Opportunities to Increase Halal SMEs Income: Evidence from Muslim Minority Area

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ABSTRACT

The growth of halal products and businesses in areas with minority Muslim populations, such as Papua, Indonesia, presents both distinct challenges and opportunities. This study examines the development of Halal-certified Small and Medium Enterprises (SMEs) in Papua, a region with a minority Muslim population. Using primary data from 33 Halal-certified SMEs in Jayapura, the research investigates the factors that affect income growth following Halal certification. Data were collected using non-probabilistic sampling and analyzed through descriptive statistics and logistic regression. The results show that entrepreneurial age and business tenure positively impact income growth, emphasizing the value of experience. However, market orientation (targeting markets outside Jayapura) has a negative effect, likely due to logistical challenges. Surprisingly, entrepreneurial education does not significantly influence income generation, suggesting that local knowledge and experience play a larger role. The study recommends that Halal SMEs focus on enhancing workforce management, confidence, and marketing strategies to improve competitiveness and market expansion. These findings offer valuable insights for fostering the growth of Halal-certified SMEs in minority regions and supporting sustainable economic development in Papua.

Keywords: Halal; SMEs; Market

INTRODUCTION

A halal ecosystem is a system of interconnected relationships formed by the interdependence between one halal pA halal ecosystem is a system of interconnected relationships formed by the interdependence between one halal production activity and other halal production activities, creating a halal environment. The ecosystem should effectively connect all core and supporting components of the halal industry from upstream to downstream. Halal refers to things permissible according to Islamic law, while haram refers to anything prohibited. The concept of

halal is also related to Thayyib, reflecting goodness and suitability. The term 'halal' is commonly used to refer to food and other products that meet the criteria set by Islamic law. Essentially, there are few prohibited foods according to Islamic law, as the default ruling for everything is permissible except when explicitly prohibited. Islamic law prohibits alcohol, blood, pork, its by-products, animals that die before slaughtering, and animals not slaughtered in the name of Allah, which are considered 'Haram' or forbidden for consumption. Products included in the halal ecosystem must be certified, as certification provides evidence of compliance with Islamic law and makes them acceptable and permissible for Muslim consumers.

The global demand for Halal products is being driven by the increasing Muslim population, economic development, and the emerging potential halal markets in non-Muslim countries (Azam & Abdullah, 2020). The Halal industry, particularly Halal food, holds a substantial and continuously growing market share. The Halal industry, particularly Halal food, holds a substantial and continuously growing market share. The State of the Global Islamic Economy Report (GIER) 2022 by DinarStandard reveals that the global halal economy (excluding Islamic finance) is valued at USD 2 trillion, with the largest contribution coming from the Halal food sector, reaching USD 1.27 trillion and projected to reach USD 1.67 trillion by 2025. The Global Halal Ecosystem Assessment 2023 by the Islamic Development Bank (IsDB) highlights the potential of the Global Halal Ecosystem in facilitating cross-border trade, enhancing infrastructure in energy, ICT, water, and sanitation sectors, reducing poverty, and creating job opportunities. The assessment projects that the Global Halal Ecosystem will reach nearly USD 3 trillion by 2025 based on surveys of 40 IsDB member countries. Notably, even countries with Muslim minorities, such as Thailand, Australia, the UK, and Japan, are now recognizing the significance of Halal certification for products and services (Nurrachmi, 2018). The concept of Halal in food signifies cleanliness, hygiene, and food quality, appealing to health-conscious non-Muslim consumers (Mathew et al., 2014).

