

THE ROLE OF INFORMATION TECHNOLOGY, BUSINESS ENVIRONMENTAL ADAPTABILITY, ENTREPRENEURIAL ORIENTATION, AND HALAL CERTIFICATION ON THE PERFORMANCE OF HALAL CULINARY MSMEs IN WEST JAVA

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Abstract. *This study aims to examine the role of information technology, business environment adaptability, entrepreneurial orientation, and halal certification on the performance of halal culinary MSMEs in West Java. The Slovin technique is used to determine a representative sample size from a population. By using the Slovin formula, researchers can estimate the minimum sample size required to achieve accurate and general research results. The number of respondents studied was 100 respondents who were analyzed using SEM-PLS (Structural Equation Modeling) and the SmartPLS application version 4.1.0.9. The results of this study indicate that the variables of business environment adaptability and information technology were found to have a positive and significant effect on the performance of halal culinary MSMEs in West Java. Overall, the variable of business environment adaptability is very dominant and has a positive and significant effect on the performance of halal culinary MSMEs in West Java.*

Keywords: *MSME Performance; Business Environment Adaptability, Micro Small, and Medium Enterprises (MSMEs), Culinary MSMEs*

Introduction

According to the ASEAN Investment Report released in September 2022, Indonesia has the largest number of micro, small, and medium enterprises (MSMEs) in the ASEAN region. The report estimates that the number of MSMEs in Indonesia will reach around 65.46 million in 2021. This figure is significantly higher than in other countries. In 2021, Indonesian MSMEs absorbed 97% of the workforce and contributed 60.3% of gross domestic product (GDP) and 14.4% of national exports. The employment rate of Indonesian MSMEs is the highest in ASEAN. In neighboring countries, MSMEs

only absorb 35-85% of the workforce. However, in terms of performance, Indonesia still lags behind Myanmar, where MSMEs contribute up to 69.3% of the country's GDP. Indonesian MSMEs also lag behind Singapore, where Singapore's export contribution reached 38.3%, Thailand 28.7%, Myanmar 23.7%, and Vietnam 18.7%. The Indonesian government is currently striving to improve the performance of MSMEs in the country, including through digitalization strategies.

Micro, Small, and Medium Enterprises (MSMEs) are one of the pillars of the Indonesian economy. This was evident when Indonesia weathered the 1997/1998 economic crisis. Many large companies, expected to survive, failed (Atmaja & Novitaningtyas, 2021). On the other hand, MSMEs became the driving force of the economy amidst the crisis (Werdani et al., 2020). Their role in the economy includes supporting national economic growth, distributing development outcomes, and creating jobs (Sudaryanto & Wijayanti, 2014). Micro, small, and medium enterprises (MSMEs) can use technology to drive business growth and efficiency (Yuliantari & Pramuki, 2022). The pandemic has accelerated the emergence of the digital economy, opening up numerous opportunities for MSMEs, such as reaching a wider consumer base and improving business acumen through data collection (Anatan & Nur, 2021). However, MSMEs face various obstacles in accessing the digital economy, such as a lack of digital infrastructure and traditional financial support (Julianto et al., 2022). To boost MSME growth, technology-based solutions can be implemented. For example, the application of data analytics, big data transformation, system-based operations, digital platforms, and automation of supply chain processes through artificial intelligence and machine learning can enable ease of doing business with high productivity (Kitsios & Kamariotou, 2021).

The development of information technology has brought about major changes in the business world. Information technology has become a boon for the growth of MSMEs in the digital era. By using various software, online

platforms, and other digital tools, MSMEs can improve operational efficiency, expand market reach, and become more competitive. From product marketing through social media and marketplaces, inventory management through integrated systems, to more personalized customer service through chatbots and email marketing, information technology has transformed the way MSMEs conduct business. Furthermore, this technology enables MSMEs to collect and analyze customer data, enabling them to make more accurate and better business decisions. This allows MSMEs to grow faster and adapt to dynamic market changes.

