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Dr. Jyotirmoy Koley
Assistant Professor, Department of Commerce, Darjeeling Government College, Darjeeling, West Bengal, India

Corresponding Author:
Dr. Jyotirmoy Koley
Assistant Professor, Department of Commerce, Darjeeling Government College, Darjeeling, West Bengal, India

Impact of digitalization on the growth of MSMEs in India: A study in the district of Hooghly

Jyotirmoy Koley

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Abstract
This study investigates the impact of digitalization on the growth of Micro, Small, and Medium Enterprises (MSMEs) in the Hooghly District of West Bengal, India. MSMEs play a crucial role in economic growth and employment, and digitalization offers potential solutions to challenges they face, such as limited access to finance and markets. A structured questionnaire survey was administered to the owners and managers of registered MSMEs in Hooghly, and the data were analyzed using statistical tools. The findings revealed that a significant majority of respondents agreed that digitalization improved MSME performance (70%), enhanced employment opportunities (70%), helped poverty reduction (80%), improved business opportunities (80%), and served as a determinant of economic growth and development (80%). Chi-square tests confirmed significant associations between digitalization and positive outcomes. However, MSMEs still face barriers to digital adoption, including a lack of technical knowledge, inadequate infrastructure, and financial constraints. The study concludes that supporting digital transformation through policies, training, and infrastructure improvements is essential for MSMEs in Hooghly to fully leverage the benefits of digitalization and contribute to the region's economic development. Further research on specific digital solutions and their impacts could provide additional insights to guide policies and practices in this area.

Keywords: Digitalization, MSMEs, economic growth, employment, poverty reduction, business opportunities, digital adoption, digital transformation, etc.

1. Introduction
Digitalization greatly affects small businesses, especially in areas with old business methods. In India, small businesses are the key to jobs and the economy. The Hooghly District in West Bengal is a good place to study these effects because of its different industries. Digital tools help small businesses to innovate, work better, and reach more customers. In Hooghly, these businesses face problems such as a lack of technology, poor infrastructure, and low digital skills. Digital tools can help to solve these issues. Online platforms allow small businesses to sell outside of local areas. Digital tools improve operations through automation, better supply chains, and digital payments, thus making it easier to access financial services. Hooghly shows how these changes worked in both old and new business sectors. This study examines how digital tools affect local small businesses and what factors help or hinder their use. Digitalization has changed businesses worldwide, including in India. Despite their importance, small businesses in India have struggled with technology, money, and infrastructure (Rajamani *et al.* 2022) [9]. Hooghly, in West Bengal, shows how digital tools impact small businesses. The area's business culture and industry variety demonstrate the benefits and challenges of using digital tools in traditional businesses. Digital tools offer small businesses opportunities to grow, work efficiently, and engage with customers (Raj *et al.* 2024) [8]. However, they face issues such as poor digital skills, poor infrastructure, and financial limits. Understanding these factors is crucial for small businesses (Rupeika-Apoga & Petrovska, 2022) [10]. Studying Hooghly's situation aims to create ways to support digital change and sustainability in small businesses (Rajamani *et al*., 2022; Raj *et al*., 2024) [9, 8]. Digitalization boosts economic growth in developing countries by changing their business practices. The small business sector, which is important for economic growth and jobs, is greatly affected by digital progress (Raj *et al*., 2024) [8]. In India, digitalization helps small businesses grow by improving their efficiency and market access (Rajamani *et al*., 2022) [9]. Digital transformation involves the use of tools for marketing, transactions, and operations (Hernández *et al*., 2024) [24]. E-payments and e-commerce have improved supply chains for

small businesses worldwide (Kilay *et al*., 2022) [15]. The COVID-19 pandemic sped up digitalization with government support for digital infrastructure. However, issues such as IT security and lack of skills differ according to business size and income (Rupeika-Apoga & Petrovska, 2022) [10]. In Hooghly, India, where there are many small businesses, understanding the challenges and opportunities is key to digital strategies. This study examines how digitalization affects small businesses in Hooghly. By studying digital use and challenges in Hooghly, this study aims to offer insights for similar areas in India, helping the discussion on digital change for small businesses. This view helps align policies with small local business needs, support growth, and digital use.

