

# The Role of Accounting Information Systems and Management MSMEs On GRDP In East Java Indonesia

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## ABSTRACT

Micro, Small and Medium Enterprises are the main pillar of the economy in East Java Province, Indonesia. This sector contributes 57.25% to the Gross Regional Domestic Product of East Java. This business sector shifted from offline to online sales during the Covid-19 pandemic. This research examines whether the accounting and management information systems are supportive factors. Both impact the Gross Regional Domestic Product in East Java Province. This research uses the literature review method. The literature review method is a set of activities related to library data collection methods, reading, recording, and managing written materials. This literature study is also based on data from the East Java Central Bureau of Statistics from 2018 until 2020. The results of this study prove that in the implementation of accounting information systems, human resources have a role in decision-making. Management is needed in business development. As a facilitator, regulator and catalyst, the government must support regulations, financial accounting standards and taxation. Accounting information systems and management support the Gross Regional Domestic Product in East Java Province. Future research should pay attention to constraints or supporting things other than accounting information systems and management that can be done in other provinces.

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## 1. Introduction

### 1.1 The Economy and MSMEs (Micro, Small and Medium Enterprises)

Being a growing nation, Indonesia has gone through economic transformations. Environmental, social, and technical factors influence issues so that they greatly impact national changes. As one of the world's industrialised nations, Indonesia must pursue sound economic development, including creating a microeconomy. To expand and prosper, an economy must have an element of change. Supporting the local economy requires the government and society to play their respective roles. Through a thriving economy, the government actively promotes individual production. The number of employment available in Indonesia does not immediately correlate with the country's high working age. This inspires the Indonesian people to make strides in their economy and competitiveness. Entrepreneurs in the industrial sector are steadily starting Micro, Small, and Medium Enterprises (MSMEs). Because it can survive in difficult situations, this sector is the cornerstone of the country's hope. MSMEs are regarded as the engine of the local and national economies. This is demonstrated by the fact that there were 9,783,920 MSMEs in East Java in 2018, with a workforce of 13,665,632. By their demands, up to 13,000 people were accommodated (Anugerah & Noraini, 2021).

MSME's current issues are shifting circumstances and an unfavourable economic environment. The

government works to promote the establishment of regulations which help MSMEs. The government encourages economic independence by fostering competition on a global scale (Asnawi, 2018). In the stage of business empowerment, the government gives important domestic economic sectors top priority. Making MSMEs robust and independent in the national economy is the goal of empowerment. The interaction between the public sector, private sector, and local community is another issue facing MSMEs. The government promotes an environment that is favourable to business, offering advice and development through regulations and other forms of assistance.

The initiative to boost Indonesia's economic growth via MSMEs is highly connected to accounting information systems (Lestari & Amri, 2020). With digital transformation and the national creative industry making its mark in the global market, effective MSME accounting information systems and management play a crucial role in supporting these enterprises. In the current era of digital business, it is essential to have appropriate systems and efficient management to ensure success. The MSMEs' economic sector significantly contributes to Indonesia's regional GRDP and greatly influences the East Java economy's dynamics (Dewi & Suprpto, 2022). The MSMEs portion reaches 57.25% of GRDP, supporting East Java's economy (Aminy, 2022).

The MSMEs actors face developmental challenges, primarily due to limited knowledge in both management and technology. Within this context, an Accounting Information System (AIS) is crucial in supporting decision-making processes for business operations. The AIS helps process transactional data, providing valuable insights for MSME decision-makers. Effective management is another vital aspect that contributes significantly to the success of these enterprises. The Gross Regional Domestic Product (GRDP) indicates economic conditions in a specific region over a given period.

This study examines the potential impact of accounting information systems and MSME management on the GRDP in East Java. The research aims to determine whether these factors are related to and influence the economic conditions in the region. By analysing this relationship, the study aims to draw valuable conclusions about the significance of accounting information systems and effective management for the economic growth of MSMEs in East Java.

