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AN EMPIRICAL STUDY OF EX- PLORING AND CONFIRMING A RE- LIABLE SCALE TO MEASURE THE LEVEL OF MARKET ORIENTATION IN A RESOURCE-BASED ECONOMY

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Abstract

Purpose: This paper attempts to empirically explore and confirm a scale that was developed to measure the level of market orientation in a resource-based economy among financial services providers.

Design/methodology/approach: This will be undertaken through the collection of primary data and testing of the extent to which such data fit with the model that was developed. A reliability test was therefore employed together with exploratory and confirmatory factor analysis, building the measurement model and using SPSS and SPSS AMOS software. This was undertaken through the collection of primary data and testing of the extent to which such data fit with the model.

Findings: This model is set with four constructs, namely: corporate culture, strategy formulated and implemented, structure and systems employed, and market-orientated activities. Each of these identified constructs is measured by three items, apart from the “strategy formulated and implemented” construct, which is measured by four items. The results were supported by experimental design and statistical analysis outputs.



International Journal
of Innovation and
Knowledge Management
in Middle East & North
Africa Vol. 2 No. 2, 2013

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Originality/value: Most of the previous work covering the market orientation construct used models that were developed in a different context with different level of economic development and cultural backgrounds. Data were collected directly from management within the financial services sector and reflect their views and perceptions of the businesses level of market orientation. These are considered the most reliable data available in this context.

Keywords: Market orientation, Service marketing, Resource-based economy, Marketing planning

Paper type: Research paper

INTRODUCTION

During the last two decades the concept of market orientation has received increasing interest from academics and practitioners (Kohli and Jaworski, 1990; Narver and Slater, 1990; Deshpandé *et al.*, 1993; Day, 1990 and 1994; Ruekert, 1992; Kohli *et al.*, 1993). Moreover, the literature is rich with studies which attempt to measure the level of market orientation as well as its consequences on organizational performance (Deng and Dart, 1994; Harris, 1996; Kumar *et al.*, 1998; Deshpandé and Farley, 1998; Baker, 2002; Homburg *et al.*, 2004; Nwokah, 2008; Gray, 2010; Kumar *et al.*, 2011). In fact, since 1993, most of the measurement scales employed to measure market orientation in different contexts have either adopted the original scales developed in a different context such as the scales developed by Narver and Slater (1990), Kohli *et al.* (1993) and Deshpandé *et al.* (1993), or a version adapted from these scales. Furthermore, the only two studies that have been conducted in a resource-based economy (Saudi Arabia) by Bhuian (1997 and 1998) employed an adapted version of an existing scale that was developed in a different context with a different cultural background and a different level of economical development. Accordingly, one may wonder if scales that have been developed in such different contexts would be understood and interpreted in the same way where these scales were originally developed. Therefore, it is clear that the literature provides hardly any previous studies that attempt to explore the dimensions and constructs of market orientation in resource-based economies.

Churchill (1979) criticized the way marketers measure their variables. He also criticized marketers' definitions and measures of the reliability and validity of what they are using to measure the various constructs. He suggested an alternative framework and procedures by which measures of constructs can be developed successfully. Accordingly, he claimed that ***“the rigour with which the rules are specified and the skill with which they are applied determine whether the construct has been captured by the measure”*** (Churchill, 1979, p. 65). In addition, he argued that undertaking the sampling process systemically and scientifically is not enough to provide content validity of the scale employed. Furthermore, the ambiguity of the questions and other influences tend to produce errors in the measure due to human factors (Churchill, 1979). It is worth noting that if respondents have to guess the meaning of a vague question in the questionnaire, then the ***“subsequent calculation of item-to-total correlation will then suggest the item to be eliminated”*** (Churchill, 1979, p. 69). Churchill (1979) also claimed that ***“specifying the domain of the construct, generating items that exhaust the domain, and subsequently purifying the resulting scale should produce a measure which is valid and reliable”*** (Churchill, 1979, p. 70). Accordingly, he suggested that researchers undertaking applied research should ensure that they complete the process through four steps. These four steps comprise articulating a precise and clear definition, generating items that capture the specified domain, purifying the measures and assessing the reliability and validity of the scale.

However, different studies have used the Narver and Slater scale (1990). Kohli *et al.* (1993) suggested scales of market orientation based on the assumption that these measures have been developed and refined, which has led to valid and reliable results being produced (Diamantopoulos and Hart, 1993; McDermott *et al.*, 1993; Greenley, 1995a and b; Pitt *et al.*, 1996; Appiah-Adu, 1997; Harris and Piercy, 1999; Lonial and Raju, 2001; Atuahene-Gima and Ko, 2001; Calantone *et al.*, 2003).

