

# The Effect of Human Resource Competencies, Financial Inclusion, E-Commerce Implementation, and Financial Knowledge on Performance of SMES

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| Article Info                                                                                                                     | Abstract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Received</b> : 2024-11-24<br><b>Accepted</b> : 2025-05-09<br><b>Published</b> : 2025-06-18                                    | <i>In the globalization era, good economic growth is an assessment of the government's success in economic development, especially in supporting programs with the concept of people's economy. The growth of SME is a government effort to increase the income of low-income groups and decrease income inequality and poverty through increasing business capacity and business management skills. The purpose of this study was to analyze the effect of human resource competencies, e-commerce implementation, financial knowledge, and financial inclusion on the performance of SMEs in Kuantan Singingi Regency. The sample used was 85 SMEs with the criteria that SMEs are registered at the Office of Cooperatives, Small &amp; Medium Enterprises. SMEs have used E-commerce, either in the form of a platform or social media-based E-commerce, and have recorded their finances. The data collection method used purposive sampling. The analysis tool used is Warp PLS. The results of the study stated that human resource competencies affect the performance of SMEs. E-commerce implementation affects the performance of SMEs. Financial knowledge affects SME performance, while financial inclusion does not affect SME performance.</i> |
| <b>Keywords:</b> SME performance; human resource competency; e-commerce implementation; financial knowledge; financial inclusion |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Introduction

The success of SMEs in running a business can be seen by how well the business performs. Performance, according to Moehariono in Subagyo (2020), is the result of work that can be achieved by a person or group of people in an organization both quantitatively and qualitatively, in accordance with the authority and duties of their respective responsibilities, to achieve the objectives of the organization concerned legally, not against the law, and in accordance with morals and ethics. In the context of SMEs, SME performance is the result of fully realized work and, when compared to work results, targets, goals, or standards predicted or agreed upon in business with value-added assets and income determined by law (Setiawati et al., 2021).

Based on data from the Ministry of Cooperatives and SMEs, it shows that currently there are approximately 64 million SMEs in Indonesia, and around 19.5 million SMEs have moved onboarding to the digital field. According to the Director General of Aptika of the Ministry of Communication and Information, SMEs are the breadwinners of the Indonesian economy because they are able to absorb nearly 97% of the national workforce (Biro Humas Kementerian Kominfo, 2022). It is stated that a healthy SME sector can contribute to the

economy through job creation ([Savitri et al., 2021](#)). However, in reality, SMEs in Indonesia still experience various challenges, such as in terms of human resources, strategies in marketing, innovation and technology to be improved, financing, branding, legality, and standardization and certification. During yesterday's pandemic, the challenges of UMKM increased in terms of adaptation to technological developments. Therefore, it is necessary to transform UMKM through the application of digital technology ([Limanseto, 2022](#)).

The same is true for SMEs in Kuantan Singingi Regency. SMEs in Kuantan Singingi Regency increased, initially amounted to 5,258 SME units in 2021 and then increased to 10,148 SME units in 2022, which were recorded in the Kuantan Singingi Regency SME Office. The SMEs in Kuantan Singingi Regency have indeed increased from the previous year, but after conducting pre-surveys and interviews, it was found that there are obstacles in the weak quality of the mindset of human resources, which has an impact on the development of SMEs because it greatly affects business stability for the sustainability of its business. Therefore, this becomes an obstacle related to the development of SME performance in Kuantan Singingi Regency, seen from several performance indicators that are also related to business owners as human resources in SMEs.

Human Resource Competence is one of the factors that affect the performance of SMEs by determining how the individuals involved in managing the business ([Fibriyani & Mufidah, 2018](#)). Success in an organization or company is also largely determined by the quality or ability of its human resources. Therefore, superior human resource competencies are needed. Human resource management in SMEs includes recruitment, selection, placement, development, compensation, retention, evaluation, promotion, and termination of employment relationships ([Widjaja et al., 2018](#)). In accordance with research conducted by Suindari & Juniariani (2020), Zhaviery et al. (2019), and Fachrunnisa et al., (2022), it states that human resource competencies affect the performance of SMEs, but in contrast to research conducted by Diana et al., (2022) and Ardiyani et al. (2021), which stated that human resource competencies have no effect on SME performance.

With the development of SMEs caused by increased economic growth, of course, it requires SME owners to be creative and innovative in developing effective financial inclusion so that their businesses develop and produce good business performance. SMEs will find it difficult to develop if business owners do not know how to market an effective product ([Amalia, 2018](#)). For an optimal result, financial inclusion must be implemented to the maximum extent possible because there is increasing competition in terms of price, service, and product quality ([Triandra et al., 2019](#)). In accordance with research conducted by Suindari & Juniariani (2020), Ningrum et al., (2020), and Albar et al., (2023), they state that financial inclusion has an effect on SME performance. However, it is not in line with research conducted by Ardiyani et al., (2021), which states that financial inclusion has no effect on SME performance.

It was mentioned earlier that the use or application of this Internet as a marketing medium can be referred to as e-commerce. According to Romero & Rodríguez (2010), the application of e-commerce offers opportunities for business entities in a competitive market environment and can be a core component of business and marketing strategies that create value to enable companies, suppliers, customers, and consumers to exchange information about business activities, goods, and services. In accordance with research conducted by Akob et al., (2022), Hutabarat et al., (2022), and Auliandari et al., (2022), e-commerce has an effect on SME performance. However, it is different from the research conducted by Triandra et al., (2019) and Subagio & Saraswati (2021) that e-commerce has no effect on SME performance.

Financial knowledge is an individual's expertise of issues related to the financial world ([Herleni & Tasman, 2019](#)). Financial knowledge will affect how individuals apply saving behavior, invest in activities, and manage their finances. For SMEs, it is important to understand and have knowledge about finance. Because financial knowledge affects financial management, which will have an impact on the performance and sustainability of SMEs ([Desiyanti, 2016](#)). In

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accordance with research by Kasendah et al., (2019), Ferdiansyah & Bukhari (2021), and Herleni & Tasman (2019), they found that financial knowledge has a positive effect on SME performance. However, it is not in line with Kumalasari & Asandimitra's research (2019) that financial knowledge or financial literacy has no effect on SME performance.