The Quran explicitly commands Muslims to always consume halal products. The implication is that halal teachings are part of the Islamic belief system and a moral code of ethics that plays a vital role in the daily lives of Muslims, including guiding Muslim consumer behavior (Azwar et al., 2022). Consuming halal products is a fundamental obligation for Muslims everywhere. Therefore, it is not surprising that Muslim consumers are sensitive to products and services offered in the market (Toran et al., 2016). With the largest Muslim population, Indonesia has a significant opportunity to influence the global halal industry market. Significant efforts are needed to stimulate the revival of the Indonesian halal product sector so that the local halal product industry can thrive and develop rapidly while maintaining a balanced global halal product trade (Ibrahim & Fauziah, 2023). According to SGIE/SGIER (State of the Global Islamic Economy Report) data, Indonesia, as the world's third-largest country, has also recorded success in the halal food sector. This is measured by revenue growth, country/trade, operations, ecosystem, social impact, innovation, and opportunities. The latest forecast for Muslim consumer spending in Indonesia (expressed as the number of Muslim consumers purchasing food and beverages) is for it to rise 9.6% in 2022 to \$1.4 trillion, compared to \$1.28 trillion in 2021.

West Java Province plays a crucial role in the Indonesian economy. This is demonstrated by its size, which covers 20% of Indonesia's total area.

Interestingly, 98.5% of the economic drivers in West Java are MSMEs (Febriansyah & Prabowo, 2023). Research shows that MSMEs in West Java are creative entrepreneurs (Rozak et al., 2023).

However, MSMEs in Indonesia, including West Java, face challenges such as limited market access, a lack of understanding of business management, and a lack of scientific knowledge and technological development skills. Another study found that the performance of MSMEs in West Java has not improved over time. This poor performance may be due to weak innovation and entrepreneurial orientation, as well as a lack of knowledge management within company management (Santoso et al., 2020).

This study aims to comprehensively demonstrate how the interaction of information technology, business environment adaptability, halal certification, and entrepreneurial orientation influences the performance of halal food MSMEs in West Java. Understanding these four factors is expected to help identify effective business models for halal culinary MSMEs. Furthermore, this study also provides appropriate policy recommendations to support the development of halal culinary MSMEs in West Java, which can contribute to improving community welfare and regional economic growth. This study differs from previous studies (Azwar et al., 2022); (Santoso et al., 2020).

Referring to the research of Hesty Aisyah, Sari Puspita, and Elizamiharti in analyzing IT can have a positive impact on the performance of MSMEs. And secondly, by Nafisa Amalia Afifah and Eko Triyanto (2023) analyzing that IT can have a positive impact on the performance of MSMEs. This study provides differences in aspects: first, this study focuses on the elaboration of the use of more dominant technology such as the introduction of AI which can increase efficiency in the progress of businesses that will be run by MSMEs. Second, this study focuses on the scope of halal culinary in West Java by applying the SEM-PLS method. Third, using the basic theory of RBV as a trigger for stable MSME development supported by supporting variables, namely Adaptability of the business environment and entrepreneurial orientation, and halal certification.

Literature Review

MSMEs

Provisions regarding all MSME activities are regulated in Law Number 7 of 2021 concerning Assistance, Protection, and Strengthening of Cooperatives and Micro, Small, and Medium Enterprises. This is under the auspices of the Ministry of Cooperatives and SMEs (Koeswahyono et al., 2022). According to the World Bank, the development of global MSMEs contributes significantly to economic growth, especially in developing countries, as the majority of businesses are owned by MSMEs. The impact of MSMEs contributes significantly to job growth. In Indonesia, MSME growth is very rapid. Based on data from the last 12 years, there are more than 50 million MSMEs throughout Indonesia (Kemenkopukm, 2022). Indonesian MSMEs played a crucial role during the 1997-1998 crisis. Of the various existing economic sectors, the MSME sector was able to survive the crisis. With the enactment of the Job Creation Law, it is hoped that it will be able to empower MSMEs with supportive programs, as well as protect and develop businesses (Hamundu et al., 2021). The presence of MSMEs in Indonesia can contribute to economic efficiency by providing jobs for local workers and fostering a strong entrepreneurial spirit. Small and medium enterprises also play a role in balancing national income and welfare (Hisnul et al., 2022).

MSME Performance

Good performance across all sectors, including finance, production, sales, and marketing, is crucial for MSMEs to maintain a stable business cycle. With strong performance, MSMEs are expected to become stronger as the backbone of the economy and play a more important role in the national economy. MSMEs are an identity that continues to receive attention and is always prioritized by the government (Malikhah et al., 2024). The culinary MSME sector is one of the most dynamic and promising sectors of the Indonesian economy. Therefore, MSMEs must maintain their best production because

good production results in high-quality products. High-quality products will be more attractive to consumers, increase sales, and ultimately improve MSME profitability. MSMEs with increasing or stable profitability must be able to control expenses and ensure healthy cash flow.