But if market orientation is about being able to create and deliver value to customers through a comprehensive understanding of their needs and wants and being responsive to the generated intelligence, then the achievement of customer satisfaction and retention is the ultimate goal. However, Jones and Sasser (1995) argued that sometimes customer

satisfaction does not correlate highly with the organization's performance, or it does not keep up with changes that occur in the customers' needs and wants. In addition, Woodruff (1997) argued that the application of customer satisfaction measurement has fallen short of its promise for several reasons. He explained that although many organizations set goals for customer satisfaction, few of them have rigorously measured it. In fact, Dutka (1994) argued that even though companies measure customer satisfaction, they do not act on their findings. Therefore, he asserts that a thorough understanding of the customer-perceived value and what drives customer evaluation can provide guidance to managers in order to design and deliver their response.

On the other hand, Gray *et al.* (1998) claimed that academics and practitioners have failed to provide empirical support for market orientation. They explained that this is because both academics and practitioners fail to establish a model of market orientation that can be generalized and can precisely and adequately measure market orientation in different contexts to enable managers to employ it and pinpoint their organization's shortcomings. They claimed that the problem is partly related to definitions because there seems to be confusion between the term "market orientation" and the implementation of that concept. They claimed that another difficult problem is the unresolved issue of how to measure company performance, especially as the debate continues "***over the applicability and reliability of various organizational and social measures***" (Gray *et al.*, 1998, p. 885). Therefore, they argued that "given the diverse range of research methodologies, measures and sample frames employed, it is unsurprising that there has been only limited validation" (Gray *et al.*, 1998, p. 885). In addition, they asserted that Narver and Slater's scale (1990) has been validated to some degree in both the Canadian (Deng and Dart, 1994) and UK (Greenley, 1995a and 1995b) contexts, while the Kohli *et al.* (1993) scale has not received enough attention from researchers attempting to develop market-orientation measures in contexts other than the USA.

Furthermore, Lado *et al.* (1998) claimed that even though Kohli *et al.*'s (1993) empirical procedure "***is more systematic than Narver and Slater (1990)***", it has received certain criticism (Lado *et al.*, 1998, p. 24). They also noted that Kohli *et al.*'s (1993) work has been criticized on a methodological basis because they employed small samples from different economic sectors without providing information related to the type, nature and characteristics of these organizations.

Harris and Ogbonna (1999) argued that cultural theorists have continually claimed that in order to reveal cultural breadth and depth, culture must be examined in depth terms. They added that the nature and limitations of certain forms of quantitative research prevent researchers from exploring certain aspects of organizational culture. Therefore, they claimed that because of such difficulties in examining the organizational culture, Kohli and Jaworski (1990) focused on the behaviour and systems employed. This may be why Kohli and Jaworski (1990) were not able to capture the breadth of any given business's culture in their study (Harris and Ogbonna, 1999). They pointed out that the limitations of the existing conceptualization of market-oriented culture and the theories of developing a market-oriented culture indicate that there is a need for further theoretical development in order to enhance the body of knowledge. They continued, arguing that conceptualization of market orientation cannot be comprehensive and complete due to the absence of cultural components. In fact, they argued, there is a need to develop a more advanced conceptualization of the market-oriented culture that takes into account the cultural incongruence and inconsistency.

Furthermore, with regard to cross-national measurements of market orientation, Deshpandé and Farley (1999) asserted that a major concern is whether the scales developed and tested in a given national culture and context can be usefully transferred to other environments and contexts. Therefore, they argued, Deshpandé *et al.*'s (1993) scale has the broadest international application even in developing countries such as India, China, Vietnam and Thailand and industrialized countries such as Hong Kong, Japan, England and Germany. On the other hand, they reported that Kohli *et al.*'s scale (1993) was shown to be highly reliable when applied in Scandinavia. They concluded that the scales have proven reliability when used in different countries and cultures than those in which they were developed. However, it is worth noting the question of whether the market-orientation scales suggested by Narver and Slater (1990), Kohli *et al.* (1993), Deshpandé *et al.* (1993) and Deshpandé and Farley (1999) will prove reliable in contexts other than those in which they were previously employed and tested.

It is clear from the literature that there are various views and assessments related to the scales that have been employed to measure levels of market orientation in different contexts. To this end, a qualitative study was conducted employing interviews and focus groups, which identified the market-orientation constructs in a resource-based

economy, and tested the reliability of the developed scale (Al-Shirawi and Hajjar, 2012).

Measure the
level of market
orientation in a
resource-based
economy

RESEARCH QUESTION

The present study aims to determine factors to measure the level of market orientation in a resource-based economy. In this paper, the research question is:

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What are the results of exploring and confirming a reliable scale to measure the level of market orientation in a resource-based economy?

METHODOLOGY

In order to be able to evaluate the suggested developed scale, which consists of five constructs: the corporate culture, strategy formulated, strategy implemented, structure and systems employed, and market-oriented activities (see Appendix A), and in order to explore and confirm this scale, this paper will undertake exploratory and confirmatory factor analysis (EFA and CFA), followed by path analysis. A random sample of 139 responses representing the financial services businesses including banks, investment and insurance companies was selected through an online questionnaire distributed via the internet. A letter was sent to each financial services provider on the central Bank of Bahrain registration list. A follow-up was carried out by via telephone calls and emails. The collected data were subjected to a normality assumption test, EFA, CFA and path analysis. However, because there were no missing values (except for item 5 of the market-oriented activities, which was associated with a high missing value) the entire body of collected data was used.

