

The Impact of Technological-Organizational-Environmental (TOE) Factors on Homestay Performance

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Abstract: Homestay have been a part of the tourism industry for a long time, however, their prevalence is still lower than the other travel-related services. Determining the factors that homestays should have to improve their performance and level them with other tourism services is the goal of this pilot study. Thus, this study aims to investigate how homestay performance can be improved by using the TOE Framework. To do this, a self-administered questionnaire was distributed among 50 homestay coordinators in the pilot study. To verify the validity and internal consistency of the measures, a few tests were carried out on the data by using SPSS 29 software. The three factors examined in this study which are technology, organization and environment factors were all determined to be significant. The findings show that homestays should give each of these factors top priority if they want to improve their performance and stay competitive in the tourism industry. In conclusion, the uniqueness of this study has contributed to the development of the most effective homestay business plan and provided empirical data for the study, both of which are essential resources for decision-makers engaged in the execution of future research.

Keywords: *TOE Framework, Homestay, Homestay performance, MOTAC, Tourism*

1. Introduction and Background

The government of Malaysia has allocated RM 237.61 million to the Ministry of Tourism, Arts and Culture (MOTAC), in an attempt to boost the tourism industry (Zulkefli, Che Aziz and Mohd Radzol, 2021). These kinds of grants support the economic development of rural communities with limited resources by facilitating a variety of business transactions of commodities, crafts and services. This provides the opportunity for the community to seek careers in business. Therefore, Community Based Tourism (CBT) is viewed as an excellent option to launch a number of activities that encourage tourists to learn about accessible natural treasures. Homestay is a common CBT program that allows participants to visit neighboring towns and villages as well as reside with local foster families (Phunnarong, 2021). This is because the Homestay program is one of the initiatives that the rural community takes part in to enhance living circumstances, strengthen community bonds and reap equitable benefits from the homestay (Kunjuraman, Hussin, and Aziz, 2022). As stated by Azman (2020); Ramele and Yamazaki (2020), this Homestay program was officially launched in 1995 and distributed to all rural villages in Malaysia.

Additionally, guests can stay with host families through this program, interacting with family members and taking in the customs and daily activities of the community (Azhar et al., 2021). Furthermore, Zulkefli et al. (2021) found that this program was designed to provide unique experiences to tourists who are eager to learn about the local way of life and culture, as well as to develop a fresh and reasonably priced rural tourism service for the global market.

According to Balasingam and Bojei (2019), this program also will help in enhancing the social and economic status of the community by reducing unemployment and creating job opportunities. Where the program offers various advantages to the community, including generating income, developing the handicraft sector and fostering rural culture (Janjua et al., 2021).

Even with all of the government incentives that the Homestay program has received, it is still a slowly expanding industry. There is a problem with registered homestays declining interest in taking part in the

program. This is in line with Ismail et al., (2016) study stated that the homestay program faces numerous challenges, due to external and internal factors in its business environment that affect the program's performance and efficiency. Thus, to what extent the usage of the TOE Framework in the Homestay Program is yet to be determined. In addition, there is less evidence on how the TOE Framework is utilized in practice, reflecting the context of use in a homestay program, which is confined and susceptible to situational constraints (Agyeiwaah, 2018; Siti Nabiha, Nordin, and Poh, 2021). Thus, to enrich the literature, this study seeks to investigate the influence of TOE factors on the performance of homestay in Malaysia.

2. Literature Review

There are a number of well-known frameworks that aid the explanation of why individuals or organizations decide to accept or reject new technologies. The TOE framework, which integrates technology, organization, and environment, has gained significance in analyzing the ways in which different elements impact the financial performance of businesses, including homestays. The purpose of this literature study is to examine how the TOE framework has been used to evaluate homestays' financial performance, with an emphasis on the ways in which these elements support both operational effectiveness and profitability. This review attempts to provide a thorough understanding of how homestays can use the TOE framework to improve their financial performance by highlighting important findings and gaps in the literature through a synthesis of recent research. Hence, this is how the TOE framework and homestay performance are summarized

