

## The Effect of Demographics on Quality Management Principles of ISO 9001:2008 amongst Malaysia Hajj Pilgrims

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**Abstract:** The implementation of Quality Management Principles (QMP) is crucial in ensuring business excellence. Many ISO certified organizations have adopted the QMP of ISO 9001:2008 for achieving and sustaining business performance. However, studies related to the implementation of QMP amongst Malaysia Hajj Pilgrims are limited. This study examines the effect of demographic of Hajj Pilgrims on QMP of ISO 9001:2008. Four constructs of QMP were developed and a questionnaire was prepared to measure the implementation of the QMP as perceived by the Malaysia Hajj Pilgrims. About 500 questionnaires were distributed to the respondents using stratified random sampling procedure. A total of 350 usable questionnaires were collected and analyzed. The overall descriptive result indicated that the QMP are highly adhered to by staff of TH. It shows that the Hajj Pilgrims rated high level of QMP being practiced by the staff. This implies that TH has performed the excellent performance of QMP in the delivery of Hajj services. There is no significant effect of demographic on QMP for gender, age, occupation, academic and frequency of performing Hajj except for category of Hajj Pilgrims.

**Key words:** ISO 9001:2008, quality management practices, demographic, Hajj services, occupation

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### INTRODUCTION

QMP is a management philosophy that helps organizations to improve their business performance (Garvin, 1988; Arumugam *et al.*, 2008; Ahmad *et al.*, 2012a), to Ahmad *et al.* (2013), to sustain high business performance, a high level of QMP is required to fulfill customer satisfaction on a continuous basis (Ahmad *et al.* 2012b; Ahmad and Yusof, 2010). The practice of QMP is embedded in a Quality Management System, such as Total Quality Management (TQM) and ISO 9001:2008. Both TQM and ISO provide requirements for developing and sustaining a quality management system and the QMP must be practiced to implement them effectively.

The TH is the premiere Hajj organizer and Islamic investment institution in Malaysia. Being the country's largest Islamic fund manager with more than RM41 billion funds, TH endeavours to strengthen the economy of the Malaysian Muslims by capitalizing on its available funds and resources (<http://www.tabunghaji.gov.my/en/web/guest/profil-korporat>, 2014). Currently, >80.0% of

Malaysia Hajj Pilgrims are managed by TH. The TH provides package for "Muassasah" category of Hajj Pilgrims. The other packages of Hajj Pilgrims are organized by private companies namely "Pengelola Jemaah Haji" and "Pakej Haji TH Travel and Services Sdn. Bhd (THTS)".

TH has been certified to ISO 9001:2008 since 2009 in handling Hajj operations and services in Malaysia and Saudi Arabia. Adhering to this ISO standard requires TH to adopt and practice the eight QMP leadership; customer focus; total employee involvement; system approach to management; process approach; factual approach to decision making; mutually beneficial supplier relationship; and continual improvement that are specified in the standard. Academic studies related to Hajj services are limited and examining QMP in the context of Hajj services is less emphasized, as compared to other service industries like banking, hotel, higher education, etc. In addition, most QMP studies examined these practices from the service provider's perspective, utilizing the TQM framework and ISO 9001:2008 QMP. Assessing the QMP from the service receiver's perspective is less emphasized

and this calls for researchers to focus on the extent to which the QMP being practiced effect judgment of the service receivers. In services marketing literature, examining consumers' demographic characteristics and their influence on consumer behavior is vital. Thus, in Hajj services, the effect of Hajj Pilgrims demographic characteristics on their judgment towards the QMP is important to research. Therefore, this study examines the effect of demographics on the QMP in the context of Malaysia's Hajj services. This study provides additional insights in the study of QMP by applying the ISO 9001:2008 QMP in the context of Malaysia Hajj services; and examining the demographic effect on QMP from the Hajj Pilgrims, i.e., the service receivers.

