

FINANCE AND MARKETING | RESEARCH ARTICLE

MSME Performance: Financial Information System, Work Productivity, and E-commerce

Received: May 04, 2023

Accepted: June 09, 2023

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Abstract: This study aims to identify and analyze financial information systems, work productivity, and e-commerce on the performance of MSMEs. The approach in this study used a qualitative approach. The sources of informants were seven SMEs in the fields of food and clothing in Makassar City. Data collection techniques were carried out by interviewing informants and literature studies. The steps for the analysis technique used were data reduction, data presentation, and conclusion. The study results show that work productivity and e-commerce effectively support MSME activities to improve MSME performance. At the same time, the financial information system has not been implemented optimally, so MSME performance has not increased optimally. Some MSMEs have done computerized financial bookkeeping, but some MSMEs still do financial bookkeeping manually due to a lack of managerial knowledge and skills. The implications of this research are very important to help MSMEs identify opportunities and challenges by having a good financial information system that can optimize financial management, good productivity, and utilize e-commerce in their business.

Keywords: e-commerce, financial information system, MSME performance, work productivity

JEL Classification: D13, D24, E23, F65



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PUBLIC INTEREST STATEMENT

The challenge faced in this study was when collecting data, it was difficult to adjust the time for MSME actors to be interviewed.

Apart from that, another challenge for MSME actors is that they are still not maximally implementing bookkeeping in a computerized financial information system. The 5.0 revolutionary era, which is all technological, requires MSME actors to utilize information technology in carrying out operational activities, both in terms of finance, marketing and so on. Thus, information technology is very effective in helping MSMEs carry out operations so that MSME performance can be improved.



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1. Introduction

Micro, Small, and Medium Enterprises (MSMEs) play an important role in the 5.0 revolution because MSMEs, one of the sectors, can make a major contribution to a country's economy and are the backbone of a country's economy. MSMEs have great potential to create jobs, increase economic growth, and reduce poverty. However, MSMEs often experience several obstacles, namely financial management, work productivity, and limited market access. This can hinder the growth and success of the business. In addition, competition in the market is getting tighter, and limited market access is also a challenge for MSMEs. Therefore, using financial information systems and e-commerce technology can help MSMEs improve their performance, increase productivity, and expand their market. In the era of revolution 5.0, the rapid development of technology has had a major impact on the business world, including MSMEs. Even so, not all MSMEs can take advantage of these technological developments, and many are still experiencing difficulties obtaining large incomes.

According to Zaelani (2019), the phenomena faced by some MSMEs are that MSMEs face problems, namely, among others, the ability regarding market knowledge is still minimal, knowledge about product specifications needed by the market is still lacking, knowledge about rules for entering the market is still lacking, and knowledge about business competition is still lacking. Many MSMEs are still not good at managing their finances. One of the drawbacks is that the financial records of MSMEs are still simple. Some don't even record it, and the important thing is that their income is enough to meet their daily needs, so financial management does not show actual results and cannot know whether the money used is on target for business (Haryati, 2019).

According to Dinnullah and Fayeldi (2017), in carrying out their business activities, the managers of MSMEs often have difficulties recording what happens in their business operations. These difficulties concern the activities and the assessment of the results obtained in each business). Especially if it has to be carried out with measurements and assessments of activities that occur in business activities. The recording is carried out only by calculating the difference between incoming and outgoing money, regardless of whether the money is spent for or from the allocation of business or non-business activities (Winarno, Agustina, Wijijayanti, Churiyah, & Subagyo, 2020). The development of MSMEs is very strategic because of its great potential to drive the community's economic activities and, at the same time, being the basis of the source of income for most people in improving their welfare (Ariani & Utomo, 2017).

The financial information system is related to the development of information technology, which enables the processing financial data more efficiently and accurately. Before a financial information system existed, financial data processing was done manually, took a long time, and required many human resources. In addition, data accuracy is often a problem due to human errors in data entry or calculations. With advances in information technology, financial data processing can now be done more easily and accurately through financial information systems. A financial information system is a system specifically designed to manage the financial data of an organization or company. This system enables automatic and real-time financial data processing, enabling management to make more appropriate and quick decisions based on accurate financial information.

Financial information systems are becoming increasingly important in the business world due to fierce business competition. MSME actors can manage financial data efficiently and accurately through a financial information system which will have a greater advantage in facing competition. Therefore, using financial information systems is very important for business continuity. On the other hand, using technology also requires investment from human resources and infrastructure. Therefore, the government and non-governmental organizations need to provide support and accessibility for MSMEs to make good use of this technology. By utilizing the right technology, MSMEs can increase their competitiveness and contribution to a country's economy.

Human resource management is a human resource approach that seeks to achieve two goals together, namely company and employee goals. Implementing this approach emphasizes the principle that employees are an effective investment element that, if properly managed and developed, will positively contribute to the company through greater productivity. E-commerce stems from advances in information technology and the Internet, which grew rapidly at the end of the 20th century. Before e-commerce, consumers had to buy goods or services directly at the shop or place of business. However, with advances in technology and the Internet, consumers can now buy goods or services through e-commerce platforms available on the Internet.

E-commerce or electronic commerce can be defined as buying and selling goods or services carried out online via the Internet. In e-commerce, buying and selling transactions are carried out through an online platform that anyone with an internet connection can access. The development of internet technology allows e-commerce transactions to be carried out quickly, easily, and safely. As a result, e-commerce is becoming an increasingly popular form of commerce and is increasingly in demand by consumers worldwide.

E-commerce provides enormous benefits for both consumers and businesses. For consumers, e-commerce makes it easy to buy products or services without coming to a physical store. In addition, e-commerce also provides more choices, more competitive prices, and ease in finding the product or service information needed. Meanwhile, for business people, e-commerce provides access to a wider and more global market. Businesses can sell their products or services to customers worldwide without having a physical store in every location. In addition, e-commerce also allows businesses to reduce operational costs, such as store rental and marketing costs. Therefore, e-commerce is very important for business development in today's digital era. By using e-commerce well, businesses can expand market reach, increase sales, and improve operational efficiency and effectiveness.