ANALYSIS OF RESULTS

This section presents a summary of the main survey results, and then goes through these in detail.

TESTING THE NORMALITY ASSUMPTION

A visual inspection of the data graphs shows that the distribution of values for some of the variables was not clustered around a straight line,

which indicated that there was deviation from normality. However, at this stage of the analysis there was no adjustment made (such as transformation of the data). The other methods employed were skewness and kurtosis. Kurtosis is the “peakedness” or “flatness”, a measure of distribution compared to normal distribution (Hair *et al.*, 2010). For a normal distribution, the value of the kurtosis is zero. Skewness is a measure of the asymmetry of a distribution that is used to describe the balance of the distribution. In this study, the analysis indicated that some variables (CC1, CC2, CC3, and CC4) fell outside the acceptable range for values of skewness and kurtosis between -3 and +3 (Hair *et al.*, 2010). However, because of the size of the sample, one could argue that the impact of skewness and kurtosis might not make a substantive difference in further analyses (Tabachnick and Fidell, 2001).

EXPLORATORY FACTOR ANALYSIS (EFA)

Based on the pilot survey result, all measurement items were subjected to a series of factor analysis with varimax rotation to reduce the set of variables to a relatively smaller and more parsimonious set. Therefore, in order to explore whether a factor analysis would be meaningful, it was necessary to undertake the KMO and Bartlett’s test of Sphericity (Cohen and Cohen, 1983; Kaiser, 1974; Janssens *et al.*, 2008; Hair *et al.*, 2010). A random sample of 139 respondents was selected and treated using SPSS software. The results are shown in Table 1 (see Appendix B); Bartlett’s test of Sphericity aims to determine if there is a high enough degree of correlation between the variables included. The null hypothesis here is H_0 : the items are uncorrelated. Table 1, Appendix B, shows that the p -value = 0.000 < 0.001, therefore making a factor analysis meaningful. In addition, since the global statistic Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.898 > 0.50, it demonstrates that a factor analysis may be performed (see Field, 2009). Furthermore, the component matrix represented in Table 2 (Appendix B) only contains values for the five relevant factors, and these values are also referred to as “factor loading”, which corresponds to the correlation between a set of factor scores and a set of scores for an original variable (Janssens *et al.*, 2008; Field, 2009; Hair *et al.*, 2010). Table 2, Appendix B, shows that the correlation between the variables and the factors is not exclusive. Therefore, all of the variables are correlated to a greater or lesser degree with all the factors, although this may be much less applicable to one factor than another.

SPSS provides two options: unrotated factor extraction that lists factors in descending order with the highest loading factor listed on top, extracted based on an Eigen value greater than 1; and rotated factor extraction. The unrotated factor extraction suffers from the limitation that most items should load or correlate with the first component (factor) which makes interpretation difficult (Kline, 1994). Other researchers suggest that working with the rotated factor solution is better (Rattray and Jones, 2007). Therefore, in order to better guarantee the exclusivity of the relationship between a variable and a factor, it is recommended to work with the rotated factor structure as indicated in Table 3 (Appendix B). Many researchers, such as Boudreau *et al.* (2001) and Hair *et al.* (1998), have recommended that the minimum acceptable factor loading on the variables should be 0.4 after rotation, so any factor that is cross-loading on variables up to 0.4 is acceptable. Furthermore, where cross-loadings observed were marginally beyond 0.4, such variables were retained due to their importance to the research, a particular factor based on content and their necessity to be included in measuring marketing orientation.

The results of Table 3 (Appendix B) show that there are four components rather than five. These results also show that the strategy formulated (SF) and strategy implemented (SI) components load together and thus measure the same thing. This is based upon the direct relationship between the processes of strategy formulated and strategy implemented. In fact, West *et al.* (2006) suggested a marketing strategy formulation and implementation grid illustrating such a direct relationship and argue that success can be achieved through adequate formulation and implementation processes (see also Henry, 2008; Johnson *et al.*, 2011). Furthermore, Deshpandé (1999) has argued that a market orientation is a corporate culture that guides the entire organization to focus on the customer as a focal point and responds to his/her needs and expectations through its formulated and implemented strategy to create and deliver superior value to its customers. In addition, Deshpandé and Farley (1999) proposed their 10-item scale with one item measuring the strategy formulated and implemented. Therefore, based on such direct relationship and interdependency between the strategy formulation and implementation processes, one can argue that conceptualizing these two components as one component is acceptable and justifiable.

The results of Table 3 (Appendix B) also indicate that SI5, SF5, CC1 and SF1 should be dropped because they do not load on the “right” factors. The remaining four components are: structure and systems

employed (SSE) expressed by the five items SSE1, SSE2, SSE3, SSE4, SSE5; strategy formulated and implemented (SF/SI) expressed by the seven variables SF2, SF3, SF4, SI1, SI2, SI3, SI4; corporate culture (CC) expressed by the four variables CC2, CC3, CC4, CC5; and market-oriented activities (MOA) expressed by the four variables MOA1, MOA2, MOA3, MOA4.