By offering unique and innovative products or services, MSMEs can attract more customers and maintain the loyalty of existing customers, such as by using online platforms in the development of culinary MSMEs, which is one of the most important factors by innovating by marketing products through E-commerce platforms such as Gofood and Shopeefood or better known as online food delivery (OFD). Culinary business actors must immediately adapt and use OFD services in their business activities. Now OFD is no longer a benefit for the company, but a necessity for actors to remain competitive and able to compete with other businesses. Changes in human behavior, especially Gen Z and Millennials who are the majority of OFD users, are changing the marketing and sales styles of business people. Based on Tenggara Strategics research, the majority of OFD service users are Gen Z (43%) and Millennials (39%), which is one of the reasons why the use of OFD services is very important.

Teori RBV (Resource Based View)

The resource-based theory of the firm, also known as the resource-based view, is the primary theory most commonly used as a basis for business strategy research. Resource theory continues to evolve to explain the sources of sustainable competitive advantage at the firm level. Resource theory emphasizes that resources, both tangible and intangible, are crucial to a firm's survival (Vance, 2012). This theory was developed by Birger Wernelfelt in 1984. This theory focuses on an organization's unique resources as the key to success. In the context of MSMEs, entrepreneurial orientation can be considered a unique resource. These resources, combined with effective use of the environment and social media, can improve MSME performance. This theory helps explain how MSMEs with a strong entrepreneurial orientation can

capitalize on opportunities in a dynamic business environment through social media.

Information technology is an intangible asset, but its use plays a significant role. In the context of MSME performance, IT can help optimize MSME market expansion through e-commerce, digital marketing, and social media, enabling MSMEs to reach a wider customer base, both domestically and internationally. The environment is one of the external factors that significantly influences the strengthening of RBV theory because it is a variable that valuable, such as capability development. The constantly changing environment encourages MSMEs to develop capabilities aimed at responding to change quickly and effectively. In the Resource- Based View (RBV) theory, a company or business unit takes initiatives to improve performance using a proactive approach before the need arises. The RBV addresses the internal capabilities that drive each initiative. The company implements halal standards as a strategic tool, as halal standards are considered safe and healthy food.

Information Technology (IT) and Its Relationship to the Performance of Halal Culinary MSMEs in West Java Information technology (IT) plays a crucial role in improving operational efficiency, competitiveness, and innovative capabilities of MSMEs (Octiva et al., 2024). In today's digital era, the use of information technology in business is crucial. Nearly every aspect of business, from production and marketing to human resource management, is integrated with various technologies. Information technology enables companies to operate more efficiently and effectively and respond to market changes. In the business world, technology has become a highly influential trend among both large and small businesses due to the ever-changing market needs. Society must be able to adapt to technological changes. This is because technological change has an impact and importance for both large and small businesses in developing and maintaining their businesses. Technological advances will continue to have a significant impact on the economy and entrepreneurship. Technology has changed the way businesses work and conduct business

strategies, opening up new opportunities, and also creating new challenges for business actors. The development of information technology has enabled businesses to conduct online transactions, manage data efficiently, and communicate with customers and business partners worldwide with ease (Ahadiyah, 2024). Rapidly developing technology is driven by entrepreneurial intentions which are identical to individual competencies which refer to the willingness to carry out certain behaviors (Ridha et al., 2017).

With the advancement of technology, culinary companies are increasingly incorporating technology into their business operations. One way to do this is by utilizing food delivery services. The use of social media and online food delivery apps has become the latest solution for MSMEs, especially in the culinary sector. By utilizing these platforms, MSMEs can reach a wider market without being limited by physical location. Through social media, MSMEs can build brand awareness, interact directly with customers, and conduct effective promotions. Meanwhile, online food delivery apps like ShopeeFood and GoFood enable MSMEs to reach more customers and increase efficiency in the order delivery process. In other words, the combination of social media and online food delivery apps has become a powerful tool for MSMEs to increase visibility, sales, and ultimately overall business performance.