### *1.2 Accounting and Management Information Systems in MSMEs*

A well-designed Accounting Information System (AIS) can bring numerous benefits and add value to an organisation, as indicated (Huy & Phuc, 2020). Some of these advantages include:

- **Improved Product or Service Quality:** AIS helps streamline processes and data management, improving product or service quality and customer satisfaction.
- **Cost Reduction:** Efficient AIS implementation can save costs through automated processes, reduced manual work, and minimised errors.
- **Increased Efficiency:** AIS automates repetitive tasks, reducing the time and effort required for various accounting processes, thus increasing overall efficiency.
- **Knowledge Sharing:** AIS enables centralised data storage and access, facilitating better knowledge sharing among team members and departments.
- **Enhanced Supply Chain Management:** With AIS, businesses can optimise their supply chain processes, improving efficiency and cost-effectiveness.
- **Strengthened Internal Controls:** AIS helps establish robust internal control structures, reducing the risk of fraud and errors in financial reporting.
- **Informed Decision-Making:** By providing real-time and accurate financial information, AIS enables better decision-making at various levels of the organisation.

Regarding MSME management, there are challenges, as noted by (Putri, 2020). One significant problem lies in the financial knowledge of small entrepreneurs. Many MSMEs handle all aspects of management themselves, which can hinder growth and development. Effective delegation and seeking external management support, such as from the government regarding regulations and policies, can play a pivotal role in fostering the growth of MSMEs, as emphasised by (Chalim et al., 2022). By embracing sound financial practices and seeking external expertise, MSMEs can achieve common goals more efficiently and focus on business development.

Indeed, MSME accounting information systems and effective MSME management, particularly in East Java, substantially impact the national economy. This influence becomes even more evident during economic fluctuations, such as those experienced during the pandemic. The government plays a crucial role in

supporting the economy to maintain stability. A robust and stable economy requires active participation and support from the community, as economic actors, and as users of goods and services.

The government's facilitation and support in East Java greatly aid the role of the community in contributing to economic prosperity. By creating an enabling environment and implementing supportive policies, the government encourages the growth of MSMEs and fosters economic development in the region. The active involvement and cooperation of the community, along with government support, are essential for ensuring sustainable economic growth and prosperity in East Java and the overall national economy.

## 2. Literature Review

### 2.1 *Micro, Small and Medium Enterprises (MSMEs)*

According to Law No. 20 of 2008 (UU, 2008) in Indonesia, Micro, Small, and Medium Enterprises (MSMEs) are defined as follows:

- **Micro Enterprises:** These are productive businesses owned by individuals and/or business entities that meet the criteria outlined in the Law. Micro Enterprises typically have a limited number of employees and operate on a small scale.
- **Small Enterprises:** Small Businesses are productive economic enterprises that operate independently, not subsidiaries or branches of larger businesses. Individuals or business entities carry them out and do not fall under medium-sized or large businesses' ownership, control, or direct/indirect involvement. Small Enterprises meet the criteria specified in the Law for their classification as Small Enterprises.
- **Medium Enterprises:** Medium Enterprises are productive economic enterprises that function as stand-alone entities, not as subsidiaries or branches of larger businesses. Individuals or business entities operate them and are not directly or indirectly connected to small or large businesses. The classification of Medium Enterprises is based on specific criteria related to their total net worth or annual sales proceeds, as stipulated in the Law.

These definitions and criteria help to categorise businesses according to their size and scale of operations, enabling the government and other stakeholders to provide appropriate support and incentives to promote the growth and development of MSMEs in Indonesia.

### 2.2 *MSMEs' Accounting Information System and GRDP*

According to Singhal et al. (2020), an accounting information system (AIS) serves as a system that effectively gathers, stores, maintains, and processes information to generate valuable insights for decision-makers. The AIS comprises six key components:

- **People:** The individuals who use, operate, and manage the accounting information system, including users, data entry personnel, and IT specialists.
- **Procedures and Policies:** The documented methods and guidelines that govern the usage and operation of the AIS, ensuring consistency and accuracy in data processing.
- **Information:** The data collected, stored, and processed by the AIS, which includes financial and non-financial information relevant to the organisation.
- **Software:** The computer programs and applications facilitating AIS data processing, reporting, and analysis.
- **IT Infrastructure:** The hardware and network resources, such as servers, computers, and communication equipment, that support the functioning of the AIS.
- **Internal Controls and Security Measures:** The mechanisms and safeguards implemented within the AIS to protect organisational assets and sensitive information from unauthorised access or misuse.