**MATERIALS AND METHODS**

Four constructs of QMP were proposed to measure the practice of QMP in Hajj guidance services, as perceived by the Hajj Pilgrims. The four QMP used in this study is further explained as follow.

Customer focus (Focus on ) requires TH to determine and fulfill the needs of Hajj Pilgrims. Practicing this principle also requires TH to deliver Hajj services which are exceeding the expectations of the Hajj Pilgrims. Total employee involvement recognizes that staff of TH and their abilities should be utilized to achieve Hajj operational excellence and satisfaction of . Measure of this dimension of QMP must focus on employee or staff of TH to indicate the extent to which they are involved in the delivery of Hajj services. Continual improvement deals with effort of TH to embrace new opportunities, operational flexibility and improved performance of Hajj services. Factual approach to decision making requires TH to collect, analyze and use data related to the Hajj operation and services systematically on a continuous basis in the process of making decision.

The other ISO 9001:2008 QMP-leadership, process approach, system approach to management and mutually beneficial supplier relationship were excluded from this study. Typically, these principles are used in the study of QMP from the service providers' point of view because they are directly involved in the delivery of the services

and processes. For service receivers, for example Hajj Pilgrims in this study, these four principles are difficult to be judged by the Hajj Pilgrims thus they are inappropriate to be examined.

A questionnaire was developed to measure the QMP in Hajj guidance services and to acquire demographic background of the Hajj Pilgrims performing Hajj in 2013.

Based on the ISO 9001:2008 QMP and the work of Azizaman and coauthors, six questions were utilized to measure customer focus (focus on ) and four items each were employed to measure factual approach to decision making, total employee involvement and continuous improvement. These items were reviewed in term of their suitability to measure the QMP from and the result was presented in Table 1.

A 5 point Likert scale was employed with 1 (very low) and 5 (very high) to determine level of QMP being practiced by the TH. The questionnaire was developed based on the literature review and it had been validated by quality experts. About 500 respondents were selected from Hajj Pilgrims using stratified random sampling procedure. About 352 completed questionnaires were gathered from the respondents out of the 500 distributed. However, the number of completed questionnaires that were found to be usable in this study was 350, indicating 70.0% of response rate.

**RESULTS AND DISCUSSION**

**Descriptive result of respondents:** The overall descriptive result shows that the mean score of each category of QMP is >4.0/5 Likert scales. This score can be interpreted that the QMP being practiced by staff of TH, is high, as perceived by the Hajj Pilgrims. For gender, as can be seen in Table 2, male respondents ( $\mu = 4.57$ ) rated the QMP slightly higher as compared to female ( $\mu = 4.56$ ). However, this difference is insignificant as shown in Table 3.

Based on the mean scores presented in Table 3, respondents in the age of 31-40 year ( $\mu = 4.64$ ) rated high QMP, followed by those in the age of 21-30 year ( $\mu = 4.61$ ). Respondents who are between 15-20 year of age rated the lowest QMP ( $\mu = 4.48$ ).

Table 1: Dimensions of QMP of ISO 9001:2008 and their items in Hajj services

QMP	Items of QMP
Focus on	Appropriate with the needs of Hajj Pilgrims; committed to enhance ' understanding and skills to perform Hajj Pilgrims; fulfilled the questions/problems encountered by the Hajj Pilgrims; adhere to the schedule, easy and accessible place; encourage to voice out problems/issues related to Hajj Pilgrims
Total employee involvement	Effective interaction; problems solving; responsible and dedicated; efficient and knowledgeable
Factual approach to decision making	Use of facts/easy to understand; adhere to the decision made by the authority, use of valid information/materials; help to make the best decision
Continuous improvement	Accept idea and suggestion from Hajj Pilgrims; assist in time management; continuous improvement of Hajj guidance services; keep informed about the relevant changes

Table 2: Descriptive and rank of QMP based on gender

Gender	N	Mean	SD	SE mean	Rank
Male	177	4.5747	0.44438	0.03340	1
Female	173	4.5691	0.43516	0.03308	2