TOE framework

The TOE framework is a well-known theoretical model that explains how technology is adopted and integrated into businesses (Fan et al., 2023). This framework was first proposed by Tornatzky and Fleischer during the progress of technology (Tornatzky & Klein, 1982). It includes technological, organizational and environmental factors. Compared to the other theory, the TOE framework has the advantage of being able to identify both internal and external impacts, as well as offering a more comprehensive research perspective (Zhong and Moon, 2023). Perceived relative advantage, perceived compatibility and other pertinent technologies utilized by the company are all included in the technological factors (Amini and Jahanbakhsh, 2023). Organizational factors comprise the firm's characteristics and features, including its size, the level of competence of its human resources, the quantity of resources at its disposal, and its organizational structure (Kwabena et al., 2021). According to Ramlan et al., (2023), the environmental context includes external factors that have an impact on the company.

Technological Factors

Technological factors refer to the creative efforts made by an organization to acquire new technologies that could improve its performance (Wang et al., 2016). Tornatzky et al. (1990) highlighted the importance of company capabilities in managing technology by emphasizing the technological aspect within the TOE framework. In terms of putting technological components into practice, Yalcin and Daim (2021) have recommended acquiring technology as well as having the ability to manage, integrate, and develop with these elements successfully. Technology will continue to grow as long as internal factors continue to drive it and performance will also increase with it. Naturally, internal R&D alone is not enough to improve an organization's performance. Some companies that have a long R&D cycle and a high difficulty coefficient can achieve twice the outcomes in half the time by introducing new technology. Thus, the introduction of new technology can improve an organization's performance in innovation. Technological advancement is the key factor driving this improvement.

Organizational Factors

Kwabena et al., (2021), claimed that organizational factors affect an organization's performance. In accordance with Stenberg and Nilsson, (2020), "internal resource bases and procedures that affect an organization's ability to respond to both the internal and external environment" are referred to as organizational factors. It may affect the planning, overall performance and strategic objectives. Additionally, Ellstrom et al., (2022) stated that organizational expertise and innovation are necessary for organizations to improve their performance. In this regard, businesses should be able to strategically create long-term goals (AlNuaimi et al., 2022). Organizational skills are also necessary for this organizational aspect. Some of its constituents are an agile organizational structure (Adel, 2022), effective decision-making procedures and the capacity to reallocate

personnel and resources as necessary (Asker and Mergel, 2022).

Environmental Factors

Based on Amini & Jahanbakhsh (2023) stated that environmental factors are things that affect and impede particular operational characteristics. This element includes the demands of the market and customers, trading partners, readiness, sociocultural considerations, government support and technical infrastructure (Zhong and Moon, 2023). This is in line with Ramlan et al. (2023) defined the environmental context as external factors that impact the firm, like competition from competitors and pressure from suppliers or customers. Moreover, regarding the environmental element, businesses need to be able to respond quickly to external factors such as market trends, industry upheavals, and regulatory changes (Steininger et al., 2022). In this instance, organizations require governance-risk-management-compliance (GRC) to manage the environment and guarantee that, through risk management and regulatory compliance, the organization can obtain performance from the application of the TOE Framework (Abdurrahman et al., 2023).

Homestay

The official homestay program is known as a cluster homestay and is managed by the Ministry of Tourism and Culture (MOTAC) (Bachok, Hasbullah, Ab Rahman, 2018). Moreover, according to Ramele & Yamazaki, 2020; and Azhar et al. 2021 stated that MOTAC started promoting the homestay program in 1995. They also have produced a set of guidelines and regulations that these cluster homestays must follow (Ramele & Yamazaki, 2020). Therefore, recognition and program licenses will only be granted to property owners who comply with the rules and regulations for hosting visitors (Noor and Awang, 2018).

Moreover, MOTAC also established branches of the Malaysian Homestay Association (MHA) in every state in Malaysia so that they could participate in the inspection of the host family house throughout the registration process for cluster homestay (Velan, 2019). This Association will coordinate discussions and negotiations between the host family and MOE. Additionally, they also took part in marketing and advertising for homestays, which prompted a lot of visitors to sign up for the program (Ramele & Yamazaki, 2020). Furthermore, Nor and Awang (2018) stated that the MOTAC Homestay logo is placed in front of the house and marks it as a "cluster homestay," making it easy to recognize the homestays that have been registered with MOTAC in Malaysia. They also claimed that MOTAC is the owner of the logo's patent and prohibits unregistered homestay providers from using it (Nor and Awang, 2018).