These six components collectively enable the accounting information system to fulfil three vital business functions:

- **Information Collection and Maintenance:** The AIS gathers and maintains essential information about the organisation's operations, resources, and personnel. This involves recording and tracking various business processes, such as selling and purchasing raw materials frequently repeated in the organisation.
- **Information Transformation for Management:** The AIS processes and transforms data into meaningful information that aids management in planning, implementing, monitoring, and evaluating activities, resources, and personnel within the organisation. This valuable insight assists decision-makers in making informed choices.

- Establishment of Controls: The AIS establishes appropriate controls to safeguard organisational assets and information.

These controls ensure the integrity of the data, prevent fraudulent activities, and uphold data privacy and security. By effectively performing these functions, the accounting information system contributes significantly to the overall efficiency, effectiveness, and security of an organisation's financial and managerial operations. MSMEs must develop and advance their accounting information systems (AIS) in the current technological era. AIS, a collection of integrated subsystems, is responsible for processing transactional data related to financial issues and generating financial information (Putra, 2019). Implementing AIS in MSMEs is influenced by recent education, business scale, and training, which affect the adoption and use of accounting information systems (Zulkarnaeni & Rizki, 2019). The successful utilisation of accounting information systems positively impacts financial performance (Nasihin & Faddila, 2021). Moreover, research (Rochdianingrum & Setyabudi, 2019) highlights a significant relationship between the number of micro, small, and medium enterprises and the level of technology used in the economic growth of East Java Province. As the number of MSMEs increases, there is a corresponding rise in the economic growth rate.

Additionally, higher levels of technology adoption contribute to even higher economic growth rates. Therefore, embracing advanced accounting information systems and integrating technology into MSME operations can enhance financial performance and foster regional economic growth. By leveraging technology effectively, MSMEs can streamline their processes, make informed decisions, and stay competitive in the dynamic business landscape.

### 2.3 MSMEs Management and GRDP

MSME management is a crucial aspect of improving and developing businesses. The growth and development of MSMEs can be measured by the income they receive. An increase in income signifies growth and development, while a decrease indicates a decline in the business. Business development involves advancing management practices and enhancing financial competitiveness (Al Aidi et al., 2023). This improved competitiveness positively impacts companies, allowing them to generate more revenue and effectively compete with other businesses. According to Auliya et al. (2021), the government plays a pivotal role in supporting the development of MSMEs management. The government acts as a facilitator, regulator, and catalyst to foster the growth of MSMEs:

- Facilitator: The government helps MSMEs achieve their business development goals by addressing their weaknesses and providing necessary support. This may include training to enhance production skills and assisting financially weak MSMEs in finding suitable financing options while ensuring their independence.
- Regulator: The government formulates strategies to create a favourable business climate for MSME development. This may involve regulating interest rates, such as those set by Bank Indonesia (SBI), and formulating policies related to competition rules for companies.
- Catalyst: As a catalyst, the local government expedites the development process of MSMEs to transform them into agile and fast-moving business entities.

By actively supporting MSMEs management, the government can significantly contribute to the growth and success of these enterprises, leading to a positive impact on the overall economy.

### 2.4 Gross Regional Domestic Product (GRDP)

The Gross Regional Domestic Product (GRDP) measures the total production-added value generated by various sectors or business fields operating within a specific region. It represents the total value of final goods and services produced by all regional economic units (Zuliasari & Rachmawati, 2021). The growth rate of GRDP indicates the success of regional economic development efforts undertaken by both the government and the private sector in enhancing the population's welfare.

The government actively supports regional MSMEs' development in East Java through regular evaluations. However, challenges have been observed in some areas, such as Sidoarjo, where the implementation of regional policies for MSMEs has been lacking (Sopah et al., 2020). The government must provide various supports and facilities to bolster regional MSMEs' development further. One key challenge MSMEs face about GRDP in East Java is the perspective of business management. Many small entrepreneurs handle all management aspects, from marketing to finance, on their own. This limited capacity for delegation hinders their ability to focus on business development. To effectively contribute to regional and national GRDP, small business actors should learn to delegate certain management aspects to others, enabling them to think strategically about business growth. By addressing the challenges in MSMEs management and providing

adequate support, the East Java government can foster the growth of regional MSMEs, which, in turn, will positively impact the GRDP of the region and contribute to the nation's overall economic development.

