

## ANALYZING ENVIRONMENTAL FACTORS FOR PREDICTING THE ADOPTION OF ISLAMIC FINANCING FACILITIES AMONG *HALAL*-CERTIFIED COMPANIES IN MALAYSIA

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### Abstract

This study investigates the environmental factors on the intention to adopt Islamic financing facilities among *halal*-certified companies in Malaysia. The research utilizes Technology, Organization, and Environmental (TOE) framework as underlying theory, with a specific focus on environmental factors. A relevant questionnaire was designed and distributed among the owners or managers of *halal*-certified companies in Malaysia. Data from 237 *halal*-certified companies were collected after a simple random sampling selection. The hypotheses were tested using a Structural equation modelling with SmartPLS. The findings show that competitive pressure has a significant positive impact on the intention to adopt Islamic financing facilities, while customer pressure have no significant impact. Also, this study provides crucial insight to bank managers regarding the development of effective strategies aimed at enhancing the adoption of Islamic financing facilities among *halal*-certified companies.

**Keywords:** Islamic Financing Facilities, Competitive Pressure, Customer Pressure, *Halal*-Certified Companies, Malaysia.

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### Introduction

Islamic economics is based on the principles and norms for human welfare derived from Islamic sources (DinarStandard, 2022). While Muslim may be culturally diverse or geographically distributed, they globally drive US\$2 trillion opportunity across a range of lifestyle products and services, while Islamic finance assets amount to a US\$3.6 trillion opportunity (DinarStandard, 2022). Since the both industries are significant for Muslim, the industries have progressed positively in creating *Shari'ah* compliant products and services.

In halal sector, the *halal* certification program was introducing in the 1990s with the aim to provide assurance to consumers. Malaysia has also placed significant emphasis on the development of the *halal* certification program since 1965. This include the implementation of *halal* food standard in 2000 and Manual Procedure for Malaysia *Halal* Certification (MPPHM) in 2005. Since *halal* certificate primarily emphasizes production aspects which from the selection of raw materials to the distribution process (Muhamed et al., 2014). In 2011, Malaysian government took the step the introduction of the integration of the *halal* industry with Islamic finance to encourages the *halal*-certified companies utilize Islamic financing (Fredericks, 2011). According to World Bank Group (2022) described that Islamic finance offered variety of Islamic financing facilities that suit of various business sizes including fixed asset financing, trade financing. However, only 43.1% of *halal*-certified companies adopt Islamic financing facilities in their *halal* business operations (World Bank Group, 2022). This unresolved issue has meant that the source of financing for a *halal*-certified company still has to deal with the prohibition of *riba* (interest).

Researchers (e.g. Muhammad *et al.*, 2022; Rasheed & Siddiqui, 2022; Shah *et al.*, 2023) have shown interest in investigating the adoption of Islamic financing facilities in the past. The outcomes of these studies could potentially enhance the rate of Islamic financing facilities adoption. However, a majority of these investigations have placed greater emphasis on Islamic financing facilities adoption at the individual level (Usman *et al.*, 2022). To address this gap, the current study shifts its focus to organizational-level adoption. By doing so, it aims to provide novel insights into the intentions surrounding the adoption of Islamic financing facilities.

Focusing on the organizational level, this study adopts the TOE framework as its foundational theory, specifically concentrating on environmental characteristics. Hence, the objective of this study is to investigate how competitive pressures and customer pressures influence the adoption of Islamic financing facilities among *halal*-certified companies in Malaysia. According to Usman *et al.* (2022), competitive pressure holds the potential to shape an organization's behavior in adopting Islamic finance. This pressure prompts organizations to emulate strategies that align with the demand for these financial products and services. Likewise, customer pressure can significantly impact on organization's inclination to adopt Islamic financing facilities as outlined by Ngah *et al.* (2022), customers' preferences for a holistic adherence to *halal* practices throughout the entire production-to-consumption process.

The paper begins by conducting a literature review on previous research on Islamic financing facilities and develops a research framework and hypotheses. The study's data analysis and findings are then presented and discussed. The conclusion summarizes the study's significance and contribution and proposes recommendations for future research.

### **Technology-Organization-Environment (TOE) Framework**

Previous studies have used various theories and models to examine the behavior of micro, small, and medium enterprises (MSMEs) companies in adopting Islamic financing facilities. Nevertheless, the investigation of the adoption of Islamic financing facilities at the organizational level remain underexplored. Although Usman *et al.* (2022) investigated the adoption of Islamic financial services using institutional theory. However, this study focus MSMEs in Indonesia. Therefore, it is imperative to consider the external pressure on intention to adopt Islamic financing facilities among *halal*-certified companies in Malaysia context

Interestingly, this study focus on organizational level and TOE framework as a theoretical basis. Although the TOE framework examines the characteristics of technology, organizational, and environmental (see Figure 1), Wang *et al.* (2010) argued that the TOE framework's three main components lack well-defined major constructs and are overly broad. Hence, the framework's flexibility in altering factors or measures for research contexts renders it highly adaptable and appropriate for various research studies.