More recent research by Tolstoy, Jonsson, and Sharma (2016) and industry reports (DHL Express, 2016) emphasize that e-commerce, i.e., digital market presence, can be a strong vehicle for international growth among small and medium-sized enterprises (SMEs). International e-commerce is coming of age, bolstered by new consumer behaviors and large-scale political efforts aimed at creating well-functioning digital markets through supporting infrastructures and regulations, e.g., the EU Digital Single Market and China's Belt and Road Economic Zone (European Parliament, 2020; Yang, Fu, & Wang, 2017).

E-commerce can be done through social media platforms such as Shopee, Tokopedia, Lazada, Facebook, Instagram, WhatsApp, Grab Food, and Gojek. Based on the results of this study, social media, namely Shopee, Grab Food, and Gojek, are currently in great demand by Indonesian people, especially millennials. Instagram is the right choice medium for social media marketing activities. Lionardo and Iskandar (2020), in Tungka's research, show that the aspects of entertainment, interaction, and word of mouth affect purchase intention but are not significant. The results of research by Sanny, Arina, Maulidya, and Pertiwi (2020) discuss the influence of social media marketing on brand image and brand trust in the intention to buy Indonesian men's skin care. The results obtained indicate that social media marketing has a significant effect on brand image and brand trust. In addition, brand trust and brand image have a significant effect on purchase intention. This study aims to identify and analyze financial information systems, work productivity, and e-commerce on the performance of MSMEs.

2. Literature Review

2.1 Performance of Micro, Small and Medium Enterprises (MSMEs)

According to Rivai (2015), performance results from an individual success rate during a certain period in carrying out tasks compared to several possibilities, such as work standards, targets, goals, and criteria determined by mutual agreement. MSMEs are one of the right ways to be developed in Indonesian society and as a driving machine that can be relied upon to improve the people's economy (Novitasari & Zuraida, 2015). MSME performance can affect business continuity and the ability to compete in the market. Therefore, MSME owners need to monitor and improve their business performance regularly. This can be done by adopting good management practices, such as strict financial and operational monitoring, investing in human resources, and using appropriate technology.

2.2 Financial Information System

According to Anjelita and Rosiska (2019), an information system is a relationship between data and methods and uses hardware and software to convey useful information. Romney and Steinbart (2015) explained that financial information systems are two or more interrelated components that interact to achieve goals. Most systems consist of smaller subsystems that support the larger system. A system is a group of elements that are closely related to each other and function together to achieve certain goals (Mulyadi, 2016).

Financial Information System (SIK) is designed to collect, process, and present relevant financial information for decision-makers within an organization or company. CIS manages an organization's financial resources, including budgets, financial plans, and financial reports. Anggadini and Puspitawati (2011) define a financial information system as organizing coordinated forms, records, and reports to produce financial information needed in making management decisions and corporate leadership and can facilitate the company's management. Next, according to Tohari (2014), the financial information system is an information system that provides information on financial functions related to company finances. Financial information systems support financial managers regarding company financial issues and the company's allocation and control of financial resources (Sitepu, 2015).

The findings from the research results show that work productivity and e-commerce are very effective in supporting MSME activities so that they can improve MSME performance. At the same time, the financial information system has not been implemented optimally, so MSME performance has not increased optimally. Some MSMEs have done computerized financial bookkeeping, but some MSMEs still do financial bookkeeping manually due to a lack of managerial knowledge and skills. This is different from the research by Indahsari, Halim, and Aspirandy (2023); the study results show that simultaneously and partially, accounting information systems and e-commerce variables significantly affect MSME performance. However, another study conducted by Triandra, Hambali, Nuurasia, and Rosalina (2019) showed that e-commerce had a positive and insignificant effect on the performance of MSMEs. However, the existence of e-commerce was one of the marketing alternatives that used to be able to reach many more customers.

2.3 Work Productivity

Siswandoko and Darsono (2011) define productivity as a measure of the relationship between input and output. Productivity results from HR capabilities using work tools, work methods, working capital, book materials, and information. Next, Martono (2019) stated that productivity is the ratio between the output volume and the amount of input used. According to Tohardi (2017), work productivity is a mental attitude. A mental attitude that is always looking for improvements to what already exists. A belief that one can do a better job today than yesterday and better tomorrow than today. Meanwhile, Busro (2018) defines work productivity as the ability of a person or group to produce goods and services within a certain predetermined time

or according to plan. Productivity is more than just science, technology, and productivity management techniques, it contains a pattern of philosophy and mental attitude based on strong motivation to strive to achieve a better quality of life continuously (Mangunegara, 2011).

2.4 E-commerce

According to Santosa, Santyadiputra, and Pradyana (2017), e-commerce emerged around the 1990s with changes in the buying and selling transaction process, which used to be conventional, and then changed to digital electronics based on the internet and computer networks. Technology is developing rapidly in this modern era, especially in trade. To face competition in the business world, you can use information technology through the Internet, which is already mushrooming and influential among the public. The Internet is a major factor in the development of e-commerce because it can be used as a transaction medium that can be accessed anytime and anywhere, not limited by time and distance. E-commerce is "buying and selling products and services over the internet and using computer systems to improve overall company efficiencies" (Oudan, 2010). Lastly, according to Rizki, Hidayat, and Devita (2019), e-commerce or electronic commerce is electronic commerce that includes the process of buying and selling goods or services, exchanging products, and transferring funds, services, and information using computer networks or the Internet.

3. Conceptual Framework

Based on the empirical studies reviewed above and from previous results research to financial information systems, work productivity, and e-commerce. Financial, productivity, and e-commerce information systems can affect MSME performance with complex interactions and relationships. A good financial information system provides MSMEs with accurate and up-to-date financial data. This allows for effectively monitoring income, expenses, cash flow, and overall financial performance. A good financial information system can also increase MSME financial transparency, increasing the trust and compliance of stakeholders such as investors, business partners, or financial institutions. This can open opportunities for access to additional capital or strategic partnerships.

