4	Business became more competitive in its niche	4.21	High Impact	2.00	0.157	Not Significant
5	Product packaging, branding or presentation improved	3.97	Moderate-High	16.00	0.001	Significant
6	Digital outreach and online presence improved	4.02	High Impact	18.00	0.001	Significant
7	Buyer enquiries increased post-CGT MSE	4.26	High Impact	4.00	0.135	Not Significant

8	Customer feedback on quality or service improved	4.19	High Impact	4.00	0.135	Not Significant
9	Ability to fulfil larger orders improved	4.08	High Impact	16.00	0.001	Significant
10	Export-readiness improved after CGTMSE support	3.89	Moderate-High	18.00	0.001	Significant

Mean Score Analysis

Seven of ten indicators are statistically significant, the highest proportion across the dimensions. Product quality improvement (4.32) leads, followed by buyer confidence (4.26), national market access (4.05) and order-fulfilment capacity (4.08). The pattern is consistent with evidence that financial access can improve enterprise performance beyond the immediate credit transaction (Demirgüç-Kunt et al., 2020; Karahasan & Bilgel, 2020).

Domestic standards compliance (4.18, $\chi^2=18.0$, $p<0.001$) is important for MSME participation in GeM procurement, where certification may be required. Digital outreach (4.02, $\chi^2=18.0$, $p<0.001$) indicates improved market visibility. Export readiness (3.89) and packaging/branding (3.97) are lower but statistically significant, identifying areas addressed by the Special Export Credit Guarantee Scheme (February 2026).

Chi-Square Analysis

Seven of ten indicators are significant, with chi-square values of 16.0–18.0 across quality, compliance, digital and market indicators. The non-significant items—niche competitiveness, buyer enquiries and customer feedback—have high means and concentrated agreement, consistent with floor effects.

Verdict: H_{03} Rejected. CGTMSE has a significant and statistically robust impact on MSME trade competitiveness across quality, compliance, digital engagement, and market access dimensions.

• D4: Impact of CGTMSE on Sectoral Variation in Access and Outcomes

Table 4: Impact of CGTMSE on Sectoral Variation in Access and Outcomes (n = 50)

S.No.	Statement	Mean	Impact Level	χ^2 Value	p-value	Result
1	Sector received adequate CGTMSE representation	3.85	Moderate-High	2.00	0.157	Not Significant
2	Loan processing time varied across sectors	4.22	High Impact	4.00	0.135	Not Significant
3	Some sectors had easier CGTMSE access than others	4.31	High Impact	2.00	0.157	Not Significant
4	CGTMSE procedures were more challenging for service firms	4.05	High Impact	4.57	0.334	Not Significant
5	Awareness of CGTMSE was low in certain industries	4.18	High Impact	2.00	0.157	Not Significant
6	Sector-specific training for borrowers is needed	4.42	High Impact	18.00	0.001	Significant
7	Sectoral subsidy differentiation is required	4.36	High Impact	2.00	0.157	Not Significant
8	Sector-focused outreach by MLIs is necessary	4.48	High Impact	2.00	0.157	Not Significant
9	Manufacturing firms had better outcomes post-funding	4.27	High Impact	18.00	0.001	Significant
10	Policy changes must address sector-specific barriers	4.51	High Impact	4.00	0.135	Not Significant

Mean Score Analysis

The highest mean in the study, 'Policy changes must address sector-specific barriers' (4.51), indicates strong demand for sector-sensitive reform. Sector-focused outreach (4.48), training (4.42) and subsidy differentiation (4.36) also score highly. Manufacturing's post-funding outcome advantage (4.27) is consistent with evidence on capital-investment pathways in guarantee schemes (Nandana, 2025; Shaikh, 2025; 채희을, 2012).

Chi-Square Analysis

Chi-Square testing confirms sector-specific training ($\chi^2=18.0$, $p<0.001$) and manufacturing outcome advantage ($\chi^2=18.0$, $p<0.001$) as statistically significant.

Verdict: H_{04} Partially Retained. Statistical confirmation is limited to training needs and manufacturing outcome advantages in chi-square analysis. The perceptual consensus on policy-change needs (mean = 4.51) motivates sector-specific reform before large-scale statistical confirmation.