Entrepreneurial Orientation and Its Relationship to the Performance of Halal Culinary MSMEs in West Java

Entrepreneurial orientation helps MSMEs overcome external conditions such as political instability and poor quality of regulations that can have a negative impact on their business such as by involving government support in helping regulate business activities so that the entrepreneurial orientation we want to create can be maximized Alhinity, Armanurah, and Ishak (2016). In other words, the economic institutional environment in general is not open to organizational growth, and especially for MSMEs, entrepreneurial orientation needs to be more proactive to combat influences that can have a negative impact on business such as being more active in monitoring market

developments through sales evaluation results and consumer demand by developing products and innovations in marketing such as through social media Instagram which is a platform that is almost used by everyone and e-commerce such as shopee which is very familiar in its use and the results of observations are used as a good strategy to do to provide the best performance in business with an example of lowering prices to attract customers to become frequent buyers of our products.

Therefore, introducing and strengthening entrepreneurial orientation is the right choice to help MSMEs improve their organizational performance towards success and internal companies such as employees must also be selective in their selection according to business needs because competent employees will be able to express new ideas as a form of commitment to business progress. (Gupta & Batra, 2016). The findings studied by (Masa'deh et al., 2018) define that learning orientation, entrepreneurial orientation, market orientation, and brand orientation simultaneously/simultaneously affect organizational performance, and entrepreneurial orientation, market orientation, and brand orientation have a positive effect on MSME business growth.

Business Environment Adaptability and Its Relationship to the Performance of Halal Culinary MSMEs in West Java

According to Griffin (2004), the environment is something outside the boundaries of the company that can influence the organization, and according to William (2000), the environment is something outside the company that creates opportunities and challenges for the company. Research (Mai & Gan, 2007) What is meant by "entrepreneurial environment" is a combination of factors.

Factors that play a role in entrepreneurship development. Many works demonstrate the influence of various environmental factors on entrepreneurship. Research shows that adaptability influences organizational performance and that adaptability needs to be developed to improve

organizational performance. The complexity and dynamics of the external environment are drivers of organizational performance in developing countries. Environmental adaptability, as the degree of adaptation to environmental change and industry instability, can moderate the influence of entrepreneurial orientation and program creativity on improving marketing performance.

Environmental adaptability is the ability and flexibility to handle changing economic conditions, for example by changing prices, seeking alternative suppliers, and determining different market segments. Therefore, environmental adaptability is one of the factors that influence competitive advantage by understanding and responding to changes that occur, such as developing products according to the latest trends and using marketing strategies that suit consumer interests. Business environmental adaptability can be done by adjusting us as business actors to the current digital era by adapting in technological aspects with the aim of increasing operational efficiency and developing products. Innovatively. To achieve success in business, we must be able to adapt to applicable government regulations and adapt our business strategies.

Halal Certification and Its Relationship to the Performance of Halal Culinary MSMEs in West Java

Halal certification is mandatory for micro, small, and medium enterprises, as well as large businesses, and serves as valid proof that the products or services provided comply with Islamic religious recommendations and law. The halal certification program is designed to provide consumers with assurance that the products they consume comply with Islamic halal standards. Halal culinary product certification, whether in the form of a license, logo, certificate, or stamp, serves as a form of identification to inform consumers that a food product is sourced, produced, and distributed in accordance with strict Islamic standards (Alfarizi, 2023). The halal logo is a visual symbol indicating that a product or service has obtained halal certification. The presence of the

halal logo on product packaging and in the product's premises is an important indicator for Muslim consumers when choosing a product or service to use. The halal logo comes in a standardized shape and color, so it is hoped that people will easily recognize that their products are certified. To obtain halal certification, companies undergo a series of inspections to ensure that their raw materials, production processes, and halal assurance systems meet standards (Apriliyanto and Hidayati, 2023). Competent auditors conduct a thorough assessment to determine halal status. After meeting halal requirements, producers receive a halal certificate, which includes a halal label and registration number displayed on product packaging (Rachmawati 2016). (Apriliyanto, 2023). People who follow Islamic rules strive to adhere to halal guidelines for their consumption behavior, regardless of where they live. In many countries, Muslim consumers encounter products that do not adhere to religious principles. Therefore, they rely on halal certification to trust their purchases. Halal certification ensures that products follow Islamic rules from production to consumption, as well as Sharia- compliant food and beverage practices, including serving halal food and providing non- alcoholic beverages (Anggraeni & Zaerofi, 2024).