Table 3 (Appendix B) also shows that there was cross-loading between certain factors, which might indicate problems. However, no item had cross-loading above 0.4 on the wrong trust construct except for SI4 ($0.393 \approx 0.4$) (see Costello and Osborne, 2005; McKnight *et al.*, 2002; Boudreau *et al.*, 2001; Hair *et al.*, 2010). Principal component analysis was used to estimate the communalities, which is a widely used method in EFA (Janssens *et al.*, 2008). This may be an indication that item SI4 should be kept out of the analysis. However, for the time being, this item will continue to be included in the CFA. Hence for a visual representation that specifies the model's constructs, indicator variables and interrelationships, confirmatory factor analysis (CFA) should be carried out. CFA provides quantitative measures of the reliability and validity of the constructs. With these results, this study will carry out the CFA on the holdout sample using only four factors: CC, SISE, SSE and MOA.

CONFIRMATORY FACTOR ANALYSIS (CFA)

Structural equation modelling (SEM) is employed to test the measurement model and structural model (see Anderson and Gerbing, 1988; Janssens *et al.*, 2008; Hair *et al.*, 2010). In fact the two-stage approach was recommended by Anderson and Gerbing (1988) and was therefore adopted in this research. Accordingly, this study will start with confirmatory factor analysis (CFA) using SPSS AMOS 18 in order to specify the causal relationships between the observed factors (items) and the underlying theoretical constructs. The paths or causal relationships between the underlying exogenous and endogenous constructs are then specified in the structural model, which is the second stage. On the basis of a hypothesis test, CFA may then be used to discover to what degree the different assumed variables also measure that particular factor. Confirmatory factor analysis is a technique employed to test whether the theoretically imposed structure of the underlying construct exists in the observed data (Anderson and Gerbing, 1982; Hu and Bentler, 1999; Janssens *et*

al., 2008; Hair et al., 2010). It facilitates testing whether the indicators of a specific construct converge or share the high proportion of variance in common. Moreover, confirmatory factor analysis is used to test discriminate validity of the constructs, i.e. the extent to which a construct is truly distinct from other constructs.

The original BO CFA model presented in Figure 1 represents a model which is not significant for certain indicators. There is a low factor loading with the following indicators: CC5, SI4, SF2, MOA1 and SSE1, as these factors are loading below 0.7 (Janssens et al., 2008; Hair et al., 2010). Therefore, this model should be modified by dropping these items. On the other hand, this research finally conceptualized “strategy formulated” and “strategy implemented” as one construct. Moreover, SF2 could be cross-loading with SF4 as the obtained competitive advantage is an integral part of the strategy formulated based on understanding customer expectations. In addition, the SI4 variable may be cross-loading with SI3, as responding quickly to changes in customer expectations is directly related to the coordinated efforts of the business based on understanding such changes. One could also argue that there might be no direct effect of the organization

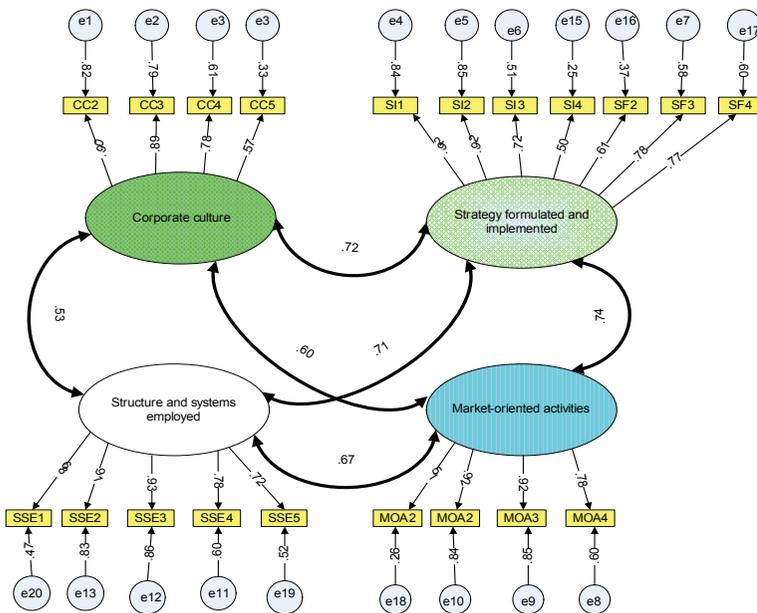


Figure 1. Business Organizations' CFA original

structure and the strategy implementation process. Furthermore, the MOA1 item seems to be cross-loading with MOA4, as communication feedback across all business functions and disseminating customer satisfaction feedback measure the same activity.

Modification produces a better model as shown in Figure 2. However, the RMSEA is 0.108, which is above the guideline of 0.08, so other fit statistics will also be considered.

