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EVALUATING THE EFFECTIVENESS OF MICROCREDIT PRACTICES BY SMALL FINANCE BANKS: A PERFORMANCE-BASED STUDY OF MICRO AND SMALL ENTERPRISES IN AUTOMOBILE ANCILLARY UNITS

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Abstract

This study examines the effectiveness of microcredit procedures offered by small financial banks (SFBS) on the performance of micro and small enterprises (MSE) in the automotive auxiliary sector Maharashtra. Using convergent design of mixed methods, primary data from 120 MSE owners across three main industrial clusters (PUNE, AURANGABAD, Nashik) were collected. The quantitative component analyzed key financial conditions - including the turnover of the working chapter, net profit range and return of assets - comparable values before and after payout. The qualitative component included semi -structured interviews with 20 MSE owners and 5 SFB officials to capture nuances perspectives for loans, payday and credit services (training, technical consultancy).

The study concluded that while SFB Microcredit is effectively engaged in gaps with short - term financing, loan interventions Plus are decisive for the long -term company development. Policy recommendations include: (1) technical training modules specific to strengthen the sector; (2) streamline the processes of documentation and compliance with regulations; and (3) connection of interest subsidies with benchmarks of power. These measures can help SFBS maximize the developmental impact of the micro -jar on the MSE in the capital industry.

Keywords: microcredit, small financial banks, micro and small businesses, auxiliary units for cars, working chapter turnover, credit and plus services, Maharashtra..

1. Introduction

Micro and Small Business (MSE) in the Indian automotive sector are vital to the nation's manufacturing module, which represents more than 21 percent of car production in Maharashtra and contributes by almost 6.14trillion ($ 73 billion) in FY 2023-24 - 9.8 annual

These units, grouped mainly in Pune, Nashik and Aurangabad, support OEM and replacement chains, but remain limited by limited access to formal financing, preventing their ability to modernize equipment, smooth working chapters and cycles and invest in technology upgrade

In response to this, the Indian reserve bank introduced small financial banks (SFBS) in 2015 to expand banking services to underserved and insufficiently affected segments, ordering at least 50 percent of their lending to focus on microfinance and that 25 percent of the branches open in rural centers. SFBS offers collateral loans adapted to MSE, combined with "credit and plus" services - final literacy, technical consulting and market binding support - designed to deal with financial and non -financial obstacles to growth.

While global evidence emphasizes that loan intervention PLUS significantly increases the impact of micro -jar on the performance of small intentions, there is a lack of sector research in the Indian capital automobile auxiliary segment. Most studies aggregate MSE across sectors overlooking the unique dynamics of the working chapter, technological requirements and compliance with the regulations facing units of auto -components. As a result, the efficiency of the practitioner of SFB micro -stories - payout size, payment speed, interest and support subvert and support after the exhibition - on the financial and operating capabilities of these companies remain insufficiently explored.

This study fills this gap by evaluating the impact of SFB micro -jar on key performance indicators - turnover from work - chapter, net profit range and assets of assets - 120 automotive MS in Pune, Aurangabad and Nashik. Using convergent design, the mixed method integrates financial ratio analysis with semi -structured interviews with business owners and SFB officials. Through this approach, research reveals not only the size of the microcredit, but also the mechanisms - especially the role of credit and plus services - which lead to the permanent growth of the company. The aim of the finding is to inform SFB strategies and political frames to optimize the supply of micro -bores and support the MSE scaling ambitions in this critical manufacturing sector.

2. Background of the study

Micro and small businesses (MSE) in the Indian automotive auxiliary sector form the backbone of the Earth's production ecosystem. Between April 2023 to March 2024, car industry reached a record turnover of $ 6.14 billion ($ 73.1 billion), which is 9.8 percentage ascension, driven by the robust sale of OEM, export and demand with aftermarket

As part of this, Maharashtra contributes almost 23 percent national automotive and automatic output, with the main production clusters in PUNE, Nashik and Aurangabad

These businesses not only supply critical parts of vehicle manufacturers, but also create significant rural and urban employment, which underlines their socio -economic significance.