### 3. Method

The study described above adopts the method of literature review, which involves conducting a comprehensive examination of existing research on a specific topic. This literature review aims to give readers a clear understanding of what is already known about the topic and what gaps in knowledge still exist. It also serves as a basis for justifying the need for further research or generating new research ideas (Paul et al., 2021). The literature review process involves gathering information from various sources, such as academic journals, books, documentation, the Internet, and libraries. The researcher collects relevant data from these sources, reads and takes notes on the findings, and organises the writing materials accordingly (Castro & Tumibay, 2021). The type of writing used in this study is a literature review that focuses on presenting the results related to the chosen topic or variables. Before conducting the literature review, the author determines the writing topic and formulates the research problem. The literature study is conducted as a preparatory step before collecting primary data in the field if needed. By conducting a literature review, the author gains insights into the existing research landscape and builds a strong foundation for their study, enhancing the quality and validity of their research.

#### 3.1 Methods of Data Collection

The data used in this study is derived from research results previously conducted and published in national and international online journals. To collect relevant literature, the researcher utilised various search engines, including ProQuest, PubMed, Research Gate, SagePub, and Scholar, using specific keywords related to the research topic. The keywords used were “AIS and MSEMES on GRDP Management” and “MSMEs on GRDP”. The data collection process involved filtering the journals based on predetermined criteria set by the authors of each journal. The criteria used for selecting literature in the form of journals were as follows:

- **Years of Literature Sources:** The journals were published between 2018 and 2022. This timeframe allows the researchers to understand the condition of MSMEs before the pandemic (in 2018) and compare it with the results of research conducted during and after the COVID-19 pandemic (2019 to 2022).
- **Keyword Suitability:** The journals selected were relevant to the research keywords, ensuring they address the specific topic of “AIS and MSMEs on GRDP Management” and “MSMEs on GRDP”.
- **Accredited Journal Sites:** The researchers collected journals from accredited sources, both nationally and internationally.
- **Effective Search Strategies:** The researchers utilised the search engines by entering appropriate keywords in line with the writing title and conducting advanced searches.
- **Full-Text Search:** The search was based on accessing the full-text content of the selected journals.
- **Critical Evaluation:** The researchers evaluated the selected journals based on abstracts, considering whether they aligned with the research objectives, and conducted critical appraisals using existing tools.

Notably, this research focused on journals related to East Java Province's MSMEs. By examining research conducted before and after the pandemic, the study aims to gain insights into the effects of the COVID-19 pandemic on MSMEs in the region and their impact on GRDP management.

Table 1. Journal Collection Criteria

Information	Details
Criteria	Management, AIS, MSMEs, and GRDP
Period	2018 to 2022
Subject	East Java MSMEs
Literature	Articles, Journals, Books
The Theme	AIS, MSMEs, and GRDP MSMEs, and GRDP Management AIS, Msmes-Management MSMEs, and GRDP

Table 2. Table of Journals Collected (2018 to 2022)

No.	Writer	Theme	Conclusion
AIS – MSMEs and GRDP			
1.	Listianda (2019) Firdarini & Prasetyo (2020) Semekto (2021) Riswanda, Miradji & Adi (2022)	The Influence of Entrepreneurs' Perceptions and Application of Accounting Information Systems Against the Success of MSMEs Businesses	The study's findings reveal two significant impacts: Impact on MSMEs Business Success: The research demonstrates that both the overall perceptions of entrepreneurs and the application of accounting information systems collectively influence the success of MSMEs businesses. Impact on Financial Statement Presentation: The study indicates that understanding and utilising accounting information systems substantially and positively affect the presentation of financial statements based on SAK ETAP (Simplified Accounting Standards for MSMEs).
2.	Helmiyati et al., (2020)	Implications Of Using Accounting Information in Making Business Decisions	The study's results indicate that three factors, namely accounting knowledge, personality, and business age, significantly influence the use of accounting information in making investment decisions in MSMEs.
3.	Helmiyati et al., (2020) Murniatio (2022)	Analysis And Design of Information Systems Accountancy (Computer Accounting Application -MYOB)	The research findings demonstrate that the software used in the study can produce detailed invoice documents and generate reports related to business transactions, including sales reports and accounting information. This software's functionalities can significantly assist in the decision-making process of MSMEs.
Management of MSMESSs and GRDP			
1.	Faridatuz (2018) Adanyani & Rahimayati (2020) Sugiarti, Sari & Hadiyat (2020) Sandi, Muljaningsih & Wahed (2022) Naziah (2022)	Digitalization Development(E-Marketing) Against Competitive Advantage Through Msmes Marketing Performance Digital Marketing Facilitates Communication and Direct Interaction Between Msmes Players and Consumers, Increasing Market Share, Increasing the Visibility of MSMEs Players and Increasing Sales	The research findings highlight the importance of technology adoption and utilisation for MSMEs to increase their consumer base through digital-based marketing. Specifically, the use of e-marketing has a positive and significant impact on gaining a competitive advantage for MSMEs, and this advantage is achieved through improved marketing performance.
2.	Pramestiningrum & Iramani (2020) Putri & Siregar (2022) Muvidah & Andriani (2022)	The Government Supports MSMESS Management as A Facilitator, Regulator, And Catalyst (MSMEs Regulations, SAK Msmes, Taxation).	The research findings indicate that several factors have a positive influence on voluntary tax compliance and MSMEs: Interest in Using SAK (Simplified Accounting Standards for MSMEs), Digitalization of Taxation and Government Policies.
Accounting Information System-Management MSMEs and GRDP			