For owners in the SME sector, it is very important to understand and have financial knowledge. Because financial knowledge, which is divided into financial inclusion and financial literacy, affects financial management, which will have an impact on the performance and sustainability of SMEs (Desiyanti, 2016). Segara (2017) explained that increasing financial inclusion is believed to be beneficial in developing SMEs because SME owners are able to better understand the basic concepts of financial products, carry out better financial planning and management, and protect them from fraud and unhealthy businesses in the financial market. In line with research conducted by Kusuma et al., (2021), Iko (2019), and Septiani & Wuryani (2020), which state that financial inclusion has an effect on SME performance. However, it contrasts with the results of research by Hilmawati & Kusumaningtias (2021) and Amin & Pamungkas (2022), which state that financial inclusion has no effect on SME performance.

The novelty in this study is that the authors add two new variables, namely e-commerce implementation and financial knowledge. For the application of e-commerce, applying e-commerce will make it easier for business owners for marketing, selling, and transacting as it can be done anywhere and anytime and can expand market share, which will have an impact on improving business performance. Then for the Financial Knowledge variable is a variable that explains knowledge about financial management, where good financial management will have a good impact on SME performance. Furthermore, this study aims to determine and analyze the effect of human resource competencies, financial inclusion, e-commerce implementation, and financial knowledge on SME performance.

## **Literature Review**

### **Resource-Based View Theory (RBV)**

The main idea in the Resource-Based View Theory (RBV) states that a company can achieve a performance advantage and sustainable competitive advantage if it obtains valuable resources, has valuable capabilities that are not substantial and cannot be imitated, and requires the ability to absorb and apply them (Barney, 1991). This Resource-Based View Theory (RBV) suggests that tangible and intangible resources in a company or organization can encourage a company or organization to develop strategies to realize competitive advantage (Sari, 2020). This theory suggests that the performance of an organization, including SMEs, is influenced by the resources it has. The performance of SMEs will increase if entrepreneurs allocate their internal and external resources correctly, respond proactively to market conditions, seek opportunities, and take risks in implementing new ideas (Wijaya & Widjaja, 2023).

### **SME Performance**

SME performance is the result of fully realized work compared to work results, targets, goals, or standards predicted and agreed upon in business with value-added assets and income determined by law (Setiawati et al., 2021). Then, according to Mutegi et al., (2015), SME performance is the result or evaluation of the company's work achieved by a person or group with the division of activities in the form of their duties and roles in a certain period with the standards of the company.

### **Human Resource Competencies**

Human Resource Competence is the ability of individuals to plan and carry out activities related to understanding, creativity, ability, and characteristics of personality that will affect the performance of a business (Kholid Murtadlo & Hanan, 2019). Human Resource Competencies reflect the productive capacity of human resources, including various skills to produce economic added value (Rapih et al., 2017). Furthermore, according to Mangkunegara (2012), human

resource competencies are competencies related to knowledge, skills, abilities, and personality characteristics that directly affect performance.

### **Financial Inclusion**

The World Bank defines financial inclusion as the ability for individuals and business units to have access to useful and affordable financial products to fulfill their needs in a responsible way (World Bank, 2022). Financial inclusion is a comprehensive activity that aims to eliminate all forms of barriers to community access in using or utilizing financial services (Iko, 2019). Based on the statement of the Center for Financial Inclusion, it provides an understanding of financial inclusion, which means the availability of access to appropriate financial products such as financing, savings, insurance, and payments. The availability of quality access consists of convenience, reach, suitability, protection, and availability of services to the community (Kusuma et al., 2021).

### **Application of E-commerce**

The application of e-commerce is a buying and selling transaction that uses an internet connection or digital technology (Lovita & Susanty, 2021). The presence of e-commerce technology allows various SMEs to easily enter the global market and in real time, as well as easily build business partners and develop good relationships with customers (Li & Hong, 2013). The application of e-commerce will also make it easier for businesses to identify workflows, competition, and more effective product marketing (Subagio & Saraswati, 2021). E-commerce as a form of advancement in information technology provides many changes, lowers costs, facilitates promotion, and provides opportunities to expand market share without having to have large capital (Bernadi, 2013).

### **Financial Knowledge**

According to Herleni & Tasman (2019), financial knowledge is an individual's expertise of issues related to the world of finance. If someone has high financial knowledge, it can show more responsible financial behavior, as financial knowledge has the ability to understand the concept of financial management itself. According to Durband et al., (2018), financial knowledge refers to a basic understanding of financial concepts and procedures and the use of that knowledge to solve financial problems. The Association of Chartered Certified Accountants (2014) defines that financial knowledge includes knowledge of financial concepts, skills in managing personal and corporate finances, and the ability to make financial decisions in certain situations (Idawati & Pratama, 2020).

## **Conceptual Framework and Hypothesis Development**

### **The Effect of Human Resource Competencies on SME Performance**

Human resource competency is one of the factors that influence the performance of SMEs. It is because a business unit can be determined by how the individuals involved in it manage the business (Wahyudiati & Isroah, 2018). In order to realize good SME performance and continue to increase, it requires the participation of entrepreneurs with quality human resource competencies in controlling, leading, managing, and innovating (Fibriyani & Mufidah, 2018). An understanding, creativity, and characteristics of the human resources owned by an SME will enable SMEs to continue to develop and be able to compete competitively with other businesses (Fachrunnisa et al., 2022).

In line with the RBV theory, which states that one of the important resources in business sustainability is business owners with their competencies. Wijaya & Widjaja (2023) states that performance is strongly influenced by human resources by utilizing aspects of their skills, knowledge, and abilities in responding proactively to market conditions, seeking marketing opportunities, and taking various risks when implementing new ideas that will have an impact on improving performance. In accordance with the research of Suindari & Juniariani (2020), K. Sari & Sijabat (2022), and Fachrunnisa et al., (2022), which states that human resource competencies

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have an effect on SME performance, because SME owners who have good human resource competencies tend to have an impact on improving the performance of their SMEs. Based on the description above, the hypothesis is as follows:

H<sub>1</sub>: Human resource competencies affect the performance of SME

### **The Effect of Financial Inclusion on SME Performance**

Financial inclusion is needed by SMEs to get convenience in every business process, and one of the supporting factors for a business is capital. Istiyana et al., (2017) state that the problems often faced by SME owners are related to capital. This problem can be overcome by facilitating access and providing good quality to the use of financial services. Optimizing the contribution of the financial sector and opening access to financial services as widely as possible, especially to business actors such as SMEs, who need capital support so that business performance remains stable, is an important element of financial inclusion in supporting economic growth (Septiani & Wuryani, 2020).