Table 3: Descriptive and rank of QMP based on age

Age (years)	N	Mean	SD	SE mean	Rank
15-20	4	4.4844	0.52907	0.26453	6
21-30	9	4.6088	0.43160	0.014387	2
31-40	47	4.6436	0.43184	0.06299	1
41-50	138	4.5672	0.43251	0.0682	3
51-60	124	4.5501	0.44690	0.04013	5
61-70	27	4.5571	0.46787	0.09004	4
71-75	1	5.0000	.	.	
Total	350	4.5720	0.43923	0.02348	

Table 4: Descriptive and rank of QMP based on occupation

Occupation	N	Mean	SD	SE mean	Rank
Government	118	4.6379	0.41654	0.03835	2
Statutory sector					
Private sector	81	4.5072	0.47362	0.05262	5
self-employed	52	4.4860	0.45205	0.06269	6
Pensioner	46	4.6105	0.40664	0.05996	3
Housewife	47	4.5660	0.43556	0.06353	4
Student	6	4.6458	0.48052	0.19617	1
Total	350	4.5720	0.43923	0.02348	

Table 5: Descriptive and rank of QMP based on academic qualification

Academic	N	Mean	SD	SE mean	Rank
Sijil Rendah Pelajaran and bellow	26	4.5088	0.47559	0.09327	6
Sijil Pelajaran Malaysia	82	4.5628	0.44514	0.04916	4
Sijil Tinggi Persekolahan	21	4.5149	0.42864	0.090354	5
Diploma	51	4.5919	0.44954	0.062095	2
Bachelor degree	163	4.5786	0.43352	0.03396	3
Others	7	4.7857	0.38164	0.14425	1
Total	350	4.5720	0.43923	0.02348	

Table 6: Descriptive and rank of QMP based on frequency of performing Hajj

Frequency of Hajj	N	Mean	SD	SE mean	Rank
First time	292	4.5547	0.44100	0.02581	2
More than once	58	4.6591	0.42315	0.05556	1

Table 7: Descriptive and rank of QMP based on category of Hajj Pilgrims

	N	Mean	SD	SE mean	Rank
Muassasah	212	4.6075	0.43368	0.02979	2
Pakej Haji THTS	77	4.4389	0.43343	0.04939	3
Pengelola Jemaah	61	4.6165	0.43996	0.05633	1
Total	350	4.5720	0.43923	0.02348	

Table 8: Cronbach alpha for QMP

Factors	No of items	Deleted item	Cronbach alpha value
Focus on Hajj Pilgrims	6	Nil	0.888
Factual approach to decision making	4	Nil	0.920
Total employee involvement	4	Nil	0.913
Continuous improvement	4	Nil	0.911

Table 9: t-test analysis for gender

Link to models	$\mu$ Male	$\mu$ Female	t-value	p-value	Results
H <sub>1</sub> (QMP)	4.57	4.57	0.119	0.905	Not Sig.

According to mean scores presented in Table 4, the highest mean of QMP for occupation is student ( $\mu = 4.65$ ). Respondents who are self-employed recorded the lowest mean score ( $\mu = 4.49$ ) of QMP. How respondents rated the QMP according to their qualification is presented in Table 5. The highest mean score for the QMP is for respondents with Diploma ( $\mu = 4.59$ ) and the lowest is for respondents who hold Sijil Rendah Pelajaran and below ( $\mu = 4.51$ ).

Table 6 presented mean scores of QMP according to the frequency of performing Hajj. It shows that the mean score ( $\mu = 4.66$ ) for respondents who have performed Hajj more than once is higher, as compared to first time respondents ( $\mu = 4.55$ ). It denotes that those who have performed Hajj more than once rated the QMP being practiced by TH higher than the first timer.

As can be seen in Table 7, the highest mean score of QMP between category of Hajj Pilgrims is Pengelola Jemaah Haji Pakej Haji ( $\mu = 4.62$ ), followed by Muassasah ( $\mu = 4.61$ ). The mean score of QMP for THTS is slightly lower ( $\mu = 4.44$ ), as compared to the PJH and Muassasah.

