STUDY ON IMPACT OF EMERGENCY CREDIT LINE GUARANTEE SCHEME ON PERFORMANCE OF INDIAN MSME

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CANDIDATE'S DECLARATION

I, **Deepasha Mishra,** hereby certify that the work which is being presented in the thesis entitled "**A Study on the Impact of the Emergency Credit Line Guarantee Scheme (ECLGS) on the Performance of MSMEs in India**" in partial fulfillment of the requirements for the award of the Degree of Master of Arts, submitted in the Department of UNIVERSITY SCHOOL OF MANAGEMENT AND ENTREPRENEURSHIP, Delhi Technological University is an authentic record of my own work carried out during the period from AUGUST 2024 to MAY 2025 under the supervision of **Dr. Manisha G. Singh**.

The matter presented in the thesis has not been submitted by me for the award of any other degree of this or any other Institute.

deepasha mishra

Candidate's Signature

This is to certify that the student has incorporated all the corrections suggested by the examiners in the thesis and the statement made by the candidate is correct to the best of our knowledge.

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Certified that Deepasha Mishra (Roll number 2K23/MAE/011) has carried out her research work presented in this thesis entitled **A Study on the Impact of the Emergency Credit Line Guarantee Scheme (ECLGS) on the Performance of MSMEs in India**' for award of Master of Arts from the department of University School of Management and Entrepreneurship, Delhi Technological University, Delhi, under my supervision. The thesis embodies results of original work, and studies are carried out by the student herself and the contents of the thesis do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

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A Study on the Impact of the Emergency Credit Line Guarantee Scheme (ECLGS) on the Performance of MSMEs in India

Deepasha Mishra

ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of India's economic framework, contributing approximately 30% to the overall national GDP and providing employment to more than 110 million people (as per MSME annual report 2024-25). MSMEs are vital for inclusive growth, entrepreneurial development, and geographical balance. The COVID-19 pandemic had a huge economic impact, causing severe damage to the MSME sector in the form of liquidity shortfalls, supply chain failures, and lack of labour. The Government of India, in turn, introduced the Emergency Credit Line Guarantee Scheme (ECLGS) under the Atmanirbhar Bharat Abhiyan in May 2020. The scheme was aimed at providing government-backed collateral-free credit to COVID-hit MSMEs in order to enable them to resume operations and maintain jobs.

This thesis's main goal is to assess how the Emergency Credit Line Guarantee Scheme (ECLGS) has affected the productivity and financial success of Micro, Small, and Medium-Sized Enterprises (MSMEs) in India, especially in the wake of the COVID-19 pandemic.

The analysis utilizes two econometric models: Generalized Least Squares (GLS) and Fixed Effects (FE). GLS accounts for heteroscedasticity in the panel data (for period 2016-2023) and provides the most efficient estimates across firms and states with different characteristics. The Fixed Effects model controls for firm-specific, time-invariant factors— like internal practices firms utilized, or local idiosyncrasies—by examining variation within a firm over time. The main independent variable is an interaction of state-level ECLGS disbursement per registered MSME (indicating intensity of scheme) and a dummy variable for firm eligibility. The dependent variable of interest, firm-level value added, was calculated using financial data from 427 MSMEs obtained from the CMIE Prowess IQ database. This approach provided the best measure of the effect of the ECLGS on firm performance.

Initial observations show that ECLGS has played a crucial role in preventing extensive closures of businesses by MSMEs, especially in industrially high-activity states. Inflow of liquidity enabled enterprises to service working capital needs, maintain workers, and resume operations at a gradual pace. However, uneven access persists,

with micro and informal units encountering more difficulties. The repayment ability of enterprises is still a concern, with a possibility of increasing NPAs.

This research highlights the importance of continuous assessment and flexible policy design that acknowledges the heterogeneity of MSMEs and their contribution to economic rejuvenation.

Keywords: MSMEs, ECLGS, COVID-19, India, credit guarantee, economic recovery, government policy, financial access, small business resilience

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LIST OF SYMBOLS, ABBREVIATIONS AND NOMENCLATURE

ECLGS	Emergency Credit Line Guarantee Scheme
GSDP	Gross State Domestic Product
MSME	Micro, Small, Medium Enterprises
NCGTC	National Credit Guarantee Trustee Company
Cr.	Crores
Rs.	Indian Rupees
NPA	Non Performing Assets
NSSO	National Sample Survey Office
GLS	Generalized Least Square
FE	Fixed Effects

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

1.1.1 MSMEs are the backbone of Indian Economy

Micro, Small, and Medium Enterprises (MSMEs) are often regarded as India's economic backbone. The Annual Report of the Ministry of MSME for the year 2024-25 points out the contribution of the MSME sector to the Indian economy—approximately 30% of India's Gross Domestic Product (GDP), almost 50% of India's total exports, and employment of, over, 24.4 crore people. These points highlight the important role of MSMEs in India's social and economic landscape.

MSMEs operate across a range of industries (textiles, food processing, pharmaceuticals, and manufacturing with linkages to agriculture and services) and are providing depth to the industrial base to create entrepreneurs across regions (especially underserved geographic areas due to large scale industries). MSMEs emphasize inclusivity by providing income-generating opportunities to different social and strata especially among women and marginalized sectors, as a result of their geographic dispersion. An area of distinct advantage of MSMEs is their modest capital-to-output ratio, and capacity to innovate, these attributes create a unique advantage in driving businesses that are nimble to rapidly changing market needs, and resilient when economies are faced with a pressure cooker of change.

1.1.2 Impact of COVID-19 on Indian MSMEs

Despite contributing to a range of activities, MSMEs have historically been impeded by structural bottlenecks. These include limited access to formal credit, late payments from larger firms, lack of tech adoption, burdensome compliance, insufficient skilled workforce, and lack of infrastructure. These long-standing systemic constraints were accentuated as the virus's impact of COVID-19 supposedly devastated the global economy, leading to almost a complete halt in all industries.

The initial impact of COVID-19 in early 2020 led to nationwide lockdowns to 'stop the spread,' which meant that economic activities came to a virtual stand-still. For MSMEs, this impact was particularly harsh. The pandemic only intensified the 'existing vulnerabilities' that have long afflicted MSMEs – demand disruptions, cash flow challenges have increased, supply chains were disrupted, production stopped, and non-essential goods and services saw a collapse in demand. According to a survey by the All India Manufacturers' Organisation (AIMO), over one third of MSMEs were at risk of closing in the months following the onset of the pandemic. The worst-hit were

micro and small firms with limited reserves and liquidity buffers. The unavailability of workers due to reverse migration, the rising cost of raw materials, and the uncertainty of the business environment created a precarious situation. A large number of MSMEs either scaled down their operations drastically or shut down completely. This had immediate impacts on employment, household incomes, and patterns of consumption. The economic scarring, particularly among new entrepreneurs and self-employed people, threatened to unravel years of work undertaking poverty reduction and improving economic wellbeing.

1.1.3 Need for credit support in form of ECLGS

Given the urgency of supporting MSME's and protecting livelihoods, the Government of India put into place a series of fiscal and monetary measures, namely "Atmanirbhar Bharat Abhiyan" (Self-Reliant India Mission), designed to support MSME businesses. This included several initiatives, but one example of this was the Emergency Credit Line Guarantee Scheme (ECLGS), which was publicised in May 2020. The ECLGS was a flagship initiative focused primarily on the liquidity challenges experienced by MSME's.

The ECLGS was implemented to provide emergency credit to productive businesses that had been financially viable before the COVID-19 pandemic, but were suffering from acute cash flow issues as a result of the economic downturn cause by COVID-19. The central government through the National Credit Guarantee Trustee Company (NCGTC) provided a 100% guarantee to banks and Non-Banking Financial Companies (NBFCs) when providing additional working capital to MSMEs. The government guarantee removed the risk of default for the lender, which led them to lend more readily to troubled businesses.

The scheme had several phases, each expanding the scope and coverage. ECLGS 1.0 was targeted at businesses with outstanding loans up to ₹50 crore and an annual turnover of up to ₹250 crore. ECLGS 2.0 extended coverage to 26 sectors identified as stressed (such as hospitality, tourism, textiles, and construction), while ECLGS 3.0 and ECLGS 4.0 increased the cap on eligible loan amounts and included the healthcare sector. These iterative revisions demonstrated the government’s responsiveness to feedback from stakeholders and its commitment to support business continuity.