Specifically, this study focus on environmental characteristics which explained that the business environment can be viewed as a barrier or opportunity to technological innovation (DePietro *et al.*, 1990). For examples, Ngah *et al.* (2022) examine the influence of environmental characteristic of customer pressure on the adoption of *halal* transportation in Malaysia. While Schmitt *et al.* (2019) identified environmental characteristics (regulatory policy, competitive pressure, legal uncertainty, consumer perception and external data) for smart contracts and Internet of things (IoT). In light of this, this study focuses on competitive pressure and customer pressure as environmental characteristics influencing the intention to adopt Islamic financing facilities among *halal*-certified companies in Malaysia.

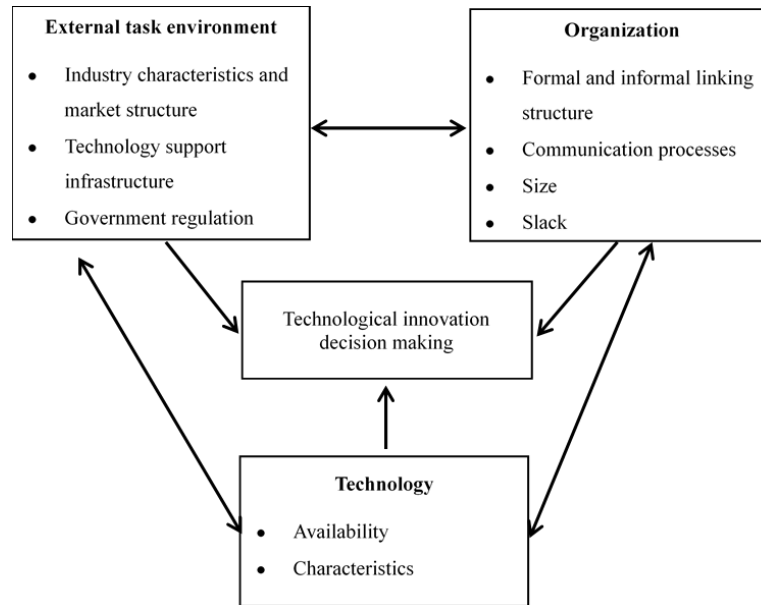


Figure 1. Technology, Organization, and Environment  
Source: Tornatzky and Fleischer (1990)

### Research Framework and Hypotheses Development

#### Competitive Pressure

Competitive pressure refers to the amount of pressure that a company experiences from its competitors. In order to stay competitive, businesses are compelled to incorporate innovative approaches to enhance their business strategies. Prior research has demonstrated that the adoption of innovation is positively influenced by competitive pressure. For example, The study conducted by Wong *et al.* (2020) revealed that competitive pressure had a significant effect on blockchain adoption for operation and supply chain management among small, medium enterprises (SMEs) in Malaysia. Similarly, Matias and Hernandez (2021) found that competitive pressure has a positive impact on cloud computing adoption by MSMEs in Philippines. Therefore, competitive pressure is a key factor for the adoption of IFF. This leads to the following hypothesis:

*H<sub>1</sub>: Competitive pressure has a significant positive influence on the intention to adopt Islamic financing facilities*

#### Customer Pressure

In a highly competitive business environment, keeping the customer satisfied is the primary focus of a business entity to remain viable. Customer pressure is one of the factors of influence the adoption of technology or innovation. A study by Ezzaouia and Bulchand-Gidumal (2020) found that competitive pressure was determined to have the most significant impact on IT adoption in the hotel industry in Morocco. Likewise, Ngah *et al.* (2020) discovered that there was a significant relationship between customer pressure and the intention to adopt halal transportation services among pharmaceuticals and cosmetics manufactures in Malaysia. Hence, this study formulates the following hypothesis:

*H<sub>2</sub>: Customer pressure has a significant positive influence on the intention to adopt Islamic financing facilities*