In RBV theory, financial resources are one aspect of internal resources that can support SME performance. SMEs that have access to adequate financial resources, whether in the form of capital, loans, or even investments, will have the potential to develop their operations, invest in innovation, and expand their business. In line with research conducted by Iko (2019), and Kusuma et al. (2021), financial inclusion has an effect on SME performance. Financial inclusion is one of the aspects needed for additional capital for SME owners in improving and developing their business. Based on the description above, the hypothesis is as follows:

H<sub>2</sub>: Financial inclusion affects the performance of SMEs

### **The Effect of E-commerce Implementation on SME Performance**

By implementing e-commerce, it will provide SME owners with an expansion of their business range to enable them to gain new market share, increase marketing and sales efficiency, and improve business operations, which will have an impact on their business performance. For SMEs, the application of e-commerce can improve the quality of customer service and support the provision of access to more detailed information for customers through one of the e-commerce platforms used so that the application of e-commerce comes to be one of the effective financial inclusions to market local products. The application of e-commerce also offers a variety of opportunities for SMEs without spending more payment costs to improve work efficiency (Akob et al., 2022).

RBV theory emphasizes that adjusting the resources and capabilities of businesses to changes in an increasingly modern environment is important. When SMEs implement e-commerce, they can utilize human resource knowledge of technology, customer databases, and other knowledge that has been developed and help create a competitive advantage that has an impact on future business performance. Supported by research conducted by Akob et al., (2022), Wijaya & Widjaja (2023), and Auliandari et al., (2022), where e-commerce has an effect on SME performance and the existence of e-commerce is an alternative marketing used to be able to reach more customers. Based on the description above, the hypothesis is as follows:

H<sub>3</sub>: E-commerce affects the performance of SMEs

### **The Effect of Financial Knowledge on SME Performance**

In the opinion of Widayanti et al., (2017), ineffective financial management will have an impact on the financial crisis, so it can be said that when SMEs have good financial knowledge, they will be able to achieve their company goals, have a direction of business development, and be able to survive in difficult economic conditions so that they can maintain their business performance and vice versa. Financial knowledge helps SME owners to acquire the skills necessary for them to develop financial strategies in making decisions and choices of financial services that will have an impact on business welfare and increased business performance (Idawati & Pratama, 2020).

In connection with the RBV theory that the success or failure of a business will be significantly determined by internal business, one of which is human resources, especially in financial management knowledge, which has an impact on business performance and sustainability. In accordance with research conducted by Kasendah et al., (2019), Ferdiansyah & Bukhari., (2021), and Herleni & Tasman (2019), it was shown that financial knowledge has a positive effect on SME performance. If the level of knowledge of an owner or manager of an SME is higher, the performance achieved by the SME will increase. Based on the description above, the hypothesis is as follows:

H<sub>4</sub>: Financial knowledge affects the performance of SMEs

Based on the problems and the theoretical basis that have been described, the authors can formulate the framework in this study as follows:

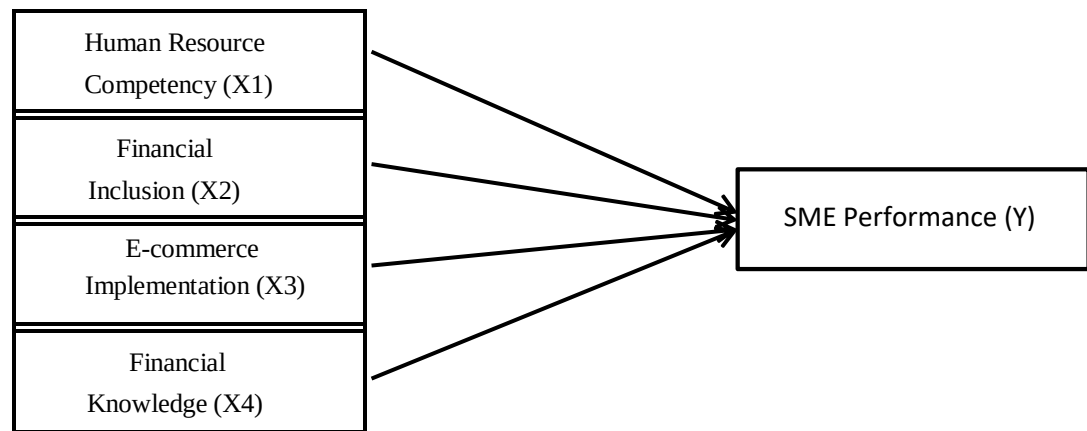


Figure 1: Research Model

## Methodology

### Type and Source of Data

This research used quantitative research. According to Arikunto (2010), quantitative research is widely required to use numbers, starting from data collection, interpretation of data, and appearance of the results. Then the data were analyzed and processed into statistical analysis to test hypotheses that explain the relationship between the variables used. Then the type of data source used was primary data obtained directly from the original source, namely the respondents' answers to the interviews and questionnaires distributed by SME owners.

### Population and Sample

The population in this study were SME owners in Kuantan Singingi Regency in 2022, totaling 10,148 SMEs from 9 sub-districts. This study used the theoretical formula of Hair et al., (2021) in sample calculation. According to it, a good sample size ranges from 100-200 respondents and can be adjusted to the number of indicators used in the questionnaire with the assumption that it is 5-10 times the number of indicators available. In this study, the number of indicators used was 17 indicators. Therefore, the calculation is as follows:

- 5 x 17 to 10 x 17 samples
- 5 x 17 = 85 to 10 x 17 = 170 samples



Based on the above calculations, the minimum sample limit is 85 to a maximum of 170 samples, so researchers can adjust to the conditions of research, which is not a large scale, using the assumption of 6 times the number of indicators, or as many as 102 respondents, and round up to 150 respondents who are considered sufficiently representative of the population. Then the researchers took the number of samples distributed in this study as many as 150 SMEs in Kuantan Singingi Regency so that the number could reach a minimum of 85 SME samples. Then the sampling technique in this study was Purposive sampling, namely the sample selection process using certain considerations (Sugiyono, 2016). Among them are registered at the Office of SMEs and Cooperatives, already using e-commerce, either in the form of a platform or social media-based e-commerce, and SMEs that have recorded their finances.

### Data Collection Technique

This study used a questionnaire method by providing sheets of questions or statements directly and indirectly to SME owners to obtain information regarding the variables examined. This questionnaire consists of an attachment to the respondent's identity and a list of statements for each variable. In order to obtain the score of each variable, the statements in the questionnaire were measured based on a Likert measuring scale, which had seven points, namely very strongly agree (7), strongly agree (6), agree (5), neutral (4), disagree (3), strongly disagree (2), very strongly disagree (1).