The program allowed for taller borrowing options through collateral-free, low-interest loans, and there was a moratorium period with a fixed repayment window. The focus was also on funding quickly with less documentation, mainly to keep transaction costs low for small firms. According to government data, in FY 2023, ECLGS had sanctioned more than ₹3.6 lakh crore to more than 1.1 crore borrowers. States like Maharashtra, Gujarat, Tamil Nadu, and Uttar Pradesh had been sanctioned the most funding, consistent with their high density of MSME activity.

1.2 THE CORE CHALLENGE

The above numbers are optimistic, but fundamentally the assessment of whether the ECLGS was a success or not cannot be measured simply by the numbers of credit it sanctioned, but rather by the definitive consequences it produced. Did the extra credit actually help firms get back to operating? Was employment maintained or created? Were firms able to maintain themselves out of insolvency and regain pre-pandemic performance? These are important and obvious questions that need answering through empirical analysis.

The ECLGS may inform us about how to evaluate the policy at a minimum, but it also may inform interventions in the future. The role of MSME in realizing India's $5 trillion economy aspirations is vital. The recovery and growth of MSMEs will inform the viability of the whole of industrial sector.

Policymakers need to know if support schemes reach intended beneficiaries as well as if the assistance is adequate and timely.

Evaluating ECLGS also provides opportunities to better understand the heterogeneity of the MSME sector. Not all firms face the same constraints, and they utilize credit differently depending upon the size, sector, geographic location and previous financial health, and thus a disaggregated approach is important to help them develop more directed and effective policies

1.3 RESEARCH OBJECTIVE

To assess the causal impact of ECLGS credit supports on MSMEs in India as they recover from COVID-19.

To determine if ECLGS disbursements contributed to MSMEs maintaining or increasing their value addition.

To provide evidence-based recommendations for increasing the effectiveness of future MSME support schemes.

1.4 HYPOTHESIS

For the quantitative analysis, the hypotheses can broadly be defined as:

Null Hypothesis (Ho): ECLGS credit assistance had no significant impact on MSME firms' performance in India

Alternative Hypothesis (H1): ECLGS credit assistance had significant and positive impact on MSME firms' performance in India

1.5 WHY DOES THIS ANALYSIS MATTER?

This study presents one of the original econometric assessments of the ECLGS scheme's impacts on Indian MSMEs, and is useful to policymakers and stakeholders interested in the respective schemes efficacy. Understanding the scheme impacts and limitations is also necessary for developing improved credit-based measures in the future and providing much needed support to the most vulnerable firms in times of crisis. The findings also add to a larger discourse of post pandemic recovery, inclusive growth, and credit as an avenue to improve economic resilience for MSMEs, which are essential in India's path towards development.

CHAPTER 2

LITERATURE REVIEW

2.1 Importance of MSME in India

Importance of MSME in India has been acknowledged by **Zanjurne & Priyadarshani (2018)**. The paper mentions that the MSME sector has truly become a vibrant and essential part of the Indian economy, celebrated for its adaptability, efficiency, and entrepreneurial drive. It plays a crucial role in driving industrial output, creating jobs, and boosting exports. With minimal investment needs and a quick turnaround time, MSMEs make the most of their capital and skilled workforce. By focusing on smaller markets, they help ensure fair income distribution and encourage grassroots industrial entrepreneurship.

Begum et al. (2024) highlighted, how vital MSMEs are to India's economic landscape and their connections to the larger economy. The study paints MSMEs as essential players in creating jobs, boosting manufacturing output, and driving exports—making a notable impact on both GDP and socio-economic progress. It finds a strong positive link between MSME manufacturing growth and GDP, while also pointing out a negative relationship between economic growth and unemployment—highlighting how this sector can help stabilize and invigorate the economy during tough times.

2.2 Problems faced by Indian MSME

Mund (2020) discusses how, in India, the MSME sector continues to face cash crunches even with wider bank branch outreach. While institutional credit is rising, the banking sector has been too small to keep up with the growing demand for MSME industrial credit. Banks generally regard MSMEs as risky borrowers, as they have few assets, very little capital, and are largely susceptible to fluctuations in demand and prices. Further, based on this perception of opaque MSME businesses and lack of collateral, banks refuse credit, pushing MSMEs to get non-institutional credit at high costs.

Asymmetry of information, is another issue that leads to a deficiency of bank finance in this sector. Hence, MSMEs become eligible to obtain loans lesser than required. Further, higher transaction cost and thin margins have also reduced innovation in products by enterprises; consequently, these, along with their greater appetite for risk, have delayed and denied timely and adequate credit to the MSME (Mund, 2020).

Chitsimran et al. (2022) mentions that the issue of MSME financing from banks is a two-way street: entrepreneurs struggle to secure funding, while banks are hesitant to lend to this sector. To tackle this challenge, various government agencies and

initiatives have been put in place. However, these efforts haven't managed to reach a significant number of MSMEs.

2.3 COVID-19 Impact on Indian MSME: K shaped Recovery

Analysis by **Behera et al. (2021)** uncovers strong positive correlations and a long-term co-integrating relationship among these factors, showcasing how interconnected MSME performance indicators are.

A significant 66.6% contraction in production was recorded in April 2020, compared to a positive growth rate of 2.5% in April 2019. (Behera et al., 2021). The fall in the IIP growth rate was much higher in labour intensive industries such as food processing and textiles (which were mainly the micro and small MSMEs) than capital-intensive industries such as metal, petroleum, and chemical industries. (Behera et al., 2021). The study points out that external shocks, such as the COVID-19 pandemic, significantly disrupted the balance, revealing the sector's structural weaknesses.

Kumar et al. (2021) offer an empirical look at how the COVID-19 pandemic triggered specific shocks across different sectors of the Indian corporate world. By employing event study methodology, the paper uncovers significant negative cumulative abnormal returns in most sectors, categorizing industries based on the severity of their impact. Interestingly, it reveals that larger firms with higher market capitalization faced more severe setbacks compared to their smaller counterparts, challenging the usual belief that bigger companies are more resilient. This variation in vulnerability among sectors and firm sizes during crises underscores the need for tailored strategies in responding to future economic shocks. Sectors like electrical goods and transportation sectors faced the highest negative impact of pandemic, whereas Drug & pharmacy sector faced the lowest negative impact according to the analysis done by Kumar et al. (2021).

2.4 Government’s role during pandemic

Paper by **Singh et al. (2023)** mentions that the Indian government, along with the Reserve Bank of India (RBI), had rolled out a variety of support measures aiming at helping micro, small, and medium enterprises (MSMEs). They launched several credit programs specifically for these businesses. To broaden the reach of MSMEs, the definition of these enterprises has been updated, allowing more businesses to benefit from various programs, discounts, and initiatives offered by the Ministry of Micro, Small and Medium Enterprises of India. Back in 2020, the Government of India introduced a range of measures under the Aatmanirbhar Bharat Abhiyan.

The study by **Roy et al. (2020)** sheds light on the significant challenges that MSMEs in India faced during the nationwide lockdown, which severely disrupted business operations and made life even tougher for small entrepreneurs. The failure to provide

timely relief measures resulted in a drop in production for both essential and non-essential goods, adding to the financial burden on these businesses. The study emphasizes the critical need for timely government action and suggests that targeted support through liquidity injections and tax relief is essential to protect the sector during major disruptions like the pandemic.

2.5 Emergency Credit Line Guarantee Scheme (ECLGS) Limitations

The Emergency Credit Line Guarantee Scheme (ECLGS) has had a limited impact on the broader MSME sector. Paper by **Ghosh (2021-22)** discusses that initially, the scheme was only available to businesses that already had loans outstanding as of February 2020, which meant that nearly 93% of MSMEs—especially the smaller and informal ones that needed help the most—were left out. These excluded businesses, many of which were struggling with severe cash flow issues during the COVID-19 crisis, couldn't access institutional credit due to various structural hurdles, like lacking formal documentation, having no credit history, and not enough collateral.

Offering loans without collateral to MSMEs was expected to have the potential to boost their liquidity and working capital, especially during the tough times of the COVID-19 crisis. However, the impact of this support was somewhat hampered by underlying structural challenges in the sector. According to the NSSO's 73rd round survey of unincorporated non-agricultural enterprises (excluding construction) from 2015–2016, only around 31% of MSMEs are officially registered (**Sharma, A. K., 2022**). This low registration rate posed a significant hurdle for accessing government schemes and formal credit, even when those loans were collateral-free or subsidized. Since MSMEs are largely part of an unorganized sector made up mostly of micro-sized units, they tend to be particularly vulnerable during economic downturns (**Behera et al., 2021).** Many small businesses that desperately needed funds for essential expenses like paying wages, rent, and utility bills found themselves either ineligible or hesitant to take on more debt, especially with revenues dwindling and market conditions looking uncertain.