2. Rewards for Digitalization of MSMEs Sector in India

2.1 Efficiency Improvement: In the contemporary marketplace, consumers anticipate rapid responses, and the absence of conversion barriers necessitates efficiency in responsiveness to attract new clients and, more critically, to retain existing ones. The process of digitization facilitates prompt responses, thereby increasing the likelihood of conversion.

2.2 Enhancement of User Experience: Enhancing the user experience can significantly contribute to prolonged customer loyalty. The process of digital transformation, coupled with proficient IT support, facilitates the establishment of novel communication channels, enables rapid responses, and ensures the provision of transparent and immediate feedback.

2.3 Reduction in Cost: Digital organizations have successfully reduced their fixed costs on average while simultaneously maintaining an enhanced level of quality.

2.4 Diversity: Numerous MSMEs operate without integrating digital tools or support. By capitalizing on the benefits of digitalization, a marked disparity in performance between the two companies can be readily discerned.

2.5 Innovation Culture: Integrating digital technology facilitates innovation. When micro, small, and medium enterprises (MSMEs) adopt digital strategies, they not only enhance their entrepreneurial value but also generate more innovative and creative ideas that drive growth.

2.6 Generation of More Income: By engaging in online sales, vendors can access a substantially larger customer base and reach individuals across diverse geographical locations. This expansion enhances the probability of sales and increases revenue.

2.7 More Customer: Digitization substantially enhances a company's digital presence, thereby enabling access to a broader audience. Currently, approximately four billion individuals are active on various social media platforms. This expansion increases the potential for enhanced reach, which may lead to increased sales and offer numerous advantages.

3. Problems Faced by the MSMEs Sector in India due to Digitalization

3.1 Shortage of Technical Knowledge: Micro, Small, and Medium Enterprises (MSMEs) currently encounter substantial challenges due to insufficient knowledge and technical advancements in digitalization. This issue can be effectively mitigated through the adoption of Internet-based services, such as e-commerce and social networking platforms. However, the limited access of MSMEs to these resources constitutes a significant barrier that impedes their ability to capitalize on these opportunities.

3.2 Shortage of Funds and Infrastructure: Numerous Micro, Small, and Medium Enterprises (MSMEs) in India face challenges related to inadequate funding and outdated infrastructure that impede their operational efficiency. Enterprises often depend on government loans and financial assistance.

3.3 Ineffective Regulatory Frameworks: Data theft, unauthorized hacking, and malware constitute the most significant risks for micro, small, and medium enterprises (MSMEs) as they transition to digital operations. This vulnerability is primarily attributed to the lack of an adequate and effective regulatory framework to address these economic challenges.

3.4 Shortage of Entrepreneurial Skills: For small and medium-sized enterprises, the margin between success and failure is notably narrow. To achieve success, it is imperative to maintain comprehensive control of financial resources, data management, and market access. Attaining this level of resource management requires effective leadership, robust communication skills, and proper coordination.

4. Literature Review

Numerous studies have been undertaken by researchers and scholars to assess the impact of digitalization on the growth of micro, small, and medium enterprises (MSMEs) in India. The following section highlights some of the most relevant and significant studies in this domain.

Mishra and Shukla (2024) [6] studied how digital tools and Communication Technology (ICT) help small businesses in India grow and perform better. They found that digital changes make businesses more efficient and competitive both in India and abroad. Digitalization accelerates economic activities, reduces poverty, and opens new markets for small businesses. Using data and chi-square tests, the study shows that ICT has a significant positive effect on small business performance and job creation. However, problems such as a lack of funds, old infrastructure, weak regulations, and limited business skills make it difficult to adopt digital tools. The study concludes that digitalization is crucial for small businesses to help India's economy grow, but support is needed to overcome these challenges.

Singh (2017) [11] looked at how digitalization affects small and medium businesses (SMEs) in India. This study shows that digital changes help SMEs grow by automating tasks, improving product quality, and making operations more efficient. Digitalization also helps businesses obtain better access to money, reach more customers online, and encourage new ideas. However, SMEs face problems, such as poor infrastructure, insufficient money, lack of technology skills, and regulatory issues. Overall, this study highlights that digitalization has a significant positive impact on the performance, profits, and productivity of Indian SMEs, making it important for their future growth

and global competition.