With the world's largest Muslim population, Indonesia is optimistic about building a robust Halal ecosystem in response to the growing demand for Halal industries. According to data from BPS in 2010, approximately 87% or over 207 million Indonesians are Muslims. The GIER 2022 report indicates that Halal food consumption in Indonesia is projected to reach US$146 billion by 2025. This underscores that the Halal industry in Indonesia has become one of the most competitive streams, with promising business prospects. In support of fostering and developing the Halal industry, the Indonesian government has implemented mandatory Halal certification for both domestic and foreign producers. This mandatory certification is enshrined in Law Number 33 of 2014 on Halal Product Assurance (also known as UU 33/2014 JPH, where UU stands for Undang-Undang [Law] and JPH stands for Jaminan Produk Halal [Halal Product Assurance]). As mandated by UU 33/2014 JPH, all businesses, including Small and Medium Enterprises (SMEs), are required to obtain Halal certification, marking a departure from the previous voluntary certification system. The mandatory certification for Halal products officially started on October 17, 2019, with a transitional period for food and beverage products until October 17, 2024, while other products have different transitional periods. The Halal certification is carried out by the authorized institution, the Halal Product Assurance Organizing Agency (BPJPH, Badan Penyelenggara Jaminan Produk Halal).

The development of the halal industry in Indonesia faces various challenges, primarily related to mandatory halal certification. Jamaluddin et al. (2022) Highlighted several challenges in implementing Halal certification, including 1) lack of Halal awareness and socialization of Halal certificates among Small and Medium Enterprises (SMEs); 2) suboptimal involvement of relevant stakeholders; 3) limited responsiveness of businesses to Halal certification regulations and digital services; and 4) inadequate support in the process of obtaining Halal certification, along with the emergence of entities exploiting the trend of Halal certification programs. The book Ekosistem Industri Halal or Halal Industry Ecosystem, published by Bank Indonesia in 2020 further elucidates challenges in the development of the Halal industry, encompassing: 1) low number of Halal-certified SME products; 2) the absence of a Minister of Finance regulation establishing tariffs as the basis for the Public Service Agency of BPJPH; 3) suboptimal Halal Information System in JPH services; and 4) limited qualitative and quantitative understanding of Halal among Human Resources.

The growing recognition of Halal certification is also reflected in the challenges faced by MSMEs in Muslim-minority countries. In Japan, for example, restaurants striving to obtain Halal certification face several obstacles, including cultural nuances, high costs, and a shortage of certified ingredients (Idris, 2024). Similarly, in the UK, the lack of consistency among Halal certification bodies, with varying interpretations of dietary laws and slaughter procedures, complicates the certification process (Fuseini et al., 2020). In Thailand, the challenges include a complicated certification process, a lack of commitment from restaurant owners, and high certification fees (Wannasupchue et al., 2023). These difficulties highlight the complexities MSMEs face in obtaining Halal certification, particularly in non-Muslim-majority regions. As global Halal markets expand, it is increasingly

crucial for MSMEs in these areas to navigate these challenges in order to meet growing consumer demand, enhance competitiveness, and tap into lucrative markets both domestically and internationally.

As a diverse country, the Halal industry must consider and encompass the non-Muslim communities and regions in Indonesia that also contribute to the country's economic growth. A study by Sujibto & Fakhruddin (2023), aimed at understanding the perception of Halal certification from the perspective of non-Muslim SMEs in Yogyakarta and Semarang, found that the understanding of Halal remains sectoral, religious, and ideological. Instead of Halal certification, the Indonesian Food and Drug Control Agency (BPOM, Badan Pengawas Obat dan Makanan) is considered a more trustworthy certification. Therefore, government intervention is needed to regulate and optimize fundamental aspects of Halal certification, such as hygiene, cleanliness, and health. In Indonesia, SMEs are regarded as the critical engine of the national economy due to their significant role in the country's economy, constituting 99% of all business units. Although the halal industry in Indonesia shows immense potential, the SME sector, which is the largest economic pillar in the country, still faces challenges in implementing mandatory halal certification, especially in terms of human resource understanding. These challenges are particularly evident among non-Muslims, who require specific attention to enhance their comprehension and awareness of Halal certification.