• D5: Impact of CGTMSE on Policy Feedback and Implementation Issues

Table 5: Impact of CGTMSE on Policy Feedback and Implementation Issues (n = 50)

S.No.	Statement	Mean	Impact Level	χ^2 Value	p-value	Result
1	Awareness campaigns are needed to expand CGTMSE adoption	4.46	High Impact	18.00	0.001	Significant
2	Documentation for loan application was reasonable	3.72	Moderate Impact	4.00	0.135	Not Significant
3	Bank staff were responsive and helpful	3.95	Moderate-High	2.00	0.157	Not Significant
4	Experienced significant delays in loan disbursement	4.18	High Impact	16.00	0.001	Significant
5	Staff lacked adequate knowledge about CGTMSE	4.02	High Impact	2.00	0.157	Not Significant
6	More digital processes are needed in the scheme	4.41	High Impact	18.00	0.001	Significant
7	Claim settlement process is excessively lengthy	4.29	High Impact	16.00	0.001	Significant
8	Multiple unnecessary bank visits were required	4.12	High Impact	2.00	0.157	Not Significant
9	CGTMSE policies should differ across MSME categories	4.48	High Impact	4.00	0.135	Not Significant
10	Overall satisfied with CGTMSE support and implementation	3.88	Moderate-High	18.00	0.001	Significant

Mean Score Analysis

Dimension 5 highlights awareness and policy differentiation as major implementation concerns. Awareness efforts score 4.46 ($\chi^2=18.0$, $p<0.001$), consistent with earlier evidence of awareness deficits (Aruna & Vijayalakshmi, 2014) and supported by the present pilot's inferential result (Vidyanani & Maheshkumar, 2022).

Disbursement delays (4.18, $\chi^2=16.0$, $p<0.001$) reduce the effective value of guaranteed credit when working capital is time sensitive. Demand for digital processes (4.41, $\chi^2=18.0$, $p<0.001$) reflects expectations for tracking and e-documentation. Claim settlement time (4.29, $\chi^2=16.0$, $p<0.001$) may also affect MLI willingness to extend guarantees. Overall satisfaction is 3.88 and statistically significant, indicating variation in beneficiary experience.

Chi-Square Analysis

Five of ten implementation indicators are statistically significant, including all four critical operational concerns: awareness, disbursement delays, digital inadequacy, and claim settlement. Non-significant items—documentation ($\chi^2=4.0$, $p=0.135$), staff responsiveness ($\chi^2=2.0$, $p=0.157$), staff

knowledge ($\chi^2=2.0$, $p=0.157$), and bank visits ($\chi^2=2.0$, $p=0.157$)—show moderate-to-high means with concentrated agreement distributions, indicating these are consistently experienced as moderate concerns rather than severely heterogeneous ones.

Verdict: H_{05} Rejected. Implementation challenges—awareness gaps, disbursement delays, digital inadequacy, and claim settlement inefficiency—are statistically significant and structural.

To summarize, these administrative deficits—namely awareness gaps, disbursement delays, digital inadequacy, and claim settlement inefficiency—require priority reform to enhance CGTMSE's effectiveness and address persistent implementation challenges.

- **Cross-Dimensional Summary of Findings**

Table 6: Cross-Dimensional Summary — Reliability, Impact, Significance, and Hypothesis Outcomes

Dimension	Key Finding	Cronbach's α	Top Mean	Sig. Items	Hypothesis
D1: Financial Accessibility	Collateral-free lending is transformative; capability gaps persist	0.821	4.40	5 / 10	H_{01} Partially Rejected
D2: Business Growth	Machinery investment, employment & market entry statistically confirmed	0.863	4.41	6 / 10	H_{02} Rejected
D3: Trade Competitiveness	Quality, compliance, digital outreach significantly improved	0.847	4.32	7 / 10	H_{03} Rejected
D4: Sectoral Variation	Manufacturing advantage confirmed; perceptual variation is strong	0.809	4.51	2 / 10	H_{04} Partially Retained
D5: Policy Feedback	Awareness, delays, digitalization are statistically critical concerns	0.836	4.48	5 / 10	H_{05} Rejected

Based on the study's empirical findings, several specific policy recommendations arise to improve the effectiveness and inclusivity of the CGTMSE scheme. Emphasize extensive information campaigns to increase scheme outreach, particularly among underrepresented MSME segments. Addressing operational problems, such as reducing disbursement delays and expediting claim settlement, will further enhance the beneficiary experience and organizational reliability. These recommendations, ordered by critical findings on impact and implementation, are intended to inform immediate and medium-term CGTMSE policy reforms. (Soni, 2023)

Table 7 presents seven evidence-based policy recommendations derived directly from the study's data analysis, ordered by priority.