Table 1: Operational Definition and Measurement of Variables

| Variable                  | Definition                                                                                                                                                                                 | Indicator                                                                                   |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| SME Performance           | A modification of the desire to fulfill business goals, where one's performance in running a business proves how capable someone is in maintaining and improving the business.             | 1. Sales level<br>2. Business stability level<br>3. Profit level<br>Source: Suryana (2013)  |
| Human Resource Competency | Competence as knowledge, skills, and abilities acquired by individuals that have become part of themselves, so that they can perform cognitive, effective, and psychomotor behaviors well. | 1. Skill<br>2. Ability<br>3. Knowledge<br>Source: (Ardiana et al., 2010)                    |
| Financial Inclusion       | E-commerce is a comprehensive activity that aims to eliminate all forms of barriers in the form of both price and non-price to public access in using or utilizing financial services.     | 1. Access dimension<br>2. Quality dimension<br>3. Welfare dimension<br>Source: (Iko, 2019)  |
| E-commerce Implementation | E-commerce implementation is a buying and selling transaction that uses an internet connection or digital technology.                                                                      | 1. Marketing<br>2. Sales<br>3. Payment<br>Source: (Lovita & Susanty, 2021)                  |
| Financial Knowledge       | Is an individual's expertise of issues related to the world of finance. Someone who has high financial knowledge will be able to show more responsible financial behavior.                 | 1. General knowledge of finance<br>2. Savings and loans<br>Source: (Herleni & Tasman, 2019) |

Source: Previous research

### Data Analysis Method

The data analysis method used in this research is path analysis using structural equation modeling (SEM) of the Warp PLS 8.0 program. PLS is an alternative method in structural equation modeling that is used in order to overcome problems that arise with very complex variables, but the dimensions of the data sample size are relatively small. In the PLS-SEM method, there are two phases of assessing the measurement model used, namely the external measurement model (outer model) and the internal measurement model (inner model).

## Results and Discussion

### Results

#### General Description of Respondents

Table 2: Respondents' Demographic Data Results

| No | Respondent Characteristics | Information           | Total | Percentage |
|----|----------------------------|-----------------------|-------|------------|
| 1. | Gender                     | a. Female             | 57    | <b>70%</b> |
|    |                            | b. Male               | 28    | 30%        |
| 2. | Age                        | a. 17-25 Years        | 30    | <b>35%</b> |
|    |                            | b. 26-35 Years        | 25    | 30%        |
|    |                            | c. 36-45 Years        | 16    | 20%        |
|    |                            | d. 46-55 Years        | 9     | 10%        |
|    |                            | e. 56-65 Years        | 5     | 5%         |
| 3. | Length of business         | a. <1 Years           | 5     | 5%         |
|    |                            | b. 1-5 Years          | 58    | <b>70%</b> |
|    |                            | c. 6-10 Years         | 13    | 15%        |
|    |                            | d. 11-15 Years        | 1     | 1%         |
|    |                            | e. >16 Years          | 8     | 9%         |
| 4. | Number of workers          | a. 1-10 People        | 84    | <b>99%</b> |
|    |                            | b. 11-20 People       | -     | -          |
|    |                            | c. >21 People         | 1     | 1%         |
| 5. | Education                  | a. Primary school     | 2     | 2%         |
|    |                            | b. Junior High School | 5     | 5%         |
|    |                            |                       | 33    | 28%        |
|    |                            | c. Senior High School | 10    | 10%        |
|    |                            |                       | 35    | <b>40%</b> |
|    |                            | d. Diploma            |       |            |
|    |                            | e. Bachelor           |       |            |

Source: Processed Data (2024)

Based on table 2, the characteristics of respondents based on gender, the majority of SMEs in Kuantan Singingi Regency are female, namely 57 people, or around 70%. This is because many women start SMEs to support their family economy. They are looking for additional ways to generate income without leaving home or their main job. In other cases, women are also often associated with certain skills such as cooking, sewing, and handicrafts, which are often the basis of many SMEs, and many women have the flexibility to balance household and work responsibilities more effectively compared to formal employment.



Based on age, 30 people, or around 35%, are dominated by ages between 17-25 years; most of the sample is in the young or productive age category, where physical health and mindset greatly affect the way a business works. Based on the length of business, most of them were dominated by businesses that were established in the range of 1–5 years, namely 58 businesses, or around 70%. The majority of SMEs in Kuantan Singingi Regency survive in 1–5 years because SMEs often lack experience in managing an effective business. Lack of knowledge in financial, marketing, and operational management leads to difficulties in sustaining the business in the long term.

Furthermore, based on the number of workers, the majority are in the range of 1-10 workers, with a total of 84 businesses, or equivalent to 99%. This is because SMEs in Kuantan Singingi Regency are still classified as small home and micro businesses that do not require a lot of labor in the operational process. Then, based on the level of education, it is dominated by bachelor's degrees for as many as 35 people, or equivalently, 40%. This is because overall, it is seen from the growing interest in entrepreneurship among undergraduates and the combination of the desire to be independent, challenges in the job market, support from various programs, and also the opportunities offered by technology and innovation that many undergraduate graduates choose to undergo SMEs.

Table 3: Descriptive Statistics Results

| Variable                  | N  | Mean  | SD    | Min   | Max   |
|---------------------------|----|-------|-------|-------|-------|
| Human Resource Competency | 85 | 4.987 | 1.227 | 1.733 | 7.000 |
| Financial Inclusion       | 85 | 5.079 | 1.212 | 2.133 | 7.000 |
| E-commerce Implementation | 85 | 4.998 | 1.132 | 2.333 | 7.000 |
| Financial Knowledge       | 85 | 5.106 | 1.066 | 2.222 | 7.000 |
| SME Performance           | 85 | 4.915 | 1.238 | 1.600 | 7.000 |

*Source: Processed Data (2024)*

Based on table 3, it shows that each mean value is greater than the standard deviation value, which means that the mean value can be used to represent the overall data for each variable and shows a minimum variation between the maximum and minimum values, indicating that the results are normal and do not cause bias. The table above explains that the mean value for Human Resource Competencies shows that respondents assess the quality of Human Resource Competencies on improving SME performance in Kuantan Singingi Regency is classified as good.