Figure 1: Logo Cluster Homestay



Nevertheless, based on Wang et al.' (2016) stated that the Homestay program is a tourism product that gives visitors a sense of local community life and a pleasant rural environment. Adli and Chin (2021) further define homestay as a type of lodging in which visitors stay in private houses with a host family, who typically reside on the premises. This is in line with Ayupp, Jaafar and Tinggi, (2021) stated that the guests will have the opportunity to participate in community events and communicate with the hosts to exchange information, customs, and life experiences.

Additionally, the program seeks to generate income and economic booster for rural communities (Kayat et al., 2016). This is reached by their engagement in operating homestays out of their homes and by taking part in other activities that are part of the packages that are offered to the visitors (Mapjabil et al., 2017). In addition, according to MOTAC (2024), based on statistics, showing that there were about 208 homestay programs registered in Malaysia involving the participation of a total of 450 villages and 3397 operators in December

2023 which is a decreasing number from previous years. There is a problem with cluster homestays declining interest in taking part in the program which affects the performance of the homestay (Ramele & Yamazaki, 2020; Nor and Awang, 2021).

Performance of the Homestay

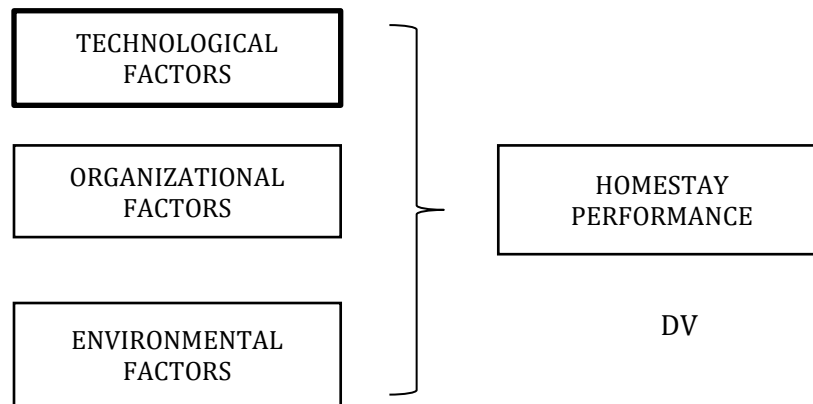
The performance of an organization can be evaluated using both financial and nonfinancial parameters (Zulkefli et al., 2021). Based on Dawayana et al., 2021 stated that productivity, sales growth, cash flow, and profitability are examples of financial criteria measurements. On the other hand, non-financial goals contribute to alternative success measures, such as customer satisfaction, effective leadership, strong partnerships with public and private organizations and uniqueness of homestay attractions (Zulkefli et al., 2021).

Homestay is an initiative taken by the government to enhance the standard of living among the participating rural communities (Kunjuraman, Hussin, and Aziz, 2022). There was little research done on performance evaluation in homestay settings (Yong et al., 2021). Moreover, Walker and Brown (2004) claimed that the relationship between financial and nonfinancial variables indicates actual performance for success and can be explained more thoroughly. Previous studies have indicated that a multitude of factors may impact the homestay's performance; however, this particular study focuses exclusively on its financial performance.

Furthermore, according to Golovkova et al. (2019), financial performance is the phrase used to describe financial operations. The achievement of financial objectives is frequently indicated by financial performance. Golovkova et al. (2019) define it as the process of evaluating how a company's policies and operations affect its bottom line. Thus, to enhance the effectiveness of homestay performance, homestay operators should persist in their focus on creating unique business approaches (Devadas and Jayasooriya, 2021).

The theoretical framework is then demonstrated in the next section, followed by the methods for data collection and analysis in the next section, and finally, the main conclusions and results are presented. The context-specific information that follows should be especially helpful in pointing out potential areas for improvement.

Conceptual Framework



IV

The framework above is drawn to evaluate the relationship between all variables. On the left side of the model are the independent variables (TOE Factors) as influencing factors. The right side of the model shows the dependent variable which is the Homestay Performance.

3. Research Methodology

In this section, the researcher outlines the methodology strategy, which includes defining the target population, the survey's nature, sample size estimation and survey instruments.

