Validity and Reliability of the Strategic Factors and Organizational Performance Scales

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Abstract: The study investigates validity and reliability of small data regarding strategic link of competitive strategy, market orientation and innovation strategy on organizational performance of hotels in Malaysia. Thus, the goodness of measures examined via field experts, academicians and data analysis with SPSS v21. Overall, the alpha coefficients were above 0.8. The result of exploratory factor analysis (EFA) showed all factors loaded more than 0.50. Additionally, the result of normality test showed the data was normal. The findings showed that the instrument was reliable and valid. Therefore, the questionnaire developed was appropriate to be used in investigating the integrated effects of strategic factors on organizational performance of hotels in Malaysia.

Key words: Competitive Strategy · Market Orientation · Innovation Strategy · Organizational Performance · Validity · Reliability · Hotel Industry

INTRODUCTION

Hoteliers today face a variety of challenges from internal and external factors which increase the level of competition in the industry [1, 2]. To overcome these challenges, hoteliers have to pursue continual enhancement in overall organizational strategy to match with their changing business environment. Thus, the hyper competitive environment forces the hoteliers to determine the best competitive strategy, market orientation and innovation strategy which best fit into an organization's overall strategic direction.

Mutually, scholars and practitioners admit that effective competitive strategy, market orientation and innovation strategy assist to attain competitive advantage, but there were very limited empirical study on the basis of the integration of those three strategic factors on organizational performance in context of Malaysia hotel industry. This study attempted to address this insufficiency and pursued to bridge the existing research gap.

Review of Literature: Porter [3] proposed competitive strategy that described as the direction and scope of the organization to acquire superior competitive advantage and performance than rivals. Porter suggested organization can choose cost leadership or differentiation as their main business strategies which possibly mitigates from the effects of Porter's five forces. Porter [3, 4] stated cost leadership strategy is about lowering the cost to gain the cost advantage and internal efficiency while differentiation strategy is relatively on offering superior, different and unique product or service to fulfill the customers' need, whereas focus strategy is a subset of the latter strategies [5, 6]. Numerous studies showed substantial association between competitive strategies and organizational performance [5, 7, 8].

Narver and Slater [9] explained market orientation as culture that effectively created an essential behaviour for superior value to the buyer and superior performance [10]. Competitor orientation observes the competitors closely, recognizes strength and weakness and competencies while customer orientation recognised the customers adequately to form greater value for them [9, 11]. This study investigated the effects of competitor orientation and customer orientation only. The concept of market orientation effects on business performance is a matter of extensive research and the association has been well established [12].

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Innovation is considered as developing new product / service, approaches of creation, finding new market, source of supply and managerial structures [13]. Specifically, process innovation is considered as introducing new production methods, management approaches and technology to improvise the production and management process while service innovation considered as making beneficial changes in the service that the customers use [13]. The link between innovation strategy and performance is well established in prior studies [14].

Kaplan and Norton [15] produced balanced scorecard approach to provide balanced performance measurement by retaining financial and adding non-financial perspectives; customer, internal process and learning and growth in assessing the organizational performance. The present study used the subjective approach to assess the organizational performance of hotels in balanced scorecard setting.

Purpose of Study: The intent of the study was to detect flaws in the operationalization of the variables and dimensions in the research. Initially, the study was conducted to establish the survey's validity and reliability. The researcher gathered information from the respondents to improvise the format of the instrument. Nunnally [16] and Sekaran [17] stated that pre-test is highly required for the subjective assessment to be made on the survey instrument to ensure that the questions are understandable and appropriate items are used in measuring the constructs.

Hence, this study showed the findings of validity and reliability regarding the strategic relationship of competitive strategy, market orientation and innovation strategy on organizational performance in context of Malaysia hotel industry.