Work productivity can affect the performance of MSMEs in producing more output by using available resources efficiently; this includes the optimal use of people, equipment, technology, and effective business processes. Increased productivity allows MSMEs to produce more output by using available resources efficiently. MSMEs can better meet market demands and earn greater profits by producing more goods or services in less time. E-commerce can affect the performance of MSMEs in expanding market reach and reaching new customers. MSMEs can reach consumers in various geographic locations and even globally by selling online. MSME actors who use e-commerce can increase MSME sales by making it easier for customers to purchase online. Efficient use of e-commerce platforms can also improve customer experience, speed up transaction processing, and increase customer satisfaction. In addition, adopting e-commerce can reduce operational and overhead costs, such as renting a physical store or the cost of traditional distribution, increasing the efficiency and profitability of MSMEs.

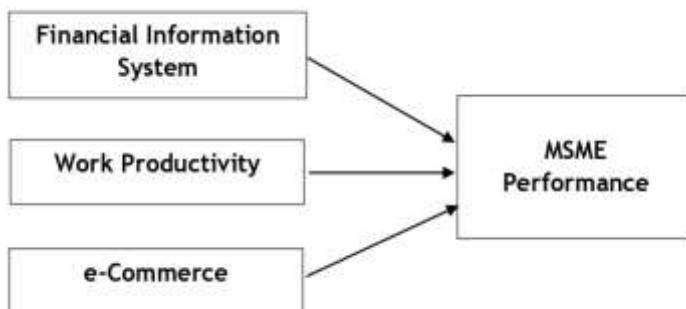


Figure 1. Conceptual Framework

4. Methods

4.1 Participants

The approach used in this study is qualitative. According to Sugiyono (2014), the qualitative descriptive is a research method based on the philosophy of post-positivism that is used for research on natural object conditions (as opposed to experiments) where the researcher is the key instrument of data collection techniques carried out by tribulation (combined), analysis the data are inductive/qualitative in nature, and the results of qualitative research emphasize meaning rather than generalization. Qualitative descriptive research aims to describe, explain, explain, and answer in more detail the problems to be studied by studying an individual, a group, or an event as much as possible. The location in this study is in Micro, Small, and Medium Enterprises located in Makassar City.

Informants are all sources that provide information or data regarding a topic or event. Sources of informants can be books, journals, articles, websites, interviews, surveys, observations, or documents. The sources of informants amounted to seven MSMEs originating from MSME actors in the four MSMEs of the food sector and three MSMEs of the clothing sector. Data collection techniques were carried out by interviewing informants and studying the literature. Data collection techniques aim to obtain data information used in this study.

4.2 Measurement

The variables to be tested in this study are three independent variables: finance information system, work productivity, and e-commerce. A financial information system is designed to collect, process, store, and present financial information companies need for decision-making. Financial information systems can be measured through computer ownership, knowledge of information technology, and the use of computers in financial bookkeeping. As for some of the questions posed to informants related to financial information systems, among others. How important is the application of computerized information systems in business activities? Is it manual or computerized bookkeeping in recording business transactions?

Sutrisno (2011) argued that work productivity is a mental attitude. A mental attitude that is always looking for improvements to what already exists. A belief that one can do a better job today than yesterday and tomorrow is better today. Work productivity measures the workforce's effectiveness and efficiency in producing output or work results within a certain period. Work productivity can be measured through the quantity of work, employee skills and knowledge, quality of work, turnaround time, and timeliness. As for some of the questions asked to respondents related to work productivity, what factors affect work productivity? How do you increase efficiency and productivity in running a business?

E-commerce is trade transactions carried out via the Internet or other electronic networks. According to Kuswiratmo (2016), e-commerce or usually also known as online shopping, is the implementation of commerce in the form of sales transactions, purchases, orders, payments, or promotion of a product of goods and/or services carried out by utilizing a computer and means of digital electronic communication or data telecommunications e-commerce can be measured through interaction (social media provides a place for users to easily communicate ideas and information with other users on social media). E-commerce can be measured through interaction, in which social media provides a place for users to easily communicate ideas and information with other users on social media. As for some of the questions asked to respondents related to e-commerce, among others: How do you use e-commerce in your business operations? Which platform is more dominant in selling goods online? How do the benefits of e-commerce support MSME activities in improving performance? How do you interact with consumers through social media by offering a product?. Wibowo (2016) argues that performance is the value of a series of work behaviors that contribute positively and negatively to the completion

of how to do it. According to Minuzu (2010), there are several indicators of company performance: sales growth, additional workforce, market share growth, and profit growth.

4.3 Analysis

The data analysis technique used in this research is the qualitative data analysis technique. Miles and Huberman (2014) suggest that activities in qualitative data analysis are carried out interactively and continuously until complete so that the data is saturated. The absence of new data or information indicates the measure of data saturation.

Activities in data analysis, according to Miles and Huberman (2014) that is first, display data is the process of gathering information that is arranged based on the categories or groupings required. The presentation of data can be in the form of writing or words, pictures, graphs, and tables. Second, data reduction is defined narrowly as the process of reducing data, but in a broader sense is the process of perfecting data, both reducing unnecessary and irrelevant data, and adding data deemed lacking. Third, data interpretation is the process of understanding the meaning of a series of data presented in a form that does not just see what is stated but rather understands or interprets what is implied in the data presented. Four, conclusions drawing is the process of formulating the meaning of research results expressed in concise and easy-to-understand sentences and carried out by repeatedly reviewing the truth of the conclusions, especially concerning their relevance and consistency with the title, purpose, and formulation of the existing problem.

5. Findings

5.1 Characteristics of Respondents

The data in this study were obtained through interviews and field observations. The amount of MSME data is based on various types of businesses, such as food, beverage, and clothing. The characteristics of the respondents observed in this study are based on several criteria (Table 1).