This research explores the efforts to enhance Halal products through Halal certification for Small and Medium Enterprises (SMEs) in Papua Province, one of the regions with the largest non-Muslim population in Indonesia. Papua Province is geographically distant from the Java Region, which serves as Indonesia's Halal economic growth center. Based on data from the Central Statistics Agency, it is known that around 3.9 million residents, the majority of whom are Christians, while approximately 13% are Muslims. This makes Papua an interesting case study, as the Halal food market is generally less developed in regions with lower Muslim populations. Papua presents a unique opportunity to explore the potential for Halal products in non-Muslim majority areas, aligning with the national goal to expand the Halal industry beyond traditional markets. Previous research by Pratiwi (2018) focused on expanding the market segmentation of the Halal industry in Papua Province. The study examined factors influencing the purchase intention of Halal food from the perspective of buyers, particularly young Muslims. The results revealed that attitude significantly influenced the intention to purchase Halal food and recommended manufacturers to increase awareness of Halal products. By focusing on Papua, this study contributes to understanding how Halal SMEs can thrive in a minority Muslim region, adding value to Indonesia's broader Halal economic strategy.

This study will explore the perspective of SMEs and essential human resources in improving their quality. The primary focus addresses the following research questions: 1) Is there significant potential for developing Halal products in minority regions? 2) What are the determinants of effective Halal SMEs to expand market reach in minority Muslim regions? 3) Are additional strategies needed to extend the market reach of Halal products in non-Muslim areas? These questions are critical not only for Papua, but also for similar regions across Indonesia, where Halal certification is a relatively new and emerging concept. The findings from this study are expected to provide guidance and recommendations for the government, entrepreneurs, and other stakeholders to optimize the Halal ecosystem's potential in non-Muslim majority regions. Additionally, it aims to enhance the performance of Halal food SMEs, contributing to sustainable and inclusive economic growth in Indonesia.

Many studies have looked at the factors that affect the performance of Small and Medium Enterprises (SMEs). However, there is limited research on SMEs in the Halal industry. This study will also consider Micro, Small, and Medium Enterprises (MSMEs), which are central to Indonesia's economic development policies. While SMEs generally refer to businesses based on size, MSMEs include micro, small, and medium-sized enterprises. Together, they play a crucial role in Indonesia's strategy for inclusive economic growth. According to the Ministry of Cooperatives and Small and Medium Enterprises, there were 64.2 million MSMEs in Indonesia in 2023, making a significant contribution to the national economy..

The following literature review will focus on key factors influencing SMEs performance, including business demographics such as the age of the business and the number of employees. Additionally, this study will explore how the demographic characteristics of entrepreneurs—such as age and educational background—affect performance. It will also examine the strategies adopted by entrepreneurs, particularly in terms of market orientation and efforts to target new markets. By offering a comprehensive analysis of these determinants in the context of the Halal industry, this study aims to provide valuable insights for entrepreneurs, researchers, and stakeholders working to advance this sector.

The age of a firm is a significant factor influencing its potential for revenue growth and overall performance.

Older firms typically benefit from accumulated knowledge and experience, which can lead to improved operational efficiency and market positioning. Research by Rwakihembo et al. (2023) supports this, highlighting a positive relationship between firm age and financial performance. As firms mature, they gain a competitive edge through enhanced market understanding and reduced risks associated with newness. However, older firms also face the challenge of inertia and inflexibility, which can hinder their ability to adapt to changing market dynamics and innovative practices (Barron et al., 1994).

On the other hand, some studies suggest that firm age may be linked to decreased growth potential due to the burden of accumulated routines and organizational structures. Pervan et al. (2017) argue that firm performance tends to decline with age as the benefits of accumulated knowledge are offset by the rigidity of established practices. This decline is particularly evident when firms struggle to innovate and adapt to new challenges. Similarly, Coad et al. (2013) found that younger firms tend to be more successful at converting job growth into sales, productivity, and profitability growth. In contrast, older firms face difficulties in translating job growth into long-term profitability, although their sales growth tends to be more profitable.