3.	Rochdianingrum & Setyabudi (2019) Wardani, Nasikh & Augustin (2022)	AIS-Management of MSMEs and GRDP	The research findings provide important insights into the relationship between community entrepreneurship, the number of MSMEs, technology usage, and economic growth in East Java Province.
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Source: Journals, 2022

### 3.2 Research Design

Researchers are highly interested in studying the effects of MSMESS accounting information systems (AIS) and MSMEs management on Gross Regional Domestic Product (GRDP). They aim to gain valuable insights into the relationship between these two factors and their impact on the development of MSMEs and the overall economy, as reflected in the GRDP. The following aspects are of particular interest to researchers:

- i. Does the MSMEs accounting information system affect GRDP?
- ii. Does MSME management affect GRDP?
- iii. Do MSME information systems and MSME management affect GRDP?

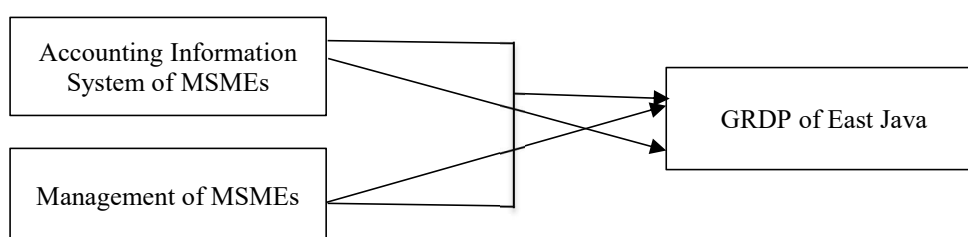


Figure 1. Research Design, 2022

## 4. Results and Discussion

The research on MSME accounting information systems shows several important findings: Perception and Application of AIS: The success of MSME businesses is influenced by both the perception of entrepreneurs towards accounting information systems and the actual application of these systems. The studies by (Moeritty & Wirawan, 2019) and (Riswanda et al., 2022) indicate that when entrepreneurs positively perceive AIS and effectively implement them in their businesses, it positively affects the success of the MSMEs.

### 4.1 Impact on Investment Decision Making

Helmiyati et al. (2020) found that the better the use of accounting information systems in MSMEs, the more likely entrepreneurs are to make informed investment decisions. Efficient and accurate accounting information systems provide entrepreneurs with valuable financial data, enabling them to make more confident investment choices.

### 4.2 Presentation of Financial Statements

Understanding and utilising accounting information systems significantly positively affect the presentation of financial statements, especially when based on SAK ETAP (Simplified Financial Accounting Standards). Listianda (2019) highlights the importance of proper accounting systems in producing accurate and reliable financial reports for MSMESSs.

### 4.3 Business Experience and Accounting Information

Firdarini and Prasetyo (2020) found that business experience and the use of accounting information positively and significantly influence the success of MSMEs. Entrepreneurs who understand accounting principles and effectively use accounting information tend to have more successful businesses.