Table 1. Respondent's characteristics

Characteristics	Number (n)	Percentage (%)
Gender		
Male	3	43
Female	4	57
Age (Years)		
<25	2	29
25-35	2	29
35 or older	3	42
Highest level of education		
Less than high-school	2	29
High school	4	57
Associate college	0	0
College and above	1	14

Table 1 shows that MSME actors have more female characteristics, with a percentage of 57 percent, compared to males, with a percentage of 43 percent. The characteristics of MSME actors aged 35 and over who carry out business activities are more dominant. In addition, more MSME actors come from high school education, with a percentage of 57 percent, junior high school 29 percent, and undergraduate education 14 percent.

5.2 Finding of Finance Information System

Based on Figure 2, five SMEs carried out manual financial bookkeeping or a percentage rate of 71.4 percent, while financial bookkeeping using a computerized information system was two SMEs or a percentage rate of 28.6 percent. Manual bookkeeping is the process of recording and recording financial transactions using

traditional methods involving handwriting or a physical notebook. In the current situation, MSMEs are more dominant in using manual rather than computerized information systems due to limited resources, technological skills, and knowledge, as well as limited financial knowledge and educational background.

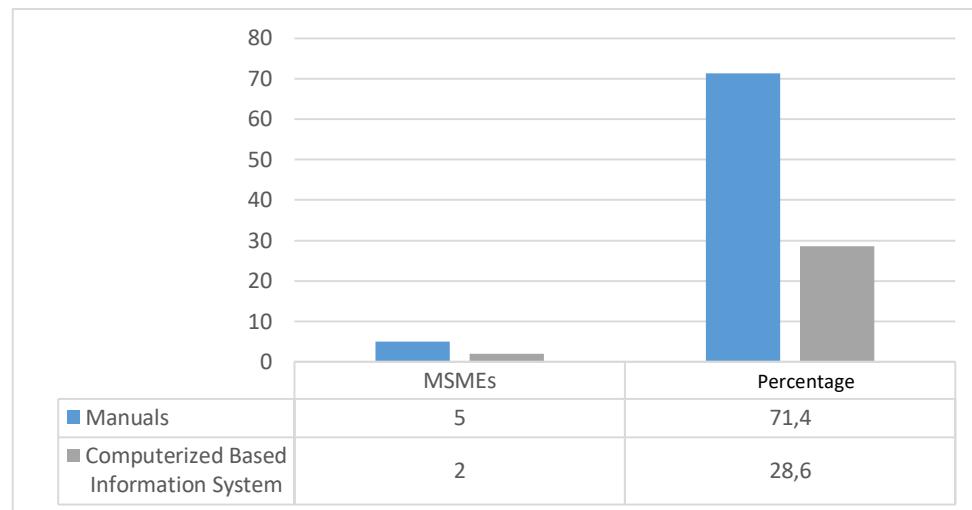


Figure 2. Financial accounting

5.3 Finding of Work Productivity

Based on the Figure 3 results of observations, it shows that work productivity is influenced by the skills and knowledge of employees with a percentage rate of 100 percent, then the quality of work increasing with a percentage level of 100 percent is categorized as very effective. Employees' skills and knowledge of work productivity significantly influence the performance of MSMEs; this means that employees with good skills can help increase work productivity in MSMEs. These skills can be technical skills, such as an understanding of technology, or non-technical skills, such as communication and leadership skills. Employees with good knowledge of the products or services offered by MSMEs, target markets, competition, and business policies can help improve the overall performance of MSMEs. Then the quality of work on work productivity significantly influences the performance of MSMEs. This means achieving employee goals and targets, reflected in the employee's ability to produce quality and efficient products or services. Thus the higher the work productivity, the performance of MSMEs increases. Work productivity is very effective in supporting MSME activities to improve MSME performance.



Figure 3. Work productivity

In addition, the quantity of work and processing time with a percentage level of 80% is categorized as effective, and the timeliness of 90 percent is categorized as very effective. MSME actors with an adequate quantity of work and processing time are also very important. However, some special considerations must be considered in the context of MSMEs. Namely, the quantity of work means that MSME actors can produce products or services that meet customer demand in sufficient quantities. They can produce goods or provide services according to the scale and capacity of their business.

Meanwhile, for MSME actors, effective working time means they can manage time well to carry out daily business operations; this involves setting priorities, avoiding time wastage, and optimizing work processes. MSMEs must be able to complete important tasks efficiently and on time so that there are no delays in fulfilling customer requests or meeting business targets.

5.4 Finding of E-commerce

Based on Figure 4, MSME actors market and sell products through Shoppe and Gojek/Grabfood with a percentage rate of 29 percent, while MSME players carry out product sales through Facebook, WhatsApp, and Tokopedia with a percentage rate of 14 percent. This means that MSMEs in the clothing business sector are more dominant in using the Shopee application to offer products and business brands to consumers because most people shop through the Shopee application. The Shopee application has many profitable consumer offers, including free shipping and discount vouchers. In addition, MSME players offer their products at Shopee, which has a shopping feature with a credit system so that consumers can use this method to ease their shopping burden.