The age factor is particularly significant in Small and Medium Enterprises (SMEs), where the balance between experience and flexibility is crucial for sustained growth. Mansikkamäki (2023) discusses how firm age, in combination with firm size, influences profitability and growth. Older SMEs benefit from their accumulated expertise but may struggle to adapt to evolving market conditions or new technologies. For Halal-certified SMEs, this balance becomes even more critical, as they need to navigate changing regulatory landscapes while maintaining their competitive advantage. Halal certification can enhance market access, but older firms may require more adaptive strategies to meet evolving standards and consumer expectations.

In conclusion, while the age of a firm can offer advantages in terms of experience and market knowledge, it also poses challenges related to adaptability and innovation. For older SMEs, it is essential to strike a balance between leveraging accumulated experience and embracing new opportunities. For Halal-certified SMEs, this balance is even more crucial, as they must continuously adapt to changing regulatory environments and consumer preferences to remain competitive and compliant with certification standards.

Employees represent human potential, which plays a crucial role as a driving force for organizations to realize their existence or potential. Some studies suggest that an increase in the number of employees can have a positive impact on business performance. Sharma & Sharma (2014) argue that greater employee involvement leads to increased company productivity, subsequently enhancing profitability. Moreover, an increased workforce, especially front-line employees, is likely to improve customer service quality, resulting in higher customer satisfaction and loyalty. (Farrell et al., 2001).

However, the relationship between the number of employees and performance is not always straightforward. Fiegenbaum & Karnani (1991) suggest that smaller companies with a moderate number of employees tend to be more flexible in responding to market changes, thus enhancing their competitive advantage. More recent studies, such as Mansikkamäki (2023), further refine this view by noting that firm size can benefit future performance, but only when the firm is already in a high-profitability configuration. In contrast, firms starting from low profitability configurations may not gain any advantage from increasing in size, and doing so could even hinder growth.

Additionally, Coad & Karlsson (2022) highlights that while small, young firms are more likely to become high-growth firms (HGFs), the chances of growth diminish for older, small firms. This suggests that, while a larger workforce can be beneficial, it is particularly advantageous when the firm is young and small, allowing the firm to remain adaptable and responsive to market changes.

Based on these recent findings, it can be concluded that the number of employees can have a complex impact on the performance of Small and Medium Enterprises (SMEs). Increasing the workforce in SMEs may enhance productivity, profitability, and customer service quality, potentially leading to increased business growth. However, SMEs with fewer employees may have a competitive advantage in terms of flexibility and adaptability, especially in rapidly changing markets. Therefore, SMEs need to carefully consider their workforce needs and development strategies to achieve optimal growth and maintain strong competitiveness in a dynamic business environment.

In the context of business development, such as SMEs, one relevant determinant to consider is the age of the entrepreneur. The age of entrepreneurs can influence business or venture performance, particularly when facing dynamic market competition and changes. The older the entrepreneur, the more accumulated experience and knowledge they possess. A study Reuber & Fischer (1994) found that experience held by entrepreneurs

significantly impacts the performance of Halal-certified SMEs. This experience allows entrepreneurs to be more responsive to market changes and better equipped to face emerging challenges. Consequently, businesses led by older entrepreneurs tend to have better stability in facing market fluctuations and can optimize existing opportunities (Rahayu & Day, 2015). Conversely, the study by Bellaaj, (2021) highlights that young entrepreneurs tend to be more open to technology and innovation. They have a better understanding of the digital market and can leverage technology to enhance their business competitiveness. This study also suggests that younger entrepreneurs can offer advantages to SMEs.

Furthermore, a research Forbes (2005) indicates that the age of entrepreneurs is also related to the development of managerial skills, particularly in decision-making. The longer the entrepreneurs' experience, the more opportunities they have to learn from experience and train managerial skills. Entrepreneurs who have been in the industry for an extended period tend to possess more mature managerial abilities in resource management, strategic decision-making, and adapting to market changes. In conclusion, the age of entrepreneurs is a crucial factor that can influence the performance of Halal-certified SMEs. Older entrepreneurs can bring advantages from accumulated experience and knowledge, while younger entrepreneurs can offer advantages in technological adaptation and innovation. Therefore, to enhance SMEs' performance, it is essential to holistically consider the age factor of entrepreneurs and identify suitable strategies to support business development at various stages of their age.