Likewise, the mean value for the financial inclusion variable shows that respondents assess the financial inclusion they use to provide a good improvement on SME performance in Kuantan Singingi Regency. Furthermore, the mean value for the e-commerce implementation variable shows that respondents assess the e-commerce implementation to provide a good improvement on SME performance. The mean value for the financial knowledge variable shows that respondents assess that their financial knowledge improves the SME performance in Kuantan Singingi Regency to be better. Finally, the mean value for the SME Performance variable shows that respondents assess the level of SME performance in Kuantan Singingi Regency has increased well.

## Outer Model Measurement Results

### Convergent Validity

Convergent validity is measured by looking at the item reliability (validity indicator) indicated by the loading factor value. The loading factor value can be considered valid if greater than 0.70. Convergent validity of the measurement model with reflexive indicators is assessed based on the correlation between item scores or component scores estimated with WarpPLS 8.0 software. The results of the convergent validity test with the loading factor and AVE values explain the

existence of the attributes of these variables. The indicators of each variable in this study can be seen in the following table:

Table 4: Loading Factor

| Y       | X1      | X2      | X3      | X4     | Type       | SE    | P-value |
|---------|---------|---------|---------|--------|------------|-------|---------|
| (0.892) | -0.174  | -0.254  | 0.011   | -0.039 | Reflective | 0.083 | <0.001  |
| (0.902) | 0.067   | -0.061  | 0.210   | 0.009  | Reflective | 0.083 | <0.001  |
| (0.872) | -0.264  | -0.214  | 0.008   | -0.060 | Reflective | 0.084 | <0.001  |
| (0.724) | -0.156  | 0.028   | 0.013   | 0.083  | Reflective | 0.088 | <0.001  |
| (0.731) | -0.132  | 0.198   | 0.414   | -0.247 | Reflective | 0.087 | <0.001  |
| (0.815) | -0.181  | -0.037  | -0.136  | 0.192  | Reflective | 0.085 | <0.001  |
| (0.796) | -0.199  | 0.144   | 0.076   | 0.259  | Reflective | 0.086 | <0.001  |
| (0.743) | -0.034  | 0.027   | -0.032  | 0.450  | Reflective | 0.087 | <0.001  |
| (0.866) | -0.038  | 0.107   | -0.050  | 0.341  | Reflective | 0.084 | <0.001  |
| (0.826) | -0.131  | 0.130   | 0.068   | 0.253  | Reflective | 0.085 | <0.001  |
| (0.753) | 0.596   | -0.199  | -0.614  | -0.295 | Reflective | 0.087 | <0.001  |
| (0.704) | 0.477   | -0.174  | -0.320  | -0.284 | Reflective | 0.088 | <0.001  |
| (0.844) | -0.074  | 0.384   | 0.115   | -0.296 | Reflective | 0.085 | <0.001  |
| (0.835) | 0.090   | 0.097   | 0.257   | -0.468 | Reflective | 0.085 | <0.001  |
| (0.909) | 0.230   | -0.146  | -0.090  | 0.067  | Reflective | 0.083 | <0.001  |
| -0.038  | (0.823) | 0.007   | 0.326   | -0.234 | Reflective | 0.085 | <0.001  |
| 0.414   | (0.768) | -0.193  | -0.383  | -0.290 | Reflective | 0.086 | <0.001  |
| 0.028   | (0.880) | -0.116  | -0.065  | 0.140  | Reflective | 0.084 | <0.001  |
| -0.004  | (0.736) | -0.046  | 0.054   | 0.410  | Reflective | 0.087 | <0.001  |
| -0.228  | (0.828) | -0.156  | 0.334   | 0.214  | Reflective | 0.085 | <0.001  |
| -0.160  | (0.785) | -0.224  | 0.156   | -0.135 | Reflective | 0.086 | <0.001  |
| 0.074   | (0.720) | -0.189  | 0.163   | -0.048 | Reflective | 0.088 | <0.001  |
| -0.022  | (0.750) | -0.034  | -0.111  | 0.256  | Reflective | 0.087 | <0.001  |
| 0.090   | (0.906) | -0.084  | -0.056  | -0.126 | Reflective | 0.083 | <0.001  |
| 0.073   | (0.825) | 0.204   | -0.362  | 0.134  | Reflective | 0.085 | <0.001  |
| -0.125  | (0.894) | 0.256   | -0.127  | 0.007  | Reflective | 0.083 | <0.001  |
| 0.055   | (0.791) | 0.107   | -0.138  | -0.322 | Reflective | 0.086 | <0.001  |
| -0.185  | (0.865) | 0.196   | 0.009   | 0.092  | Reflective | 0.084 | <0.001  |
| 0.237   | (0.843) | 0.202   | 0.138   | -0.065 | Reflective | 0.085 | <0.001  |
| -0.195  | (0.745) | -0.002  | 0.080   | -0.015 | Reflective | 0.087 | <0.001  |
| -0.135  | 0.062   | (0.770) | 0.105   | -0.025 | Reflective | 0.086 | <0.001  |
| 0.128   | 0.085   | (0.804) | -0.173  | -0.031 | Reflective | 0.086 | <0.001  |
| -0.648  | -0.128  | (0.737) | -0.026  | 0.365  | Reflective | 0.087 | <0.001  |
| 0.372   | 0.107   | (0.814) | -0.339  | 0.027  | Reflective | 0.085 | <0.001  |
| 0.243   | -0.066  | (0.847) | -0.234  | 0.165  | Reflective | 0.085 | <0.001  |
| 0.393   | 0.019   | (0.843) | -0.148  | -0.227 | Reflective | 0.085 | <0.001  |
| -0.263  | -0.193  | (0.724) | -0.209  | 0.385  | Reflective | 0.088 | <0.001  |
| 0.308   | -0.013  | (0.815) | 0.009   | -0.491 | Reflective | 0.085 | <0.001  |
| -0.150  | 0.393   | (0.820) | -0.101  | -0.240 | Reflective | 0.085 | <0.001  |
| 0.347   | -0.150  | (0.847) | 0.117   | -0.509 | Reflective | 0.084 | <0.001  |
| 0.161   | 0.036   | (0.803) | 0.437   | -0.087 | Reflective | 0.086 | <0.001  |
| 0.023   | 0.293   | (0.832) | 0.096   | -0.131 | Reflective | 0.085 | <0.001  |
| 0.033   | -0.250  | (0.825) | 0.353   | 0.137  | Reflective | 0.085 | <0.001  |
| -0.356  | -0.021  | (0.840) | 0.164   | 0.285  | Reflective | 0.085 | <0.001  |
| -0.640  | -0.223  | (0.733) | -0.077  | 0.519  | Reflective | 0.087 | <0.001  |
| -0.420  | 0.144   | -0.274  | (0.765) | 0.172  | Reflective | 0.087 | <0.001  |