Research design

This paper is a pilot study that uses a structured questionnaire with a quantitative research design to gather data from the homestay coordinators. The purpose of the study is to look into the relationship between the financial performance of the homestay and the TOE framework, which considers technological, organizational, and environmental factors. The study focuses on the major concepts included in the TOE framework and examines the connections between these factors and the financial performance of the homestay using SPSS 29 software.

Population and Sampling

Data was collected from homestay coordinators who act as the representatives to represent the cluster homestay that are registered with MOTAC. The rationale for selecting these respondents is that they are the people who will report the homestay's performance as a whole to MOTAC, have the knowledge to provide accurate responses and are the best people to complete the questionnaire.

The researcher employed quantitative research and a self-administered survey questionnaire was used as an instrument to collect data. The type of sampling used for this research was the probability sampling technique by using purposive sampling method. For a pilot study, a smaller sample size is often deemed appropriate to test the research instruments and collect preliminary data. However, it is important to ensure that the sample size is large enough to generate reliable results.

Sampling and Data Collection Process

A total of 50 questionnaires for the pilot study were distributed to get higher response and only 30 questionnaires were completed and returned, yielding a response rate of 60%. This response rate is considered adequate for pilot studies but highlights the need for efforts to improve participation in larger-scale studies. Moreover, the survey questions were made bilingually (English and Bahasa Malaysia translation) to make it easier for the respondents to answer the questions. Section A will describe the respondents' demographic profile. Sections B, C, D and E were used to assess respondents' level of agreement and the results were analyzed using SPSS 29. All constructs were measured using established scales adopted from existing literature on a seven-point Likert scale.

4. Results of the Study

Descriptive Analysis

The total number of respondents for this study was 30 respondents which consisted of Homestay coordinators.

Table 1: Frequency analysis

Variables	Items	Frequencies	Percentage
Gender	MALE	19	63.3
	FEMALE	11	36.7
Age	21-40	3	10
	41-60	12	40
	ABOVE 61	15	50
Education	SPM	18	60
	CERTIFICATE	3	10
	DIPLOMA	5	16.7
	DEGREE AND ABOVE	4	13.3
Type of Social Media Use	Facebook	19	63.3
	Instagram	2	6.7
	TikTok	0	0
	Other	9	30

Based on Table 1, show the frequency analysis for the study. Overall, of the 30 respondents, 63.3 percent were male respondents and 36.7 percent were female. Respondents age above 61 years old were collected as the highest sample with 15 people (50%) from the whole sample size. Respondents age between 21 to 40 years old

represent the lowest sample for overall research. Additionally, most of the respondents have SPM as their educational level which is 18 respondents (60%). Besides that, the type of social media used by all the respondents was also gathered. The least respondents use Instagram by 2 respondents (6.7%) to promote their homestay. Continuously, the highest percentage of respondents who prefer to use Facebook to promote their homestay was 63.3 percent or 19 respondents.

Table 2: Reliability analysis

Variables	Cronbach's Alpha	N of Items
Technological	.823	10
Organizational	.732	8
Environmental	.685	9
Homestay Performance (DV)	.855	11
OVERALL	.872	38

Table 2 shows the results of the reliability test. It demonstrates that there are different degrees of internal consistency amongst the various constructs. The technological and homestay performance variables have reliability (0.823), indicating that the items that measure these constructs are regularly dependable and in good alignment with the dimensions in which they are contained. Additionally, the Organizational factor shows an acceptable reliability of 0.732, which demonstrated generally consistent measurement, though there is room for potential improvement. While, the environmental variable has a moderate reliability of 0.685, indicating that further modification of the environmental component measurement may be necessary to attain higher consistency.

In conclusion, a total Cronbach's Alpha of 0.872 indicates that the measuring instrument has good internal consistency for all variables. As a result, there can be confidence in the consistency and reliability of the study findings, even in the face of some variability in the individual variables that make up the combined instrument. Reviewing and perhaps changing the Environmental factor's elements to increase internal consistency would help produce the most accurate and trustworthy findings.