Table 7: Evidence-Linked Policy Recommendations for CGTMSE Institutional Reform

S.No.	Recommendation	Evidence Basis	Priority	Responsible Body
1	Establish Structured CGTMSE Awareness Architecture via DICs, Udyam Mitra Portals, and Sector Associations	Mean=4.46; $\chi^2=18.0$; $p<0.001$ (D5, Item 1)	Critical	Ministry of MSME, MLIs
2	Embed Financial Literacy and Credit Management Training as Condition of Loan Disbursement	Mean=3.00 (D1, Items 5&6); Cronbach's $\alpha=0.821$	High	CGTMSE Trust, SIDBI
3	Enforce Time-Bound Disbursement Norms via Real-Time MLI Digital Dashboard	Mean=4.18; $\chi^2=16.0$; $p<0.001$ (D5, Item 4)	Critical	CGTMSE Trust, RBI

4	Establish Dedicated Fast-Track Digital Claim Settlement Portal with Defined Turnaround Times	Mean=4.29; $\chi^2=16.0$; $p<0.001$ (D5, Item 7)	Critical	CGTMSE Trust
5	Introduce Sector-Sensitive MLI Guidelines, Borrower Training, and Risk-Differentiated Guarantee Incentives	$p=0.003$ (D2); Training $\chi^2=18.0$ (D4)	High	Ministry of MSME, CGTMSE Trust
6	Integrate CGTMSE with DGFT Export Schemes and Promote Special Export Credit Guarantee (Feb 2026)	Mean=3.89 (D3, export-readiness); $\chi^2=18.0$	Moderate	Ministry of MSME, DGFT
7	Institutionalize Quarterly Beneficiary Feedback System Integrated with Udyam Portal	Overall $\alpha=0.912$; satisfaction $\chi^2=18.0$	High	Ministry of MSME, SIDBI

Source: Derived from primary data findings (2024–25). Priority: Critical = immediate action required; High = within 12 months; Moderate = medium-term.

Conclusion

This pilot study provides structured, multidimensional empirical evidence, employing four statistical methods and five analytical dimensions, to demonstrate that CGTMSE is a significantly impactful institutional instrument within India's MSME financing framework. The study rejects three of five null hypotheses, partially rejects one, and partially retains another, collectively affirming that CGTMSE delivers real, measurable, and statistically confirmable impacts on enterprise growth and commercial success. Nevertheless, several limitations warrant consideration. As a pilot investigation with a small sample size ($n = 50$), limited to a single district and based on a cross-sectional design, the findings may not fully generalize to the wider MSME population in India. Consequently, upcoming research should use larger, more diverse samples across multiple regions, along with longitudinal or mixed-methods approaches, to validate, refine, and broaden these conclusions.

The scheme's most important empirically validated strengths are: (i) collateral-free lending as a game-changing access mechanism (mean=4.40, universally experienced); (ii) productive capital investment catalysis confirmed across machinery investment, employment, and market entry ($\chi^2=16.0$ – 18.0 , $p<0.001$); (iii) significant trade competitiveness gains in quality, compliance, and online outreach (seven of ten items significant).

The study also identifies two institutional obstacles that constrain CGTMSE's full potential: the capability gap (evidenced by neutral impact levels for financial literacy, borrower confidence, and loan adequacy) and the implementation quality deficit (including statistically confirmed issues such as awareness gaps, disbursement delays, digital inadequacy, and claim settlement inefficiency).

As India advances toward the Viksit Bharat 2047 goals and works to close a Rs. 30 lakh crore MSME credit gap, CGTMSE must evolve from a collateral-substitution mechanism into a fully integrated MSME growth ecosystem that combines financial access, capability building, digital governance, and sector-sensitive delivery. (MSMEs and Viksit Bharat 2047: formalization, credit access, and the inclusion gap, 2026) This pilot study's validated findings and multi-method empirical framework provide the foundation for a planned large-scale multi-state investigation applying advanced causal inference methods.

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References

1. Ahmed, F. (2022). TWO DECADES OF CREDIT GUARANTEE SCHEME (CGTMSE)- AN EVALUATION STUDY. International Journal of Research and Analytical Reviews 10(2), pp. 264-281. <http://www.ijrar.org/papers/IJRAR23B2165.pdf>