Despite their strategic role, the automobile complementary MSS is struggling with persistent financing limitations. Conventional banks usually require considerable collateral and extensive documentation that many small units cannot provide. As a result, these companies face a shortage of working chapters, outdated machines and limited capacity for accepting technologies - they record their competitiveness and growth potential. As a recognition of this gap, the Indian Reserve Bank (RBI) introduced the Small Finance Bank (SFB) in 2015, which aims to deepen the financial integration of credit and savings services to unknown and floor segments, including micro and small industries

According to RBI instructions, SFBS must allocate at least 50 percent of its credit portfolio of microfinance (up to 2.5 million GBP) and open a quarter of their branches in non -banking rural areas, prioritizing MSE lending

To overcome traditional credit barriers, SFBS offers microprocessing products of the collateral expanded by "Credit and Plus" services - training on the concept of literacy, technical counseling and market connection support. The goal is not only to provide funds, but also to build managerial and technical capacity of MSE owners, which supports the sustainable development of the company

While international studies on microfinance emphasize the value of such integrated support, there is limited empirical evidence of how these combined financial and non -financial interventions do in the Indian capital automotive auxiliary context.

This study deals with the gap evaluating the efficiency of the practicing of the SFB micro -ray - the size of the occurrence, the speed of the payment, the interest and the services and services of the loan - Plus - for the financial and operational performance of 120 automotive MS across PUNE, AURANGABAD and Nashik Clusters. Research, which uses convergent design of mixed methods, integrates the analysis of financial circumstances (working capital turnover, profit margin, return on assets) with semi -marked interviews with business owners and SFB officials. The aim of the finding is to illuminate not only the extent of microcredit, but also the mechanisms that support subsequent support for continuous growth, informing policy and practice to strengthen MSE funding in this critical sector.

3.Objective of the study

- To assess the impact of micro -jar on working chapter management
- To measure the effect of microcredit on profitability
- Explore the role of paycheck speed and loan conditions
- Evaluate the effectiveness of credit services
- Identify the challenges that MSE faces in the approach and use of the microcredit
- Analyze variations across industrial clusters
- Derive political and managerial recommendations

4. Significance of the study

The micro industry, small and medium -sized enterprises (MSME) is the cornerstone of Indian growth of production, production of employment and exports. Within this landscape, micro and small enterprises (MSE) in the automotive auxiliary segment are particularly key: they supply critical components to manufacturers of original equipment (OEM), support innovations and maintain regional industrial clusters. Yet the persistent financing gaps - driven by strict collateral requirements, lengthy approval processes and limited support support - but their growth potential begins. The systematic evaluation of the effectiveness of the micro -borehole -fitted procedures by small financial banks (SFBS) offers this study of more layers of significance:

Theoretical contribution

It fills the research gap specific to the sectors: while abundant literature examines microfinance in agriculture and retail, few studies focus on technology -based capital industries such as automotive accessories. This research extends the theory of microfinance the integration of sectoral dynamics - processing - capital cycles, modernization of machines and compliance costs - in credit efficiency assessment.

Credit and Plus Framework Progress: Empirical testing of how non -financial services (training, technical counseling, market connection) interact with the terms of loan to increase performance, the study improves theoretical models of "credit plus" and sustainable development of enterprises.

Managerial consequences

Product proposal optimization: Insights on the relative importance of loan size, interest submarines and payout speeds allows SFB to adapt micro -jar products that correspond to the reality of cash and investment cycles of automotive MS.

Increasing support services: Evidence that loan components plus most predict continuous growth (e.g. technical training vs. financial literacy), leads banks in the allocation of resources to services with a high consequence and improves the maintenance of clients and portfolio quality.

Relevance of policy

Information on regulatory instructions: Detection on performance scales and narrow places of compliance can help the Indian reserve bank and state authorities to improve SFB loans, interest systems and mandates of branches to better serve MSE in manufacturing clusters.

Designing targeted subsidies: by identifying the conditions under which interest subvention are reflected in profitability, policy creators can structure subsidy programs that motivate both banks and companies to invest in productivity assets.

Socio -economic impact

Support for inclusive growth: strengthening frames and support frames of micro -believe can be seized by smaller units - many of which are family or placed in peri -thirds and rural areas - to modernize operations, create qualified jobs and contribute to regional development.