Based on the overall descriptive result, it can be concluded that the QMP of ISO 9001:2008 is highly adhered to by TH. The Hajj Pilgrims rated high QMP being performed by the staff of TH, denoting that the quality of delivering Hajj services is high.

**Measurement of QMP:** For unidimensionality, factor loading of more than 0.6 for all items were recorded, based on the results of confirmatory factor analysis. Thus, deletion to items of QMP is not required. To determine construct validity of the instrument, the fitness indices for measurement model are examined after setting free parameter. The result for construct validity indicated that all of the indices value are within the required level, showing the satisfactory level of the measurement model. In addition, all correlation coefficients in the final measurement model recorded 0.85 and less and they are acceptable for the measurement model. For convergent validity, all AVE values in the QMP dimensions are above 0.50 and this result supports the validity of the measurement model of QMP (Hair, 2010). Further, the composite reliability for the all dimensions of QMP achieved 0.7, as proposed by Hair (2010).

**Internal consistency:** The internal consistency reliability analysis was performed to validate the questionnaire used for this study. As shown in Table 8, the results of Cronbach's alpha measures of reliability for the four dimensions of QMP vary between 0.888-0.937 which are well above the value of 0.7. Thus, it can be concluded that the instrument used in this study was reliable.

**Test of significant on differences of means:** To test  $H_1$   $H_0$  to determine whether there are any significant effects of demographics on QMP, the independent t-test and one-way ANOVA were carried out. The results were presented in Table 9-14.

**H<sub>1</sub>; Gender has effect on QMP:** To compare differences in the practice of QMP between male and female, an independent t-samples t-test was conducted. As can be seen in Table 9, there was no significant difference in the QMP for male (M = 4.57, SD = 0.44) and female (M = 4.57, SD = 0.44), conditions;  $t(348) = 0.119, p > 0.05$ .

**H<sub>2</sub>; Age has effect on QMP:** No significant effect of age on practice of QMP was observed at the  $p < 0.05$  level for the seven conditions [F(6,343) = 0.459,  $p > 0.05$ ]. This finding is presented in Table 10.

**H<sub>3</sub>; Occupation has effect on QMP:** Table 11 presented the result of ANOVA comparing the QMP according to

Table 10: One-way ANOVA for Age

Model	Groups	Sum of square	df	Mean square	F-value	Sig.	Result
H <sub>2</sub> (QMP)	Between groups	0.536	6	0.089	0.459	0.839	Not Sig.
	Within groups	66.793	343	0.195			
	Total	67.329	349				

Table 11: One-way ANOVA for occupation

Model	Groups	Sum of squares	df	Mean squares	F-value	Sig.	Result
H <sub>3</sub> (QMP)	Between groups	1.340	5	0.268	1.397	0.225	Not Sig.
	Within groups	65.990	344	0.192			
	Total	67.329	349				

Table 12: One-way ANOVA for academic

Model	Groups	Sum of squares	df	Mean squares	F-value	Sig.	Result
H <sub>4</sub> (QMP)	Between groups	0.526	5	0.105	0.542	0.744	Not Sig.
	Within groups	66.803	344	0.194			
	Total	67.329	349				

Table 13: t-test analysis for frequency of Hajj

Models	$\mu$ First time	$\mu$ >once	t-value	p-value	Result
H <sub>5</sub> (QMP)	4.55	4.66	1.659	0.98	Not Sig.

Table 14: One-way ANOVA for category of and Turkey HSD test

Model	Groups	Sum of square	df	Mean square	F	Sig.	Result
H <sub>6</sub> (QMP)	Between groups	1.753	2	0.876	4.638	0.010	Sig.
	Within groups	65.576	347	0.189			
	Total	67.329	349				

the occupation of .It shows that there was no significant effect of occupation on practice of QMP at the  $p < 0.05$  level for the six conditions [F(5,344) = 1.397,  $p > 0.05$ ].