However, after many modifications through the “Trial and Error Method”, this study presents the improved model in Figure 3, shown below:

RESULTS AND DISCUSSION

The results of the CFA show that there is a relatively high covariance between the four constructs and the goodness of fit, and path analysis indicates acceptable indices. The model can be tested using a structure

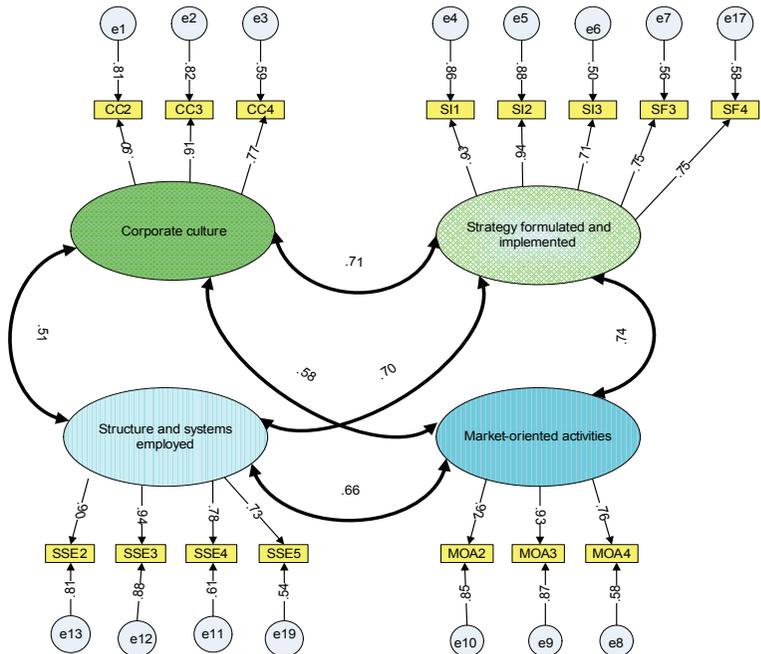


Figure 2. Business Organizations' CFA second modification

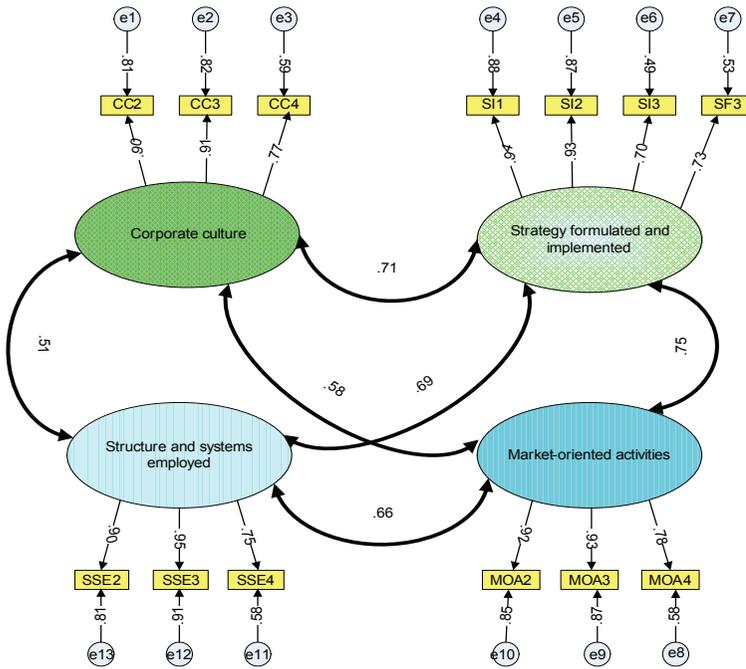


Figure 3. Business Organizations' CFA final

equation model and employs a sample of financial services businesses, including banks, investment companies and insurance companies. The confirmatory factor analysis showed that the model has a significant fit with the data. Tables 4 to 13 in Appendix B show that the CMIN/DF (normed Chi-Square) is a value equal to 2.131, which is between 2 and 5 so is considered acceptable. The GFI, an absolute fit index, is 0.892. This value is approximately 0.90, which is tolerable for this model considering the sample size (Janssens *et al.*, 2008; Hair *et al.*, 2010). The same is true for the AGFI (the parsimony fit index), which is 0.834 and is therefore also tolerable for this model. The CFI, the incremental fit index is 0.956; the NFI is 0.921; the RFI is 0.896; the IFI is 0.957 and the TLI is 0.942, so these incremental fit indices indicate an acceptable fit. Guidelines indicate that the NFI should be >0.90 for a model of this complexity and sample size (Janssens *et al.*, 2008; Hair *et al.*, 2010). The RMSEA, an absolute fit index, is 0.091. This value is a little high and above 0.08; however, being below 0.1, it is acceptable for a model with 13 measured variables and a sample size of 139 (Hair *et al.*, 2010; Janssens *et al.*, 2008).