Overall, the research emphasises the importance of accounting information systems in MSMEs. When entrepreneurs positively perceive AIS and effectively apply it, it can lead to better investment decisions and improve the presentation of financial statements. Additionally, having business experience and utilising accounting information also contributes significantly to the success of MSMEs. Understanding and implementing efficient accounting information systems are crucial for the growth and prosperity of MSMEs. The studies on MSME management reveal several important findings:

- E-marketing and Competitive Advantage: E-marketing has a positive and significant effect on gaining a competitive advantage for MSMEs. By effectively leveraging digital-based marketing strategies, MSMESSs can enhance their competitiveness in the market.

- **Technology Utilization and Consumer Reach:** Sandi et al. (2022) emphasise that MSMEs increasingly utilise technology, especially digital-based marketing, to expand their consumer base. Technology adoption plays a vital role in attracting and reaching more consumers, even more so during the pandemic when online tools become crucial for maintaining sales and marketing efforts.
- **E-commerce Adoption and Benefits:** Demonstrate that MSMEs with higher e-commerce adoption experience greater benefits from e-commerce than those with lower adoption levels. This suggests that embracing e-commerce platforms can significantly impact the growth and success of MSMEs.
- **Government Support and MSMEs Progress:** Studies such as Putri (2020) and Muvidah & Andriani (2022) emphasise the crucial role of government support in fostering the progress of MSMEs and promoting regional economic growth, such as in East Java. The government serves as a facilitator, regulator, and catalyst for MSMEs development.
- **Digitisation of Taxation and Tax Compliance:** Muawanah & and Trisnaningsih (2023) highlight the effect of digitisation of taxation on the voluntary tax compliance of MSMEs. Streamlining tax processes through digitisation can positively influence MSME's willingness to comply with tax regulations.
- **Managerial Ability and Business Performance:** Pramestiningrum & and Iramani (2020) indicate that the ability of MSME managers has a significant and positive impact on business performance. Competent and skilled managers play a crucial role in driving the success of MSMEs. In conclusion, effective MSME management, including strategies such as e-marketing and technology utilisation, is pivotal in achieving competitive advantage and enhancing business performance. Government support and the adoption of e-commerce and digitisation further contribute to the progress of MSMEs and the regional economy. The findings of these studies underscore the importance of strong management practices and supportive government policies in facilitating the growth and development of MSMEs and, consequently, fostering economic growth in a region.

The studies on AIS and MSMEs, MSMEs management, and their influence on GRDP in East Java Province highlight several important points:

- **Technology and Economic Growth:** Rochdianingrum & Setyabudi (2019) research shows that the higher the technology adoption by MSMEs, the higher the economic growth, particularly in East Java. Embracing advanced technology and digital tools can significantly contribute to economic progress.
- **Government Support during the Pandemic:** The Indonesian government plays a vital role in supporting MSMEs during challenging times like the COVID-19 pandemic. By aiding and improving the quality of information through outreach, the government helps maintain GRDP, especially in regions like East Java.
- **MSMESSs' Impact on GRDP:** The research highlights the significant influence of MSMEs on the Gross Regional Domestic Product (GRDP) of East Java Province. Increasing the number of MSMEs in Indonesia can boost the overall GRDP of the country Wardani et al., (2022).
- **Positive Economic Indicators:** Despite facing external economic pressures like trade wars and changes in US monetary policy, the Indonesian economy has shown positive results. The relatively high economic growth in 2018 resulted in job creation, lower unemployment rates, and reduced poverty and inequality.

The research underscores the importance of MSMEs and their management practices in driving economic growth and improving overall economic conditions. By fostering technology adoption, providing government support, and promoting entrepreneurship through education and training, MSMEs can play a pivotal role in advancing the regional and national economy, as evident in the case of East Java Province. The data from the Central Statistics Agency (BPS) indicates positive improvements in key welfare indicators in Indonesia: Unemployment Rate: As of August 2018, the unemployment rate decreased to 5.34 percent from 5.50 percent in the same period in 2017. This signifies a positive trend in employment opportunities and suggests a growing economy. Poverty Rate: The poverty rate in Indonesia fell to 9.82 percent in March 2018 from 10.64 percent in 2017. This decline in poverty indicates that the government's poverty alleviation and social protection programs have positively impacted the population's welfare. Gini Coefficient: The Gini coefficient, a measure of income inequality, improved from 0.393 in 2017 to 0.389 in 2018. This indicates a reduction in income inequality, reflecting a more equitable distribution of wealth.