The level of education of entrepreneurs is a determining factor that influences the growth and progress of SMEs (Ertuna & Gurel, 2011). Entrepreneurs with higher educational backgrounds tend to have a competitive advantage because they can access information, technology, and resources more effectively. This study reveals that individuals with higher education possess better managerial abilities, sophisticated analysis, and a tendency to adopt innovative business practices (Wain et al., 2018). Moreover, university curriculum, relational factors, societal factors, and entrepreneurial values also significantly influence business performance (Mahmood et al., 2020). This confirms that education plays a vital role in shaping entrepreneurial attitudes and skills, which positively impact SMEs' performance. Exposure to successful entrepreneurship models can stimulate students' confidence in their ability to start a business (Boldureanu et al., 2020). Students can improve their attitudes and confidence in entrepreneurship through entrepreneurship education programs. Therefore, higher levels of education can foster interest and intent among entrepreneurs to develop their SMEs.

Overall, the results of these studies indicate that the level of education plays a crucial role in business growth, especially for SMEs. Entrepreneurs with higher education have advantages in accessing information, managerial abilities, and the inclination to adopt innovations in their businesses. Therefore, a deeper understanding of the importance of education and social support in developing entrepreneurship can help enhance SMEs' performance and overall competitiveness.

Market orientation is a strategic approach focused on developing products or services to meet consumers' needs and satisfaction (Uncles, 2000). This means that companies or SMEs strive to continuously adapt to changing consumer needs, analyze market preferences, and direct marketing efforts to meet customer expectations. Market orientation is one of the critical determinants of SME performance because product or service alignment with market demands positively impacts business competitiveness and growth. Market orientation can trigger innovation and adaptation of business strategies to meet market demands, thereby enhancing business competitiveness.

Unfortunately, in the context of SMEs, a study Rahman et al. (2021) reveals that market orientation can have a negative impact on the marketing performance of SMEs in the creative economy sector. Factors such as the complexity of the creative industry, limited resources, and a lack of innovation ability contribute to this impact. However, innovation emerges as an essential mediator in overcoming the negative consequences of market orientation. By focusing on innovation, SMEs can differentiate themselves, create added value, and adapt to dynamic market demands, thereby achieving sustainable marketing performance amidst market challenges.

Entrepreneurs' confidence is a key determinant of SME performance, especially when expanding into new markets. Research shows that confident entrepreneurs are more likely to explore new opportunities and enhance their products' competitiveness, overcoming challenges and risks in the process (Zhao et al., 2005). Teruel-Sánchez et al. (2021) confirms that an entrepreneur's confidence, driven by experience and trust, positively influences business performance, further emphasizing the critical role of confidence in achieving business success. Additionally, entrepreneurs' confidence is linked to entrepreneurial passion (Cardon et al., 2009), which drives continuous business growth. In the context of Halal-certified SMEs, confidence can fuel the exploration of new market opportunities and innovation in product development. With the growing demand for Halal products

among both Muslim and non-Muslim consumers, confident entrepreneurs are better positioned to capitalize on this market's potential and sustain long-term business success.

METHODS

Population and Sample

The analysis of this research is based on primary data. The unit of analysis used in this study is the entrepreneurs who are Halal-certified or those currently applying for Halal certification in SME. The obtained data sample consists of 33 respondents, which is expected to represent the entire population, considering the relatively small number of Halal-certified SME in the Jayapura City, Papua region. The sampling method used is non-probabilistic sampling. Data and information are collected through structured questionnaires that inquire about demographics, financial performance, and market access.

Analytical Tools

To achieve the research objectives, the analysis will use descriptive statistics and inferential statistics approaches. In the descriptive statistics analysis, the results obtained from the questionnaire will be presented, including the number of SMEs experiencing increased orders and customers, average revenue increase obtained, increased production costs, constraints related to raw materials, and other characteristics of SME.