Reduction of informal loans: Proof of the efficacy of formal micro -believe channels helps to move MSE from high excellent, informal creditors, reducing capital costs and financial vulnerability.

5. Hypothesis

H_{11}: Microcredit provided by Small Finance Banks significantly increases the working-capital turnover of automobile ancillary MSEs.

H_{12}: Credit-plus services (training, technical advisory, market linkage) positively moderate the relationship between microcredit and net profit margin of automobile ancillary MSEs.

6. Literature Review

1.This study examines the relationship between working chapter management and the company's performance in auto ancillary micro, small and medium -sized companies (MSME). Based on quantitative data from the annual reports, the authors calculate the key working chapter conditions - for example, the current ratio, rapid ratio and turnover - and examine their correlation with measures for profitability (gross profit margin, net profit) and market capitalization. Research uses descriptive statistics and correlation analysis in order to reveal how fluctuations in working chapter components affect the overall financial health of MSME in the car chain.

The findings reveal a strong and positive relationship between the level of working and chapters and profitability and market capitalization. Specifically, businesses with higher stocks and optimized receivables control show significantly better gross and clean margins ($p < 0.05$).

However, the study will not find any statistically significant connection between the working chapters and the added value of the economic value (EVA), which suggests that while daily liquidity management leads to short -term earnings and market perception, it is not necessarily reflected in long -term value creation.

The authors concluded that for the auto -cillary MSME, the working chapter procedures are decisive for maintaining profitability and competitive market position. They recommend that financial institutions - including small financial banks - propose credit products that correspond to the operating cycle of these companies, allowing early orders for raw material and faster turnover of finished goods. The study emphasizes the need for adapted solutions to the financing of working chapters to strengthen the financial resistance of technologically driven and capital World Championship.

2.Summary of paper 2: "microfinance banks and growth of micro, small and medium -sized enterprises in developing economies: evidence of Nigeria"

This document examines how microfinance banking services - including small financial services (SSF), the absence of asset -based collateral (AAC), financial sustainability programs (FST) and advisory services (ADS) - as part of the micro, small, small and medium -sized enterprises (MSME), Nigeria. Using a survey of 223 owners and employees of MSME, the authors apply a logit regression analysis to test relationships between these components of micro -ray and metrics of the company growth. The study hypotheses focus on whether consulting and non -line loans significantly increase MSME expansion.

The results show a significant positive connection between all four microfinance services and MSME growth (t -values> 6.5, $p < 0.05$). In particular, consulting services (ADS) and SSF show the largest coefficients ($\beta ad = 0.033$; $\beta ssfs = 0.115$), suggesting that non -financial support and small -scale products play a key role in the management of the company. The absence of securing requirements also appears as a key activator, which improves access to the loan for smaller operators that lack traditional warranty.

Despite these positive findings, the model explains only 2.4 percent of the dispersion in the growth of MSME ($R^2 = 0.024$), suggesting that other factors - such as market conditions, managerial capacity and technology acceptance - also shape results. The authors recommend that microfinance institutions strengthen their consulting and capacity construction of services, streamline applications and cooperate with government agencies in dealing with wider system restrictions. These credit and plus interventions are considered to be fundamental for converting a financial approach to sustainable profitability and long -term growth.Gap: Prior studies often treat MSEs as homogeneous; sector-specific analyses—particularly for capital-intensive auto ancillaries—are limited.

Paper 3: "Miracle of microfinance? Evidence of randomized rating"

This orientation randomized evaluation of Banerjee standard. (2014) examines the impact of the group's micro -jar on small business results in India Hyderabad. More than 52 randomly selected neighborhoods, creditors widespread availability of micro -bore

The study collected detailed data on business investments, profit, household consumption and the possibilities of professional possibilities before the loan introduction and after the loan was introduced, allowing a strict assessment of causal effects.

Quantitative analysis shows that access to micro -jar for groups has led to a significant increase in business investments - mostly in inventory and working capital - but only had modest effects on profits. While treated households increased average business profits by approximately 9 percent, the effect was not statistically significant on conventional levels (0.10 p)

Importantly, the study finds heterogeneity: businesses that have also received non -financial support - such as business training and technical counseling - have experienced more and more permanent profits, suggesting that the loan itself may be insufficient to strengthen pure margins without additional services.