The scheme didn't effectively reach the most vulnerable MSMEs, highlighting disconnect between policy intentions and the financial realities on the ground.

Literature suggested that MSME sector has faced an uneven recovery after COVID, there's still a notable lack of detailed unit level analysis on specific policy measures like the Emergency Credit Line Guarantee Scheme (ECLGS). Taking a closer look at how individual businesses, like under MSME sector, have accessed and benefited from these schemes could reveal some important insights. Such research could not only guide more inclusive and targeted policymaking but also help assess how effective credit guarantees have been in addressing the systemic vulnerabilities within the sector.

CHAPTER 3

DATA AND METHODOLOGY

3.1 DATA SOURCES AND SAMPLE CONSTRUCTION

This research investigates effects of the Emergency Credit Line Guarantee Scheme (ECLGS) on performance of Micro, Small, and Medium Enterprises (MSMEs) in India using firm-level panel data for the period of 2016-2023. The data includes both the pre-intervention time period (2016-2019) and post-intervention period (2020-2023), which allows a compared impact analysis before and after ECLGS was delivered as a support measure for MSMEs during the COVID-19 pandemic.

Firm-level financial data, were retrieved using the CMIE Prowess IQ database, which provides detailed annual financial statements of Indian firms. A sample of 427 MSMEs was selected, as per the newly established MSME classification (as discussed in Appendix I) by the Government of India, based on financial data. The firms belonged to different states and industries (industrial composition of sample is discussed in Appendix III), which is a representation of diversity.

State level data for ECLGS disbursements were acquired from the Department of Financial Services (DFS), Government of India, and sourced through the National Credit Guarantee Trustee Company Limited (NCGTC). Due to the absence of firm-level ECLGS data available to the public, the average disbursement computed for registered MSME at the state level will be used as a proxy for intensity of the credit scheme. It is computed by taking the ratio of ECLGS Amount guaranteed in a state and the MSME registered in the state for the respective year.

In addition, Gross State Domestic Product (GSDP) at constant prices by state (to account for macroeconomic fluctuations across states and years) was obtained from the Ministry of Statistics and Programme Implementation (MOSPI) to account for macroeconomic variation (differences in states and years).

All nominal monetary variables were deflated utilizing the Wholesale Price Index (WPI) with a base year of 2011-12 to allow comparability in real terms over time.

3.2 DEVELOPMENT OF KEY VARIABLES

3.2.1 Dependent variable

The main dependent variable is gross value added (GVA) by firm.

In economics, for a firm, "value added" refers to the increase in value that a firm creates by undertaking the production process. It represents the total value created during production, and this value includes the payments made to the factors of production.

It is calculated following the equation below based on financial statements:

$$Gross\ Value\ Added = Profit\ after\ tax + Salaries + Rent + Indirect\ tax + Interest + Depreciation \quad (3.1)$$

The GVA variable represents a holistic measure of output and productivity at the firm level and a solid measure of performance.

3.2.2 Independent variable

A primary issue with this study was the unavailability of firm-level data on actual ECLGS loan uptake and, as such, we were unable to straightforwardly measure the amount of credit every firm has received.

To deal with this, the study countered an ECLGS intensity proxy variables derived from state-level data of total ECLGS disbursements available from the National Credit Guarantee Trustee Company (NCGTC), divided by the number of registered MSMEs in that state during 2020–21 to 2022–23 period. The final measure is the ECLGS Amount Intensity proxy variable, which reflected the average quantum of credit guaranteed per MSME in the state and will again reflect a larger liquidity environment and which would possibly point to the availability of regional government-backed credit support. Although, the actual uptake cannot be measured, given individual firm circumstances, the proxy does reflect the general level of credit assistance which firms would have likely had the option of accessing within their market's operating environment.

$$ECLGS\_Amount\_Intensity_{st} = State\ Level\ ECLGS\ amount/Number\ of\ MSMEs\ in\ the\ state \quad (3.2)$$

To dive more into the analysis an eligibility dummy variable was created to both identify firms that met the formal eligibility criteria set out for ECLGS support (discussed in APPENDIX II). The dummy isolates firms that were eligible for potential benefits of the scheme, versus ineligible firms.

The main independent variable in the model is the interaction term between the state level amount of ECLGS amount intensity and the firm level eligibility dummy therefore the interaction reflects the differential ECLGS support on eligible firms operating in states with differences in intensity of credit guarantees- so essentially, it models how Stage 1 availability of scheme funds at state level can impact firm performance of those firms that are eligible for support.

$$ECLGS\_Effect_{it} = EligibilityDummy_i \times ECLGS\_Amount\_Intensity_{st} \quad (3.3)$$

Where i indexes firms and s indexes states. This variable helps estimate the causal impact of ECLGS on firm performance by combining firm eligibility with the regional intensity of credit support.

3.2.3 Control Variables

To assess the effect of the Emergency Credit Line Guarantee Scheme (ECLGS) on firm performance, it is important that we control for other possible variables that may affect firm output in order to understand the true effect of the scheme. As the dependent variable in this study is value added (the net output produced by a firm), we derived our control variables based on the traditional planning model (production function) in economics.

Value added can be seen as measuring the output of a firm or entity's production process, usually expressing it as a function of inputs such as labour, capital, and the broader economy. Therefore we will present the following control variables:

- **Number of employees (noofemp):** representing labour that is the primary inputs in any production process.
- **Total Assets (tasset):** Serves as proxy for the capital stock and the land assets, as it includes plant, property and machinery, land holdings, buildings, patents, technology etc. therefore overall size of the firm.
- **State level GSDP:** captures the macroeconomic factor which might have an impact on the firms' performance. It captures state's economic activity and macroeconomic conditions.

Together they align with the conceptual framework of the production function

$$\textit{Gross Value Added} = f(\textit{Labour, Land, Capital, Entrepreneurship, other factors}) \quad (3.4)$$

3.4 METHODOLOGY

3.4.1 Generalized Least Squares (GLS) model

The methodology used consists of two types of econometric techniques: a Generalized Least Squares (GLS) model and a Fixed Effects (FE) model. GLS is the best fit to this research as it accounts for possible heteroscedasticity in the panel dataset (i.e. where the square errors might vary amongst firms and states) to produce efficient and unbiased parameters estimates. The application of the GLS model to the panel dataset was essential given the combinations of both cross-sectional and time-series datasets of firms located in different Indian states and having different economic profiles. Therefore, the GLS model allows for the restructuring of the disparities amongst observation between observations and relationships of reviews using ECLGS. Two dummies were used, year and industry dummies, to control for temporal and sectoral heterogeneity.

For analysis under GLS model, each variable is log transformed. (for i firms, in time period t, and industry type j)

$$ln(VAD_{it}) = \beta 0 + \beta 1 \cdot elg\_lnamt_{it} + \beta 2 \cdot ln(no\_of\_emp_{it}) + \beta 3 \cdot ln(tasset_{it}) + \beta 4 \cdot ln(gsdp_{st}) + \sum \gamma_j \cdot IndustryDum_j + \sum \delta t \cdot YearDum_t + \epsilon_{it} \quad (3.5)$$

Table 3.1: Variable Description

Variable name	Description
$ln(VAD_{it})$	Log of gross value added of firm i in time period t
elg_lnamt_{it}	Interaction term of log transformed ECLGS intensity and dummy for eligibility of firm i in time period t
$ln(no\_of\_emp_{it})$	Log transformed Number of employees
$ln(tasset_{it})$	Log transformed total asset of firm i in time period t
$ln(gsdp_{st})$	Log transformed GSDP for state s in time period t
$IndustryDum_j$	Industry dummy for industry j
$YearDum_t$	Year dummy for year t

3.4.2 Fixed Effects (FE) model

Fixed Effects (FE) model is used to control time-invariant and unobservable characteristics of firms that may affect their performance, such as management quality, internal policies, and some elements of the business environment (i.e. local opportunities) (one of the factors affecting it could be the different industry types). The FE model allows for all observations concerning time-invariant factors (e.g. firms management style, internal policies, some local elements) to be constant whilst tracking their variation of firms over time. This allows the FE model to isolate the effects of ECLGS from other variables that are fixed throughout the period of observation. For this model, year dummy was used to capture temporal heterogeneity. Similar to GLS model, under FE model, variables are log transformed

$$ln(VAD_{it}) = \beta 0 + \beta 1 \cdot elg\_lnamt_{it} + \beta 2 \cdot ln(no\_of\_emp_{it}) + \beta 3 \cdot ln(tasset_{it}) + \beta 4 \cdot ln(gsdp_{st}) + \sum \delta t \cdot YearDum_t + \epsilon_{it} \quad (3.6)$$

Usage of both the models will also cross-validate the findings, to check for consistency. This will ensure the robustness of results given different model specifications and assumptions.