Table 3: Normality analysis

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Technological Factors	.166	30	.200*	.930	30	.600
Organizational Factors	.106	30	.200*	.974	30	.657
Environmental Factors	.120	30	.200*	.972	30	.607
Homestay Performance	.143	30	.200*	.960	30	.513

The normality test was used to determine whether or not the study data had a normal distribution. Table 3 shows the results of the normality test on each of the constructs in this pilot study. It indicates that all the data for each of the constructs has a normal distribution. This is supported by the fact that the estimated p-values are greater than the significance level (0.05). Consequently, the study data for the research is distributed normally.

Table 4: Validity analysis

	KMO values	Bartlett's Test of Sphericity (Sig.)
Technological Factors	.666	<.0001
Organizational Factors	.748	<.0001
Environmental Factors	.776	<.0001
Homestay Performance	.742	<.0001

Exploratory Factor Analysis (EFA) was used to determine the basic structure of the instruments used in this investigation. The validity test, which includes KMO values and Bartlett's Test for all constructs which are technological, organizational, environmental and homestay performance is shown in Table 4. The scores are

0.666 for technology, 0.748 for organizational, 0.776 for environmental and 0.742 for Homestay performance. A strong correlation between the variables is shown by an overall KMO value above 0.6 and a p-value for Bartlett's test of sphericity below 0.05, which is considered acceptable. Thus, Lorenzo (2003) claimed that the data is appropriate for factor analysis.

5. Implications

Theoretical implication

The theoretical implications of this study are the contribution to knowledge in several ways. Firstly, it adds to the existing literature on performance by expanding the relationship between the TOE Framework and organization performance, focusing on the homestay industry. Second, based on the findings all the results were significant and it confirms the need for the TOE Framework to improve homestay performance. Third, this study also provides empirical findings on how the TOE Framework can be used to study small businesses and not only large corporations as the main respondents of this study were homestay operators who are mainly small business owners from mostly in rural areas.

Practical implication

This study also provides managerial contributions, especially for the homestay industry in Malaysia. The implication of the findings will help homestay operators comprehend the variables affecting the homestay program. Therefore, to strengthen the homestay program, the Ministry of Tourism, Arts, and Culture of Malaysia (MOTAC) and homestay operators should use these components as a standard. Moreover, it is essential to comprehend the TOE components that affect performance to design a program with a strong structure. Furthermore, the study is effective in pinpointing traits that enhance the effectiveness of the homestay program. In general, a number of parties, including researchers, MOTAC, homestay operators, and the tourism industry, will benefit from the data and conclusions from this study.

Conclusion

This study aims to investigate the influence of TOE factors on the performance of homestay in Malaysia. The TOE framework was used as a suitable theoretical foundation for the suggested conceptual model. To accomplish the study's aims, a quantitative field survey was conducted using a self-administered questionnaire, which was distributed to obtain data from a purposive sample. The data analysis and results were presented, including the details of the respondents in the survey sample. It can be concluded that there are strong relationships between Homestay performance and each of the three TOE framework components.

This suggests that the independent variables (technological, organizational, and environmental) have an impact on the dependent variable, which is homestay performance. Technology has the greatest influence on a homestay's performance, according to every hypothesis that was investigated and proven to be accurate. The results of this study have significant implications for both practitioners and researchers, especially in relation to how the homestay is carried out. Consequently, the findings support the Homestay Program's ability to manage tourism resources while serving as a catalyst for community development. Additionally, it also assists them in developing their knowledge and skills in managing the homestay effectively. Therefore, to boost the regional economy and create job opportunities in remote areas.

Limitations and Recommendations

Despite the significant findings, this research addressed a few limitations in examining the TOE framework to enhance homestay performance. Firstly, the respondents were all homestay coordinators. Examining the perceptions of other prospective users in the homestay organization such as the homestay operator and officer in MOTAC could probably give more insights and different reviews regarding the Homestay performance.

Next, the issue of generalizability arises, as the findings rely solely on data from the Homestay industry. To enhance applicability, future research may consider extending the study to other industries. Hence, recognizing that diverse regulations, cultural norms and business practices could influence the relevance of the framework. The last limitation is that researcher would be beneficial to test this model with data from the homestay industry in different countries, as it allows for potential modifications and enhancements to the model. Another area of research involves expanding and developing various inputs within the TOE framework.

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