Method

The sampling technique in this study used purposive sampling, which is based on criteria. The sampling technique used was determined using the Slovin method with a 10% margin of error because the population size was already known. The number of samples taken from each district/city and when added together became 100 respondents. In this study, the sample determination was carried out using the Slovin sampling technique combined with purposive sampling or consideration sampling. The sample was selected based on certain criteria relevant to the research objectives. These criteria include: MSMEs domiciled in West Java, having a business in the culinary

sector, having been in business for at least two years, and having a digital payment platform. The sample size was calculated using the Slovin formula:

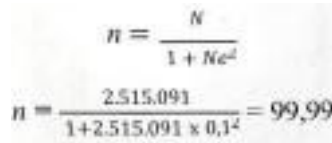

$$n = \frac{N}{1 + Ne^2}$$
$$n = \frac{2.515.091}{1 + 2.515.091 \times 0,1^2} = 99,99$$

Figure 1. Slovin Formula

Information:

Information:

n = Minimum sample size N N = Population size

e = Error Margin

According to West Java Province Open Data, the population in this study is 2,515,091, representing the projected number of MSMEs in West Java. This study uses the Slovin formula with a confidence level set at 90% and a margin of error of 10%, or $e = 0.1$. This study requires a minimum sample size of 99.99 rounded to 100, meaning 100 respondents are required.

This research employed a quantitative method with a survey technique. Quantitative methods are research methods used to examine a specific population or sample. Sampling is typically random, data collection utilizes research instruments, and data analysis is quantitative or statistical in nature, with the aim of testing the established hypothesis. Survey research, on the other hand, is a data collection technique within quantitative research methods used to obtain data from a specific, natural setting. A sample is a subset of a population's characteristics. The recommended sample size (Hair et al., 2014) suitable for SEM analysis is 100-200 respondents, which is intended to be used in estimating interpretations with SEM. Hypothesis testing aims to analyze whether there is a positive or negative relationship between the independent and dependent variables. The methods used in this test (Hair et al., 2021) are:

- a. If the p-value is < 0.05 then H_0 is rejected and H_a is accepted.
- b. If the p-value is ≥ 0.05 then H_0 is accepted and H_a is rejected.

Results and Discussion

Of the total respondents, 61% were male and 39% were female. The respondents' business types were summarized as follows: 80% owned food businesses and 20% owned beverage businesses. The next criterion was the length of time the culinary businesses were established, with 45% having been in business for two years and 55% for more than two years. This research focused on the development of Information Technology, one of which is making purchases and payments through e-commerce platform digital which is summarized in several platform QRIS accounted for 75%, ShopeePay accounted for 26%, GoPay accounted for 31%, OVO accounted for 22%, and DANA accounted for 41%. The respondents who completed the research questionnaire were 100 people residing in regencies/cities in West Java.

Table 1. Respondent Demographics

	Keterangan	Frequency (n)	Percentage (%)
Gender	Male	61	61%
	Female	39	39%
Type of Business	Food	80	80%
	Drinks	20	20%
Length of Business	Two years	45	45%
	More than two years	55	55%

Table 2. Region

Region	City	Percentage (%)
West Java I	Bogor Regency, Sukabumi, 5	50%
	Cianjur, Bandung, Garut, Tasikmalaya,	
	City Tasikmalaya	
West Java II	Ciamis, Kuningan, Cirebon, Majalengka, Sumedang	7%

West Java III	Indramayu, Karawang, Bekasi, West Bandung, Bogor City	28%
West Java IV	Sukabumi City, Bandung City, Cirebon City, Bekasi City, City Depok	15%
Total		100%

Requirement Test

Validity Test Based on Loading Factor

Test result data

Convergent Validity at the first loading factor stage shown in Figure 6, namely there is one variable indicator that has a factor loading value < 0.50 , namely OK1A with a value of 0.390, which explains that this variable indicator must be removed from the model. After the invalid indicators were removed, the indicator values of all variables were above 0.50 and were therefore declared valid.