The Indonesian government has faced challenges in maintaining economic growth amidst pressure in the financial sector. However, strong synergies between monetary and fiscal policy institutions have enabled the government to maintain economic stability while continuing efforts to improve economic growth and fiscal



health. These policies have received positive perceptions from the international community as a response to the economic impacts of the COVID-19 outbreak. The economy's challenges also significantly affect various business actors, especially MSMEs, which play a crucial role as the backbone of the economy in Southeast Asia. With approximately 71 million MSMEs, their resilience and growth are vital for Indonesia's economic prosperity and stability. According to research (Harvie, 2019), MSMEs in ASEAN countries, Indonesia stands out with the highest proportion of its workforce, nearly 97%, employed in MSMEs. This indicates the significant role of MSMEs in providing employment opportunities in the country. Thailand and the Lao People's Democratic Republic (Lao PDR) also have high SME employment-to-total employment ratios, with 81.31% and 82.63%, respectively. On the other hand, Vietnam has a relatively lower ratio of SME employment to total employment. In the context of Indonesia, specifically in East Java Province, MSMEs have played a pivotal role in boosting the regional economy. Data from the Dinkop UKM - BPS for 2018 to 2020 indicates that the MSMEs environment has undergone substantial changes during that period. The Profile of MSMESS owners in East Java from 2018 to 2020 provides valuable insights into the province's characteristics and dynamics of MSMEs. Understanding the profile of MSME owners is essential for devising policies and strategies to support their economic growth and contribution. Overall, the research emphasises the significant contribution of MSMEs to employment and economic growth in Indonesia and other ASEAN countries. In the case of East Java Province, the dynamic nature of the MSME environment indicates its crucial role in driving economic development and improving the livelihoods of the workforce.

- By Gender: Looking at each business field, it is known that business owners are dominated by men, except for industrial business fields, where women dominate 52%.
- By Age: Generation X (age 40 years) of 59.45%; Generation Y (millennial 30 years) 21.9%; Generation Z (20 years) 2.19%; Age group 50-60 years 16.4%.
- Based on Education: S1/ more 33.69%; D3 3.47%; SMA 37.76%; Junior High School 10.76%; SD 11.09% and did not complete SD 3.22%.

The Role of MSMEs in the East Java Economy. The contribution of MSMEs to the economy from 2016 to 2020 is 57.25%. 2019 has increased compared to 2018. The amount of the MSMEs contribution has increased from 2018 to 2020, based on BPS East Java.

Table 3. Contribution of MSMEs

Year	MSMEs Contribution (%)
2016	56,42
2017	56,62
2018	56,93
2019	57,26
2020	57,25

Source: BPS, 2020

MSMESS problems in 2018 to 2020 are 37% capital, 35% marketing, 12% human resource development and 11% raw materials. The central government has supported this by providing capital to MSMEs with applicable rules and policies. For marketing, MSMEs and their respective regional governments have handled human resources and raw materials to stimulate the local economy.

Table 4. Current Problems Faced by MSMEs

Problem	Amount (%)
Capital	37
Raw Material	11
Marketing	35
Human Resources Improvement	12

Source: BPS, 2020

Use of integrated information systems on the internet and outreach marketing MSMEs product range, one of the indicators is the marketing area. The marketing area of a business indicates the condition of the business, especially the area of production range.

Table 5. Use of Integrated Information Systems on The Internet and Outreach Marketing

Problem	Amount (%)
Use Internet (SK UMKM-2020)	56
Use internet (SE-2016)	11
No Internet (SK UMKM-2020)	43
No Internet (SE-2016)	89

Source: BPS, 2020

MSMEs impact cities in East Java. Thirty-four cities (districts/municipalities) contributed more than 50%, and 4 cities contributed less than 50%. MSMEs in East Java from 2018 to 2020 have developed and are proven to expand to other regions by 18% in Indonesia, internationally by 2%, and locally by 80%.