CHAPTER 4

FINDINGS AND RESULTS

4.1 EMPIRICAL OBSERVATION

4.1.1 Trends in sample MSME value added from 2016 to 2023

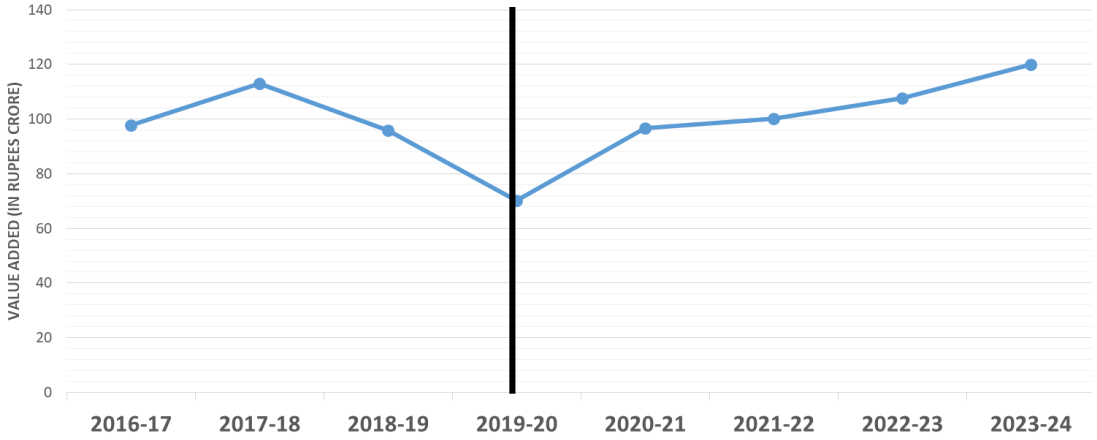


Fig. 4.1: Value added of Sample MSME firms over the time period 2016-23

The path that value added by MSME followed from 2016 to 2023 provides information to help understand the economic context in which the ECLGS was developed. As displayed in the graph, beginning in 2018, we can see an evident dip in value added that deepens considerably in the period of 2019-20 that coincides with the onset of COVID-19 pandemic. This illustrates how vulnerable MSMEs were to a systemic shock.

The value added data between 2019-20 and 2021 beginning in 2021 shows us recovery in value added that suggests that firms began regaining their operational momentum. Notably, this upward movement aligns closely with the rollout of the ECLGS around mid-2020 that provided collateral free credit guarantees to MSMEs. While all signs suggest steep increases in recovery this is partly explained by pent up demand and an inflow of liquidity suggesting some of this recovery was complicit upon initial emergency credit support under ECLGS. Till 2021-22, it was likely clear to the MSMEs that they would continue to face liquidity shortages and that supply chain pressures likely continued to restrict revenues even describing themselves as being caught in a vicious cycle that would require a stimulus on the demand side, capacity building and an ongoing macro recovery.

4.1.2 State wise distribution of ECLGS assistance vs. GSDP for the period 2020-23

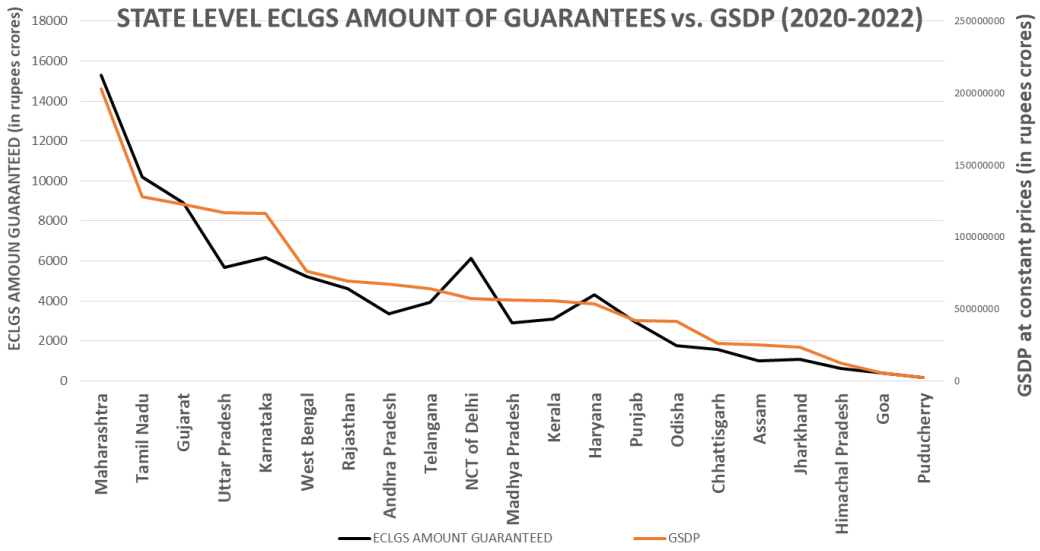


Fig. 4.2: State wise ECLGS Amount distribution vs. GSDP (2020-22)

The graph shows the relationship between GSDP and guarantees of credit under the Emergency Credit Line Guarantee Scheme (ECLGS) for the period from 2020-2022. States are presented on the x-axis in descending order of Gross State Domestic Product (GSDP), with two corresponding y-axes, one showing the ECLGS guarantees (in ₹ crore) and the other showing GSDP (in ₹ lakh crore).

It is observed that the amount of credit support declined as the GSDP of a state declined. This is consistent with expectations, as larger states with more economic activity tend to have a larger pool of MSMEs and therefore a higher demand for credit support. Larger states such as Maharashtra, Tamil Nadu and Gujarat - all of which have sizeable and diverse MSME sectors - received higher ECLGS guarantees in amount reflecting their scale of the overall state economy.

The chart also portrays certain deviations from the trend. NCT of Delhi, for example, appears to have attained credit assistance higher than the average trend line compared to its average GSDP over the time period. This was expected, as NCT of Delhi contains high concentration of service-oriented MSMEs combined with better financial infrastructure.

Conversely, Uttar Pradesh is one of the India's largest contributor in terms of GSDP and has a large base of MSMEs, but received less than expected support from ECLGS. This discrepancy suggest a variety of structural impediments

such as limited financial literacy, bureaucratic constraints, and variable market access to credit across the districts.

4.1.3 State wise ECLGS amount guaranteed vs. MSMEs Registered for the period of 2020-22.

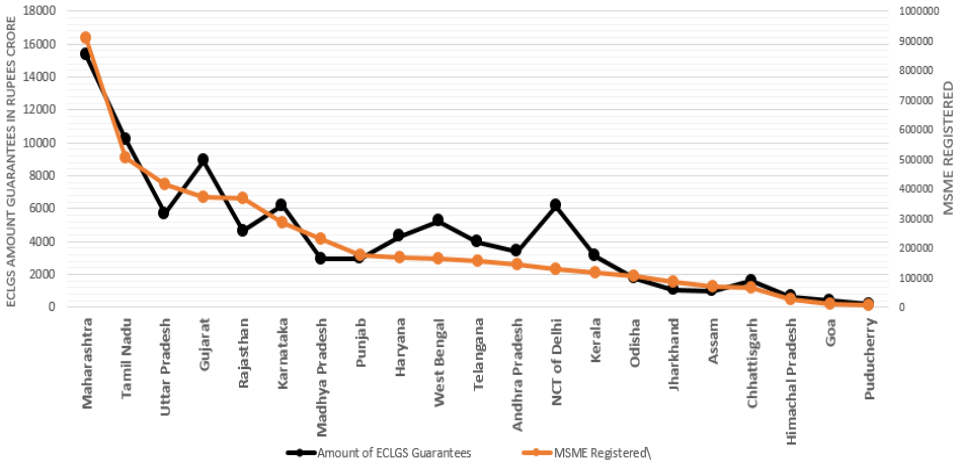


Fig. 4.3: State wise ECLGS Amount distribution vs. MSME in the state (2020-22)

This graph presents a comparison of the Emergency Credit Line Guarantee Scheme (ECLGS) distribution across Indian states in relation to the number of MSMEs registered in each state for the period 2020–2022. The states presented on the X-axis are listed in descending order by number of MSMEs registered, Y-axis of the figure presents two characteristics. The left axis represents the ECLGS guaranteed amount for each state (₹ crore). The right axis gives the number of registered MSMEs. This graph is meant to examine whether the ECLGS credit disbursement was, on the whole, proportional to size of the MSME base in each state.