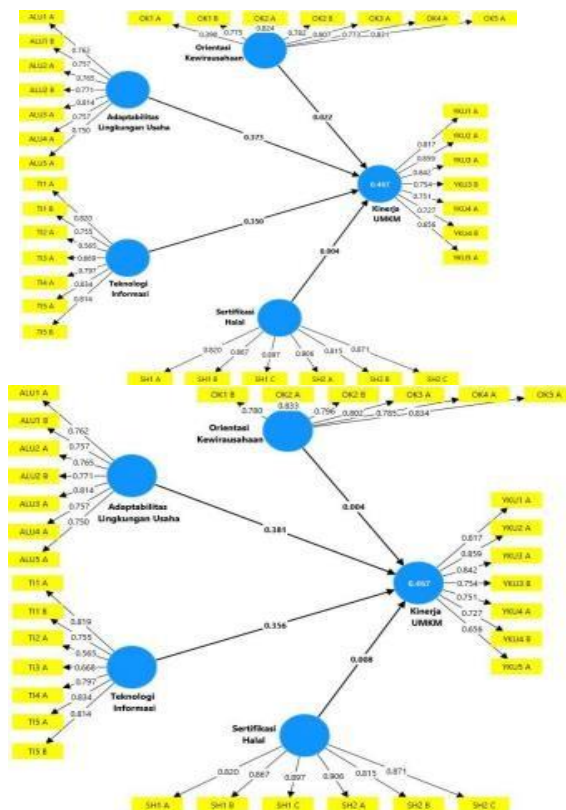


Figure 2. Test result data

Based on the results of the second stage of estimation, after eliminating risk-taking indicators that have a loading factor value below 0.50, the results show that the loading factor value of each variable indicator is above 0.50, according to (Hair et al., 2014) these results indicate that the overall indicator is valid and can be continued to the next testing stage.

Validity Test Based on Average Variance Extracted (AVE)

Validity testing can also be determined using the AVE value. The average variance extracted (AVE) must be >0.50 to demonstrate adequate validity. This means that the latent construct must explain more than half of the variance of its indicators (Sarstedt et al., 2014). According to (Ghozali, 2021), in addition to looking at the outer loading value, it can also be seen based on the AVE (average variance extracted value). The recommended AVE value >0.50 should be at least 0.50. Based on Table 8, the AVE values for the variables entrepreneurial orientation, business environment adaptability, information technology, halal certification, and MSME performance are each respectively 0.648, 0.590, 0.571, 0.746, and 0.601 which concludes that all variables have met the requirements in the validity test with good results because the AVE coefficient value is > 0.40.

Table 3. Validity Test Based on Average Variance Extracted (AVE)

Variables	<i>Average Variance Extracted (AVE)</i>
Entrepreneurial Orientation	0.648
Adaptability of the Business Environment	0.590
Information Technology	0.571
Halal Certification	0.746
MSME Performance	0.601

Discriminant Validity Test

In discriminant validity, the test values observed in this study are based on cross-loading values. In other words, the value obtained for each construct

correlation is higher than the correlation between different constructs, making it suitable for discriminant validity testing. Each latent variable can be ensured to be different from other variables by evaluating its discriminant validity. A good discriminant validity test is one where each latent variable indicator has the largest loading value compared to the loading values for other latent variables, with a test value within a variable being > 0.7 (Sarstedt et al., 2014).

Table 4. Discriminant Validity Test

Variables	Code	Orientation Entreprene urship	Adaptability is Business Environm ent	Informa tion Technol ogy	Halal Certificatio n	MSM EPerform ance	Information
Orientation Entreprene urship	OK1B	0.780	0.607	0.612	0.550	0.438	<i>Reliable</i>
Orientation Entreprene urship	OK2A	0.833	0.646	0.650	0.563	0.516	<i>Reliable</i>
Orientation Entreprene urship	OK2B	0.796	0.577	0.540	0.591	0.411	<i>Reliable</i>
Orientation Entreprene urship	OK3A	0.802	0.595	0.609	0.585	0.483	<i>Reliable</i>
Orientation Entreprene urship	OK4A	0.785	0.663	0.552	0.612	0.379	<i>Reliable</i>
Orientation Entreprene urship	OK5A	0.834	0.617	0.657	0.555	0.494	<i>Reliable</i>
Adaptability of the Business Environment	ALU1A	0.618	0.762	0.545	0.529	0.484	<i>Reliable</i>

