

RESEARCH ARTICLE

The relationships between quality management system practices and innovation performance in Malaysia hotel industry

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ABSTRACT

In view the stiff competitiveness of Malaysia hotel industry, this research to assess the difference on hotel's innovation performance based on hotel's demographic(RO1) and to evaluate the relationship between QMSP and innovation performance in Malaysia hotel industry(RO2). Seven common quality management system practices (QMSP) were identified from literature review, which are leadership, customer focus, employee management, supplier management, process management, quality control and continuous improvement. The study is quantitative based, questionnaire was sent to 135 hotels in Malaysia, and 43 responded. Data collected was analyzed via ANOVA test(for RO1) and Pearson Correlation analysis(for RO2). Research finding revealed that there is significant difference on innovation performance based on hotel's size in term of number of workers. Additionally, all the QMSP are significantly correlated with innovation performance. This research denotes a practical implication to Malaysia hotel industry by identified the important and significant QMSP for innovation performance. Furthermore, the results could replicate the methodology used in this research in other service industries and process innovation.

Keywords: Innovation Performance; Leadership; Customer focus; Employee management; Supplier management; Quality Management system Practices

1. Introduction

Quality management system (QMS) practices aids in the coordination and direction of the organization's activities in order to meet customer and regulatory requirements while also continuously improving its effectiveness and efficiency. According to Maguad, B.A.^[1] QMS can help to improve supply quality. Whereas an improvement-oriented approach to QMS encourages an integrated approach to process improvement, it involves the entire organisation and has a variety of applications, such as support services and operations. Furthermore, Al-Bayati, A. J., Hasan, R. A., & Alomari, K. ^[2] revealed that, QMS such as ISO 9001 do contribute to service quality because when QMS is used in a way that allows it to affect the quality of the product or service, management notices this and has a positive view of qualitymanagement.

According to the Economic Outlook 2023 report, the growth will continue to be mainly driven by subsectors such as business services dan accommodation. The service industry is critical to the growth and

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development of the Malaysian economy, including hotel industry. In 2021, there were 5.17 thousand hotels in Malaysia. This was a decrease compared to around 5.3 thousand hotels in the previous year. The concept of the service economy combines the need for service improvement and product provision. Acceptance of this type of economy will enable Malaysia to improve the dimensions of the country's economic standard. In conjunction with this, innovation performance has been widely recognized by previous research as an essential measure for service industry in order to remain competitive advantage and to achieve long-term success^[3]. Whereas, QMS has been viewed by prior study as a set of practices to coordinate and direct organizational activities in order to meet customer and regulatory requirements, meantime continuously improve organizational innovation performance^[4]. As such, two objectives are developed for this research:

RO1: To access the differences in innovation performance of hotel industry in Malaysia based on demographics variables

RO2: To explore the relationship between quality management system practices and innovation performance of hotel industry in Malaysia.

2. Literature Review

2.1 Quality Management System Practices

A quality management system practices is defined as an effective system that integrates the efforts of various groups in an organization to develop, maintain and improve quality in order to enable production and service at the most cost-effective level that allows full customer satisfaction. Furthermore, it is an integrative philosophy of management practices used in organizations to improve their products, services and processes on a continuous basis. Where management, employees, suppliers and customers collaborate to meet or exceed customer satisfaction and expectations^[5].

2.2 Innovation Performance

2.3 Difference on Hotel's Innovation Performance demographic

Innovation is defined as the generation of new ideas and implementation into new products, processes or services which leads to national economic growth and increased employment, as well as the creation of genuine profits for innovative business enterprises^[6]. A multi-stage process by which a company converts an idea into a new or improved product or process in order to differentiate itself and compete successfully in the market^[7]. Innovation is never a one time phenomenon, but rather a long and accumulated process of organizational decision making. Innovation is also the beginning of new ideas and ending with the implementation. Besides that, innovation also known as the economic impact of technological change and defined as the use of new combination of existing productive forces to solve business problems^[8].

An organization's innovation performance is greatly influenced by company demographics. By implementing these quality management practices, an organization will have a multi-level process for converting ideas into new or improved products or processes in order to differentiate itself and compete successfully in the market. The concept of important quality management practices in innovation performance has been proposed and supported by Baregheh, A., Rowley, J., & Sambrook, S.^[7]. As a result, the hypotheses based on demographic for this study are as follows:

H1a: There is significant difference on innovation performance based on hotel's ownership (local or International)

H1b: There is significant difference on innovation performance based on hotel's size (number of workers).