|        |        |        |         |         |            |       |        |
|--------|--------|--------|---------|---------|------------|-------|--------|
| 0.067  | 0.029  | 0.028  | (0.846) | 0.061   | Reflective | 0.085 | <0.001 |
| -0.041 | 0.092  | -0.264 | (0.736) | 0.137   | Reflective | 0.087 | <0.001 |
| 0.121  | 0.162  | 0.222  | (0.900) | -0.361  | Reflective | 0.083 | <0.001 |
| 0.224  | -0.168 | 0.216  | (0.902) | -0.266  | Reflective | 0.083 | <0.001 |
| -0.026 | -0.131 | -0.369 | (0.732) | 0.338   | Reflective | 0.087 | <0.001 |
| -0.195 | 0.157  | -0.190 | (0.702) | -0.061  | Reflective | 0.088 | <0.001 |
| 0.319  | -0.023 | -0.242 | (0.775) | 0.064   | Reflective | 0.086 | <0.001 |
| 0.137  | 0.257  | -0.071 | (0.863) | -0.292  | Reflective | 0.084 | <0.001 |
| 0.220  | -0.142 | 0.230  | (0.892) | -0.165  | Reflective | 0.083 | <0.001 |
| -0.179 | -0.128 | 0.217  | (0.848) | 0.223   | Reflective | 0.084 | <0.001 |
| -0.208 | -0.008 | 0.048  | (0.838) | 0.331   | Reflective | 0.085 | <0.001 |
| 0.145  | -0.217 | 0.243  | (0.745) | 0.083   | Reflective | 0.087 | <0.001 |
| -0.048 | 0.017  | 0.093  | (0.823) | -0.072  | Reflective | 0.085 | <0.001 |
| -0.225 | -0.034 | -0.068 | (0.725) | -0.060  | Reflective | 0.088 | <0.001 |
| 0.174  | 0.316  | 0.169  | -0.249  | (0.803) | Reflective | 0.086 | <0.001 |
| 0.188  | 0.163  | -0.216 | -0.116  | (0.859) | Reflective | 0.084 | <0.001 |
| 0.189  | 0.234  | 0.004  | 0.018   | (0.892) | Reflective | 0.083 | <0.001 |
| -0.297 | -0.307 | 0.155  | -0.005  | (0.772) | Reflective | 0.086 | <0.001 |
| -0.355 | -0.196 | -0.003 | 0.160   | (0.819) | Reflective | 0.085 | <0.001 |
| -0.134 | 0.554  | 0.039  | -0.224  | (0.777) | Reflective | 0.086 | <0.001 |
| 0.042  | -0.333 | 0.157  | 0.216   | (0.886) | Reflective | 0.084 | <0.001 |
| 0.176  | 0.132  | -0.221 | -0.123  | (0.791) | Reflective | 0.086 | <0.001 |
| 0.243  | -0.432 | -0.257 | 0.019   | (0.746) | Reflective | 0.087 | <0.001 |
| -0.244 | -0.146 | 0.151  | 0.267   | (0.832) | Reflective | 0.085 | <0.001 |

Source: Processed Data Warp PLS 8.0 (2024)

Based on the table above, it is known that each indicator of the variable Human Resource Competence, Financial Inclusion, E-commerce Implementation, Financial Knowledge, and SME Performance has a loading value ( $> 0.70$ ), which means that all variables meet the convergent validity criteria. An individual reflexive measure is considered high if it correlates more than 0.70 with the indicator being measured. Then another measurement of convergent validity is by looking at the value of AVE (average variance extracted) with the criteria that must be met, namely the AVE value  $> 0.50$ , so that each indicator can be said to be valid.

Table 5: Results of AVE Value

| Variable | Average Variance Extracted (AVE) |
|----------|----------------------------------|
| Y        | 0,668                            |
| X1       | 0,660                            |
| X2       | 0,647                            |
| X3       | 0,654                            |
| X4       | 0,671                            |

Source: Processed Data Warp PLS 8.0 (2024)

Based on the table above, the five variables have met convergent validity. The variables of human resources competence (X1), financial inclusion (X2), e-commerce implementation (X3), financial knowledge (X4), and SME performance (Y) each have an AVE value  $> 0.50$  with a p-value that exceeds the value of other constructs.

### Discriminant Validity

Discriminant validity can be measured using the square root value of AVE and cross-loading. The criteria that must be met are the square root value of AVE > 0.50. The cross-loading value in the same indicator block must be greater than the correlation value between other latent variables.

Table 6: Correlation Between Constructs and AVE Square Root Value Results

|    | Y       | X1      | X2      | X3      | X4      |
|----|---------|---------|---------|---------|---------|
| Y  | (0.817) | 0.877   | 0.807   | 0.834   | 0.843   |
| X1 | 0.877   | (0.813) | 0.786   | 0.779   | 0.854   |
| X2 | 0.807   | 0.786   | (0.805) | 0.722   | 0.707   |
| X3 | 0.834   | 0.779   | 0.722   | (0.809) | 0.740   |
| X4 | 0.843   | 0.854   | 0.707   | 0.740   | (0.819) |

Source: Processed Data Warp PLS 8.0 (2024)

The AVE square root value of the data on each construct is greater than the correlation value; the data above shows that the AVE square root value in parentheses for each construct is greater than the correlation value between the construct and other block constructs. These results indicate that discriminant validity is fulfilled, which means that the measured variable really measures and describes the variable and can distinguish it from the other constructs studied.

### Composite Reliability

Reliability test using composite reliability and Cronbach's alpha values. A construct can be said to be reliable if the composite reliability value is more than 0.70 or Cronbach's alpha is more than 0.60.

Table 7: Outer/Measurement Model

| Variable | Composite Reliability (CR) | Cronbach's Alpha | Decision |
|----------|----------------------------|------------------|----------|
| Y        | 0,968                      | 0,964            | Reliable |
| X1       | 0,967                      | 0,963            | Reliable |
| X2       | 0,965                      | 0,961            | Reliable |
| X3       | 0,966                      | 0,962            | Reliable |
| X4       | 0,953                      | 0,945            | Reliable |

Source: Processed Data Wrap pls 8.0 (2024)

Based on the table above, all variables have a composite reliability value greater than 0.70 and Cronbach's alpha greater than 0.60 so that all indicators in the estimated model fulfill the reliability requirements.

