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Competition and Organizational Performance: Empirical Evidence from Jordanian Firms

Ahmad Nahar Al-Rfou

Business Management, Tafilah Technical University, Tafilah 66110, Jordan
Fax: 962- 32250002; E-mail: <ahmadrfou_357@yahoo.com>

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ABSTRACT In today's fast-paced economy competition is an issue of services and products. Much attention has been directed to a better service and the best product and how this can be achieved. So, the purpose of this research is to investigate the impact of intensity of competition on the organizational performance of Jordanian industrial companies. To investigate this relationship, 33 industrial companies listed at Amman Stock Exchange by the beginning of 2010 were surveyed. The result of multiple regression analysis indicates that the intensity of market competition has appositive strong effect on organizational performance of such companies. This result, however, is expected as Jordanian companies have faced intense competition lately due to attractive investment climate of Jordanian market.

INTRODUCTION

Market competition is one of the external factors that comprise the organization's environment (Chong and Rundus 2004). Companies are generally faced with different degrees of market competitions. Globalization has exposed companies in developing countries to face strong competition. Most of them now have to cope with the declining market share while several others have been forced out of the market (Waweru et al. 2004). Likewise, there is a lot of competition among Jordanian companies. In this context, Rawabdeh (2008) states: " Jordan is passing through an important phase in its development, which is characterized by a new challenge arising from the fact that companies are expected to face increased competition due to the new world policy of having internationally open markets" (p.5). In addition to Jordanian Economic Adjustment Program (EAP) for the period 1992-1998 which aimed to transfer the Jordan economy to be free and open and the privatization program which started in 1996, Jordan has close business ties with other countries especially the developed one. Jordan has signed a free trade agreement with a number of countries. Following this agreement, Jordan encourages foreign investment by giving foreign companies many incentives and exemptions. This attractive investment climate increased the local investment by 100% between 2005 and 2006. However, this rise was eclipsed by the growth in foreign investment which rose by 205% in the same period. Most of these investments went into industrial projects (Jordan Investment Board 2007). However, Jordan was the first country in the Middle East that issued a national law for competition in August 2002. In this context, Hutaibat (2005) surveyed 103 Jordanian industrial companies and used a contingency approach to examine the management accounting practices among them. One of his findings is that competition in Jordanian market is very high. Hutaibat argues that this finding is due to the new free trade agreements with other countries, such as USA, Canada and Europe. This has led to increased competition in the Jordanian market. The performance consequences of such competition are ambiguous especially on the industrial sector which is considered one of the largest sectors listed within the Amman Stock Exchange. Industrial sector provides the majority of new jobs, it contributes about 48% of the total number of workers in Jordan and produces the creativity and innovation that fuels the economic progress, and its exports contribute about 93.5% of the national export in 2005 (Ministry of Industry and Trade, Jordan 2008). Against this background, the purpose of this research is to investigate the effect of market competition on organizational performance among Jordanian industrial companies. The next section develops the theoretical model, including presentation the study's hypothesis. Section 3 outlines the research method applied. The empirical results appear in Section 4. Section 5 discusses the results and concludes the paper.

Theoretical Development and Hypothesis Formulation

Contingency theory suggests that an organization must be aligned with its environment in order to achieve its objectives (Hayes 1977). Companies facing intensity competitive market environments tend to use a greater number of product and service lines. In particular, increased market competition encourages organizations to offer multiple new products and services at a reasonable price to their customers (Mia and Clarke 1999; Al-Omiri and Drury 2007). Therefore, when companies face a high competition, they try to satisfy their customers by producing high quality products. This in turn leads to a higher level of organizational performance (Chong and Rundus 2004). Therefore, Otley (1999) argued that customer satisfaction and quality are important factors for any organization to gain the competitive advantage. A wide search of management research indicated a limited evidence of the effect of intensity of market competition on organizational performance. However, findings of this research were mixed. Patiar and Mia (2009) surveyed 56 hotels in Australia. The findings indicated no relationship between market competition and the non-financial and financial performance. Mia and Clarke (1999) reported indirect and positive relationship between the intensity of market competition and organizational performance. In particular, the findings indicated that the intensity of market competition is a determinant of the use of the information which, in turn, is a determinant of business unit performance. Chong and Rundus (2004) found a positive and significant effect of high intensity of market competition on organizational performance. Konings (1998) found in a study of Bulgaria and Estonia that more intensity of competition in the industry enhanced firm performance in Bulgaria but not in Estonia.

Brown and Earle (2000) found a strong positive effect of domestic and import competition in the product market on total factor productivity. Nickell (2006**)** found a positive relationship between competition and corporate performance among British companies.

Based on the literature reviewed above, this paper proposes the relationship between the intensity of market competition and organizational performance to be positive. Therefore, it can be hypothesized that:

There is a positive relationship between intensity of market competition and organizational performance.