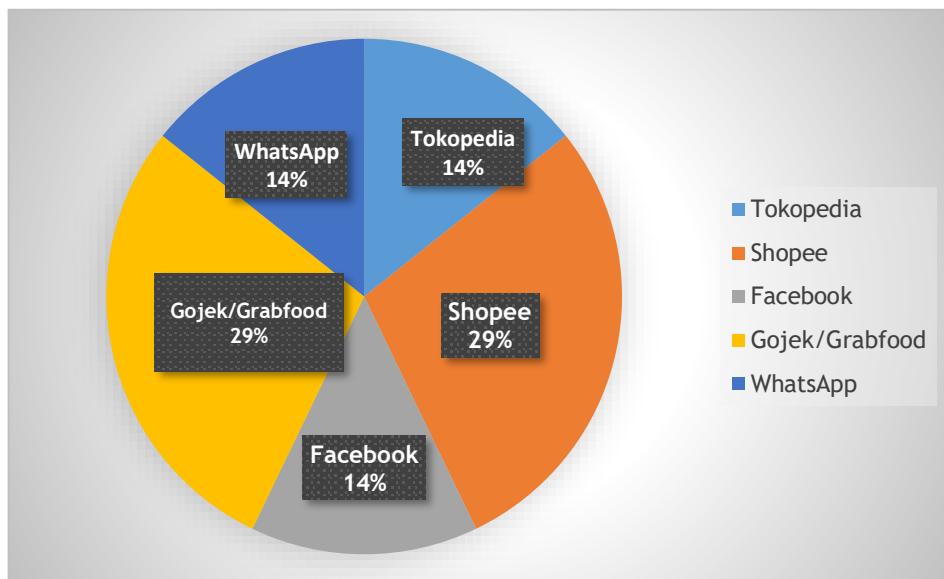


Figure 4. E-commerce

Besides that, there is also cash on delivery so that consumers can pay after the goods are ordered. MSME players can easily use the Gojek and Grab Food applications to market their food products to consumers because consumers ordering food at Gojek and grabbing food are more practical and don't need to queue at restaurants. Besides that, consumers can save time by not having to leave the house. Some MSMEs also market their clothing products on Facebook and Tokopedia to sell products, but the availability of the number of items is inaccurate, and it is not easy to interact with consumers. Meanwhile, MSME actors in the food business sell goods through WhatsApp, but the sale of goods seems unprofessional and does not attract consumers' attention. Thus, the existence of e-commerce for MSME actors can strengthen branding and gain business benefits. Even though MSME actors have obstacles and advantages in utilizing e-commerce, MSME actors still maintain the quality of products marketed online.

6. Discussion

Based on the survey and interview results, it is known that all respondents are aware of how important financial information systems are because they can assist decision-makers in planning financial strategies, monitoring financial performance, identifying financial risks, and making smart investment decisions. However, the financial information system has not been implemented optimally, so the performance of MSMEs has not increased optimally. However, in practice, five MSMEs, or 71.4 percent of MSMEs, still carry out financial bookkeeping manually. In comparison, two MSMEs, or 28.6 percent, have carried out financial bookkeeping using a computerized financial information system because, in the current situation, MSMEs are more dominant in using manual rather than computerized information systems due to limited resources, technological skills, and knowledge as well as limited financial knowledge, as well as educational background. Arniati, Rusydi, and Adiningrat (2021) concluded that with bookkeeping learning, entrepreneurs' knowledge increases in making financial reports, so their motivation increases in working to obtain maximum income.

Some MSMEs use manuals due to several factors, including; lack of financial knowledge, lack of managerial skills, MSME actors who have a high school level of education, so they still lack information technology knowledge, MSMEs have limited funds, so they may choose to do bookkeeping manually because the cost is cheaper than using a computerized system.

In addition, MSMEs that carry out computerized financial accounting include time and cost efficiency, higher data accuracy, and the ability to perform better financial analysis. In terms of time and cost efficiency, MSMEs using a computerized system can save time and costs in MSME financial management. MSMEs use a computerized system so that data recording can be more accurate because it avoids human error. Unlike manual bookkeeping, errors often occur due to typing or recording errors—the ability of SMEs to conduct better financial analysis. Computerized-based SIK can help increase the efficiency and accuracy of financial data processing and speed up decision-making. In addition, computerized SIK can also generate financial reports automatically, such as balance sheets, income statements, and cash flow reports. These reports can assist management in monitoring the financial performance of a company or organization and making better strategic decisions. This research is not in line with the research of Adiningrat, Nurnajamuddin, Amiruddin, and Wahyuni (2022) show that financial literacy has a positive and significant effect on the quality of financial management. The results conclude that through financial recording through good financial management, MSMEs can make decisions and control their finances. The function of financial management as financial management is to help MSME actors make short-term and long-term goal assessments and identify obstacles that may arise in making financial decisions.

Based on the research results described earlier, it shows that work productivity influenced by skills and knowledge is very effective, then the quality of work is categorized as very effective. Thus, work productivity effectively supports MSME activities to improve MSME performance. MSMEs can increase efficiency and productivity in running a business by improving the quality of work and the skills and knowledge possessed by an MSME actor and MSME employee. Increasing work productivity can help MSMEs maximize the use of available resources, such as labor and raw materials, so that they can produce products with better quality and in a shorter time. Some factors that affect work productivity in SMEs include employee skills and knowledge, equipment and technology, effective management, and employee motivation.

Adequate employee skills and knowledge are more productive at work. In the company's operational activities, MSMEs' equipment and technology help increase work productivity. MSMEs ensure that the equipment and technology used in their business are modern and efficient in increasing employee productivity. Effective management can help manage time and resources better, increasing employee

productivity. Motivated employees will be more productive at work. Therefore, MSME players motivate and incentivize their employees to keep working enthusiastically.

Nasution (2014) stated that the forms of work motivation applied to increasing work productivity are orientation views, conducting supervision, creating good communication, and providing incentives to employees through financial and non-financial incentives. MSME owners increase employee work productivity by providing training to employees to be able to communicate with consumers both directly and indirectly. MSMEs indirectly interact with consumers through social media and offer products by determining the relevant social media platforms that best suit the target market for this business sector. After choosing a platform, MSMEs create an attractive and professional business profile that reflects the business brand.

E-commerce is very effective in supporting MSME activities to improve MSME performance. The use of e-commerce by MSME actors has a positive effect on improving MSME performance. This means that the increasing use of e-commerce encourages increased business performance. MSME actors use commerce technology in their business operational activities, such as marketing aspects, online advertising, customer orders, and delivery of goods. MSME actors market goods and sell clothing items mostly through Shopee, Tokopedia, and Facebook. Meanwhile, MSMEs in the food sector sell goods online through Gojek, Grabfood, and WhatsApp. Based on the research results described previously shows that selling products through Shoppe and Gojek/Grabfood with a percentage rate of 29 percent, while selling products through Facebook, WhatsApp Tokopedia with a percentage rate of 14 percent.