The trend reveals an overall positive relationship between the ECLGS assistance and the concentration of MSME in the states. States with more MSMEs registered were more likely to have a higher average ECLGS guarantee. For instance, states with a densely populated small business base like Uttar Pradesh and West Bengal, are high in ECLGS intake.

Delhi had received a high average amount of ECLGS guarantees compared to the trend line, in proportion to the number of MSMEs in the city. As discussed earlier, it could be because Delhi has a relatively more formalized business ecosystem, quicker access to liquidity through credit infrastructure being primarily digitally enabled. West Bengal and Gujarat also appear to be above the trend line of ECLGS assistance. While, West Bengal may be a result of its swift and aggressive outreach under the program, number of credit-worthy urban MSMEs, and a proportion of vulnerable micro-enterprises that were

much more reliant on liquidity during the pandemic, Gujarat had much more mature industrial base, greater credit legitimacy of their MSME component.

The existence of these outliers has important policy lessons. Although the correlation between ECLGS support and the number of MSME registrations hold true on average, there is an important latent quality component related to a state's ability to harness emergency credit schemes: the state's capacity under-utilisation of the scheme is likely connected to the capacity of credit absorption, sectoral make-up, and digital readiness.

The gap underlines the need for a nuanced and context informed policy making process related to credit programme design and delivery so that other markets with very different financial ecosystems but a high volume of MSMEs can be similarly enabled.

4.1.4 State wise ECLGS number and amount of guarantees vs. MSME in the state across the years for period 2020-22.

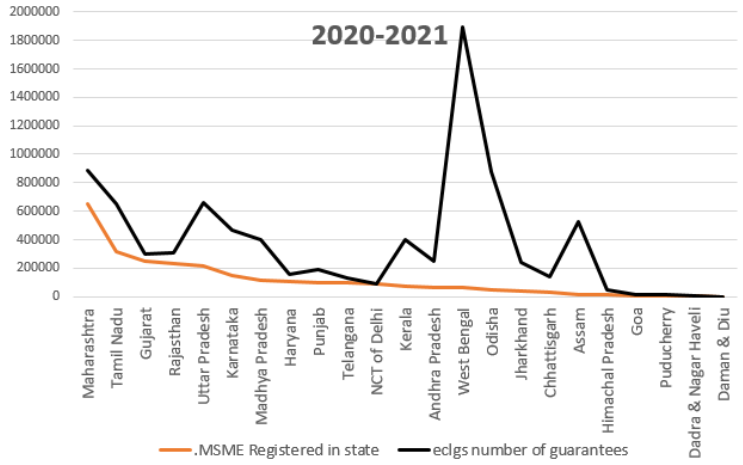
From figure 4.4 and figure 4.5, valuable insights are derived.

The charts show how the number and amount of ECLGS guarantees issued vary in each of years from 2020 to 2022, compared to the number of registered MSMEs by state. In 2020-21, states showed a greater number of guarantees than MSME registrations, which matched the urgent liquidity needs of the early pandemic.

When we assess the number and amount of guarantees issued in 2021-22, and 2022-23, from year to year, we see a decline in both numbers, and amount relative to MSME counts, with large fluctuations. This decline suggests that credit demand reduced and burdened enterprises developing back into more stable operational settings. Our analysis suggests that the scheme was used most and to a greater extent during the shock phase of the pandemic.

West Bengal recorded extraordinarily high uptake of guarantees in 2020-21 and appeared to normalize. There were micro-enterprises requiring immediate support or rather huge disbursement of credit in the initial phase. The credit intensity, however, faded away in 2022–23, signifying lesser need for emergency credit.

However, Delhi kept on remaining above the trend line as far as amounts of ECLGS guaranteed were concerned, even in 2022–23. Such a continued overrepresentation can be attributed to the dense service-sector MSME ecosystem in Delhi, strong digital banking infrastructure, and relatively large loan ticket sizes per firm. Both Uttar Pradesh and Rajasthan showed a lack of normalization and stagnation below trend, reflecting potential gaps in guarantee and/or delivery mechanisms, or structural credit constraints for both states despite large market engagement with the MSME sector.



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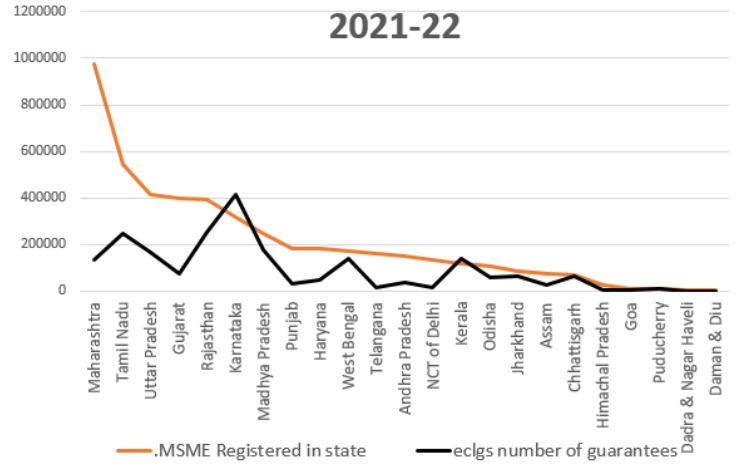

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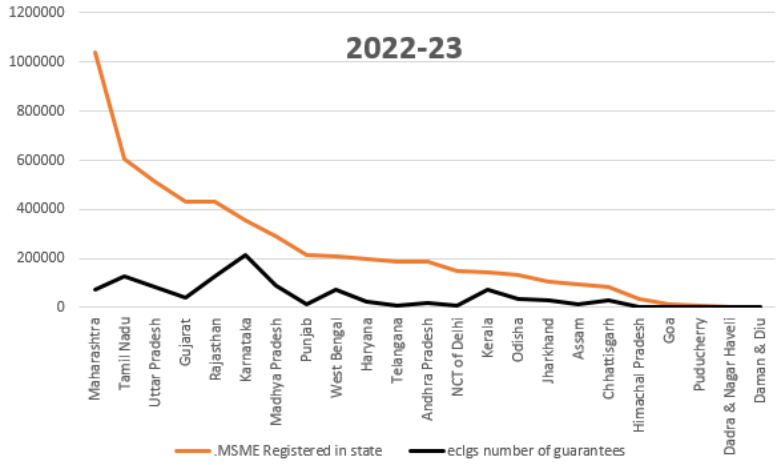
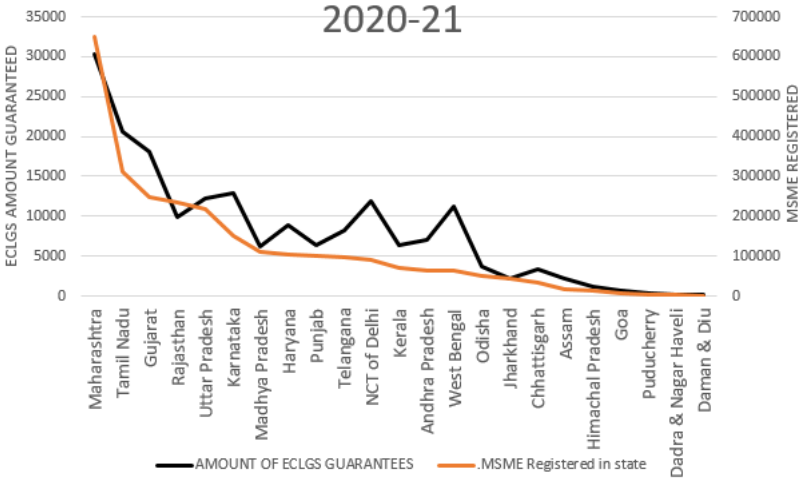


(c)

Fig. 4.4 Year wise State level ECLGS number of guarantees vs. MSME in the state for years (a)2020-21, (b) 2021-22, (c) 2022-23



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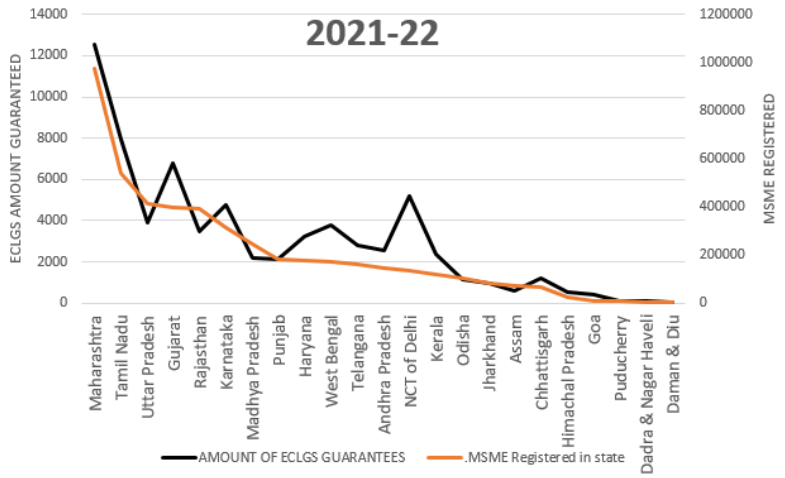