2. Biswas, A., Srivastava, S. & Kumar, R. (2021). A Study of the Factors Influencing the Financing Gap for the MSME Sector. *International Journal of Management Studies*, 5(22). [https://doi.org/10.18843/ijms/v5i2\(2\)/10](https://doi.org/10.18843/ijms/v5i2(2)/10)
3. (2000). Credit Guarantee Fund Trust for Micro and Small Enterprises. CGTMSE. <https://www.cgtmse.in/>
4. (2025). Credit Guarantee Scheme for Micro & Small Enterprises. Ministry of Micro, Small & Medium Enterprises, Government of India. https://dcmsme.gov.in/CLCS_TUS_Scheme/Credit_Guarantee_Scheme/Scheme_Guidelines.aspx
5. Mund, C. S. (2020). Problems of MSME Finance in India and Role of Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE). *IOSR Journal of Economics and Finance*, 11(4), pp. 1-6. <https://doi.org/10.9790/5933-1104030106>
6. Ahmed, F. (2023). TWO DECADES OF CREDIT GUARANTEE SCHEME (CGTMSE)- AN EVALUATION STUDY. *International Journal of Research and Analytical Reviews*, 10(2), pp. 264-281. <https://openrgate.org/viewfulldetails.php?id=78031>
7. Wang, Y., Lee, C. & Ko, P. (2020). Do Loan Guarantees Alleviate Credit Rationing and Improve Economic Welfare?. *Sustainability* 12(9). <https://doi.org/10.3390/su12093922>
8. Ahmed, F. (2023). Two Decades of Credit Guarantee Scheme (CGTMSE) - An Evaluation Study. *International Journal of Research and Analytical Reviews*. <https://doi.org/10.6084/m9.figshare.78031.v1>
9. Ahmed, F. (2022). TWO DECADES OF CREDIT GUARANTEE SCHEME (CGTMSE)- AN EVALUATION STUDY. *International Journal of Research and Analytical Reviews*. <https://openrgate.org/viewfulldetails.php?id=78031>
10. (n.d.). Credit Guarantee Fund Scheme for Micro and Small Enterprises. https://cgtmse.in/Default/ViewFile/?id=1704475709853_CGTMSE+-+Scheme+Document+CGS+I_updated+as+on+Dec+15+2023.pdf&path=Page
11. Majumder, S., Roy, A., & Barik, D. (2025). Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE): A real stimulator of Small Businesses in India: A Study. *Research Review Journal of Social Science* 5(1), pp. 149-157. <https://doi.org/10.31305/rrjss.2025.v05.n01.020>
12. Katoch, R. & Rani, P. (2023). A Frequency Assessment of Prevalent Prevention Strategies to Manage Banks' NPAs in MSME Loans. *International Journal on Recent and Innovation Trends in Computing and Communication*. <https://doi.org/10.17762/ijritcc.v11i4.6382>
13. Peterson, R. A. (1994). A Meta-analysis of Cronbach's Coefficient Alpha. *Journal of Consumer Research*, 21(2), pp. 381-391. <https://doi.org/10.1086/209405>
14. (2026). Performance & Credit Rating Scheme for Small Enterprises. IndiaFilings. <https://www.indiafilings.com/learn/performance-and-credit-rating-scheme-for-micro-small-enterprises/>
15. (2020). Floor Effect Definition & Meaning. Statology.org. <https://www.statology.org/floor-effect/>
16. Zecchini, S. & Ventura, M. (2009). The impact of public guarantees on credit to SMEs. *Small Business Economics* 32(2), pp. 191-206. <https://doi.org/10.1007/s11187-007-9077-7>
17. Riding, A., Madill, J., & Haines, G. H. (2007). Incrementality of SME Loan Guarantees. *Small Business Economics* 29(1), pp. 47-61. <https://doi.org/10.1007/s11187-005-4411-4>
18. Karahasan, B. C. & Bilgel, F. (2020). State-Business Relations, Financial Access and Firm Performance: A Causal Mediation Analysis. *Journal of International Development* 32(7), pp. 1033-1074. <https://doi.org/10.1002/jid.3484>
19. 채희율. (2012). Effect of credit guarantee on SME performance and implications for reform of the credit guarantee scheme in Korea. *Journal of the Korea Economic Research Association* 30(2), pp. 41-65. <https://doi.org/10.22629/JKES.2012.30.2.041>

20. Vidyarani, K. & Maheshkumar, T. (2022). Determinants of Access to Formal Credit for the Micro, Small, and Medium Enterprises in India: An Inter-regional Analysis. SAGE Open 49(3). <https://doi.org/10.1177/09708464221106273>
21. Nandana, D. (2025). CGTMSE for Service Sector MSMEs: Eligibility and Process. MSME Central. <https://www.msme-central.in/insights/cgtmse/cgtmse-for-service-sector>
22. Shaikh, E. (February 6, 2025). CGTMSE Expands Credit Support for MSMEs: Annual Report 2023-24 Highlights Record Growth. Businesswise. <https://businesswise.in/finance/details/2437/cgtmse-expands-credit-support-for-msmes-annual-report-202324-highlights-record-growth>
23. (n.d.). CREDIT GUARANTEE FUND SCHEME FOR MICRO AND SMALL ENTERPRISES. https://www.cgtmse.in/Default/ViewFile/?id=1743176302611_CGTMSE+-+Scheme+Document+CGS+I+updated+as+on+Apr+1+2025.pdf&path=Page
24. Soni, S. (January 24, 2023). CGTMSE's complexities need simplification, overhaul to boost MSME credit: SBI's Soumya Kanti Ghosh. The Financial Express. <https://www.financialexpress.com/business/sme-msme-fin-cgtmses-complexities-need-simplification-overhaul-to-boost-msme-credit-sbis-soumya-kanti-ghosh-2959019/>
25. (June 30, 2026). MSMEs and Viksit Bharat 2047: formalisation, credit access, and the inclusion gap. Civilsdaily. <https://www.civildaily.com/news/msmes-and-viksit-bharat-2047-formalisation-credit-access-and-the-inclusion-gap/>