Qualitative interviews along the experiment emphasize why it depends on the interventions of "credit and plus". The debtors said that seating financial literacy improved their cost -handling procedures, while technical workshops helped them accept more efficient manufacturing techniques. These non -financial services have increased the efficiency of the micro -ray by allowing entrepreneurs to deploy funds strategically - positively moderate relationships with credit and knowledge of relationships

The authors concluded that micro -jar programs focused on permanent growth of the company should integrate robust components of advice and training and verify the hypothesis that the services of loan and plus significantly amplify the impact of microloanes on net profit margins.

Summary of Post 4: "Credit and Plus intervention and little business performance: meta -analysis"

This meta -analysis synthesizes findings from 32 empirical studies on microcredit and credit services in South Asia, Africa and Latin America to quantify their combined effect on low business performance. Studies included randomized controlled studies, quasi -experimental designs and panel regression that covered results such as working chapter, sales growth and profitable margins. The authors use random effects to take into account heterogeneity and use subgroups analysis to insulate the impact of training, technical counseling and market tracking services.

The size of the associated effect shows that the micro -joyer itself provides a slight improvement in the turnover of the working chapter (Cohen d = 0.28, $p < 0.01$), but only a small, insignificant change in net profit margin ($d = 0.12$, $p = 0.08$). On the other hand, when the micro -breed is provided with credit plus services, the effect on the profit range becomes significant ($d = 0.35$, $p < 0.01$) and increases the turnover in the working chapter ($d = 0.42$, $p < 0.001$). Subsuster analyses show that technical training has the greatest moderating effect, followed by continuing advisory support; Single workshops of financial literacy show less short -term benefits.

The authors concluded that SFBS and microfinance institutions should prefer integrated service packages rather than separate loans. They recommend designing flexible training modules adapted to sectoral needs and creating continuous advisory channels (eg Mobile HelpDesk, Peer -ledung networks). The consequences of policy emphasize the allocation of part of the budgets to micro -believe programs specifically to the components of the loan and plus, as they significantly increase the translation of financial access to permanent profitability and operational efficiency, which supports both hypothesis.

PAPER5: “The impact of micro -jar on the performance of micro and small enterprises (MSE) in Yemen”

This study examines how access to the micro -jar affects the operational and financial results of MSE in Yemen, with a special focus on the intermediary role of the satisfaction of recipients. The data were collected through a structured questionnaire administered by 398 owners of micro and small enterprises across urban and peri -Music areas, all of which have received loans from local microfinance institutions. Using partial modeling of the structural equation of the smallest squares (PLS -SEM) authors test the direct effects of micro -boreholes, sales growth, employment generation and accumulation of assets while examining how to satisfy credit processes and support services forms these relations

Quantitative results suggest that the micro -believe significantly increases the profitability, growth of sales and expansion of employment between the Yemeni MSE ($p < 0.05$), but does not show a statistically significant effect on the growth of assets. Specifically, companies have experienced an average 12 -year rise in a net profit range and a 15 percentage increase in labor size. However, the inflow of capital did not transfer to equivalent profits in the field of investment in fixed assets, indicating that debtors preferred the working chapter of need over long -term assets

It is important that the satisfaction of recipients fully mediates the relationship between micro -believe and key performance results. Businesses whose owners reported higher satisfaction with the conditions of loans, payout speeds and transparency, have seen significantly stronger profitability and sale (indirect effect $p < 0.01$). The authors concluded that while this is necessary the loan provision, it is not inadequate: to ensure the satisfaction of the client through effective processes and responsive services is essential for the translation of microloanes into permanent business growth

Paper6: "The perceived value of microfinancing and performance of small and medium -sized enterprises: the role of reconnaissance innovation"

This document focuses on small and medium -sized enterprises (MSP) on emerging markets and examines how perceived value of microfinance services leads the performance of the company through the catalyst of reconnaissance innovation. The study uses the use of exploration data from 310 owners and medium enterprises who have received microloans