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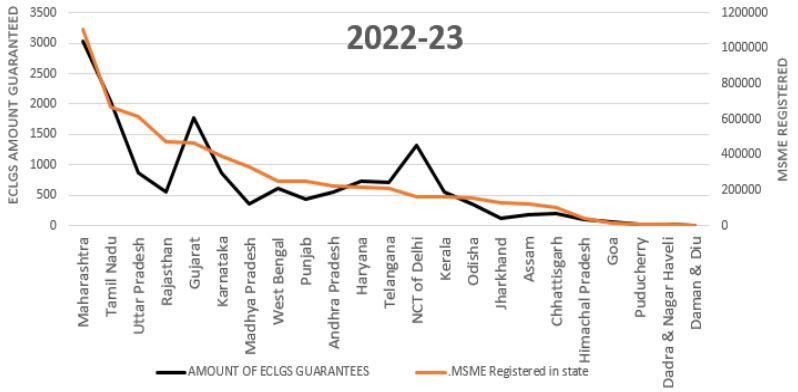

(c)

Fig. 4.5 Year wise State level ECLGS amount guarantees vs. MSME in the state for years (a)2020-21, (b) 2021-22, (c) 2022-23

In conclusion, given how nuanced and diverse the intake of state level ECLGS assistance was, state level adoption of such a scheme is worth studying, as one-size-fits-all national analysis might overlook the critical regional dynamics, true policy effectiveness.

4.2 REGRESSION ANALYSIS

Results indicate consistency in the outcomes of the two models imposed for the analysis.

4.2.1 Generalised Least Square Model

The GLS model results prove that there exists significant and positive impact of ECLGS credit assistance on the gross value added of the MSME firms, after controlling for the relevant variables.

Table 4.1: GLS model results

Dependent Variable (log)	Gross Value Added		
Independent Variables (log transformed)	Coefficient	Standard Error	p value
ECLGS Amount	0.0572	0.0134	0.000
Number of Employees	0.392	0.00702	0.000
Total Assets	0.5809	0.0079	0.000
GSDP at constant prices	0.0784	0.0123	0.000

The coefficient for the ECLGS implies that 1% change in the credit assistance led to a 0.022% increase in the gross value added of the sampled firms.

The coefficients of control variables align with the conceptual and theoretical expectations, indicating that the model is robust to a degree.

The GLS regression findings highlight a strong and positive link between the Emergency Credit Line Guarantee Scheme (ECLGS) and the gross value added by MSMEs. This suggests that having access to guaranteed credit really boosted firms' economic output during the recovery phase after COVID. The model takes into account variations in data and differences across firms, giving us a clearer picture of how credit support, when spread across a diverse range of businesses, led to increased productivity. It's also worth noting that factors at the firm level, like labor and total assets, play a significant role, underscoring the importance of a company's internal strengths in driving performance. Moreover, the impact of the broader economic environment, represented by state GSDP, shows that firms in more economically vibrant areas tended to perform better. All in all, the GLS results indicate that the ECLGS was crucial in fostering growth at the firm level, even as larger resource distributions and external economic factors continued to influence outcomes.

4.2.2 Fixed Effects (FE) Model

The FE model results also prove that there exists significant and positive impact of ECLGS credit assistance on the gross value added of the MSME firms, after controlling for the relevant variables. This indicates that the analysis is done in the right direction

Table 4.2: FE model results

Dependent Variable (log)	Gross Value Added		
Independent Variables (log transformed)	Coefficient	Standard Error	p value
ECLGS Amount	0.088	0.034	0.012
Number of Employees	0.273	0.055	0.000
Total Assets	0.481	0.098	0.000
GSDP at constant prices	0.066	0.066	0.322

On regressing the gross value of firm, on the potential ECLGS amount, given control variables, the results again highlight the positive significant impact ECLGS assistance had on the MSME firms.

The Fixed Effects model sharpens the above insight by accounting for unobserved characteristics that don't change over time within firms or states, like management effectiveness, company culture, or specific regional regulations. Within this more rigorous framework, the ECLGS still demonstrates a statistically significant positive effect on gross value added, reinforcing the idea that the scheme genuinely supported firm productivity.

The ongoing importance of factors like labour and capital indicates that while external credit played a crucial role, it was most effective when it worked alongside the internal strengths of firms. Essentially, the FE model shows that specific emergency credit measures, like the ECLGS, truly had a significant and measurable effect on the growth paths of firms during the examined period.

CHAPTER 5

CONCLUSION, FUTURE SCOPE AND SOCIAL IMPACT

5.1 Conclusion

This study represents a thorough empirical assessment of the Emergency Credit Line Guarantee Scheme (ECLGS) and its impact on the performance of Micro, Small, and Medium Enterprises in India during a period of extreme economic uncertainty and disruption. Using firm-level panel data from across several sectors from 2016 to 2023 provided useful research empirical insights into public credit assistance mitigating the impacts of the COVID-19 crisis and facilitating economic recovery.

The empirical findings demonstrate a positive and statistically significant link between the credit support provided by ECLGS and value added (GVA) by MSMEs in India. Specifically, the log-log regressions suggest every unit of ECLGS support that a firm received correlated with an increase—therefore value added—when controlling for fundamental production inputs. This finding empirically supports some theoretical views where timely provision of liquidity—especially in liquidity-constrained sectors—was seen as a mechanism that supports firm viability and productive specific investments in the midst of demand-based shocks. The ECLGS works as a credit guarantee mechanism, reducing lenders' risks to banks and addressing structural credit market failures, which prevents MSMEs from accessing formal finance.

Most importantly, the model controls for typical firm-level drivers of output: labour (operationalized by the number of employees); capital, land (operationalized by total assets); and macroeconomic conditions (operationalized by GSDP at constant prices). The positive coefficients and significance of these controls enhance the internal validity of the regression and further evidence to suggest that the ECLGS effect identified is not simply due to increased activity resulting from additional inputs but represents a specific additional effect resulting of policy intervention. The analysis was done using a form of production function to constrain the estimation, a corrective measure to ensure conceptual validity, therefore allowing the study to isolate the marginal effect of the infusion of credit on performance outcomes.

After accounting for the control factors, the study suggests that the marginal increase as a result of the ECLGS was another way well-timed public support can help restore confidence and enable the operational continuity of the MSME sector.

For future schemes, there will need to be a more targeted and sector-sensitive approach to deal with industry-specific constraints, absorptive capacity, and regional differences, which will enable good progressive outcomes in development.

As a conclusion, the ECLGS has certainly helped soften the economic hammer blow to India's MSME sector, and has contributed some measure of value-add at the firm-level during the recovery phase. Now as the economy transitions from crisis management to rebuilding in the medium to long-term, continued policy focus, better financial inclusion, and complementary investments in productivity from human capital and technology adoption will be essential to unlock the full productivity capability of the MSME sector in India. Future research can build on this evidence base by exploring heterogeneity in terms of ECLGS impact on firm sizes, sectors, and geographies, and also measuring longer-term impacts for profitability, employment, and innovation outcomes.

5.2 FUTURE SCOPE

This study emphasizes the critical importance of government-backed credit interventions, in particular the Emergency Credit Line Guarantee Scheme (ECLGS), in supporting and recovering India's Micro, Small and Medium Enterprises (MSMEs) during periods of economic distress. The results show that cheaper and accessible credit had a positive impact on the value added at the firm level provides a strong rationale for designing an emergency credit facility as a more regular feature of India's MSME support framework. The issues that occurred in reaching the maximum number of firms and improving the effectiveness and sustainability of similar interventions indicate several more sophisticated policy considerations:

- **Customize Credit Allocations by Firm Characteristics**

One of the most striking takeaways from our study is that the credit provision policy approach, as it currently stands, is unlikely to achieve desirable policy outcomes with a "one-size-fits-all" lens. Future schemes like the ECLGS must include firm-level heterogeneity in designing the schemes to efficiently allocate public credit holdings.