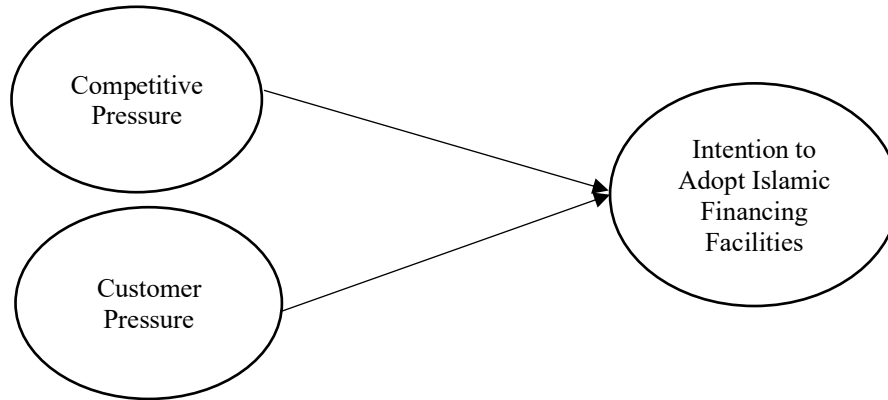


Figure 2. The Proposed Model

### Research Methodology

#### Sample and Data Collection

This research focused on companies in Malaysia that hold a *halal* certification. Simple random sampling was employed to select owner or manager of a *halal*-certified companies who attended the Malaysia *Halal* Expo (MHE), Penang International *Halal* Expo (PIHEC), and Malaysian International *Halal* Showcase (MIHAS) in 2019. A questionnaire was administered to gather data, and out of the 300 questionnaires distributed, 237 were suitable for data analysis.

#### Measurement

The survey used in the study consisted of two sections. Section A obtained information on the company's demographics, while Section B included the independent and dependent variables of the research. Respondents rated all variables on a five-point scale ranging from "1=Strongly disagree" to "5=Strongly agree." The dependent variable was adapted from previous studies by Shimp and Kavas (1984), Son and Benbasat (2007), and Amin *et al.* (2011), while the measurement of competitive pressure was based on three items from Kung *et al.* (2015) and Maduku *et al.* (2016). Four items were used to measure customer pressure, adapted from Wu *et al.* (2003) and Kung *et al.* (2015).

### Data Analyses and Results

#### Company Profiles

Table 1 presents the company profiles. The majority of the companies (48.1%) had been in operation for more than 10 years, while 30% had possessed the Malaysian *halal* certificate for more than 10 years. The majority of the companies (80.6%) were small enterprises, and more than 70% of the companies operated in the food product/beverages/food supplement sector.

Table 1. *Halal*-Certified Company Profiles

Items	Frequency	Percent
<i>Operational Age</i>	35	14.8%
<3 years	56	23.6%
3 – 5 years	32	13.5%
6 – 10 years	114	48.1%
>10 years	237	100%
Total	35	14.8%
<i>Age of Halal Certification</i>		
<3years	60	25.3%
3 – 5 years	66	27.8%
6 – 10 years	40	16.9%

>10 years	71	30.0%
Total	237	100%
<i>Number of Employees</i>		
<5 employees	43	18.1%
6-75 employees	158	66.7%
75-200 employees	33	13.9%
>200 employees	3	1.3%
Total		
<i>Halal Sectors</i>		
Consumer goods	10	4.2%
Pharmaceutical	5	2.1%
Cosmetic and personal care	6	2.5%
Logistic	1	0.4%
Food premise	49	20.7%
Food product/Beverages/Food supplement	166	70%
Total	237	100%

**Assessment of Measurement Model**

The study conducted reliability, convergent validity, and discriminant validity tests, and the findings in Table 2 revealed that the measurement models met the minimum requirements. Although a cutoff value of 0.70 is significant for factor loadings, Ramayah *et al.* (2018) argued that indicators with loadings below 0.708 can be retained if the minimum of AVE of 0.5 is reached. Thus, the loadings of Comp3 were deemed appropriate as AVE is above 0.5. The study used Dijkstra-Henseler's rho (rhoA) to measure convergent validity because Ringle *et al.* (2017) suggested that rhoA provides a more accurate estimate of data consistency than Cronbach's alpha and composite reliability. Table 2 indicates that all rhoA values are above 0.70, indicating that the measures of adoption intention, competitive pressure, and customer pressure have adequate internal consistency. Furthermore, the AVE values are above 0.50, supporting the convergent validity of the construct measures (Henseler *et al.*, 2016 and Henseler, 2017).

Table 2. Results of Assessment of Measurement Model

Constructs	Items	Loadings	rhoA	AVE
Intention to adopt	Adopt1	0.890	0.867	0.690
	Adopt2	0.753		
	Adopt3	0.880		
	Adopt4	0.791		
Competitive pressure	ComP1	0.879	0.811	0.634
	ComP2	0.871		
	ComP3	0.608		
Customer pressure	CustP1	0.810	0.830	0.613
	CustP2	0.767		
	CustP3	0.736		
	CustP4	0.816		

Finally, discriminant validity indicates the extent to which a given construct differs from other constructs. In this study, the HTMT criterion was used because it has high sensitivity and reveals problems in discriminant validity (Ab Hamid *et al.*, 2017) compared Fornell-Larcker criterion and

cross-loadings. Table 3 shows that all scores meet the HTMT.90 (Gold *et al.*, 2001) and the HTMT. 85 (Kline, 2011) criterion.