E-commerce supports the activities of MSMEs to improve their performance; namely, MSMEs can expand their market reach throughout the world without geographical boundaries. MSMEs can use e-commerce platforms like marketplaces or online shops to reach consumers outside the city or abroad. E-commerce is beneficial for MSMEs, and it can speed up business processes such as ordering and paying online. Customers can easily transact without coming to the MSME physical store, increasing business efficiency and productivity. Reducing operational costs; With e-commerce, MSMEs can reduce operational costs such as store rental costs and electricity costs. MSMEs can also save on transportation and promotion costs using existing e-commerce platforms. Increasing consumer confidence; With e-commerce, customers can see products and prices transparently to increase consumer confidence in MSMEs. In addition, MSMEs can also take advantage of customer reviews or testimonials to strengthen consumer confidence.

In line with the research of Sarastyarini and Yadnyana (2018), the more e-commerce development in SMEs increases, the performance of SMEs will further develop. The other research by Alzahrani (2019) and Tolstoy et al. (2022) shows that adopting e-commerce allows SMEs to increase their sales; this is felt by access and purchases made anytime and anywhere. Other studies have also found that social media marketing affects buying intention. Second, product quality affects buying stake; third, social media marketing and product quality correlate with purchase intention (Meliawati, Gerald & Aruman, 2023).

The results of this study align with the research of Unismuh et al. (2022), which mentioned that the marketing information system positively impacts increasing turnover for MSMEs food. Increasing MSME turnover through marketing output has several subsystems, namely the product subsystem, price subsystem, place subsystem, promotion subsystem, and marketing mix. The marketing information system has several business functions: assessing information needs, developing the required information, and distributing information. A marketing information system designed and implemented according to the needs of MSMEs in achieving goals and making decisions for MSME actors in overcoming the problems they face.

The strategy for business continuity in increasing profits is achieved by creativity and innovation in the products produced and the use of technology in product marketing efforts (Adiningrat, Fitrianti, Sulistiyanti & Soraya, 2022). The results of this study are not in line with the research, which shows that e-commerce has no significant effect

on a company's financial performance. Market expansion without incurring other advertising costs. So that by expanding the market can increase revenue and reduce advertising and promotion costs so that the profits generated will increase (Sofiyanti, Wiyono & Dimyanti, 2021).

Research on MSME performance related to financial information systems, productivity, and e-commerce has several limitations that need to be considered: data limitations, sample limitations, time constraints, external factors, data validation, and generalization of results. In dealing with these limitations, researchers need to pay attention to the right methodology, collect data as accurately as possible, use representative samples, and report findings transparently by acknowledging existing limitations.

7. Conclusions

Based on the results of research and discussion, it can be concluded that work productivity and e-commerce adoption have great potential to support MSME activities and improve their performance. Efficient use of technology, equipment, and processes in increasing productivity could help MSMEs produce more output with available resources. In addition, adopting e-commerce can expand the reach of the MSME market and reach new customers, increase sales, and reduce operational costs.

However, there is a note that implementing the financial information system is still not optimal; this needs further attention. A good financial information system provides access to accurate and up-to-date financial data, enabling effective monitoring of MSME financial performance. With timely and accurate information, MSMEs can make better business decisions to increase financial transparency.

Financial information systems in SMEs focus on accounting systems, financial reporting, inventory management, and cash management. In addition, work productivity involves factors that affect work productivity in SMEs, such as technology, employee skills, operational processes, and the use of assistive devices. What does e-commerce adoption mean in MSMEs, including creating and managing websites, e-commerce platforms, online marketing strategies, and integrating electronic payments? MSME performance measures by determining the relevant performance measures for MSME. For example, it could use revenue, sales growth, profitability, customer satisfaction, or operational efficiency.

8. Recommendation

Based on the results of research, discussion, and conclusions, the following suggestions can be given. Advice to academics is that it is better to conduct more in-depth research on work productivity and e-commerce adoption in MSMEs, as well as training and counseling on work productivity and e-commerce adoption and computerized financial information systems.

As for suggestions for MSMEs, namely evaluating and identifying work processes that can improve efficiency, using effective digital marketing strategies, such as social media, online advertising, and engaging marketing content, to increase visibility and attract potential customers, and conducting staff training or MSME owners regarding the use of financial information systems, this to ensure they understand the benefits and can manage financial data properly.

Citation Information

Cite this article as Adiningrat, A. W., Wahyuni, I., Rustan, Rahayu, Y. (2023). MSME performance: financial information system, work productivity, and e-commerce. *Journal of Consumer Sciences*, 8(2),

204-219. doi:

<https://doi.org/10.29244/jcs.8.2.209-219>

References

- Adiningrat, A. A., Nurnajamuddin, M., Amiruddin, A., & Wahyuni, N. (2022). The effect of financial literacy on the quality of financial management in food micro, small and medium enterprises (UMKM) in Makassar City (Pengaruh literasi keuangan terhadap kualitas manajemen keuangan pada usaha mikro kecil dan menengah (umkm) makanan Kota Makassar). *Management Studies and Entrepreneurship Journal (MSEJ)*, 3(6), 4164-4154. <https://doi.org/10.37385/msej.v3i6.1316>
- Adiningrat, A. A., Fitrianti, A. N., Sulistiyanti, R., & Soraya, Z. (2022). *Productive and Profit (MSME Strategy to Achieve Business Productivity and Profit in the Midst of the Covid-19 Pandemic) (Produktif dan Profit (Strategi UMKM Mencapai Produktif Usaha dan Profit Di Tengah Masa Pandemi Covid-19))*. Solok(ID): Insan Cendekia Mandiri.
- Alzahrani, J. (2019). The impact of e-commerce adoption on business strategy in Saudi Arabian small and medium enterprises (SMEs). *Review of Economics and Political Science*, 4(1), 73-88. <https://doi.org/10.1108/REPS-10-2018-013>
- Anggadini, S. D., & Puspitawati, L. (2011). *Accounting Information System (Sistem Informasi Akuntansi)*. Jakarta(ID): Graha Ilmu.
- Ariani, A., & Utomo, M. N. (2017). Study of development strategies for micro, small and medium enterprises (MSMEs) in Tarakan City (Kajian strategi pengembangan usaha mikro kecil dan menengah (UMKM) di Kota Tarakan). *Jurnal Organisasi dan Manajemen*, 13(2), 99-118.
- Arniati, M. A., Rusydi, M., & Adiningrat, A. A. (2021). Bookkeeping learning in increasing income for micro entrepreneurs (Pembelajaran pembukuan dalam meningkatkan pendapatan bagi pelaku wirausaha mikro). *Jurnal Solma*, 10(1), 23-31. <https://doi.org/10.22236/solm.a.v10i1.5577>
- Busro, M. (2018). *Human Resource Management Theories (Teori-Teori Manajemen Sumber Daya Manusia)*. Jakarta(ID): Prenadamedia Group.
- DHL Express. (September 20, 2016). The 21st-century spice trade: a guide to the cross-border e-commerce opportunity. Retrieved from <https://www.dhl.com/discover/en-my/logistics-advice/logistics-insights/21st-century-spice-route>
- Dinnullah, R. N. I., & Fayeldi, T. (2017). Simple bookkeeping training for Bugul Lor soy milk household business (Pelatihan pembukuan sederhana usaha rumah tangga susu kedelai Bugul Lor). *JPM (Jurnal Pemberdayaan Masyarakat)*, 2(1), 90-96. <https://doi.org/https://doi.org/10.21067/jpm.v2i1.1744>.
- European Parliament. (2020). How to Fully Reap the Benefits of the Internal Market for E-commerce? Luxembourg: European Parliament
- Haryati, R. A., & Chusminah, S. M. (2019). Analysis of employee performance appraisal in the staffing and general department of the P2P Directorate General of the Ministry of Health (Analisis penilaian kinerja pegawai pada bagian kepegawaian dan umum Direktorat Jenderal P2P Kementerian Kesehatan). *Widyya Cipta: Jurnal Sekretari dan Manajemen*, 3(1), 61-70.
- Indahsari, W. N., Halim, M., & Aspirandy, R. M. (2023). The influence of accounting information systems and e-commerce on the performance of SMEs in the Banyuwangi Region (Pengaruh sistem informasi akuntansi dan e-commerce terhadap kinerja umkm di Wilayah Banyuwangi). *JRAK (Jurnal Riset Akuntansi dan Bisnis)*, 9(1), 80-89.

- [https://doi.org/10.38204/jrak.
v9i1.949](https://doi.org/10.38204/jrak.v9i1.949)
- Kuswiratmo, B. A. (2016). *Starting a Business Is Easy!: Legal Steps From Establishing a Business Entity to Managing It (Memulai Usaha Itu Gampang!: Langkah-Langkah Hukum Mendirikan Badan Usaha Hingga Mengelolanya)*. Jakarta(ID): VisiMedia.
- Mangkunegara, A. A. P. (2011). *Corporate Human Resource Management (Manajemen Sumber Daya Manusia Perusahaan)*. Bandung(ID): PT. Remaja Rosdakarya
- Marshall, B. R., & Steinbart, P. J. (2015). Accounting information system 13th Edition (*Sistem Informasi Akuntansi Edisi 13*). Tejermahan Kikin Sakinah Nur Safira dan Novita Puspasari. Jakarta(ID): Salemba Empat.
- Martono, R. V. (2019). Productivity and Efficiency Analysis (*Analisis Produktivitas dan Efisiensi*). Jakarta(ID): Gramedia Pustaka Utama
- Meliawati, T., Gerald, S. C., & Aruman, A. E. (2023). The effect of social media marketing Tiktok and product quality towards purchase intention. *Journal of Consumer Sciences*, 8(1), 77-92. <https://doi.org/10.29244/jcs.8.1.77-92>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Fundamentals of Qualitative Data Analysis: Qualitative Data Analysis: A Methods Sourcebook, Edition 4*. USA: Arizona State University
- Mulyadi. (2016). *Accounting Information System and Efficiency (Sistem Informasi Akuntansi)*. Jakarta(ID): Salemba Empat
- Nasution, E. (2014). Work motivation in increasing the work productivity of da'wah Faculty employess IAIN Ar-Raniry (Motivasi kerja dalam meningkatkan produktivitas kerja pegawai Fakultas Dakwah IAIN Ar-Raniry). *Jurnal Al-Bayan: Media Kajian dan Pengembangan Ilmu Dakwah*, 20(29), 1-14.
- [http://dx.doi.org/10.22373/
albayan.v20i29.110](http://dx.doi.org/10.22373/albayan.v20i29.110)
- Novitasari, D., & Zuraida, L. (2015). The effect of entrepreneurial orientation and entrepreneurial competence on competitiveness (empirical studies on SMEs in DIY) (Pengaruh orientasi kewirausahaan dan kompetensi wirausaha terhadap daya saing (studi empiris pada umkm di DIY)). *Jurnal Riset Manajemen*, 2(2), 165-178.
- Oudan, R. (2010). Strategic decision-making in the emerging field of e-commerce. *International Journal of Management and Information Services*, 14(2), 19-26. [https://doi.org/10.19030/ijmis.
.v14i2.826](https://doi.org/10.19030/ijmis.v14i2.826)
- Rivai, V., & Sagala, E. J. (2015). *Human Resource Management for Companies 7th Edition (Manajemen Sumber Daya Manusia Untuk Perusahaan Edisi Ke 7)*. Depok(ID): PT. Raja Grafindo.
- Rizki, A. G., Hidayat, K. & Rahma Devita, L. D. (2019). The influence of brand image and price on purchasing decisions in e-commerce shopee Indonesia. (survey of 2015/2016 and 2016/2017 Faculty of Administrative Sciences undergraduate students who buy goods online in e-commerce) (Pengaruh citra merek dan harga terhadap keputusan pembelian pada e-commerce shopee Indonesia. (survei pada mahasiswa S1 Fakultas Ilmu Administrasi Universitas Brawijaya Angkatan 2015/2016 dan 2016/2017 yang membeli barang secara online di e-commerce)). *Jurnal Administrasi Bisnis*, 72(2), 49-56.
- Romney, M. B., & Steinbart, P. J. (2015). Accounting information system (*Sistem Informasi Akuntansi*). Jakarta(ID): Salemba Empat.
- Santosa, P. A. D., Santyadiputra, G. S., & Pradnyana, I. M. A. (2017). PYLE: e-commerce applications using geographic