On the other hand, for inferential statistics, the analysis will be conducted through binary logistic regression to identify the factors determining the likelihood of SME entrepreneurs experiencing increased income after obtaining Halal certification. Thus, the opportunity for income growth after Halal certification becomes the dependent variable. The independent variables include, firstly, business demographics in terms of SME age (BUS_AGE) and the number of employees (BUS_NUM). Secondly, entrepreneur demographics, such as age (ENT_AGE) and education level (ENT_EDU). Thirdly, marketing aspects like market orientation area (MARK_AREA) and entrepreneur's confidence in new marketing (MARK_CONF). A description of the variables is summarized in Table 1.

Table 1. Variables Description

No	Variable Name	Description	Value	Expected Sign
1.	Income	Categorical variables that indicate the opportunity to increase business income after having halal certification are stated by respondents.	1 = Yes 0 = No	-
2.	Age of SME (BUS_AGE)	Years since the inception of the SME	Expressed in years	Positive
3.	Number of Employees (BUS_NUM)	Number of employees involved in SMEs	People	Neutral
4.	Age of Entrepreneur (ENT_AGE)	The age of the entrepreneur was assessed as a continuous variable	Expressed in years	Positive
5.	Education Level of Entrepreneur (ENT_EDU)	Categorical variable indicating the last level of education of the entrepreneur	1 = Higher education or equivalent 0 = Lower education	Positive
6.	Market Area Orientation (MARK_AREA)	The geographic focus of the SME's marketing efforts	1 = Outside Jayapura City (inside or outside Papua Region) 0 = Within Jayapura City	Negative
7.	Confidence of Future Market (MARK_CONF)	Categorical variable expressing the belief that entrepreneurs are able to open new target markets outside Papua	1 = Yes 0 = No	Positive

Binary logistic regression is a statistical approach used to analyze the relationship between a binary dependent variable and one or more independent variables. (Hosmer & Lemeshow, 2000). Binary logistic regression works by modelling the probability that an event occurs in one group compared to another based on the existing independent variables (Hosmer & Lemeshow, 2000). The equation form of binary logistic regression is as follows:

$$\text{logit }(P) = \ln (P/(1\text{-}P)) = \beta_0 + \beta_1 X1 + \beta_2 X_2 + \cdots + \beta_p X_p \tag{1}$$

Where:
- logit (P) is the logit function representing the log-odds of the event's probability.
- P is the probability of the event (in this case, the probability of SMEs experiencing increased income).
- β_0 is the constant (intercept) of the model.
- $\beta_1, \beta_2, \cdots, \beta_p$ are the regression coefficients measuring the influence of each independent variable (SME demographics, entrepreneur demographics, and marketing aspects), $X_1, X_2, \cdots, X_p$, on the probability of the event.

By employing the logistic regression approach, this study aims to estimate the regression coefficients β_1, $\beta_2, \cdots, \beta_p$ that depict the magnitude of influence of each independent variable on the likelihood of halal-certified SMEs reaching income levels above a certain threshold. The research will carry out the logistic regression model estimation as follows:

$$IncomeIncreaseProb = f(BUS_{AGE}, BUS_{NUM}, ENT_{AGE}, ENT_{EDU}, MARK\_AREA, MARK\_CONFI) \qquad (2)$$

The results of the analysis will yield regression coefficients and relevant statistics, including odds ratios, which will provide insights into the extent of the impact that each independent variable has on the increase in income for halal-certified SMEs. This information can be instrumental in understanding the most significant contributing factors to the income of halal-certified SMEs, offering valuable guidance for decision-making and strategic formulation to enhance the performance of SMEs in this sector. The binary logistic regression analysis will be conducted using the statistical software EViews.

RESULTS AND DISCUSSION

Descriptive Statistics of SMEs and Entrepreneur Characteristics

The survey results show that 52% of the 33 respondents are women. Furthermore, in terms of the education level of the entrepreneurs, approximately two-thirds of them are college graduates, followed by those with lower educational qualifications. Regarding the market aspect of these SMEs, it was found that 48% of businesses are engaged in packaged Food and Beverages (F&B), 36% in served F&B, and the rest are catering services and raw food materials businesses.