2.4 Leadership and innovation performance innovation performance

Leadership plays a significant role in shaping a company's focus on quality^[9]. This is also supported by Tari, J. J., Molina, J. F., & Castejón, J. L.^[10] state that management leadership is required for the effectiveness of quality management system practices because leadership is satisfaction to the company's corporate planning, understanding of customer needs and expectations, customer feedback, customer satisfaction in the monitoring system and the level of interaction between the company and its customers^[11]. Leadership is one of the most important factors in improving an organization's performance. By implementing quality management practices, the organization will gain strong management resources as well as a continuous competitive advantage. The concept of important quality management practices in leadership practices has been proposed and supported by Sahoo, S.^[12]. As a result, the second hypothesis for this study is as follows:

H2: Leadership is positively associated with innovation performance within the hotel

industry in Malaysia.

2.5 Customer focus and innovation performance

Customer focus is measured by the organization's commitment to meeting their customers' needs^[13]. Customer focus also entails the process of communicating with and receiving feedback on customer concerns and satisfaction. Quality as satisfying the needs of the customer and thus views the customer as the driving force behind the entire quality process. Customer focus is critical for organizational success since it serves as the foundation for any quality initiative^[14]. The use of this quality management system allows the organization to measure customer satisfaction and service quality, which is critical for the organization's survival. The concept of important quality management practices in customer focus practices has been proposed and supported by Al Shraah, A., Abu-Rumman, A., Al Madi, F., Alhammad, F. A. F., & AlJboor, A. A.^[15]. As a result, the third hypothesis for this study is as follows:

H3: Customer focus is positively associated with innovation performance within the hotel industry in Malaysia.

2.6 Employee management and innovation performance

Employee management is the factor that has the greatest impact on quality outcomes^[10]. This viewpoint may imply that people are an important factor in the success of quality management system practices. Furthermore, employee management is critical for quality improvement because it fosters a sense of ownership. Employee management have been shown to improve both internal and external quality outcomes^[16]. Employee management is a concept that links individual strengths and competencies, natural support systems and proactive behaviour in the context of social policy and social change. By implementing this quality management system, an organization's comprehensive implementation success depends on many changes in employee attitudes and activities. The concept of important quality management practices in employee management practices has been proposed and supported by^[17]. As a result, the fourth hypothesis for this study is as follows:

H4: Employee management is positively associated with innovation performance within the hotel industry in Malaysia.

2.7 Supplier management and innovation performance

According to Tari, J. J., Molina, J. F., & Castejón, J. L.^[10] contend that firms must strengthen their relationships with suppliers in order to manage their processes more efficiently. This is supported by a study conducted by Temtime, Z. T., & Solomon, G. H.^[18] which found that using supplier management and

relationships will result in achieving a competitive advantage in the long run. Supplier management necessitates the formation of supplier partnerships in which suppliers are chosen based on quality rather than price alone ^[19]. Supplier management is the recognition that organizations rely on one another for resource allocation. By using these quality management practices, an organization will cooperate with suppliers to thrive with cooperative interdependence ^[20]. The concept of important quality management practices in supplier management practices has been proposed and supported by Egwunatum, S. I., Anumudu, A. C., Eze, E. C., & Awodele, I. A. ^[21]. As a result, the fifth hypothesis for this study is as follows:

H5: Supplier management is positively associated with innovation performance within the hotel industry in Malaysia.

2.8 Process management and innovation performance

Process management concerned with how the organization manages, evaluates and improves its key processes in order to produce high-quality results. According to Tari, J. J., Molina, J. F., & Castejón, J. L. ^[10] process management influences continuous improvement and results in quality outcomes. Moreover, the integration of process management with continuous quality improvement will result in high-quality products and services ^[22]. Process management is concerned with how businesses design and launch new products and services. By implementing these quality management practises, an organization gains the ability to manage interconnected processes and the improvement of these processes is the foundation of improved performance. The concept of important quality management practices in process management practices has been proposed and supported by Shewhart, W. A., & Deming, W. E. ^[23]. As a result, the sixth hypothesis for this study is as follows:

H6: Process management is positively associated with innovation performance within the hotel industry in Malaysia.

2.9 Quality control and innovation performance

Quality control is concerned with meeting quality requirements, and as it relates to clinical trials, it includes the operational techniques and activities carried out within the quality assurance system to ensure that the quality requirements of the trial-related activities have been met. In general, operational units are responsible for quality and outputs are infused with and verified as they are generated. As a result, quality control is an essential component of each operational unit's daily operations ^[24]. Quality control assists organizations in reducing errors and producing products in a more efficient and effective manner. By implementing these quality management practices, an organization can manage the daily operations of each operational unit. The concept of important quality management practices in quality control practices has been proposed and supported by Wijewickrama, M. K. C. S., Chileshe, N., Rameezdeen, R., & Ochoa, J. J. ^[25]. As a result, the seventh hypothesis for this study is as follows:

H7: Quality control is positively associated with innovation performance within the hotel industry in Malaysia.