Weeding on particular engaging developments must distinguish them by firm sizes (micro, versus small, versus medium), affected sectors (socioeconomic groups), and past credit behavior, to determine eligibility and credit limits. This would allow liquidity to flow directly to viable credit-constrained enterprises to maximize developmental outcomes. Moreover, the GSTN, Udyam registration, and bank credit scores data will be helpful in creating more appropriate firm profiles to lend based on needs.

- **Enhancing Credit with Capacity Building and Monitoring Systems**

Although access to credit is important it is insufficient for sustained productivity gains. Infusing liquidity with no guidance or oversight can lead to inefficient use of funds or increasing default risk. For this very reason, emergency credit programs must be instituted in a larger institutional ecosystem that supports MSMEs with financial management, operational upgrading, and access to markets, e.g. including but not limited to:

- Post-loan monitoring systems to help monitor fund usage and recognize signs of financial stress early on;
- Additional planned financial literacy and digital on boarding programs to support first-time borrowers as they seek out and join formal credit markets.
- Technical assistance through industry associations, state MSME departments or incubation centers, supporting firms as they address business planning, digitization, and compliance.

This multifaceted approach is necessary so to ensure credit is leveraged into productivity and not just acting as a safety net for short term survival.

- **Use ECLGS Data for Wider Credit Market Reforms**

The ECLGS implementation covered millions of firms across India, producing an important real-time database of credit utilization, repayment behaviour, and delivery of services under stress. This valuable and important database should not remain underutilized. Rather, it should be used as evidence for reform regarding credit policies, for example:

- Risk-based lending models can be improved by looking at repayment behaviours across segments of firms and aiding in predicting default rates more accurately;
- Credit scoring models can reflect non-traditional facets of resilience and adaptability (e.g., digital footprint, supply chain linkages);
- Access to finance can avail differential interest rate structures or collateral / guarantee requirements to high-potential MSMEs based on credit responsiveness behaviours.

By deeply embedding data-informed policy-making, India can move forward from reactive to anticipatory systems of credit support.

- **Strengthen the Delivery Infrastructure for Emergency Credit**

One takeaway from the pandemic era was that speed and simplicity in delivering credit can be the difference between survival and departure for firms. As it stands today, much needs to be done to improve the underlying mechanisms for delivering emergency credit schemes like ECLGS to be timely and inclusive. Recommended steps include:

- Expanding digital lending outlets that have integration with government databases (like Udyam, Income Tax, and GST). This could facilitate automatic eligibility checks and pre-approval of loans.
- Streamlining the loan sanction process with a focus on documentation, leave less discretion to public sector and private banks in their approval, and create a consistent process for fast-tracking loans.
- Leverage state level or local level financial institutions, cooperative banks, and fintechs to strengthen partnerships, and improve outreach to

rural, semi-urban areas and traditional micro, small, and medium enterprises (MSMEs).

These efforts will enhance last mile connectivity and allow credit interventions to reach all segments of India's geography and functionally diverse MSME sector.

Overall, while the ECLGS was created as a short-term support mechanism, the success of the program provides a framework for the long-term development of MSME credit policy in India. Ensuring flexibility, while being responsive and embedding support components in future credit interventions can help to significantly strengthen the resilience and competitiveness of the MSME sector and position them as engines of steady-state growth in the economy, rather then just crisis managers.

5.3 SOCIAL IMPACT

The conclusions drawn from this research go beyond economic analysis and corporate finance and bear important consequences for the wider social ecosystem of India—a particularly-meaningful point for social communities dependent on the Micro, Small, and Medium Enterprises (MSME) sector. As MSME plays an important role in generating employment opportunity, especially in rural and semi-urban areas, the potential impact of easing access to emergency debt in the realm of firm performance manifests in terms of the immediate social stability and livelihood guarantees for the millions of families implicated. This research explored how timely and well-implemented financial measures—like the Emergency Credit Line Guarantee Scheme (ECLGS), served as a crucial safety net for small businesses during one of the most challenging crises in recent history.

The study highlights that one of the most important social dimensions is job protection; MSMEs are labour intensive, employing over 24 crore people in India. The positive relationship between access to ECLGS credit and Gross Value Added shows firms were able to continue and even grow owing to increased liquidity, which helped to protect employees (particularly informal and vulnerable) from layoffs, wage cuts and job losses during the pandemic. The protection of jobs, especially in lower income segments, has a chain reaction, influencing family welfare, school continuity for children, access to healthcare, and general community welfare. Moreover, firms remaining in operation meant that local supply chains—particularly related to essential goods and services—continued to function during lockdowns, so that households could still access critical supplies and support.

Beyond future income security, the social benefit from survival of the firm within ECLGS also serves to enhance entrepreneurial confidence and resilience. Many small entrepreneurs, especially women and first-generation business owners, faced an existential moment in the COVID-19 shock and the guaranteed credit meant it was likely that large-scale bankruptcies did not happen within these vulnerable statuses, allowing them to protect the social capital, the networks and the productive assets they developed over time. For marginalized communities and backward regions, where

formal activity is limited, this kind of continuity is essential to self-reliance, financial inclusion, and social mobility. This study therefore brought attention to the social aspects of economic instruments - when suitably designed - can very much further inclusion and equity.

The study also provides insight into how policy instruments can mitigate systemic vulnerabilities and social inequalities. MSMEs are often excluded from broader financial systems and are disproportionally affected by credit constraints, particularly microenterprises and women-led firms. Evidence from this study showing a large and independent effect of access to credit on firm-level outcomes reinforces the argument to credit and democratizing access to finance as a lever for social change. ECLGS policies will help address this system exposure when allowing smaller firms a competitive alternative to work, invest and grow alongside larger firms. In the long run, such interventions will mitigate regional and income discrepancies, by allowing, local wealth and industry to develop and increasing access to economic opportunity at the state and district level.

This study can also serve to affect the matters of social preparedness for the future. The study reflects the deep relationship between economic resilience, and social resilience. Ensuring the protection of firms means the protection of families. The protection we afford families enables communities to withstand and recover from shocks more quickly. Overall, the evidence here presents public policy makers with a call for an active, institutionally endorsed framework for emergency credit that is able to be launched in situations of future downturn as quickly as possible - not to just preserve GDP, but to ensure the dignity, livelihoods, and dreams of the people who comprise India's economy, and facilitate an understanding of economic policy away from a mere focus on growth, and more towards human development and social justice as they relate to economic policy.

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APPENDIX I

Sample construction using recent modification of classification of MSMEs

Over time, the classification criteria for Micro, Small and Medium Enterprises (MSMEs) have changed to reflect the different development of business structure in India. Prior to 2020 MSMEs were defined simply by their investment in plant and machinery or equipment. This part of the classification criteria was heavily criticized for being outdated and for not accurately representing a firm's meaningful size, performance or economic, social and political contribution.

In 2025 the classification was altered again to provide more accurate terms of reference based on ground reality, technological advancement and changes in business interaction post-COVID. The newly updated classification included relevant current thresholds for investment and turnover which allowed for a better and more realistic definition of MSME across industries.

Table I.1: New Classification of MSME

TYPE OF ENTERPRISE	**INVESTMENT**	**TURNOVER**
Micro	Rs. 2.5 cr	Rs. 10 cr
Small	Rs. 25 cr	Rs. 100 cr
Medium	Rs. 125 cr	Rs. 500 cr[1]

The aim of this study is to assess the effects of ECLGS on MSMEs in a way that can inform current and future policy. In this regard, it is important that the classification used is recent, and conforms to the current policy and regulatory environment to provide maximum relevance and utility from the findings. Using the most recent MSME classification ensures that impact evaluations are forward-looking and more relevant to policymakers.

The 2025 revision most probably reflects structural changes in the MSME sector, influenced by economic consequences following the COVID-19 pandemic. This classification means that firms selected for sampling represent the post COVID-19 relevant structure of MSME ecosystem, and credit support schemes such ECLGS is evaluated for firms which remain relevant in the current economic environment

[1] Source : Budget 2024-25

APPENDIX II

Eligibility for ECLGS assistance

Table II.1: Eligibility details for ECLGS[2]

	PHASE 1.0	PHASE 2.0	PHASE 3.0	PHASE 4.0
Introduced on	March 23rd 2020	November 26th 2020	March 31st 2021	May 30th 2021
Credit Outstanding as on reference date	Up to Rs 50 Crores as on Feb 29th, 2020 or March 31st, 2021 (i.e. extension of reference date)	above Rs.50 crore and not exceeding Rs.500 cr. as on Feb 29th, 2020 or March 31st, 2021 (i.e. extension of reference date)	No specific limit (phase 3.0 extension puts a limit to the credit outstanding at Rs 500 cr.) as on Feb 29th, 2020 or March 31st, 2021 (i.e. extension of reference date)	No specific limit
Sector	In any sector, All eligible MSMEs	Borrowers in the 26 sectors identified by the Kamath Committee on Resolution Framework vide its report dated 04.09.2020. And Healthcare sector	Hospitality (hotels, restaurants, marriage halls, canteens etc.), Travel & Tourism, Leisure & Sporting and Civil Aviation (scheduled and non-scheduled airlines, chartered flight operators, air ambulances, airports and ground handling units) sectors	to eligible hospitals/nursing homes/clinics/medical colleges / units engaged in manufacturing of liquid oxygen, oxygen cylinders etc. for setting up of on-site oxygen producing plants.