MATERIALS AND METHODS

Procedure and Participant: To conduct the pilot test, a few samples of hotels rating three to five star which are registered in directory of Ministry of Tourism and Culture Malaysia were randomly selected. Malhotra [18] suggested that the number of sample size ranging 15-30 respondents is appropriate for pilot test. So, a total of 60 questionnaires distributed through postal mail and email as requested by the respondents and 28 were received. Of these, 8 responses were discarded because incomplete and out of the scope of research.

So, only 20 questionnaires were used for the data analysis. A token of appreciation were given to the respondents after submitted the feedback. The data were analysed using SPSS version 21. The experts' assessments and recommendations added the face and content validity of the instrument. It took approximately 5 weeks to complete the entire process.

Instrumentation and Measurement: A survey questionnaire was utilised for this study. Sekaran [17] stated that the mail questionnaire has detailed look into the wording of the questions, arrangement of variables and the appearance of questionnaires. The study used seven-point scale to measure the items. Allen and Rao [19] said the seven Likert scale assists to establish covariance among variables. The survey contains of five sections. Section 1: consists of statements about the respondent's position, hotel ratings, number of rooms, hotel location, occupancy rate, number of employees and years of operation adapted from Auzair [20] and Kasim and Minai [21]. Section 2: statements about competitive strategy consist of four items for cost leadership strategy and seven items for differentiation strategy adapted from Auzair [20].

Section 3: statements about market orientation consist of five items for competitor orientation and five items for customer orientation adapted from Grawe, Chen and Daugherty [22]. Section 4: statements about innovation strategy consist of four items for process innovation and five items for service innovation adapted from Hilmi *et al.* [14] and Grawe *et al.* [22]. Finally, Section 5: statements about organizational performance using six items in a balanced scorecard setting which adapted from Hilman [5] and Kaplan and Norton [15]. The respondents were asked regarding their perception of the hotel's performance over the past five years.

RESULT

Profile of Respondent: For the respondents demographic characteristics, the majority or 80% of respondents were middle managers and 20% were top managers. For the organization's characteristics, 50% of hotels were four star rated, 35% of three star and 15% of five star. Findings show that 40% hotels has 301 to 400 rooms, followed by 30% of hotels with 101 to 200 rooms and only 5% of hotels with under 100 rooms. Furthermore, 80% of hotels located in a city / town area, while 20% of hotels were from beach / island area. The result revealed that 55% of

Table 1: Profile of respondents and organization

Variables	Frequency	Percentage (%)
Respondents' Position		
Top management	4	20
Middle management	16	80
Hotel ratings		
3 star	7	35
4 star	10	50
5 star	3	15
Number of rooms		
Below 100	1	5
101-200	6	30
201-300	2	10
301-400	8	40
401 and above	3	15
Hotel location		
City/Town	16	80
Beach/Island	4	20
Hill	0	0
Average Occupancy rate		
50% and below	1	5
51%-60%	1	5
61%-70%	3	15
71%-80%	11	55
More than 80%	4	20
Number of employees		
Below 100	1	5
101-200	13	65
201-300	3	15
301-400	0	0
401-500	3	15
500 and above	0	0
Years of operation		
5-9 years	3	15
10-15 years	7	35
More than 15 years	10	50

hotels recorded 71% to 80% average occupancy rate, followed by 20% of hotels recorded more than 80% average occupancy rate. Moreover, 65% of hotels have 101 to 200 employees and 15% of hotels have 201 to 300 and 401 to 500 employees. Finally, 50% of hotels were operated more than 15 years, 35% were operated 10 to 15 years and 15% of hotels were operated 5 to 9 years. The detailed results of demographic profile illustrated in Table 1.

Goodness of Measures

Data Distribution: The normality assumption is required technique in inferential statistical analysis [23, 24].

Hair, Black, Babin anderson and Tatham [25] explained normality denotes to the shape of the data distribution of variables. The univariate normality tested by examining the skewness and kurtosis values. The results showed that the skewness ranged from -1.822 to 0.457 and kurtosis from -1.995 to 2.919. This indicated that the data is normally distributed.