Mishra (2019) [7] studied how digital changes affect the growth of small businesses in India. The study begins by showing the importance of these businesses to India's economy. They help with GDP, goods, jobs, and exports. The study then discusses the problems these businesses face, such as the new tax system (GST) and more competition from other countries. These problems give businesses an opportunity to use digital tools to overcome them. This study stresses that small businesses need to go digital to improve. It mentions the government's Digital MSMEs plan and other efforts to help this change. The study finds that, even though there are benefits, few businesses have gone digital. By 2018, only 6% had done this. The reasons for this include insufficient knowledge, a lack of skilled workers, and cost. The paper looks at government programs like 'Digital MSME Scheme, 'MSME Samadhan' and 'MSME Sambandh' that help promote digital use. It ends by saying that going digital is a big opportunity for Indian small businesses to improve their efficiency and help the economy.

Jain *et al*. (2024) [2] studied how Micro, Small, and Medium Enterprises (MSMEs) in India use digital technology. MSMEs are very important for India's economy. They help with the GDP, jobs, and exports. This study examines the effects and problems of digital technology in MSMEs and suggests solutions. MSMEs are key to industrial growth, especially in rural and less developed areas. The government has started programs to help MSMEs, such as new classification rules, Udyam Registration, and credit plans. Digital technology can help MSMEs earn more money, reach more customers, work better, and connect with customers. However, there are problems, such as insufficient knowledge about technology, poor infrastructure, insufficient money, and weak regulations. This paper suggests focusing on education and training, investing in digital infrastructure, and using online platforms for sales and customer communication. Even though the government has set up a digital environment for MSMEs, the sector has not grown significantly. Digital technology is important for staying competitive, but MSMEs often lack the resources and skills to use it.

Verma (2023) [13] looks at how small businesses in India are changing with digital technology and what this means for local economic growth. These businesses, called MSMEs, produce goods and play a significant role in India's economy. They help the country's GDP, manufacturing, and exports. MSMEs are important for creating jobs, developing rural areas, encouraging new businesses, and improving technology and infrastructure. They also help in both local and international markets. This study demonstrates how digital technology can help MSMEs reach more customers. Tools, such as AI, IoT, and data intelligence, can make these businesses more competitive. Digital payments help bring MSMEs into formal financial systems. This study discusses the benefits of the digital economy for MSMEs, such as better business processes, access to global markets, and easier fintech financing. This suggests different policies for digital-first and traditional MSMEs. This also highlights the need for policies on data protection, cybersecurity, and fair competition. Finally, the study emphasizes the importance of MSMEs in India's economy and how digital technology can improve their operations and competitiveness.

Angadi *et al*. (2023) [1] look at how digital tools help small businesses grow today. The paper starts by discussing how COVID-19 affected businesses, especially small ones, and highlights the importance of digital tools during crises. The study shows that small businesses need to go digital to stay globally competitive. Digital tools can automate tasks, improve demand and quality, and create growth opportunities. This paper describes various government efforts in India to promote digital tools for small businesses, such as e-governance, Udyog Aadhaar, Virtual Clusters, the Digital MSME program, and common service centers. This research points out the benefits of going digital for small businesses, such as more revenue, reaching more customers, better customer interaction, and lower costs. However, the study notes that many small businesses are still new to digital tools due to low awareness, a lack of skilled workers, and high costs. The study concludes that digital tools offer significant benefits to India's small businesses and, if used well, can greatly improve their efficiency and economic output.

Khandelwal and Priya (2024) [3] look at how small businesses in India are using digital tools. These businesses are important to the economy of India. They help with the GDP, exports, and jobs. However, they face problems, such as insufficient technology skills, weak supply chains, and insufficient money. This study shows how digital tools can help solve these problems and help these businesses grow. It explains how digital tools change how businesses work, from making products to talking to customers. This paper discusses different programs and software that can help small businesses become digital. These tools can help in making products, predicting demand, managing supplies, making things, handling staff, and payment systems. The paper states that it is important to have a clear plan for going digital. It provides examples of businesses that have done this. The paper also discusses the problems of going digital, such as not having enough skilled workers, poor infrastructure, money issues, and insufficient knowledge about digital tools. It ends by saying that small businesses need to go digital and talk about the benefits and government help.