Table 3. Heterotrait-Monotrait Ratio (HTMT) Results

Constructs	Adopt	ComP	CustP
Adopt			
ComP	0.395		
CustP	0.280	0.661	

**Assessment of the Structural Model**

Table 4 indicated that the path coefficients of four relationships have t-value > 1.645, which is considered significant at the 0.05 level. In particular, the competitive pressure ( $\beta = 0.095$ ;  $p < 0.05$ ) is positive and significant for intention to adopt Islamic financing facilities. Thus, H<sub>1</sub> is supported. The R<sup>2</sup> value of this study is 0.728, indicating this study has a substantial model.

Table 4. Direct effect of hypotheses results

Casual Path	Hypothesis	Path Coefficients	t-value	Supported
ComP → Adopt	H <sub>1</sub>	0.095	1.946	Yes
CustP → Adopt	H <sub>2</sub>	-0.080	1.484	No

**Discussions**

This study reveals that competitive pressure has a significant and positive influence on the intention to adopt Islamic financing facilities among *halal*-certified companies in Malaysia. While previous studies such as Wong *et al.* (2020), Owusu (2020), Sun *et al.* (2020), Malik *et al.* (2021), and Alam *et al.* (2022) support this finding, a distinctive feature of this study compared to prior research is the specific context in which it was carried out. This study focuses on the adoption of Islamic financing facilities adoption context among *halal*-certified companies in Malaysia. Thus, the more likely competitors are to adopt Islamic financing facilities, the more inclined the *halal*-certified companies will be to adopting the Islamic financing facilities. It is noteworthy that some companies believed that not adopt Islamic financing facilities would create negative perceptions in the market about their business.

In contrast, the study found that customer pressure does not have a significant influence on the intention to adopt Islamic financing facilities among *halal*-certified companies in Malaysia. This finding contradicts previous studies such as Ezzaouia and Bulchand-Gidumal (2020), Ngah *et al.* (2020), Lin *et al.* (2020), and Abed (2020), which showed that customer pressure significantly influences innovation adoption. A possible reason for this could be that customers give priority to the ingredients aspect when selecting *halal* products, resulting in companies not perceiving any pressure from their customers to adopt Islamic financing facilities.

**Research Contributions, Limitations**

Our study makes a theoretical contribution by addressing a research gap in the literature. While much attention has been given to the adoption of Islamic financing facilities at the individual level, there has been relatively little research conducted on organizational-level adoption behavior. Therefore, our study aims to fill this gap by providing insights into organizational adoption behavior.

This study provides practical benefits by enabling bank managers to gain a deeper understanding of the particular challenges faced by potential *halal*-certified companies and take a more proactive approach in promoting the successful adoption of Islamic financing facilities. The study found that competitive pressure significantly influences the intention to adopt Islamic financing facilities among *halal*-certified companies. This finding could serve as a useful guide for developing an appealing product package for



IFF that caters to the diverse financial requirements of halal-certified companies. Thus, if competitors adopt appealing products, it can create pressure on companies, which may affect their decision-making process and operational strategy.

### **Conclusion and Future Research**

This study has investigated the influence of competitive pressure and customer pressure on intention to adopt Islamic financing facilities by *halal*-certified companies in Malaysia. Our study is a pioneering study in applying such an approach to understand organizational behavior in the adoption of IFF. Indeed, our study makes an academic contribution by addressing a research gap in the literature. While much attention has been given to the adoption of Islamic financing facilities at the individual level, there has been relatively little research conducted on organizational-level adoption behavior. Therefore, our study aims to fill this gap by providing insights into organizational adoption behavior.

Furthermore, this study provides practical benefits by enabling bank managers to gain a deeper understanding of the particular challenges faced by potential *halal*-certified companies and take a more proactive approach in promoting the successful adoption of Islamic financing facilities. The study found that competitive pressure significantly influences the intention to adopt Islamic financing facilities among *halal*-certified companies. This finding could serve as a useful guide for developing an appealing product package for IFF that caters to the diverse financial requirements of *halal*-certified companies. Thus, if competitors adopt appealing products, it can create pressure on companies, which may affect their decision-making process and operational strategy.

On the other hands, this study has two main limitations that need to be addressed in future research. Firstly, the majority of the respondents (70%) belonged to the food/beverage/food supplement sector, and thus, more participants from other sectors are needed to provide a more representative sample. Secondly, this study did not examine organizational factors, which is an area that requires further attention in future research.

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### **Author Contribution**

H Mat Soha – Writing Original Draft; MZ Mat Junoh - Review and Editing; TS Tunku Ahmad – Supervision; MA Islam – Methodology

### **Conflict of Interest**

Authors declare no conflict of interest

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