[2] Extensions of the phases were to revise the reference dates from Feb 29th 2020. Source for the table is NCTGC ECLGS Operational Guidelines.

APPENDIX III

SECTORAL COMPOSITION OF THE SAMPLE

For sample construction, the given industry classifications, by the CMIE Prowess IQ Database, were broadly divided into 11 categories suiting the purposes of analysis.

Table III.1: Sectoral composition of sample

S no.	**Industry**	**Number of firms**
1	Business services	522
2	Construction and real estate	288
3	Consumer goods and retail	632
4	Energy and natural resources	104
5	Food and agriculture	104
6	Healthcare and Pharmaceuticals	200
7	Manufacturing and heavy industries	784
8	Media and entertainment	128
9	Miscellaneous Services and others(includes Hotel and tourism)	240
10	Technology and IT services	336
11	Transport and logistics	56
	Total observations in the sample	**3416**

APPENDIX IV

DELHI TECHNOLOGICAL UNIVERSITY

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PLAGIARISM VERIFICATION

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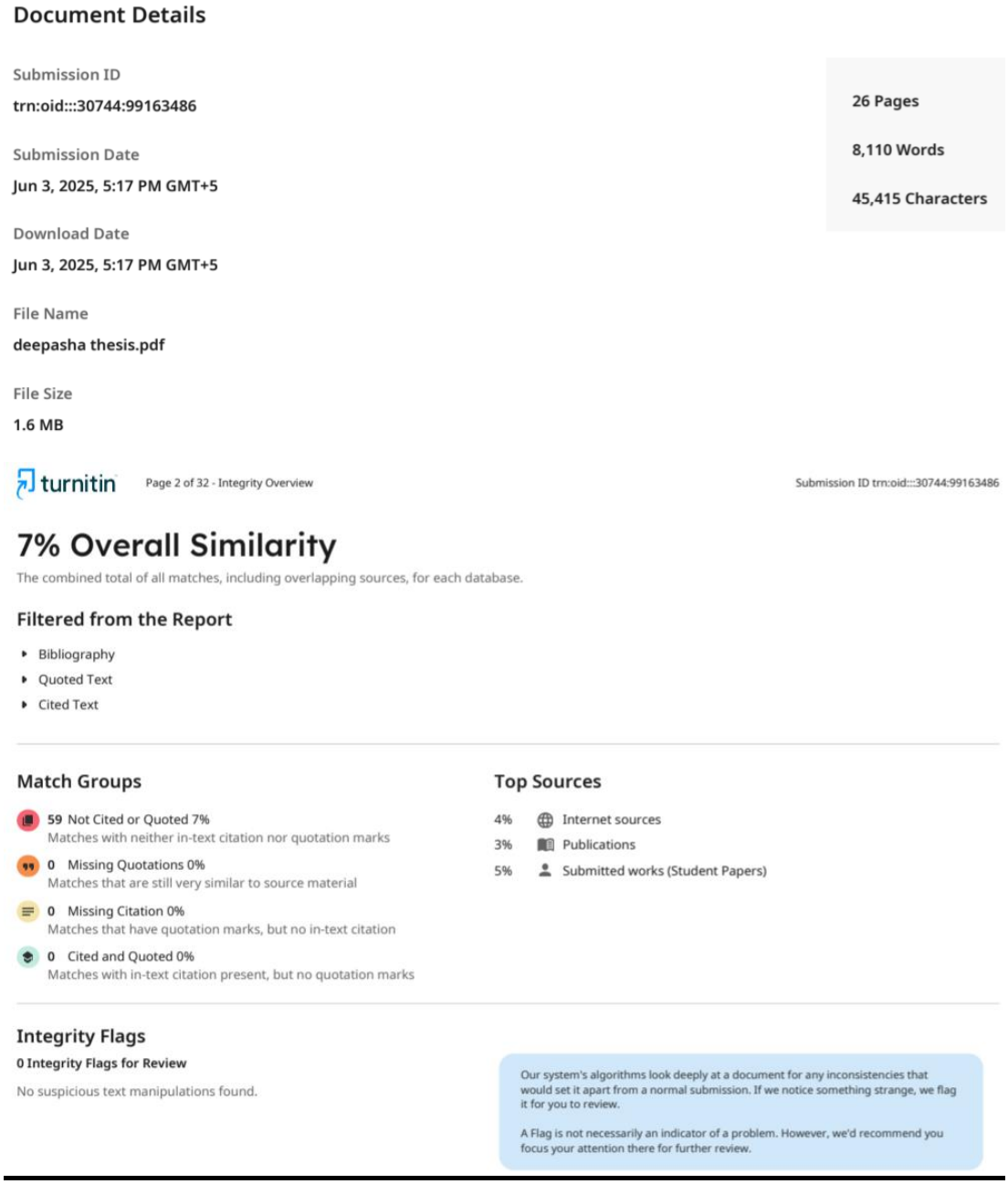
APPENDIX V

PLAGIARISM REPORT



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APPENDIX VI

DELHI TECHNOLOGICAL UNIVERSITY

(Formerly Delhi College of Engineering)
Shahbad Daulatpur, Main Bawana Road, Delhi-110042. India

CERTIFICATE OF THESIS SUBMISSION FOR EVALUATION

(Submit in Duplicate)

1. Name: Deepasha Mishra
2. Roll No.: 2K23/MAE/011
3. Thesis title: A Study on the Impact of the Emergency Credit Line Guarantee Scheme (ECLGS) on the Performance of MSMEs in India
4. Degree for which the thesis is submitted: Master of Arts
5. Faculty of the University to which the thesis is submitted: Dr Manisha G. Singh
6. Thesis Preparation Guide was referred to for preparing the thesis. YES ☐ NO ☐
7. Specifications regarding thesis format have been closely followed. YES ☑ NO ☐
8. The contents of the thesis have been organized based on the guidelines YES ☑ NO ☐
9. The thesis has been prepared without resorting to plagiarism. YES ☑ NO ☐
10. All sources used have been cited appropriately. YES ☑ NO ☐
11. The thesis has not been submitted elsewhere for a degree. YES ☑ NO ☐
12. Submitted 2 spiral bound copies plus one CD. YES ☐ NO ☐

Deepasha Mishra

(Signature of Candidate)

Name(s): Deepasha Mishra

Roll No: 2K23/MAE/011

APPENDIX VII

DELHI TECHNOLOGICAL UNIVERSITY

(Formerly Delhi College of Engineering)
Shahbad Daulatpur, Main Bawana Road, Delhi-110042, India

CERTIFICATE OF FINAL THESIS SUBMISSION

(To be submitted in duplicate)

1. Name: Deepasha Mishra
2. Roll No: 2K23/MAE/011
3. Thesis title: A Study on the Impact of the Emergency Credit Line Guarantee Scheme (ECLGS) on the Performance of MSMEs in India
4. Degree for which the thesis is submitted: Master of Arts
5. Faculty (of the University to which the thesis is submitted)
   Dr Manisha G. Singh

6. Thesis Preparation Guide was referred to for preparing the thesis.	YES ☐	NO ☐
7. Specifications regarding thesis format have been closely followed.	YES ☑	NO ☐
8. The contents of the thesis have been organized based on the guidelines.	YES ☐	NO ☐
9. The thesis has been prepared without resorting to plagiarism.	YES ☐	NO ☐
10. All sources used have been cited appropriately.	YES ☑	NO ☐
11. The thesis has not been submitted elsewhere for a degree.	YES ☑	NO ☐
12. All the correction has been incorporated.	YES ☑	NO ☐
13. Submitted 2 hard bound copies plus one CD.	YES ☐	NO ☐

manisha singh
(Signature(s) of the Supervisor(s))
Name(s): Dr Manisha G. Singh

Deepasha Mishra
(Signature of Candidate)
Name: Deepasha Mishra
Roll No: 2K23/MAE/011