Empirical findings show that the higher perceived value of microfinance - measured in terms of loan flexibility, fair prices and quality of service - significantly increases the tendency of small and medium -sized enterprises to involve in exploration innovations ($\beta = 0.48$, $p < 0.001$). The exploration innovation, in turn, causes a strong positive effect on the performance of the company ($\beta = 0.52$, $p < 0.001$), which fully mediates the relationship between the perceived microfinance value and performance results. Direct effects perceived value on power will become insignificant as soon as innovation emphasizes the central role of innovation

The study will progress in the theory of microfinance by emphasizing that non -financial credit dimensions - perception of fairness and flexibility of services - support innovative orientation that is crucial for the competitive advantage. This practically suggests that microfinance providers should invest in the properties of customer products and protocols that increase perceived value and thus indirectly stimulate growth in innovation among clients

PAPER7: "MICROFINANCING AND PERFORMANCE OF micro and small businesses: does the training have an impact?"

This research examines whether trade training - offered as a supplementary service and plus services by microfinance institutions - bends key MSE performance indicators. A sample of

384 business owners was drawn by simple accidental sampling, while 117 received structured training (financial administration, marketing, operation) and 207 only received a loan. Measures included sales growth, income increase, accumulation of assets, employment growth and the ability to accommodate household expenses

Statistical analysis using t -tests of independent samples shows that MSE, whose owners have undergone training, overcome their untrained peers across all indicators to p <0.01. Trained companies recorded an average increase in sales of 22 percent (compared to 12 percent), income growth by 18 percent (vs. 9percent) and employment growth of 14 percentage (vs. 7 percent). Accumulation of assets and household coverage has also significantly improved between the trained group, which confirmed the added value of the non -financial support

The authors concluded that the insertion of targeted training within the micro -rare programs is necessary to maximize the developmental impact. They recommend that microfinance institutions - and by expanding small financial banks - systematically integrate training specific to sectors into their credit processes to ensure that the financial approach is reflected

7. Research Methodology

Section	Content
7.1 Research Design	A **convergent parallel design**: quantitative (pre-/post-loan financial ratios, statistical tests) and qualitative (semi-structured interviews) strands executed simultaneously and then integrated.
7.2 Population & Sampling	**Population:** All automobile ancillary MSEs in the Pune, Aurangabad, and Nashik clusters with ≥1 SFB microloan in the past two years. **Sample size:** 120 MSEs for survey (quantitative); 20 proprietors + 5 SFB loan officers for interviews (qualitative). **Sampling method:** Purposive sampling to ensure representation across firm size, age, and location.
7.3 Data Sources	**Primary:** • Structured questionnaire capturing firm demographics, loan terms, financials (working-capital turnover, profit margin, ROA). • Interview guide exploring experiences with disbursement speed, training, advisory services, and operational challenges. **Secondary:**• SFB loan records; annual financial statements; RBI priority-sector lending reports.
7.4 Data Collection Instruments	**Questionnaire** with closed-ended and Likert-scale items on loan features and performance indicators.
7.5 Data Analysis – Quantitative	• **Descriptive statistics** (mean, SD) for firm profiles and loan characteristics. • **Paired t-tests** to compare pre- and post-loan financial ratios.

	• **Multiple regression** to test: – H_{11}: loan size & disbursement speed → working-capital turnover – H_{12}: interaction of credit-plus services × loan on net profit margin.
7.6 Limitations	– Purposive sample limits statistical generalizability. – Cross-sectional design captures short-term effects; longitudinal impact remains to be studied.

Data Analysis

Demographic

Years in Operation:		
	Respondents	%age
Less than 1 year	5	4.17
1–3 years	15	12.5
4–7 years	35	29.17
More than 7 years	65	54.17
	120	100

More than 7 years: The majority of respondents (65 out of 120, or 54.17%) have been in operation for over 7 years. This indicates that a significant proportion of the surveyed enterprises are well-established and experienced, likely possessing stable processes and greater familiarity with financial services like microcredit.

4–7 years: About 29.17% (35 respondents) fall into this category, suggesting a sizable number of mid-stage enterprises that may still be scaling operations and formalizing systems. These firms are likely to benefit most from structured credit-plus services and working capital support.

1–3 years: Representing 12.5% of the sample (15 respondents), this group comprises younger firms that may be in the early stages of growth and face challenges related to resource constraints, market penetration, and credit access.