IMPLICATIONS OF RESEARCH FINDINGS

The theoretical implications are discussed in the following section, followed by the managerial implications.

THEORETICAL IMPLICATIONS

This study was conducted on the basis of gaps found in the literature, i.e. what constitutes market orientation in a resource-based economy, so a measurement scale was developed and its reliability was tested (Al-Shirawi and Hajjar, 2012). Therefore, this study first explored and confirmed such a scale. Moreover, while Farrell and Oczkowski (1997) questioned the suitability of the MKTOR scale as a composite measure of market orientation, Gray *et al.* (1998) asserted that academics and practitioners have failed to provide a model of market orientation that can be generalized and can adequately measure market orientation in different contexts. Although the Narver and Slater scale has been validated to some degree in different contexts (Deng and Dart, 1994; Greenley, 1995 a and b), such validation has been done in similar contexts. Furthermore, the cross-national application of a suggested measurement scale and model is intended to explore whether it can be applied in different contexts (Deshpandé and Farley, 1998). Second, there is a lack of empirical studies on market orientation in a resource-based economy. Although two studies have been conducted in a resource-based economy (Bhuiyan, 1997 and 1998) they did not attempt to identify the concept constructs in such contexts and therefore employed an adapted version of an existing scale, which was developed in another context. Third, there is a lack of exploratory models and theory-building studies in the area of market orientation in this context.

MANAGERIAL IMPLICATIONS

This study has focused on market orientation among financial services providers operating within a resource-based economy. The financial services sector is expanding, especially in the Gulf region and the Middle East. Although these economies are basically driven by natural and other resources, there have been several attempts in various countries to diversify in order to obtain a more sustainable development. These efforts have been combined with economical and political reformations including liberating the markets, encouraging the private sector to

play a major role in the economical development and privatization of state-owned companies including services such as power supply. For example, the financial services sector in Bahrain has been contributing to the Gross National Product by over 23% during the last three years. In addition, there has been an increasing role and contribution from the manufacturing and resources transformation industry. Therefore, the development and purification of such a scale and model can help all businesses and organizations, especially those operating or attempting to operate in the international and global markets.

Therefore companies, whether operating within financial services, other services, or industrial sectors can influence their level of market orientation. This will help them to stay ahead of their customers by anticipating their future needs, manage their expectations, and stay ahead of their competitors. Therefore managers, especially top management, need to focus on creating and maintaining a market-oriented corporate culture within their organizations. They need to signal out to the entire organization their commitment to focus on customer satisfaction, emphasizing that serving customers is most important to their businesses. Such a corporate culture can guide all members of the organization to focus on creating and delivering superior value to the customers. This can also encourage the businesses in reviewing their product development efforts in order to ensure that their products or services are in line with what the customer wants and expects.

LIMITATIONS OF THIS STUDY

All research projects experience certain limitations, and this study is no exception. Therefore, the following section elaborates on the limitations posed by this research setting, the research design and measurement issues.

Although this study managed to explore and confirm the constructs of market orientation within a resource-based economy, and the endeavor was worthwhile, it was not without limitations. It is possible that important antecedents such as employees' marketing training, intelligence generation and market conditions mediators were not included in the research conceptual model. It is also possible that the strategies were not formulated and implemented as separate constructs.

A further limitation is that the survey used a combination of items adopted from other measurement scales from the literature, which were

refined by using the results of the qualitative study (Al-Shirawi and Hajjar, 2012). However, although all the proposed measurements of both scales displayed relatively acceptable reliability, some measurement items were eliminated during the EFA, CFA and path analysis process.

Furthermore, although the financial services providers' total population was targeted for the main survey, the political situation during 2011 led a number of these institutions to shift their offices and operations outside Bahrain, which limited the number of responses received. In addition, some of these financial services providers, such as money exchange institutions and bank representatives are small business organizations that were not fully operating in this context, and therefore did not respond despite the researcher following them up. Moreover, some of these institutions were registered as retailer and wholesaler banks. Therefore, although the total population was over 350 financial institutions, only 139 responses were received, and such a relatively small sample might have influenced the analysis of the results using SPSS AMOS software.

CONCLUSION

Based on the sample data, we can conclude that market orientation in this context is multi-dimensional with four constructs that comprise market-oriented organizational corporate culture, formulated and implemented strategy, organizational structure and systems employed, and market-oriented activities. While it is assumed that the market-oriented corporate culture and the strategy formulated and implemented are the exogenous variables, the structure and systems employed and the market-oriented activities are the endogenous variables which could be explored and tested through the path analysis and structural equation modelling approach in the future. However, we can conclude from the findings that creating a market-oriented corporate culture that guides all members of the organization to focus on creating and delivering superior value to customers, and fosters top management commitment to continuously emphasize that serving the customer is crucial to the business success is an important determinant of market orientation in this context.

Additionally, the business responses in formulating and implementing a strategy based on a periodic review of their products and services to ensure that they meet customers' existing and future needs and expectations is crucial in the process of enhancing the level of market orientation.