In 2022, Lakshmi and Ragini [5] studied the challenges and opportunities of digitizing Micro, Small, and Medium Enterprises (MSMEs) in India. They examined how digital changes affected these businesses during the COVID-19 pandemic. This study highlights the importance of using digital tools in areas such as manufacturing and marketing to help small businesses grow. Challenges include MSME owners not fully understanding the technology benefits, high costs of adopting technology after the pandemic, concerns about data privacy and digital fraud, and the need for more funding to support digital efforts. On the other hand, digitalization offers opportunities such as reaching more customers, better customer interaction through digital platforms, cheaper business operations, more profits, easier access to finance, and better customer credit management. The benefits of digital transformation include happier customers, better efficiency, lower costs, better decision making, access to more customers, and higher profits. The study stresses that digitalizing MSMEs is crucial for growth in India and suggests that government help and working with digital platforms are key to overcoming challenges and encouraging MSMEs to use digital technology.

Kumar *et al*. (2024) [4] studied how digitalization affects small businesses. They looked at both the problems and benefits of going digital. The study found that small

businesses face challenges, such as not having enough money, staff, or digital tools. Many business owners lack technological knowledge. Despite these issues, going digital offers several significant benefits. It can help businesses reach more customers, work more efficiently, and make better decisions by using data. This study highlights the need for good technology management. This includes making digital plans, choosing the right system, and training employees. If done correctly, digital adoption can lead to increased productivity, innovation, cost savings, and growth for small businesses.

Vandita *et al*. (2023) [12] investigated the pivotal role of digital technology in augmenting the growth and competitiveness of micro, small, and medium enterprises (MSMEs) in India. This study elucidates how digital transformation confers numerous advantages, including enhanced operational efficiency, expanded market access, and improved resource management. This underscores the urgent necessity for MSMEs to adopt digital tools to survive and prosper, particularly in the context of the disruptions induced by the COVID-19 pandemic. Furthermore, the study highlights challenges, such as limited digital readiness, lack of awareness, and infrastructural constraints encountered by MSMEs. The authors contend that fostering a supportive digital ecosystem through government policies, incentives, and comprehensive digital solutions can facilitate broader digital adoption among MSMEs, thereby contributing to sustainable growth and national economic development.

5. Research Gap

The literature review presented above reveals that numerous studies have investigated the various dimensions of the impact of digitalization on the growth of micro, small, and medium enterprises (MSMEs) in India. Nonetheless, a notable gap exists in research regarding the specific effects of digitalization on the growth of MSMEs in the district of Hooghly, West Bengal, India. This study endeavours to explore this under-researched area.

6. Significance of the Study

Examining the impact of digitalization on Micro, Small, and Medium Enterprises (MSMEs) in Hooghly is important. MSMEs play a crucial role in fostering economic growth and employment on a global scale (Pedraza 2021) [16]. In the context of India, digitalization offers the potential to address the challenges faced by MSMEs by enhancing access to financial services and markets. Digital tools, such as online platforms and electronic payment systems, facilitate businesses in expanding their customer base (Kilay *et al*., 2022) [15]. The adoption of digital technology is contingent on its alignment with environmental conditions, task requirements, and perceived benefits (Raj *et al*., 2024) [8]. Furthermore, data-driven technologies can enhance the environmental efficiency of businesses (Hernández *et al*., 2024) [24]. However, MSMEs encounter challenges in digital transformation, including issues related to IT security and a shortage of skilled workers (Rupeika-Apoga and Petrovska, 2022) [10]. This study aims to identify the barriers and propose solutions for the digital transformation of MSMEs in Hooghly, thereby aiding the formulation of improved policies to support their digital advancement and contribute to India's economic development.

7. Objectives of the Study

The study aims to (i) examine the impact of digitalization on micro, small, and medium enterprises (MSMEs) in the Hooghly district of West Bengal, and (ii) identify the problems encountered by MSMEs during the digitalization process in the Hooghly district, West Bengal.