Face and Content Validity: In order to have strong face validity, all the questions in the questionnaire were taken from the prior studies. Sekaran [17] emphasised that the face validity is signifying the questions really measures the concept. Content validity is about how well the dimensionalities of a concept have been delineated [17]. The researcher consulted research method experts to assess the fit of the items for the purpose of the research.

Furthermore, content validity was established through the systematic literature review and underpinning theories. Crucially, experts' opinions and suggestions assisted the researcher to improve the instrument that utilised for the pilot test.

Construct Validity: Then, construct validity of all variables determined through exploratory factor analysis (EFA) with Varimax rotation. Thus, Kaiser-Meyer-Olkin (KMO) Test and Bartlett's Test of sphericity determined the sampling adequacy. The sample was sufficient due to the KMO value above 0.7 and Bartlett's test was significant.

To examine the strategic factors and organizational performance scales, the principal component analysis (PCA) method applied to the 36 items and resulted the extraction of components were greater than 0.5. The eigenvalues were over 3, so all retained. All the items were loaded more than 0.750 which considered as an acceptable loading factor with Hair *et al.* [25] minimum suggested level of 0.5. Thus, no items were deleted. The finding showed sampling adequacy and the factor model is appropriate.

Reliability Analysis (Internal Consistency): Ary, Jacobs and Razavieh [26] stated that reliability is concerned with consistency in measuring what is intended to measure. Thus, the alpha coefficients tested the internal consistency. The pre-test showed all the items post a Cronbach α value of as low as 0.89 to as high as 0.98. The items for each construct in the questionnaire were reliable. Consequently, there was no need to eliminate any items. Table 2 indicated the outcome of factor analysis and reliability of the study.

Table 2: Result of factor analysis and reliability

Variables	Factor loadings	KMO	Eigenvalue	Percentage of variance	Reliability
Cost leadership					
CS1	0.981	0.88	3.76%	94.2%	0.98
CS2	0.966				
CS3	0.968				
CS4	0.967				
Differentiation					
DIFF1	0.951	0.81	6.130%	87.57%	0.97
DIFF2	0.944				
DIFF3	0.951				
DIFF4	0.955				
DIFF5	0.957				
DIFF6	0.965				
DIFF7	0.819				
Competitor Orientation					
COMO1	0.976	0.75	4.710%	94.2%	0.98
COMO2	0.977				
COMO3	0.965				
COMO4	0.975				
COMO5	0.960				
Customer Orientation					
CUSO1	0.941	0.80	4.368%	87.36%	0.96
CUSO2	0.921				
CUSO3	0.940				
CUSO4	0.926				
CUSO5	0.945				
Process Innovation					
PI1	0.969	0.87	3.701%	92.15%	0.97
PI2	0.936				
PI3	0.974				
PI4	0.968				
Service innovation					
SI1	0.966	0.89	4.686%	93.72%	0.98
SI2	0.952				
SI3	0.968				
SI4	0.984				
SI5	0.969				
Organizational Performance					
OP1	0.774	0.73	3.944%	65.73%	0.89
OP2	0.811				
OP3	0.860				
OP4	0.851				
OP5	0.812				
OP6	0.750				

CONCLUSION

In brief, this study examined face and content validity to revise some items in the instrument. The findings of factor analysis showed the KMO value was above 0.7 and Bartlett's test of sphericity was significant. The eigenvalue were greater than 1 and factor loadings were exceeding of 0.5 for all the items. Additionally, reliability test revealed that all the items possess alpha value above 0.8. The normality test showed that the data wasnormal. In a nutshell, this study showed the instrument used to measure the integrated effect of strategic factors; competitive strategy, market orientation and innovation strategy on organizational performance was reliable and valid. Thus, this study identified an empirically valid and reliable instrument to measure the strategic factors and organizational performance nexus which facilities more future studies in context of strategic management.

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