Moreover, such strategy must take into account the intelligence generated and disseminated through all levels and be related to monitoring the business level of commitment to serve their customers and respond quickly to changes in their customers' expectations. This can be fostered through the design of an effective management information system that facilitates generation and dissemination of the generated intelligence. Additionally, these business organizations need to regularly and systematically measure their customers' levels of satisfaction, establishing measures of customer service and ensuring the regular dissemination of customer feedback at all levels in their business organization.

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APPENDIX A

This appendix illustrates the revised 25-item scale that resulted from the literature, the qualitative study and the feedback received from the academics consulted.

Independent variables	Items to measure independent variables	Source
Corporate culture	<p>Our business exists primarily to serve customers</p> <p>Our corporate culture guides all members of our organization to focus on creating superior value to our customers</p> <p>Our corporate culture guides all members of our organization to focus on delivering superior value to our customers.</p> <p>Our corporate culture fosters our top management commitments to continuously emphasize that serving customers is the most important to our business.</p> <p>Our corporate culture facilitate the enhancement of our communications with all stakeholders</p>	<p>Qualitative research finding and analysis</p> <p>Adopted from Deshpandé and Farley (1999), Item 8</p> <p>Based on this research qualitative research finding, suggested by participants</p> <p>Qualitative research finding and analysis</p>
Strategy formulated	<p>Our business objectives are driven primarily by customer satisfaction</p> <p>Our strategy for competitive advantage is based on our understanding of customers' needs</p> <p>We are periodically reviewing our product development efforts to ensure that they are in line with what customers want</p>	<p>Qualitative research finding and analysis</p> <p>This qualitative research finding, which supports Deshpandé's (1999) definition of market orientation</p> <p>Adopted from Deshpandé and Farley (1999), Item 1</p> <p>Adopted from Deshpandé and Farley (1999), Item 4</p> <p>Adopted from Jaworski and Kohli (1993), Item 4 (response design)</p>

<p>Our formulated strategy is based on a thorough understanding of customer expectation</p>	<p>Qualitative research finding and analysis</p>
<p>We are more customer-focused than our competitors</p>	<p>Adopted from Deshpandé and Farley (1999), Item 7</p>
<p>We constantly monitor our level of commitment to serving customer needs</p>	<p>Qualitative research finding and analysis which support Deshpandé's (1999) definition of market orientation</p>
<p>We constantly monitor our level of orientation to serving customer needs</p>	<p>Adopted from Deshpandé and Farley (1999), Item 2</p>
<p>We are quickly responding to changes in our customers' expectations</p>	<p>Adopted from Deshpandé and Farley (1999), Item 2</p>
<p>The activities of the deferent departments in this business organization are well coordinated</p>	<p>Qualitative research finding and analysis</p>
<p>We are quickly responding to significant changes in our competitors offering</p>	<p>Adopted from Jaworski and Kohli (1993), Item 2 and Kohli <i>et al.</i> (1993), Item 27 (response implementation)</p>
<p>Our organizational structure fosters the implementation of our strategy</p>	<p>Adopted from Jaworski and Kohli (1993), Item 5 (response implementation)</p>
<p>Qualitative research finding and analysis which support Deshpandé's (1999) definition of market orientation</p>	<p>Qualitative research finding and analysis</p>

Strategy implemented

Dependent variables

Structure and systems employed

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Our management information systems facilitates the collection of market information	Qualitative research finding and analysis
Our management information systems facilitate systematic dissemination of generated intelligence	Qualitative research finding and analysis
Our performance appraisal system is based on market-linked factors	Qualitative research finding and analysis
Our appraisal system rewards employees based on customers satisfaction	Qualitative research finding and analysis
Market-oriented activities	Qualitative research finding and analysis which support Deshpandé (1999) definition of market orientation
We freely communicate feedback on customer experiences across all business functions	Adopted from Deshpandé and Farley (1999), Item 3
We measure customer satisfaction systematically at least once a year	Adopted from Deshpandé and Farley (1999), Item 5
We have established measures of customer service	Adopted from Deshpandé and Farley (1999), Item 6
We disseminate feedback on customer satisfaction regularly at all levels in our business organization	Adopted from Deshpandé and Farley (1999), Item 10
Could you please give me some idea of approximately how often you survey customers to assess the perceived quality of customer service?	Adopted from Deshpandé and Farley (1999), Item 9

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APPENDIX B

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Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.898
Bartlett's Test of Sphericity	Approx. Chi-Square	2603.824
	df	276
	Sig.	.000