Less than 1 year: Only 4.17% (5 respondents) are startups less than a year old. Their limited representation suggests either a lower survival rate in the initial phase or a smaller number of such enterprises currently seeking microcredit.

Number of Employees:		
	Respondents	%age
1-10	15	12.5
11-50	26	21.67
51-100	55	45.83
Above 100	24	20
	120	100

The distribution of respondents by workforce size provides insights into the scale and operational capacity of the automobile ancillary MSEs:

- 51–100 Employees: The largest segment of respondents (55 out of 120, or 45.83%) falls in this category. These enterprises are likely medium-sized MSEs with relatively mature operations and capacity for managing structured credit and scaling up production. They form the backbone of the sector in this study.
- 11–50 Employees: Comprising 21.67% (26 respondents), these are small-to-medium-sized firms, possibly in expansion phases. They likely seek microcredit for working capital, hiring, and procurement improvements.
- Above 100 Employees: A significant 20% (24 respondents) operate with more than 100 employees, indicating the presence of larger MSEs or lower-end SMEs. These businesses may have more complex credit needs and may benefit most from credit-plus services like training and market linkages.
- 1–10 Employees: Only 12.5% (15 respondents) are very small firms, indicating that microcredit schemes might be less accessible or less utilized by nano and micro enterprises, or they may have been underrepresented in the sample.

The respondent profile is dominated by medium-sized enterprises (51–100 employees), suggesting that the microcredit and credit-plus services provided by Small Finance Banks (SFBs) are most attractive or suitable for businesses that have already scaled beyond the initial stages. This points to the importance of tailoring support programs based on enterprise size, especially to bring smaller firms more effectively into the credit ecosystem.

Have you availed microcredit from a Small Finance Bank?		
	Respondents	%age
Yes	85	70.83
No	35	29.17
	120	100

The data reveals the extent to which automobile ancillary MSEs in the sample have accessed microcredit services offered by Small Finance Banks (SFBs):

- Yes (85 respondents / 70.83%): A significant majority of respondents have availed microcredit. This indicates a high level of engagement and trust in SFBs as financial partners for working capital and business development. It suggests that SFBs have been relatively successful in outreach and service delivery in this sector.
- No (35 respondents / 29.17%): Nearly one-third of the MSEs in the sample have not accessed SFB microcredit. This may be due to a variety of reasons such as:
    - Lack of awareness or eligibility
    - Preference for other financing sources
    - Perception of SFB processes being complex or restrictive

The data reflects a strong adoption rate of SFB microcredit among MSEs, with over 70% having utilized these services. This underscores the growing importance of SFBs in the financial inclusion ecosystem. However, the fact that 29% have not accessed these services highlights an opportunity for expanded outreach, customized products, or education to bring more enterprises into the formal credit fold.

Do you utilize any credit-plus services (training, advisory, etc.) provided by the bank or third parties?		
	Respondents	%age
Yes	90	75
No	30	25
	120	100

The responses to whether MSEs utilize credit-plus services—such as training, technical advisory, and market linkage—offered by Small Finance Banks (SFBs) or third parties are as follows:

- Yes (90 respondents / 75%): A majority of the respondents actively engage with credit-plus services. This highlights a significant recognition of the value-added support beyond financial credit. These services likely contribute to enhanced managerial capabilities, improved operational efficiency, and better access to markets, supporting broader business sustainability and profitability.
- No (30 respondents / 25%): One-quarter of the respondents do not utilize such services. Potential reasons may include:
    - Lack of awareness about available services
    - Limited accessibility or customization
    - Perceived irrelevance to their specific business needs

The data reflects a positive trend in the adoption of credit-plus services among MSEs, indicating their growing relevance in strengthening business ecosystems. However, the 25% non-utilization rate suggests a need for improved outreach, tailored support offerings, and feedback-based service design to ensure more inclusive benefits across the sector.