- information systems (PYLE: aplikasi e-commerce menggunakan sistem informasi geografis). *KARMAPATI (Kumpulan Artikel Mahasiswa Mahasiswa Pendidikan Teknik Informatika)*, 6(7), 168-181. <https://doi.org/10.23887/karmapati.v6i1.9460>
- Sanny, L., Arina, A., Maulidya, R., & Pertwi, R. (2020). Purchase intention on Indonesia male's skin care by social media marketing effect towards brand image and brand trust. *Management Science Letters*, 10(10), 2139-2146. <http://dx.doi.org/10.5267/j.ms.l.2020.3.023>
- Siswandoko, T., & Darsono, P. (2011). *21st century human resource management (Manajemen sumber daya manusia abad 21)*. Jakarta(ID): Nusantara Consulting
- Sarastyarini, N. M. W., & Yadnyana, I. K. (2018). The influence of e-commerce and the effectiveness of the user's work on performance (Pengaruh e-commerce dan efektivitas kerja pengguna terhadap kinerja). *E-Jurnal Akuntansi Universitas Udayana*, 24(3), 1880-1907. <https://doi.org/10.24843/EJA.2018.v24.i03.p09>
- Sitepu, S. N. B. (2015). The application of management information systems to business start-ups is a case study for students at Ciputra University, Surabaya (Penerapan manajemen sistem informasi pada start-up bisnis studi kasus mahasiswa Universitas Ciputra Surabaya). *Proceeding 1st National Conference on Business, Management, and Accounting*. ISBN: 978-979-96162-1-0
- Sugiyono. (2014). *Quantitative, Qualitative and R&D Research Methods (Metode Penelitian Kuantitatif, Kualitatif dan R & D)*. Bandung(ID): Afabeta
- Sutrisno, E. (2011). *Human Resource Management (Manajemen Sumber Daya Manusia)*. Jakarta(ID): Kencana.
- Sofiyanti, R., Wiyono, M. W., & Dimyanti, M. (2021). The effect of accounting information systems and e-commerce on company financial performance (profit margin) (case study on micro, small and medium enterprises (MSMEs) in the trade and restaurant sector in Lumajang Regency) (Pengaruh sistem informasi akuntansi dan e-commerce terhadap kinerja keuangan perusahaan (profit margin) (study kasus pada usaha mikro kecil dan menengah (UMKM) sektor perdagangan dan restauran di Kabupaten Lumajang)). *Progress Conference*, 4(1), 268-274.
- Tohari, H. (2014). *ASTAH Analysis and Design of Information Systems through the UML Approach (ASTAH Analisis Serta Perancangan Sistem Informasi melalui Pendekatan UML)*. Yogyakarta(ID): Andi Publisher
- Tohardi, A. (2017). *Practical Understanding of Human Resource Management (Pemahaman Praktis Manajemen Sumber Daya Manusia)*. Bandung(ID): Universitas Tanjung Pura, Mandar Maju
- Tolstoy, D., Jonsson, A., & Sharma, D. D. (2016). The influence of a retail firm's geographic scope of operations on its international online sales. *International Journal of Electronic Commerce*, 20(3), 293-318. <https://doi.org/10.1080/10864415.2016.1121760>
- Tolstoy, D., Nordman, E. R., & Vu, U. (2022). The indirect effect of online marketing capabilities on the international performance of e-commerce SMEs. *International Business Review*, 31(3). 101946. <https://doi.org/10.1016/j.ibusrev.2021.101946>
- Triandra, N., Hambali, D., Nurasia, & Rosalina, N. (2019). Analysis of the effect of e-commerce on improving MSME performance (a case study on MSMEs in Sumbawa Regency) (Analisis pengaruh e-commerce terhadap peningkatan kinerja UMKM (studi kasus pada UMKM di Kabupaten Sumbawa)). *Jurnal Ekonomi Dan Bisnis Indonesia*, 4(1), 6-10.

- <https://doi.org/10.37673/jebi.v4i1.259>
- Tungka, D., Lionardo, M. M., Thio, S., & Iskandar, V. (2020). The influence of social media marketing on Instagram on buying interest in Chatime Indonesia (Pengaruh social media marketing pada Instagram terhadap minat beli Chatime Indonesia). *Jurnal Hospital dan Manajemen Jasa*, 8(2), 77-87.
- Unismuh, R., Adiningrat, A. A., Aisyah, S., Rustam, A., Warda, & Anggoro, R. (2023). Application of a marketing management information system to increase the turnover of food culinary SMEs in Makassar City (Penerapan sistem informasi manajemen pemasaran dalam meningkatkan omzet umkm kuliner makanan Kota Makassar). *Jurnal Ilmiah Manajemen Emor (Ekonomi Manajemen Orientasi Riset)*, 6(2), 248-259. <https://doi.org/10.32529/jim.v6i2.1997>
- Wibowo. (2016). *Performance Management, Fifth Edition (Manajemen Kinerja, Edisi Kelima)*. Jakarta(ID): PT. Raja Grafindo Persada
- Winarno, A., Agustina, Y., Wijijayanti, T., Churiyah, M., & Subagyo, S. (2020). Basic bookkeeping and management training for IKM Sanan Malang City (Pelatihan manajemen dan pembukuan dasar bagi IKM Sanan Kota Malang). *Jurnal Karinov*, 3(1), 59-64. <http://dx.doi.org/10.17977/um045v3i1p58-63>
- Yang, N., Fu, J., & Wang, Y. (2017). Study of the impact of the cross-border e-commerce model based on the belt and road on China's international trade system. *Revista de la Facultad de Ingeniería*, 32(8), 490-496.
- Zaelani, I. R. (2019). Increasing the competitiveness of Indonesian MSMEs: challenges and opportunities for science and technology development (Peningkatan daya saing UMKM Indonesia: tantangan dan peluang pengembangan IPTEK). *Jurnal Transborders*, 3(1), 15-31. <https://doi.org/10.23969/transborders.v3i1.1746>