### Inner Model Measurement Results

The inner model is assessed by looking at the r-square for each endogenous latent variable as the predictive power of the structural model. The r-square results using the Warp PLS 8.0 program are presented in the table below:

Table 8: Results of R-square Value

| Coefficient               | SME Performance |
|---------------------------|-----------------|
| <i>R-squared</i>          | 0,869           |
| <i>Adjusted R-squared</i> | 0,861           |

Source: Warp PLS 8.0 Processed Data (2024)

Based on the table above, the r-square value for the SME performance variable is 0.869. This result shows that 86.9% of the SME performance value variable is influenced by the human resources competency variable (X1), financial inclusion (X2), e-commerce implementation (X3),

and financial knowledge (X4), while the remaining 13.1% is likely to be influenced by other variables not examined in this study.

The next stage is to conduct a structural evaluation (innear model), which includes model fit and path coefficient tests. In the model fit test, there are three test indices, namely the average path coefficient (APC), average r-square (ARS), and average variance factor (AVIF).

Table 9: Model Fit and Quality Indices

|        | Index | P-Value | Criteria                                                     | Information |
|--------|-------|---------|--------------------------------------------------------------|-------------|
| APC    | 0,255 | P=0,003 | P <0,05                                                      | Accepted    |
| ARS    | 0,869 | P<0,001 | P<0,05                                                       | Accepted    |
| AARS   | 0,862 | P<0,001 | P<0,05                                                       | Accepted    |
| AVIF   | 4,041 |         | Acceptable if $\leq 5$ ,<br>Idelly $\leq 3,3$                | Accepted    |
| AFVIF  | 4,773 |         | Acceptable if $\leq 5$ , Idelly $\leq 3,3$                   | Accepted    |
| GoF    | 0,757 |         | Small $\geq 0,1$ , medium $\geq 0,25$ ,<br>large $\geq 0,36$ | Accepted    |
| SPR    | 1,000 |         | Acceptable if $\geq 0,7$ , Idelly = 1                        | Accepted    |
| RSCR   | 1,000 |         | Acceptable if $\geq 0,9$ , Idelly = 1                        | Accepted    |
| SSR    | 1,000 |         | Acceptable if $\geq 0,7$                                     | Accepted    |
| NLBCCR | 1,000 |         | Acceptable if $\geq 0,7$                                     | Accepted    |

Source: Warp PLS 8.0 Processed Data (2024)

The output results above explain that APC has an index of 0.255 with a p-value = 0.003, and ARS has an index of 0.869 with a p-value <0.001. Based on the criteria, APC has met the criteria because it has a p-value <0.05. Similarly, the p-value of ARS is < 0.001 (< 0.05). The AVIF and AFVIF values, which must be  $\leq 5$ , have been fulfilled because, based on these data, AVIF has a value  $\leq 5$  and the AFVIF value is good with a value  $\leq 5$ . Thus, the conclusion that can be drawn is that the innear model is acceptable.

### Hypothesis Testing Results

Hypothesis testing is carried out based on the results of testing the structure model (innear model), which includes the r-square output, parameter coefficients, and t-statistics. To determine whether the hypothesis is accepted or rejected, consider the significance value between constructs, t-statistics, and p-values. Hypothesis testing is carried out to prove the truth of research assumptions or hypotheses. The following hypothesis is intended to prove the truth of the research. The following is a picture of the research results of the PLS coefficient test that have been obtained based on data processing, which consists of 5 hypotheses. The following is a picture of the research results of the PLS coefficient test that have been obtained based on data processing:

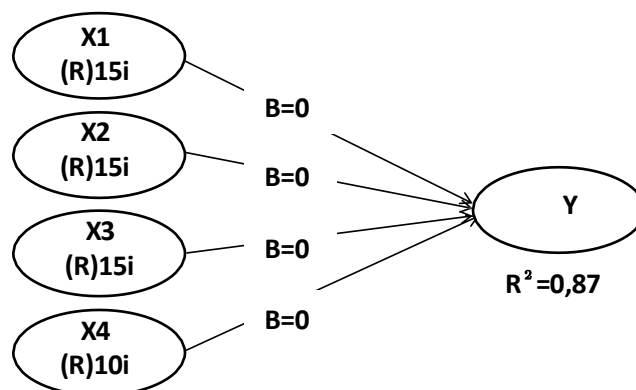


Figure 2: Results of Processed Data Warp PLS 8.0 (2024)

Based on the path diagram, the PLS Regression Coefficient value can be compiled, which is as follows:

Table 10: PLS Regression Coefficient and P-Value Test Results

| Influence | Path coefficient | P-value | Information |
|-----------|------------------|---------|-------------|
| X1        | 0,263            | 0,005   | Accepted    |
| X2        | 0,274            | 0,004   | Accepted    |
| X3        | 0,271            | 0,004   | Accepted    |
| X4        | 0,213            | 0,020   | Accepted    |

Source: Warp PLS 8.0 Processed Data (2024)

## Discussion

### The Effect of Human Resource Competencies on SME Performance

Human Resource Competencies affect the performance of SMEs in Kuantan Singingi Regency. This shows that human resource competencies have a role in improving SME performance. In a competency, there are several indicators that create quality human resource competencies. Based on the knowledge indicators, SME owners in Kuantan Singingi Regency have good knowledge by attending trainings or seminars related to how to develop a good product, knowing well the desires and characteristics of consumers and the right strategy for their business.

For the ability indicator, SME owners in Kuantan Singingi Regency also have good abilities, as seen from the ability to manage a good business by attending trainings and the ability to make decisions that are greatly influenced by their ability to manage business. Finally, the skills indicator of SME owners in Kuantan Singingi Regency showed that they have good skills through transaction bookkeeping skills, although they are not utilizing standardized accounting elements, good business administration, and good communication with workers and consumers.

With these three indicators, it can be stated that human resources are able to improve the performance and competitive strategies of SMEs from the knowledge gained through formal education to knowledge from training. Knowledge that comes from work and experience. Then skills through production skills, communication, working with organizations, and the ability to make financial reports on their business (Savitri & Syahza, 2019).