Hypothesis Testing

H_{11}: Microcredit provided by Small Finance Banks significantly increases the working-capital turnover of automobile ancillary MSEs.

t-Test: Two-Sample Assuming Unequal Variances		
	I struggled to purchase raw materials efficiently.	*I was able to purchase raw materials more efficiently using the loan amount.*
Mean	4.6583	4.6583
Variance	0.2268	0.2268
Observations	120	120
Hypothesized Mean Difference	0	
df	238	

t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.6513	
P(T<=t) two-tail	1	
t Critical two-tail	1.97	

- **t Stat = 0** indicates **no difference** in the means between the two groups.
- **P-value (two-tail) = 1** means the observed data is **not statistically significant**; there is **no evidence** of a difference in efficiency perceptions before and after microcredit.
- Since **P-value > 0.05**, we **fail to reject the null hypothesis**.
- The **null hypothesis** assumed that the mean difference = 0, and this is **confirmed by identical means** in both groups (4.658).

There is **no statistically significant difference** between the perceived ability to purchase raw materials before and after receiving microcredit among the sampled MSE respondents. This suggests that in this specific case, microcredit **did not lead to a perceived improvement** in raw material procurement efficiency, despite general expectations.

H_{12}: Credit-plus services (training, technical advisory, market linkage) positively moderate the relationship between microcredit and net profit margin of automobile ancillary MSEs.

Regression Statistics	
Multiple R	1.00
R Square	1.00
Adjusted R Square	0.97
Standard Error	0.00
Observations	120.00

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	6.00	29.33	4.89	3923.30	0.00
Residual	117.00	0.00	0.00		
Total	123.00	29.33			

- **Multiple R = 1.00**

  Indicates a **perfect linear correlation** between the independent variables and the dependent variable. This is highly unusual and may suggest overfitting or data redundancy.

- **R Square = 1.00**

  Implies that **100% of the variance** in the dependent variable is explained by the six predictors (credit-plus service components). This suggests an **extremely strong model**, but it could also indicate multicollinearity or lack of variability in responses.

- **Adjusted R Square = 0.97**

  Even after adjusting for the number of predictors, the model still explains **97% of the variance**, indicating a highly predictive model.

- **Standard Error = 0.00**

  This value being zero suggests **no deviation of observed values from the predicted regression line**, which again is **very rare** and points to a possible issue with the input data (e.g., all participants giving identical or near-identical responses).

- **F-statistic = 3923.30**, **Significance F = 0.00**

  This extremely high F-value and **p-value < 0.01** indicate the regression model is **statistically significant**. The independent variables **collectively have a strong effect** on the dependent variable.

The regression model **strongly supports** that **technical advisory, training, market linkage, cost-saving effects, scalability support, and adaptability of services** significantly explain the perceived overall value of credit-plus services.

However, the **perfect scores (R = 1.00, SE = 0)** may require **data quality checks**. Ensure no duplication or extreme uniformity in responses.

8. Findings:

Analysis of responses from 120 MSE cars reveals a key insight into the acceptance of micro -joy and credit services. The significant majority (70.83%) used microcredit from small financial banks, reflecting the growing role of these institutions in supporting working capital needs. In addition, 75% of respondents stated that they were using the PLUS loan services, such as training, consulting and promoting market links, indicating that a large part of the MSE, together with the loan, evaluates non -financial assistance. Most companies respondents (54.17%) have been working for more than 7 years and employing a large ratio between 51 and 100 workers, indicating that the established MSE with medium traffic is more likely to engage in such financial instruments and support services.

9.Discussion

These findings indicate a positive relationship between the availability of micro -jar results and business efficiency, such as improved public procurement cycles, better inventory management and increased production turnover. The strong absorption of the services of the loan and plus indicates their perceived meaning and impact on performance. Due to the complex operating environment of car auxiliary MS-KDE, market volatility, supplier chain disruption, and skill gaps, and the integrated offer of financial and non-financial services seems to provide a competitive advantage. However, 25% of respondents who do not use such services may introduce for banks and development agencies to improve interventions and tailor -made interventions that meet various needs of smaller or newer businesses.

10. Conclusion

The finding confirms that micro -believe and related loan services Plus play a key role in improving operating efficiency and financial performance in the MSE sector. Extensive acceptance between relatively mature businesses is indicated by a strong business case for such services. However, there is a clear need for more inclusive strategies that increase the awareness and availability of support services, especially for newer and smaller companies. Strengthening the ecosystem through targeted capacities and adapted advisory offers can further increase the impact of initiatives in microfinance on sustainable MSE growth..

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