2.10 Continuous improvement and innovation performance

According to Milakovich, M. E. ^[26] comprehensive organizational approach to meeting customer needs and expectations that involves all managers and employees in using quantitative methods to continuously improve organizational processes, products and services. Whereas overall performance is linked to ongoing improvement. According to the quality management practices theory, the best way to increase organizational output is to continuously improve performance ^[27]. Continuous improvement is critical to the success or failure of organizational change programmes in general. By implementing quality management

practices, an organization can continue to meet and exceed customer expectations. The concept of important quality management practices in continuous improvement practices has been proposed and supported by Jasti, N. V. K., & Kodali, R.^[28]. As a result, the eighth hypothesis for this study is as follows:

H8: Continuous improvement is positively associated with innovation performance within the hotel industry in Malaysia.

The research framework developed in this study shown above. The framework used leadership, customer focus, employee management, supplier management, process management, quality control and continuous improvement as independent variables and innovation performance as dependent variables as in Figure 1.

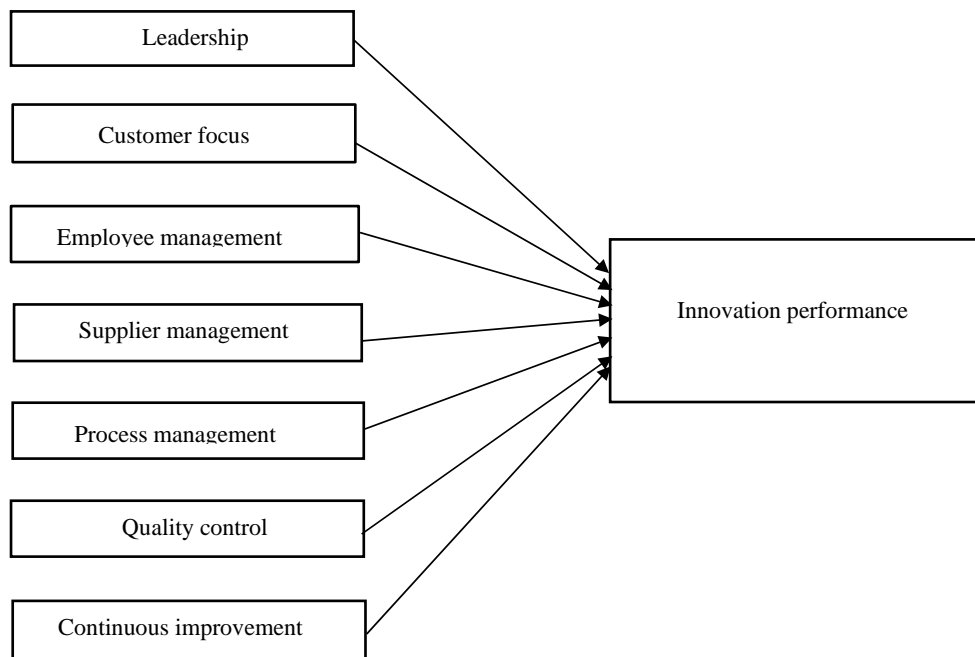


Figure 1: Research Framework

3. Research Methods

3.1 Population and Sample size

The population is the collection or grouping of all units to which research findings will be applied. Through this research, the population will be targeted to hotel industry in Malaysia that perform innovation performance and use quality management system practices such as leadership, customer focus, employee management, supplier management, process management, quality control and continuous improvement. Calculation of sample size is used based on the study of Krejcie, R. V., & Morgan, D. W.^[29]. The margin of error is the maximum amount of error that a study can accept. If 90% of respondents answer yes and 10% say no, you may be able to tolerate more errors than if the respondents are split 50-50. For a lower margin of error, a higher sample size is needed. The degree of uncertainty that can be accepted at a 95% confidence level is referred to as the confidence level. A larger sample size is required for greater confidence. Malaysia has a hotel industry with a population of 5172. As a result, the sample size for this study is 135. Snowball sampling is a network sampling design that preserves network structural information. It is an iterative procedure that collects the vertex information associated with the vertices collected in previous iterations. It has several advantages, one of which is that all network structure information is preserved because it collects samples via network connections from previous samples.

3.2 Research Instrument

The research instrument that will be used in this study is a questionnaire approach with three parts which is demographic information from respondents, innovation performance the implementing quality management system practices as shown in Table 1.