The RBV view is that internal resources, such as competent human resources, can be valuable assets and provide a competitive advantage. In the context of SMEs, when human resources have superior skills, knowledge, and abilities, they can improve operational efficiency, product innovation, customer service, and adaptability to changes in the market and business environment (Maulatuzulfa & Rokhmania, 2022). The research supporting the results of this study is Suindari & Juniariani (2020), K. Sari & Sijabat (2022), and Zhaviery et al. (2019), which state that human resource competence affects the performance of SMEs. However, this is different from research by Diana et al., (2022), Ardiyani et al., (2021), and Kristanto et al., (2021), which state that human resource competencies have no effect on the performance of SMEs.

### The Effect of Financial Inclusion on SME Performance

Financial inclusion has no effect on the performance of SMEs. Financial inclusion in the form of ease of access, quality, and user welfare from financial institution services to SME owners in Kuantan Singingi Regency has no effect on the performance of SMEs in Kuantan Singingi Regency.

Based on access indicators, SMEs in Kuantan Singingi Regency have accessed financial inclusion but have not experienced an improvement in performance as intended. Due to the lack of quality infrastructure needed to support the growth of funds funded by financial institutions. Although financial inclusion has provided access to capital, other external factors, such as poor regulation, intense competition, and a lack of supporting infrastructure, hamper the ability of



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SMEs in Kuantan Singingi Regency to use or access financial inclusion effectively. Furthermore, the quality indicator has not reached a certain quality standard, according to the SME owners in Kuantan Singingi Regency; they have not perceived the ease of finance in the use of financial services and have not found a suitability for their needs in using these financial products or services. So that SMEs in Kuantan Singingi district prefer to develop their own alternative strategies to improve performance and maintain their business so that it continues to grow by utilizing financial technology. This FinTech facilitates sales growth and offers friendly accessibility to users who are innovations in the financial services sector that empower businesses of all sizes to improve their performance (Savitri et al., 2023).

Then this affects the welfare indicator, where financial inclusion aims to improve people's welfare by providing access and good-quality financial services. But through the explanation above, It is because SME owners in Kuantan Singingi Regency do not have an effect on the performance of SMEs in Kuantan Singingi Regency. Inclusion does not fulfill the influence on SME performance. It is because SME owners in Kuantan Singingi Regency do not have an effect on the performance of SMEs in Kuantan Singingi Regency.

When associated with the Resource-Based View (RBV) theory, although financial inclusion is considered an external factor, RBV emphasizes the importance of identifying relevant resources, including external resources. RBV provides a view in understanding how external factors such as financial inclusion interact with available resources to affect SME performance. The results of this study are in line with research by Amin & Pamungkas (2022), Hilmawati & Kusumaningtias (2021), and Dermawan (2019) that financial inclusion has no effect on the performance of SMEs. However, it is contrary to research by Kusuma et al. (2021), Iko (2019), and Fajri et al., (2021), which states that financial inclusion has an effect on the performance of SMEs.

### **The Effect of E-commerce Implementation on SME Performance**

The application of e-commerce affects the performance of SMEs in Kuantan Singingi Regency. As explained by Wijaya & Widjaja (2023), the use of e-commerce is one of the most important factors for businesses to be able to expand their business range, increase business productivity, and create new strategies in marketing activities so that e-commerce has become part of the strategy and plan for businesses in running their business. Based on marketing indicators, SME owners in Kuantan Singingi Regency have successfully implemented e-commerce with their expertise and capabilities in managing the platforms used, from website management, promoting, to analyzing customer data.

Then for sales indicators, SME owners in Kuantan Singingi Regency have implemented this e-commerce well into the sales process according to their expertise, thereby increasing operational efficiency, reducing costs, and improving service quality. On the payment indicator, SME owners in Kuantan Singingi Regency have also served their consumers by continuing to provide pay-on-site services, although they are already implementing an electronic money system. In the results of this study, it can be seen how SME owners in Kuantan Singingi Regency invest in technological skills for their business and make e-commerce an option for marketing products or transactions so that marketing is not only limited to offline but also online marketing.

When applying RBV theory to this research, the focus will be on how SMEs' internal resources, such as information technology, human capital, and customer connections, can influence the successful use of e-commerce, which ultimately impacts their business performance. Based on this RBV theory, it can be concluded that SMEs in Kuantan Singingi Regency have managed and optimized their resources well in terms of promoting, selling, and transacting so that they have a greater opportunity to achieve better performance in the future. This research is in line with research by Akob et al. (2022), and Auliandari et al., (2022), which states that the application of e-commerce affects the performance of SMEs. However, this is in

contrast to research by Triandra et al., (2019) and Subagio & Saraswati (2021), which state that e-commerce implementation has no effect on the performance of SMEs.

### **The Effect of Financial Knowledge on SME Performance**

Financial knowledge affects the performance of SMEs in Kuantan Singingi Regency. This shows that the better knowledge SME owners have in managing their business finances, the SMEs will be able to achieve good SME performance. SME owners in Kuantan Singingi Regency carry out financial management through budget planning and recording or bookkeeping activities to show how their business finances are, which reflects that SME owners have mastered the indicators of general financial knowledge.

Then for indicators of savings and loans, SME owners in Kuantan Singingi Regency have implemented saving behavior, lending and borrowing activities, and managing their finances. As stated by Idawati & Pratama (2020), financial knowledge helps businesses gain the abilities and skills necessary for them to make financial plans and make strategic decisions.

Resource-Based View (RBV) theory mentions the framework used to analyze how an organization's internal resources, one of which is financial knowledge, can be a source of competitive advantage (Barney, 1991). So that this well-implemented financial knowledge can improve the overall performance of SMEs in Kuantan Singingi Regency. The results of this study are supported by research conducted by Herleni & Tasman (2019), Ferdiansyah & Bukhari (2021), and Kasendah et al., (2019), who stated that financial knowledge affects the performance of SMEs. However, it is in contrast to the results of research by Kumalasari & Asandimitra (2019), which states that financial knowledge has no effect on the performance of SMEs.

### **Conclusion**

The results of this study conclude that human resource competencies affect the performance of SMEs. This is because SME owners have competency quality with good knowledge, abilities, and skills to continue improving their business so that it has an impact on the performance of SMEs. Financial inclusion affects the performance of SMEs. This is because SME owners have implemented relevant, effective, and efficient financial inclusion, which can help maintain good SME performance. E-commerce implementation affects the performance of SMEs. This is because SME owners have implemented e-commerce properly in accordance with their expertise in managing the platform, which is one of the important factors in improving SME performance. Financial knowledge affects the performance of SMEs. This is because SME owners have a good understanding of financial knowledge so that they can make better decisions in managing their finances that impact the performance of SMEs.

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