Most SMEs operate within the city of Jayapura, with few extending their market reach outside the city. Entrepreneurs who target markets outside Jayapura face significant challenges in penetrating these markets, which may hinder income growth. However, a large proportion (70%) of entrepreneurs are optimistic about their potential to expand their market reach within one year, suggesting an opportunity for growth in Halal-certified products, even in non-Muslim-majority areas.

Descriptive statistics show that 45% of respondents experienced an increase in income after obtaining Halal certification, while the majority did not see a significant income boost. This indicates a moderate potential for Halal-certified SMEs in Papua, though the impact may be more limited in regions with lower Muslim populations. Notably, the packaged F&B and catering sectors show promising prospects, with average earnings of 50 million IDR and 33 million IDR, respectively, after obtaining Halal certification.

Regarding business finance, 85% of the entrepreneurs used personal capital to start their businesses. Additionally, 13 entrepreneurs reported increased production costs due to meeting Halal certification requirements, primarily in quality control procedures, with an average increase of IDR 865,000. Despite being in a non-Muslim-majority region, 28 entrepreneurs reported no difficulty in finding Halal raw material suppliers, suggesting minimal challenges in sourcing Halal materials. Most entrepreneurs stated that they registered for Halal certification to comply with national regulations and capitalize on market opportunities.

Finally, the challenges that may be faced in increasing the sales potential of halal products in Papua are the low awareness of halal products among the public and the lack of halal certification management facilities in this region.

Logistic Regression Analysis and The Impact of Halal Certificates on SMEs Performance

The logistic regression analysis (Table 2) show that several variables significantly impact SMEs' income after obtaining Halal certification in the Papua region. The significant variables include the number of employees, market area, and confidence in new markets.

Table 2. Logistic Regression Analysis Results

Variable	Coefficient	Std. Error	z-Statistic	Probability
MARK_AREA	-2.894285	1.543435	-1.875224	0.0608*
MARK_CONF	-2.829613	1.588038	-1.781829	0.0748*
ENT_EDU	1.124278	1.030661	1.090833	0.2753
BUS_AGE	0.438178	0.207008	2.116718	0.0343**
BUS_NUM	-0.577361	0.354869	-1.626971	0.1037
ENT_AGE	0.116692	0.068408	1.705826	0.0880*
C	-10.27068	5.167282	-1.987637	0.0469

McFadden R-squared	0.299551	Mean dependent var		0.454545
S.D. dependent var	0.505650	S.E. of regression		0.459423
Akaike info criterion	1.389474	Sum squared resid		5.487807
Schwarz criterion	1.706915	Log-likelihood		-15.92632
Hannan-Quinn criteria.	1.496283	Deviance		31.85264
Restr. deviance	45.47461	Restr. log-likelihood		-22.73730
LR statistic	13.62197	Avg. log-likelihood		-0.482616
Prob. (LR statistic)	0.034156**			

Source: Data Analysis Results

- **Market Orientation**: The market area (MARK_AREA) variable had a significant negative effect on income growth. SMEs targeting markets outside the city had a lower likelihood of experiencing an income increase. This may be attributed to logistical challenges and distribution constraints in areas outside Jayapura, limiting the effectiveness of Halal product marketing. Entrepreneurial confidence in new markets (MARK_CONF) showed a similar negative impact, emphasizing the importance of overcoming these barriers to market expansion.

- **Entrepreneurial Experience and Age**: The age of the entrepreneur (ENT_AGE) and business age (BUS_AGE) were positively correlated with income growth. Older entrepreneurs, with more accumulated experience, are better positioned to leverage their networks and knowledge, resulting in better performance post-Halal certification. This finding aligns with the literature, particularly Bellaaj (2021), who noted that older entrepreneurs benefit from their accumulated knowledge and experience in responding to market dynamics. Reuber & Fischer (1994) also emphasized that experience significantly impacts SMEs by helping entrepreneurs better navigate emerging challenges.