Table 1: Reference of question survey in different research

Content	Dimension	No. of items	Reference
A	Demographic Information	5	
B	Innovation Performance	6	Cembrero Gomez et al., (2013)
C	Quality Management System Practices 1. Leadership 2. Customer Focus 3. Employee Management 4. Supplier Management 5. Process Management 6. Quality control 7. Continuous Improvement	35	Sustainability (2020)

4. Findings and Discussions

4.1 Respond Rate, Normality and Reliability Test

Questionnaires have been distributed to 135 hotel industry companies in Malaysia, including local and international hotels that implementing quality management practices and innovation performances. There were 43 responses out of 135 hotel companies that replied to my questionnaire and have implemented quality management practices and innovation performance in their company. As a result, this researcher received 31.85% of responses.

The data from Parts B and C of the questionnaire were analyzed using normality and reliability tests, as well as Skewness and Kurtosis and Cronbach's Alpha. The Normality test results show that there are eight variables in the acceptable range, namely Skewness (-3 to +3) and Kurtosis (-7 to +7) based on Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. [30]. While the Cronbach Alpha score in this study is 0.510 where it is greater than 0.5 which is considered a moderately reliable scale [30]. These findings indicate that the variables are both reliable and consistent.

4.2 Result of ANOVA

The data from the questionnaire in Part A (demographics) was analyzed using ANOVA to determine whether there is a difference in innovation performance based on demographic of hotel industry in Malaysia depending on ownership and number of workers. The result of ANOVA test is summarized in **Table 2 and 3** for the relationship between demographic with the ownership and number of workers.

Table 2: The result of ANOVA on the differences on innovation performance based on ownership

ANOVA - Ownership					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.004	1	0.004	0.016	0.900
Within Groups	11.347	41	0.277		
Total	11.351	42			

Referring to **Table 2**, the sig value of 0.900 is greater than 0.05, indicating that there are no significant differences in innovation performance based on respondent ownership. Hence H1a is rejected.

Table 3: The result of ANOVA on the differences on innovation performance based on number of workers

ANOVA- Number of Workers					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.518	2	1.259	5.702	0.007
Within Groups	8.833	40	0.221		
Total	11.351				

Referring to **Table 3**, the value of sig 0.007 is less than 0.05, indicating that there are significant differences on innovation performance based on the number of workers, hence H1b is supported.

Based on **Table 2 and 3**, there are no significant differences in innovation performance based on ownership because the p value is greater than 0.05. While the differences in innovation performance based on the number of workers are less than 0.05. As a result, there are significant differences in innovation performance based on number of workers. Hotel with higher workforce performed better in term of innovation performance. This result for the number of workers is consistent with previous research which found that the most important part of innovation in the hospitality sector is their workers ^[31]. This is clearly demonstrated by giving empowered employees the opportunity to interact with upper-level management, gain decision-making power, and produce novel products ^[32].

4.3 Result of Pearson Correlation

Pearson correlation method was used to address research question 2, where to test the relationship between quality management system practices and innovation performance of hotel industry in Malaysia. Pearson correlation test results are shown in the **table 4** as below.

Table 4: The result of correlation between all factors with innovation performance within the hotel industry in Malaysia

Innovation performance	Pearson Correlation	Leadership	Customer focus	Employee management	Supplier management	Process management	Quality control	Continuous improvement
		.736**	.732**	.684**	.814**	.638*	.745**	.787**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	43	43	43	43	43	43	43

According to **Table 4**, Pearson correlation test results show that the sig value for all tests is 0.000, which are less than 0.05. As a result, this conclusion suggests that all QMS practices such as leadership, customer focus, employee management, supplier management, process management, quality control and continuous improvement are significantly correlated with innovation performance. Hence H2 to H8 are supported.

Based on **Table 4**, all QMS practices are significant and positively correlated with innovation performance. Supplier management has the highest Pearson Correlation score of 0.814. This finding indicates that supplier management is the most important variable for QMS practices in determining innovation performance. According to Tari, J. J., Molina, J. F., & Castejón, J. L.^[10], firms must strengthen their relationships with suppliers in order to manage their processes more efficiently. This is supported by a study conducted by which found that using supplier management and relationships will result in achieving a competitive advantage in the long run. ^[33-35]

5. Conclusion and Recommendations

The findings of this study show that there are seven QMS practices to consider including leadership, customer focus, employee management, supplier management, process management, quality control and continuous improvement. The findings of the study reveal that all seven QMS practices have a positive correlation with the dependent variable namely innovation performance based on the data that was collected and the results of the analysis. Furthermore, this study found that there is no difference in innovation performance based on ownership but there is a difference in innovation performance based on the number of workers that more than 75 workers are the most in agreement. As implication, the hotel industry companies should focus on how to improve innovation performance based on the number of workers in their organization. Additionally, future research can be undertaken to investigate ways to improve innovation performance dependent on the number of workers.

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Conflict of interest

The authors declare no conflict of interest.

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