Environmental Adaptability Business	ALU1B	0.527	0.757	0.451	0.497	0.444	<i>Reliable</i>
Adaptability of the Business Environment	ALU2A	0.670	0.765	0.570	0.558	0.404	<i>Reliable</i>
Environmental Adaptability Business	ALU2B	0.551	0.771	0.469	0.392	0.417	<i>Reliable</i>
Environmental Adaptability Business	ALU3A	0.603	0.814	0.588	0.538	0.606	<i>Reliable</i>
Adaptability of the Business Environment	ALU4A	0.498	0.757	0.492	0.450	0.547	<i>Reliable</i>
Environmental Adaptability Business	ALU5A	0.680	0.750	0.518	0.535	0.420	<i>Reliable</i>
Technology Information	TI1A	0.655	0.573	0.819	0.568	0.566	<i>Reliable</i>
Technology Information	TI1B	0.665	0.566	0.755	0.516	0.423	<i>Reliable</i>
Technology Information	TI2A	0.253	0.258	0.565	0.293	0.456	<i>Reliable</i>
Technology Information	TI3A	0.585	0.456	0.668	0.505	0.433	<i>Reliable</i>
Technoloy Information	TI4A	0.583	0.529	0.797	0.558	0.430	<i>Reliable</i>
Technoloy Information	TI5A	0.592	0.563	0.834	0.537	0.424	<i>Reliable</i>

Reliability Test

The reliability test functions as a measurement instrument for a questionnaire which functions as an indicator of a variable or construct which is consistent, stable and capable of providing accurate measurement results so that it can be said that reliable. In addition to testing construct validity, a test is also carried out, namely a reliability test using the values from Cronbach's alpha And composite reliability According to (F. Hair Jr et al., 2014), the s value is > 0.6. Based on table 10, all research variables have values > 0.6. So it can be concluded that all variables used have Reliable.

Table 5. Reliability Test

Variables	Cronbach's alpha	Composite reliability
Entrepreneurial Orientation	0.892	0.917
Adaptability of the Business Environment	0.885	0.910
Information Technology	0.871	0.902
Halal Certification	0.931	0.946
MSME Performance	0.889	0.913

Results R-Square

Goodness of fit Usually abbreviated as GOF in regression models, it is a question of how accurately the model can produce estimates that correspond to the true value. A common measure of GOF often used in regression models is the proportion of variance (sample) that can be explained by the model. This quantity is called R². (R Square). According to Chin (1998), an R-squared value of 0.67 indicates a strong model, 0.33 indicates a moderate model, and 0.19 indicates a weak model. The results of the analysis R-square can be seen in the table, which produces an R-square value of 0.467 or 46.7%, meaning that the

variability of the MSME performance construct can be explained by the variability of the entrepreneurial orientation construct, business environment adaptability, information technology, and halal certification by 46.7% while 53.3% is explained by other variables outside the model that were not studied. The value of 0.467 in the R-square results is included in the category Moderate. Moderate is a value category R-Square which indicates that the model explains the relationship between the independent and dependent variables quite well. Typically, the R Square value is between 0.33 and 0.67.

Table 6. Results R-Square

Variables	<i>R-square</i>	<i>R-square adjusted</i>
MSME Performance	0.467	0.445

Hypothesis Testing

This test was conducted with the aim of testing the hypothesis of the independent variable. influence on the dependent variable attached to the results in table 12. This study uses the SEM- PLS model, to answer the four hypotheses explained in the previous discussion. Based on the results of the analysis presented in table 12, it can be seen that of the four hypotheses proposed in this study, there are two hypotheses that have a positive and significant effect, including: H2 and H3 with P Values <0.50 and T-Statistics values > 1.96, meaning the hypothesis is accepted. Hypotheses that have P-Values > 0.50 and T-Statistics values <1.96, meaning the hypothesis is rejected are H1 and H4. In this study, it was found that the Business Environment Adaptability variable is the main factor influencing the performance of halal MSMEs in West Java.

Table 7. Hypothesis Testing

Variables	Original sample (THE)	Sample mean (M)	Standard deviation (STDEV)	T Statistic (O/STDEV)	P values	Information
Orientation Entrepreneurship	0.004	0.006	0.160	0.024	0.490	Rejected

Performance MSMEs						
Environmental Adaptability Business Performance MSMEs	0.381	0.378	0.112	0.3418	0.000	Accepted
Technology information performances MSMEs	0.356	0.382	0.148	2.394	0.008	Accepted
Certification halal performance MSMEs	0.008	-0.006	0.117	0.066	0.474	Rejected

Discussion

The Influence of Entrepreneurial Orientation on the Performance of Culinary MSMEs in West Java

The first hypothesis, namely entrepreneurial orientation, has a P-Value smaller than 0.50 but has a T-Statistics value smaller than 1.96, so H1 does not have a significant effect and the hypothesis is rejected. The entrepreneurial orientation possessed by respondents in improving the performance of halal culinary MSMEs in West Java has not been able to significantly boost their businesses. Other efforts are needed to improve their business performance. These results indicate that entrepreneurial orientation still requires support through other factors that can have a positive influence on the performance of halal culinary MSMEs in West Java. Internal factors such as limited access such as MSMEs located in remote areas, causing a lack of capital in capital development. Another internal factor is the fear of failure towards risk taking so that MSME actors tend to maintain a fixed status without change.