8. Research Methodology

This study employs an analytical methodology that incorporates both primary and secondary data sources. The secondary data were sourced from government-sponsored publications, journals, and websites. Primary data were gathered through a structured questionnaire survey administered via an online Google Form to owners or managers of registered Micro, Small, and Medium Enterprises (MSMEs) in the Hooghly district during June 2025. According to Udyog Aadhaar registration data, the total number of registered MSMEs in India is 7,491,419, comprising 6,641,473 micro enterprises, 817,535 small enterprises, and 32,411 medium enterprises. In West Bengal, the total number of registered MSMEs is 183,131, which includes 164,246 micro enterprises, 17,995 small enterprises, and 890 medium enterprises. Specifically, in the Hooghly district of West Bengal, the total number of registered MSMEs is 6,598, consisting of 5,746 micro enterprises, 792 small enterprises, and 60 medium enterprises. The conclusions of this study are primarily derived from the analysis of the collected primary data. The research centers on a systematic questionnaire study of MSMEs. The structured questionnaire was disseminated through Google Forms to owners and/or managers of registered MSME units in the Hooghly district. Ultimately, a mixture of 120 respondents (owners or managers) from MSMEs provided complete responses to all questions. The impact of digitalization on MSMEs was assessed using statistical tools, such as the chi-square test, to determine whether digitalization significantly affects MSMEs in the Hooghly District. Frequency tables and simple percentages were used to present online survey data. Data analysis was conducted using the statistical software package SPSS version 26 to derive well-founded conclusions.

9. Hypothesis

To achieve the research objectives of this study, three hypotheses were formulated.

- **H1:** There is no significant association between the digitalization improves the performance of MSMEs, and the adoption of digitization in MSMEs enhances employment opportunities in the Hooghly district.
- **H2:** There is no significant association between the digitalization improves the performance of MSMEs, and the digitalization of MSMEs helps in poverty reduction in the Hooghly district.
- **H3:** There is no significant association between digitalization, which improves the performance of MSMEs, and digitalization serves as a determinant of the economic growth and development of MSMEs' business operations in the Hooghly district.

10. Analysis and Discussion

This section offers a thorough analysis of the businesses operated through an online survey conducted using a structured questionnaire via Google Forms in the Hooghly district.

10.1 Digitalization Improves the Performance of MSMEs

Table 1: Digitalization Improves the Performance of MSMEs

Attributes	Frequency	Percent
Agree	84	70
Not Sure	12	10
Disagree	24	20
Total	120	100

Source: Primary Data

Observation: From the above table, it can be observed that 70% of the surveyed respondents agree that digitization improves the performance of MSMEs in the Hooghly district, whereas 20% of the respondents disagree with this perception.

10.2 Adoption of Digitization in MSMEs Enhances Employment Opportunities

Table 2: Adoption of Digitization in MSMEs Enhances Employment Opportunities

Attributes	Frequency	Percent
Agree	84	70
Not Sure	12	10
Disagree	24	20
Total	120	100

Source: Primary Data

Observation: From the above table, it has been seen that 70% of the surveyed respondents agree that the adoption of digitization in MSMEs enhances employment opportunities in the Hooghly district, whereas 20% of the respondents disagree with the same.

10.3 Digitalization of MSMEs Helps in Poverty Reduction

Table 3: Digitalization of MSMEs Helps in Poverty Reduction

Attributes	Frequency	Percent
Agree	96	80
Not Sure	12	10
Disagree	12	10
Total	120	100

Source: Primary Data

Observation: From the above table, it has been seen that 80% of the surveyed respondents agree that the digitalization of MSMEs helps in poverty reduction in the Hooghly district, whereas 10% of the respondents disagree and are also not sure about this particular matter.

10.4 Digitalization Improves Business Opportunities for MSMEs

Table 4: Digitalization Improves Business Opportunities for MSMEs

Attributes	Frequency	Percent
Agree	96	80
Not Sure	12	10
Disagree	12	10
Total	120	100

Source: Primary Data

Observation: From the above table, it has been observed that 80% of the surveyed respondents agree that digitalization improves business opportunities for MSMEs in the Hooghly district, whereas 10% of the respondents disagree and are also not sure about the issue.

10.5 Digitalization Serves as Determinant of Economic Growth and Development of MSMEs' Business Operations

Table 5: Digitalization Serves as Determinant of Economic Growth and Development of MSMEs' Business Operations

Attributes	Frequency	Percent
Agree	96	80
Not Sure	12	10
Disagree	12	10
Total	120	100

Source: Primary Data

Observation: From the above table, it has been found that 80% of the surveyed respondents agree that digitalization serves as a determinant of economic growth and development of MSMEs' business operations in the Hooghly district, whereas 10% of the respondents disagree and are also not sure about this particular perception.