- **Education**: Interestingly, entrepreneurial education (ENT_EDU) did not significantly influence income growth, contrary to previous studies suggesting that higher education levels correlate with better business outcomes (Ertuna & Gurel, 2011). However, in Papua, practical experience and local knowledge may be more important than formal education. This could be explained by the cultural and contextual factors in Papua, where entrepreneurial experience may play a more critical role than formal education.

- **Number of Employees**: The number of employees (BUS_NUM) did not have a significant impact on income growth. Although the number of employees is typically associated with increased business capacity, it may not be as important in Papua's context, where flexibility, local knowledge, and entrepreneurship are key to success.

Goodness of Fit

The logistic regression model has been well-specified. The Hosmer-Lemeshow test results show that there is no difference between the model and the data. The prob. Chi-Sq(8) value of 0.3878 is greater than α = 5% significance level, indicating that the model is a good fit for the data and can reliably predict the likelihood of SMEs experiencing income increases after obtaining Halal certification. Further details can be found in Table 3.

Table 3. Model Fit Statistics

H-L Statistic	Andrews Statistic	Prob. Chi-Sq (8)	Prob. Chi-Sq (10)
8.4822	20.8094	0.3878	0.0225

CONCLUSION

This study highlights the significant opportunities for the development of Halal-certified SMEs in Papua, despite the challenges of operating in a minority Muslim region. While a substantial portion of respondents did not see major income increases, 45% reported positive revenue growth after obtaining Halal certification, indicating potential for growth in this sector. Among the various Halal food and beverage (F&B) sectors, the catering industry shows the highest growth potential in Papua, offering promising prospects for future expansion. Additionally, Halal businesses face relatively few challenges in sourcing Halal-certified raw materials, suggesting that the Halal ecosystem is already established, even in regions where Muslims are a minority.

The logistic regression analysis reveals that market orientation and demographic factors are key determinants for income growth among Halal SMEs. Specifically, older entrepreneurs and those with longer-established businesses are more likely to experience revenue growth. However, a broader market orientation, targeting areas outside Jayapura, appears to hinder revenue performance. This is likely due to the limited competitiveness of SMEs in remote areas, suggesting the need for a more focused approach to market expansion.

In conclusion, this study provides valuable insights into the challenges and opportunities faced by Halal-certified SMEs in Papua. Understanding the factors contributing to business success and addressing barriers to growth can help entrepreneurs optimize their business potential, contributing to the sustainable development of the Halal industry. With the right strategies, Halal-certified SMEs in Papua have the potential to grow and thrive, making positive contributions to the regional economy.

Key Recommendations

Based on the findings, several strategies can help Halal SMEs in Papua improve their performance and expand their market reach:

- Enhance Workforce Management and Knowledge Sharing. Entrepreneurs should focus on improving workforce management and actively engage in knowledge sharing with peers. This collaboration can foster stronger competitiveness among SMEs and allow for better adaptation to market changes. Training programs focusing on business management and leadership skills would be beneficial, particularly for newer entrepreneurs looking to improve their operational efficiency.

- Strengthen Market Expansion Efforts. Expanding into new markets, particularly outside Papua, requires more than just entrepreneurial drive. Effective marketing strategies, supported by logistics and distribution infrastructure, are essential for overcoming the barriers to market access. Local government support is also crucial in addressing logistical challenges. Entrepreneurs should explore opportunities to leverage technological advancements, such as digital marketing and e-commerce platforms, to reach broader markets and increase their competitiveness.

- Boost Entrepreneurial Confidence. The confidence and optimism of entrepreneurs in facing new market challenges are key to their success. To nurture this confidence, entrepreneurs need to receive support from family, community, and relevant institutions. Mentorship programs, entrepreneurship workshops, and access to networks of successful entrepreneurs can significantly enhance self-assurance and help overcome business challenges.

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