**H<sub>4</sub>; Academic qualification has effect on QMP:** The result of ANOVA, as presented in Table 12, indicated that no significant effect of academic qualification of Hajj Pilgrims on practice of QMP at the  $p < 0.05$  level for the six conditions [F(5,344) = 0.542,  $p > 0.05$ ].

**H<sub>5</sub>; Frequency of performing Hajj has effect on QMP:** Table 13 presented the result of independent samples t-test comparing the QMP based on the frequency of performing Hajj. The result shows that no significant difference in the QMP for the first time group (M = 4.55, D = 0.44) and more than once group (M = 4.66, SD = 0.42), conditions;  $t(348) = 1.659, p > 0.05$ .

**H<sub>6</sub>; Category of has effect on QMP:** As shown in Table 14, there was a significant effect on QMP between category of Hajj Pilgrims at the  $p < 0.05$  level for the three conditions [F(2,347) = 4.638,  $p < 0.01$ ]. Result of post hoc comparisons using the Tukey HSD test indicated that the mean score for “Muassasah” (M = 4.61, SD = 0.43) was significantly different than “Pakej Haji THTS” (M = 4.44, SD = 0.43). In addition, “Pengelola Jemaah Haji” (M = 4.62, SD = 0.44) was also significantly different than “Pakej Haji THTS” (M = 4.44, SD = 0.43). As can be seen in Table 14, “Pengelola Jemaah Haji” (M = 4.62, SD = 0.44) did not significantly differ from “Muassasah”.

The overall descriptive result of this study shows high QMP level being practiced by staff of TH. It shows that TH has demonstrated effective implementation of QMP of ISO 9001:2008. In order to sustain the excellence performance of Hajj services, TH should focus on delivering Hajj services that are beyond and above the Hajj Pilgrims’ expectation. This calls for application of information and communication technology and use of latest technology in Hajj operation, particularly in Saudi Arabia.

This study found that there were no significant differences in the QMP according to Hajj Pilgrims’ demographic characteristics of gender, age, academic qualification, occupation and frequency of performing Hajj. In delivering Hajj guidance services, all Hajj Pilgrims are not grouped based on these characteristics and this practice is justified. Observed that there is a significant difference in the practice of QMP between category of Hajj Pilgrims. This calls for TH to enhance the practice of QMP in the delivery of Hajj services especially in the “Pakej Haji THTS” category.

Table 15: One-way ANOVA for category of Jemaah

DV (QMP)	Category of Jemaah (I)	Category of Jemaah (J)	Mean Difference (I-J)	SE	Sig.
Practice of ISO 9001 quality Management principles	Muassasah	Pakej Haji THTS	0.16866*	0.05784	0.011
		PJH	-0.00895	0.06316	0.989
	Pakej Haji THTS	Muassasah	-0.16866*	0.05784	0.011
		PJH	-0.17761*	0.07451	0.046
	Pengelola Jemaah Haji (PJH)	Muassasah	0.00895	0.06316	0.989
		Pakej Haji THTS	0.17761*	0.07451	0.046

Such enhancement include closer interaction with this group of Hajj Pilgrims, better quality of Hajj services, more focus on empathy towards meeting their needs and effective handling of requests and complaints. The prices charged for the three groups of Hajj Pilgrims (Muassasah, Pakej Haji THTS and Pengelola Jemaah Haji) are different, therefore, future researches should focus on perceived value of Hajj Pilgrims to examine any impact of prices on the QMP shown in Table 15.

### CONCLUSION

This study presented the effect of Hajj Pilgrims demographics on QMP of ISO 9001:2008. The overall result indicated that all the dimensions of QMP were highly practiced by TH, as perceived by the Hajj Pilgrims. The overall means score for QMP was 4.57/5, denoting that the QMP was highly adhered to by staff of TH.

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