10.6 Hypothesis Testing

10.6.1 Chi-Square Testing: The Chi-Square test has been applied in the present study to test the hypothesis that two categorical variables are independent of each other. In other words, to test whether there is any difference in the average of the two variables. Here, the chi-square test has been applied to test the association between (i) the digitalization improves the performance of MSMEs, and the adoption of digitization in MSMEs enhances employment opportunities in the Hooghly district (ii) the digitalization improves the performance of MSMEs, and the digitalization of MSMEs helps in poverty reduction in the Hooghly district (iii) digitalization improves the performance of MSMEs, and digitalization serves as a determinant of economic growth and development of MSMEs' business operations in the Hooghly district.

10.6.1.1 Hypothesis-1

- **H_0:** There is no significant association between the digitalization improves the performance of MSMEs, and the adoption of digitization in MSMEs enhances employment opportunities in the Hooghly district.
- **H_1:** There is a significant association between the digitalization improves the performance of MSMEs, and the adoption of digitization in MSMEs enhances employment opportunities in the Hooghly district.

Table 6: Crosstabulation between Digitalization Improves the Performance of MSMEs, and Adoption of Digitization in MSMEs Enhances Employment Opportunities

			Adoption of Digitization in MSMEs Enhanced Employment Opportunities			Total
			Agree	Not Sure	Disagree	
Digitalization Improved the Performance of MSMEs	Agree	Number	84	0	0	84
		% of Total	70.00%	0.00%	0.00%	70.00%
	Not Sure	Number	0	12	0	12
		% of Total	0.00%	10.00%	0.00%	10.00%
	Disagree	Count	0	0	24	24
		% of Total	0.00%	0.00%	20.00%	20.00%
Total		Number	84	12	24	120
		% of Total	70.00%	10.00%	20.00%	100.00%

Source: Compiled by Researcher

Table 7: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	240	4	0.000
Likelihood Ratio	192.436	4	0.000
Linear-by-Linear Association	119	1	0.000
No of Valid Cases	120		

Source: Compiled by Researcher

Interpretation: The Pearson Chi-Square or P value of the test at the 5% level of significance is 0.000, which is less than 0.05. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant association between digitalization and MSME performance, and that the adoption of digitization in MSMEs enhances employment opportunities in the Hooghly district.

10.6.1.2 Hypothesis-2

- **H_0:** There is no significant association between the digitalization improves the performance of MSMEs, and the digitalization of MSMEs helps in poverty reduction in the Hooghly district.
- **H_1:** There is a significant association between the digitalization improves the performance of MSMEs performance, and the digitalization of MSMEs helps in poverty reduction in the Hooghly district.

Table 8: Crosstabulation between Digitalization Improves the Performance of MSMEs and Digitalization of MSMEs Helps in Poverty Reduction

			Digitalization of MSMEs Helps in Poverty Reduction			Total
			Agree	Not Sure	Disagree	
Digitalization Improved the Performance of MSMEs	Agree	Number	84	0	0	84
		% of Total	70.00%	0.00%	0.00%	70.00%
	Not Sure	Number	12	0	0	12
		% of Total	10.00%	0.00%	0.00%	10.00%
	Disagree	Number	0	12	12	24
		% of Total	0.00%	10.00%	10.00%	20.00%
Total		Number	96	12	12	120
		% of Total	80.00%	10.00%	10.00%	100.00%

Source: Compiled by Researcher

Table 9: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	120	4	0.000
Likelihood Ratio	120.097	4	0.000
Linear-by-Linear Association	90.422	1	0.000
No of Valid Cases	120		

Source: Compiled by Researcher

Interpretation: The Pearson Chi-Square or P value of the test at the 5% level of significance is 0.000, which is less than 0.05. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant association between the digitalization improves the performance of MSMEs, and the digitalization of MSMEs helps in poverty reduction in the Hooghly district.