The Influence of Business Environment Adaptability on the Performance of Culinary MSMEs in West Java

The second hypothesis, namely the adaptability of the business environment, has a P Value greater than 0.50 and has a T-Statistics value greater than 1.96 so that H2 has a positive and significant effect so that the hypothesis is accepted. Environmental adaptability is the ability, flexibility in dealing with changes and challenges that occur in the company's external environment. Therefore, environmental adaptability is one of the factors that influence competitive advantage. Competitive advantage is the ability of a company to achieve economic profits above the profits that competitors can achieve in the market in the same industry. Marketing performance is also influenced by the company's environment, the success of a company can be seen from how the company deals with pressure from environmental effects in facing a competitive market Irmadiani, (2024).

The Influence of Information Technology on the Performance of Culinary MSMEs in West Java

The third hypothesis, namely business environmental adaptability, has a P-value greater than 0.50 and a T-statistic greater than 1.96. Therefore, H3 has a positive and significant effect, thus the hypothesis is accepted. Information technology will certainly influence competitive advantage, especially in MSMEs. Because the existence of adequate information technology allows for increased competitive advantage where information technology is used to produce, process, and disseminate information in various forms (Wijaya & Simamora, 2022). Research conducted by Cakmak and Tas (2012) states that appropriate and good information technology certainly contributes to building a competitive advantage for a company. Good information technology skills provide a company with a competitive advantage and help streamline costs.

The Impact of Halal Certification on the Performance of Culinary MSMEs in West Java

The fourth hypothesis, namely halal certification, has a P-Value smaller than 0.50 but has a T-Statistics value smaller than 1.96, so H4 and H1 have no significant effect and the hypothesis is rejected. Obstacles to the halal

certification process also occur in Malaysia, Arif (2019) conducted a study on the factors that hinder the success of online halal certification applications in Malaysia by interviewing 14 food business actors in Melaka, Malaysia, the results showed that the problem originated from three sources, namely the applicant (business actor themselves), the certification agency, and the technology itself (Arif et al., 2019). Business actors in Indonesia are currently competing to obtain halal guarantee letters or halal certificates and the government through related institutions is trying to facilitate business actors to be able to obtain halal product guarantees from the government (Sani, 2023).

However, the efforts made by the government to date still face several obstacles, namely the lack of workers who understand the provisions related to sharia and its application in halal industry practices, including the lack of Knowledge of the meaning of halal and the requirements that must be met for a product to be considered halal. Another obstacle is the limited number of halal auditors who understand the technical aspects of the product and the concept of halal, making the halal certification process difficult to carry out quickly. To date, there is no globally accepted and recognized halal certificate (Khairawati et al., 2025).

Conclusion

Based on the results of the research analysis and discussion that have been carried out in the previous chapter, there are several conclusions regarding the influence of the variables of Information Technology, Entrepreneurial Orientation, Adaptability of the Business Environment, and Halal Certification on the performance of culinary MSMEs in West Java, which are concluded as follows:

1. This study uses a sampling technique that requires 100 respondents with predetermined criteria. Of the 100 respondents, 61% are male respondents, while 39% are female respondents. Of the total respondents who have run a culinary business, 80% have a food

business and 20% of respondents have a beverage business. Of the total respondents who have run a business that has been in business for two years, 45% and those who have a business for more than two years, 55%. Of all respondents who have businesses that have implemented digital payment platforms, the most are QRIS 75%, SHOPEEPAY 26%, GOPAY 31%, OVO 22%, and DANA 41%.

2. Based on the results of the hypothesis test, the following main findings were obtained:
 - a. The Entrepreneurial Orientation variable does not have a significant effect on the performance of culinary MSMEs in West Java.
 - b. The Business Environment Adaptability variable has a positive and significant influence on the performance of culinary MSMEs in West Java.
 - c. Information Technology variables have a positive and significant influence on the performance of culinary MSMEs in West Java.
 - d. The halal certification variable does not have a significant effect on the performance of culinary MSMEs in West Java.

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