Table 6. MSMEs and Location in East Java

Location	Amount (%)
Local	80
Regional	18
Export	2

Source: BPS, 2020

## 5. Conclusion

The study concludes that both MSME accounting information systems (SIA) and MSME management significantly affect the Gross Regional Domestic Product (GRDP) in East Java. Several important conclusions drawn from the research results are as follows:

- **Government Efforts:** The East Java Provincial Government actively strives to boost economic recovery, particularly for MSMEs, with support from accounting information systems. The government's efforts are aimed at leveraging the potential of MSMEs to contribute to economic growth.
- **Adoption of SIA:** Most MSMEs in East Java have embraced AIS to enhance their business operations and decision-making processes. This reflects the importance of technology adoption in driving MSME's growth and success.
- **Addressing Human Resources Challenges:** MSMEs face challenges, especially regarding human resources in accounting information systems. Addressing these challenges is crucial to harness SIA's benefits for MSMEs fully.
- **Supportive Environment:** AIS requires adequate human resources and infrastructure support. Good management practices by MSME owners and government support are vital in increasing MSME's income and contributing to GRDP in East Java.
- **Cooperation and Participation:** Collaboration and participation from MSMEs owners, employees, and the government are essential in promoting the advancement of MSMEs. The study emphasises the role of management in MSMEs development and the government's role as a facilitator, regulator, and catalyst in supporting MSME regulations, SAK MSMEs (Simplified Accounting Standards for MSMEs), and taxation.
- **Significant Contribution of MSMEs:** The research results highlight the crucial role of MSMEs in driving the economy of East Java, as evidenced by their significant contribution to the region's GRDP during 2016-2020. 7) **Positive Outlook:** Overall, MSMEs in Indonesia are expected to be empowered, contributing to economic recovery, growth, and progress.

In conclusion, the study underscores the importance of MSMEs in the economic development of East Java and Indonesia. Effective implementation of AIS, combined with good management practices and government support, is crucial in boosting the performance of MSMEs and their contribution to the regional and national economy.

The implications of the findings of this scientific research on the influence of information systems and MSME management on GRDP in East Java Province are significant and provide valuable insights for various stakeholders. Here are the key implications based on the study's results:

### 5.1 Implications for MSMEs Accounting Information Systems (AIS)

- **Human Resources Support:** MSMEs must prioritise developing and training their human resources to utilise AIS effectively. This will enhance the efficiency and effectiveness of the accounting processes, leading to better decision-making and overall business performance.
- **Infrastructure Support:** Adequate infrastructure is essential for successfully implementing AIS in MSMEs. This includes providing access to necessary technology and tools to ensure smooth operations and data management.
- **Continuous Self-Development:** MSMEs should encourage their staff to continuously improve their knowledge and skills using the latest accounting information systems. Regular training and updating with technological advancements will enable MSMEs to stay competitive and adapt to changing business environments.

### 5.2 Implications for MSME Management

- **Support for Business Development:** MSME managers must actively support efforts to expand the business, build relationships, and seize growth opportunities. Proactive management practices can lead to increased market presence and better financial performance.
- **Adapting to Changes:** MSME management should stay informed about changes in regulations, policies, and market conditions. Adaptability and responsiveness to such changes will help MSMEs navigate challenges and capitalise on emerging opportunities.

### 5.3 Implications for MSMEs Management (Government)

- **Facilitating Business Opportunities:** The government should create an enabling environment for MSMEs by enforcing supportive regulations and policies. This will foster a conducive business climate, encouraging MSMEs to thrive and contribute to GRDP growth.
- **Timely Dissemination of Information:** Governments should promptly disseminate information related to business and MSMEs, especially during critical events such as economic disruptions or policy changes. Timely communication can help MSMEs make informed decisions and mitigate potential risks.
- **Providing Training and Support:** Governments can play a vital role in enhancing MSME's capabilities by offering training programs and support. Skill development initiatives and capacity-building efforts can improve productivity and competitiveness among MSMEs.

### 5.4 Limitations of the Study: Literature-Based Study

The research's limitations stem from relying solely on existing literature. Future studies could incorporate primary data collection to understand better the relationships between information systems, MSMEs management, and GRDP. **Expanding Variable Scope:** Future research can explore additional variables related to MSMEs and GRDP to understand better the factors influencing economic growth. **Regional Comparison:** Conducting similar studies in other provinces or regions could offer insights into how different factors and contexts impact MSMEs and their contributions to GRDP. **Methodological Updates:** Employing alternative research methods and approaches could yield diverse perspectives and enrich the study's findings.

Overall, the implications and limitations of this research highlight the importance of strong information systems, effective management practices, and supportive government policies in promoting the growth of MSMEs and, in turn, contributing to the economic prosperity of East Java Province. These findings can guide policymakers, business owners, and researchers in fostering sustainable economic development in the region.

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