10.6.1.3 Hypothesis-3

- **H_0:** There is no significant association between digitalization improves the performance of MSMEs, and digitalization serves as a determinant of economic growth and development of MSMEs' business operations in the Hooghly district.
- **H_1:** There is a significant association between digitalization improves the performance of MSMEs, and digitalization serves as a determinant of economic growth and development of MSMEs' business operations in the Hooghly district.

Table 10: Crosstabulation between Digitalization Improves the Performance of MSMEs and Digitalization Serves as Determinant of Economic Growth and Development of MSMEs' Business Operations

			Digitalization Serves as Determinant of Economic Growth and Development of MSMEs' Business Operations			Total
			Agree	Not Sure	Disagree	
Digitalization Improved the Performance of MSMEs	Agree	Number	84	0	0	84
		% of Total	70.00%	0.00%	0.00%	70.00%
	Not Sure	Number	12	0	0	12
		% of Total	10.00%	0.00%	0.00%	10.00%
	Disagree	Number	0	12	12	24
		% of Total	0.00%	10.00%	10.00%	20.00%
Total		Number	96	12	12	120
		% of Total	80.00%	10.00%	10.00%	100.00%

Source: Compiled by Researcher

Table 11: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	120	4	0.000
Likelihood Ratio	120.097	4	0.000
Linear-by-Linear Association	90.422	1	0.000
No of Valid Cases	120		

Source: Compiled by Researcher

Interpretation: The Pearson Chi-Square or P value of the test at the 5% level of significance is 0.000, which is less than 0.05. So, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant association between digitalization improves the performance of MSMEs, and digitalization serves as a determinant of economic growth and development of MSMEs' Business Operations in the Hooghly district.

11. Findings of the Study

Based on the provided text, the key findings from the study on the impact of digitalization on MSMEs in the Hooghly district are as follows:

- 70% of the surveyed respondents concurred that digitalization has enhanced the performance of micro, small, and medium enterprises (MSMEs) in the Hooghly district.
- 70% of respondents concurred that the implementation of digitization within micro, small, and medium enterprises (MSMEs) has augmented employment opportunities in the district.
- It is found that 80% of respondents concurred that the digitalization of micro, small, and medium enterprises (MSMEs) contributes to poverty alleviation within the district.
- It is seen that 80% of respondents concurred that digitalization enhances business opportunities for micro, small, and medium enterprises (MSMEs) within the district.
- It is found that 80% of respondents concurred that digitalization acts as a determinant of economic growth and the development of MSMEs' business operations within the district.
- Statistical analysis using chi-squared tests revealed significant associations between the following:
- Digitalization improves MSMEs' performance and enhances employment opportunities in the Hooghly district.
- Digitalization improves MSME performance and helps reduce poverty in the Hooghly district.
- Digitalization improves MSME performance and serves as a determinant of economic growth and MSMEs' development in the Hooghly district.
- The study rejected the null hypothesis and found significant relationships between digitalization and positive outcomes for MSMEs in areas such as performance, employment, poverty reduction, and economic growth in the Hooghly District.

These findings indicate overall positive perceptions and impacts of digitalization on MSMEs in the studied region, with a strong majority agreeing on its benefits across multiple dimensions of business and economic development.

12. Conclusion

This study examines how digitalization affects small businesses in Hooghly, West Bengal, India. The results show that digitalization has a significant positive impact on these businesses, helping them perform better, creating jobs, reducing poverty, and growing economically. Most business owners and managers (70-80%) think digitalization is good for their businesses in many ways. Specifically, 70% agreed that it improves business performance and job opportunities, while 80% believed it helps reduce poverty, improves business prospects, and boosts economic growth. Statistical tests confirm strong links between digitalization and positive outcomes such as better performance, more jobs, less poverty, and economic growth. This suggests that the use of digital tools is crucial for improving small businesses in Hooghly. The findings of this study match other research, showing that digitalization can solve problems such as limited market access and financial issues for small businesses. Digital tools help businesses reach more customers, work more efficiently, and find new opportunities. However, challenges remain, such as a lack of technical knowledge, poor infrastructure, and financial limits. Solving these issues with policies, training, and better infrastructure is important to fully benefit from digitalization. In conclusion, this study shows how

digitalization is changing small businesses in Hooghly. This highlights the need to support digital adoption to boost economic growth in this area. Future research could examine specific digital solutions and their effects to guide policy and practice.

13. References

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