Table I. KMO and
Bartlett's test of
sphericity Business
Organization

	Component				
	1	2	3	4	5
SI2	.849	.029	.040	-.188	-.225
SI1	.840	.095	.026	-.239	-.281
SSE3	.781	-.354	-.103	.239	-.174
MOA3	.772	-.008	-.420	-.062	-.038
SF4	.758	-.103	.334	-.264	.060
MOA2	.744	-.085	-.413	-.199	.012
SI3	.725	-.075	.133	-.188	-.114
SSE2	.724	-.430	-.001	.302	-.179
CC3	.705	.437	.168	.198	-.109
MOA4	.691	.068	-.489	-.186	.225
CC2	.687	.490	.049	.191	-.188
SF3	.687	.093	.395	-.417	-.105
CC4	.686	.447	.053	.211	-.122
SSE1	.683	-.056	-.105	.298	-.266
SSE5	.682	-.402	-.017	.174	.226
SSE4	.670	-.497	.036	.315	.082
SF2	.632	-.122	.488	-.146	.278
SI5	.626	-.301	.050	-.072	.043
CC5	.626	.214	-.057	.239	.010
SF1	.611	-.044	.080	.074	.527
MOA1	.580	.033	-.252	-.310	.205
SI4	.565	-.013	.270	-.001	.024
SF5	.553	.353	-.296	-.172	.132
CC1	.446	.493	.108	.380	.433

Table 2.
Component
Matrix^a factor
loading correlation
between variables
and factors in BO

Extraction method: principal component analysis.

^a 5 components extracted.

	Component				
	1	2	3	4	5
SSE2	.844	.238	.215	.132	-.003
SSE4	.825	.215	.080	.117	.236
SSE3	.799	.231	.259	.270	-.021
SSE5	.683	.249	.048	.262	.332
SSE1	.586	.131	.476	.214	-.086
SI5	.489	.409	.040	.270	.111
SF3	.077	.836	.264	.215	-.006
SF4	.302	.751	.176	.237	.172
SF2	.260	.706	.107	.052	.414
SI1	.299	.586	.436	.443	-.175
SI2	.364	.573	.402	.419	-.110
SI3	.346	.571	.246	.302	-.016
SI4	.276	.458	.269	.078	.167
CC2	.137	.244	.811	.225	.029
CC3	.165	.325	.772	.153	.128
CC4	.166	.233	.770	.221	.093
CC5	.298	.125	.544	.260	.174
MOA4	.235	.117	.193	.818	.176
MOA2	.387	.226	.167	.736	-.011
MOA3	.422	.156	.309	.693	-.015
MOA1	.124	.288	.085	.640	.155
SF5	-.029	.148	.377	.619	.131
CC1	.002	.010	.617	.103	.628
SF1	.299	.285	.150	.297	.620

Extraction method: principal component analysis
 Rotation method: Varimax with Kaiser normalization
^aRotation converged in 8 iterations

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Table 3. Rotated Component Matrix^a exclusivity of the relationship between a variable and a factor

Table 4. Normed
CHI-Square BO

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	32	125.712	59	.000	2.131
Saturated model	91	.000	0		
Independence model	13	1599.356	78	.000	20.505

Table 5. Absolute
fit index and
parsimony fit index
BO

Model	RMR	GFI	AGFI	PGFI
Default model	.030	.892	.834	.578
Saturated model	.000	1.000		
Independence model	.378	.220	.090	.188

Table 6. An
incremental fit
index and other
incremental fit
indices BO

Model Table 6	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.921	.896	.957	.942	.956
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Table 7. An
absolute fit index
BO

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.091	.069	.112	.002
Independence model	.376	.360	.392	.000

		Table 8	Estimate
CC2	<---	CORPCULT	.901
SI1	<---	STRFORMIMP	.940
SI2	<---	STRFORMIMP	.932
SF3	<---	STRFORMIMP	.729
SI3	<---	STRFORMIMP	.698
MOA4	<---	MKTORACT	.761
MOA2	<---	MKTORACT	.920
MOA3	<---	MKTORACT	.933
SSE2	<---	STRUCTSYST	.900
SSE3	<---	STRUCTSYST	.953
SSE4	<---	STRUCTSYST	.745
CC3	<---	CORPCULT	.906
CC4	<---	CORPCULT	.770

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Table 8. Standardized regression weights: (group number 1 - default model) BO loading estimates

			Estimate
CORPCULT	<-->	STRFORMIMP	.713
MKTORACT	<-->	STRUCTSYST	.657
CORPCULT	<-->	STRUCTSYST	.507
MKTORACT	<-->	STRFORMIMP	.747
CORPCULT	<-->	MKTORACT	.585
STRUCTSYST	<-->	STRFORMIMP	.688

Table 9. Correlations: (group number 1 BO - default model) innerconstruct correlations BO

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	29	135.018	62	.000	2.178
Saturated model	91	.000	0		
Independence model	13	1599.356	78	.000	20.505

Table 10. Normed Chi-Square model after modification

Table 11. Absolute fit index and parsimony fit index model after modification

Model	RMR	GFI	AGFI	PGFI
Default model	.042	.884	.830	.602
Saturated model	.000	1.000		
Independence model	.378	.220	.090	.188

Table 12. An incremental fit index and other incremental fit indices model after modification

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.916	.894	.953	.940	.952
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Table 13. An absolute fit index model after modification

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.092	.071	.114	.001
Independence model	.376	.360	.392	.000