METHODOLOGY

Sample Selection and Data Collection

The study population consists of all Jordanian industrial companies which are listed at Amman Stock Exchange by the beginning of 2010. The industrial sector was chosen because there is a clear trend in the economic development plans of successive Jordanian governments to support this sector (Al-kawaldeh 2001). Moreover, the Jordanian industrial sector is one of the largest sectors listed within the Amman Stock Exchange, and which most needs to implement modern concepts of managerial accounting (Al-khadash and Feridun 2006; Momani and Abu-Al Sondos 2008). After exclusion those companies which were in a dissolved and liquidation status, the proposed sampling frame consisted of 70 industrial companies. In total, 33 out of 70 questionnaires were completed and returned yielded a response rate of 47%. All the questionnaires were delivered by hand to the financial managers and left with them few days to enable them filling them out. The distributed questionnaires were collected by hand. Tables 1, 2 and 3 show the respondent companies' profile.

Table 1: Sample classification per industry sector

Industry type	*Frequency*	*Percent*
Textile, clothing and footwear	1	3.0
Mining and quarrying	2	6.1
Iron, steel and aluminium industry	1	3.0
Electrical appliances	3	9.1
Food products	7	21.2
Chemical/pharmaceutical industry	4	12.1
Tobacco and cigarettes	1	3.0
Building materials and construction	5	15.2
Others	9	27.3
Total	33	100.0

Table 2: Sales turnover

Sales turnover (JOD)	*Frequency*	*Percent*
Less than 1 million	2	6.1
1- less than10 millions	13	39.4
10 – less than 20 millions	6	18.2
20 – less than30 millions	2	6.1
30 – less than 40 millions	2	6.1
40 – less than 50 millions	2	6.1
50 – less than 100 millions	2	6.1
100–lessthan200 millions	1	3.0
200 – less than 400 millions	1	3.0
More than 400millions	2	6.1
Total	33	100.0

Table 3: Number of employees

Employee number	*Frequency*	*Percent*	*Cumulative percent*
1-49 employees	3	9.1	9.1
50-249 employees	17	51.5	60.6
250-499 employees	6	18.2	78.8
500-999 employees	2	6.1	84.8
1000 or grater	5	15.2	100.0
Total	33	100.0	

The first two sections of the questionnaire included some demographic questions about the organization itself and the respondent. The fourth section tried to assess the intensity of company's market competition along six factors. In respect to the third section, it was used to measure the product differentiation strategy among Jordanian companies in order to examine its effect on organizational performance in independent study for the same authors. The last section includes six items to measure the organizational performance.

Measurement of Variables

Multi-item questions were used to measures all the study factors. Due to the limitation of sample size, explanatory factor analysis was not performed to the study factors. Size of organization was used in this study as a control factor using the natural logarithm of employee numbers.

Intensity of Market Competition

Based on the work of Khandwalla (1972) and Mia and Clarke (1999), intensity of market competition was measured using the following six competitive dimensions: number of measure competitors, frequency of technological change in the industry, frequency of new product introduction, extent of price manipulations, access to marketing channels and changes in government regulation and policy. Respondents will be asked to assess the intensity of their company's market competition along six factors by using a five-point Likert-type scale ranging from one (Not at all) to five (to a very great extent). Therefore, market competition is the degree of competition faced by a company on each of the above six factors. Table 4 presents the descriptive statistic for this factor. The Cronbach alpha was .67 indicates satisfactory internal reliability of the scale. However, market competition will be scored as the mean of the responses to the six items.

Table 4: Descriptive statistics for market competition

Variable	*Mean*	*S.D*
D1. Number of major competitors	4.24	0.97
D2. Frequency of technological change in the industry	4.09	0.77
D3. Frequency of new product introduction	4.36	0.74
D4. Extent of price manipulations	2.82	1.59
D5. Access to marketing channels	4.09	0.88
D6. Changes in government regulation or policy	4.42	0.75

Organizational Performance

According to Fisher (1995), organizational performance is poorly defined in the previous studies as most of the previous studies measured it depending on the financial dimension. Therefore, the researcher believes that managers should pay more attention to these dimensions since they look at both financial and non-financial performance of their companies. Therefore, organizational performance will be measured using the six items adapted from previous studies (Abu-Khadra and Rawabdeh 2006; Al-Shiab and Abu-Tapanjeh 2005; Hoque 2005; Hoque and James 2000). These include: return on investment (ROI), sales growth rate, cash flow from operation, customer satisfaction, product quality and market development. However, respondents will be asked to assess their organization's overall performance over the last three years relative to that of competitors subjectively using a five-point Likert-type scale ranging from one (significantly below average) to five (significantly above a average). Table 5 presents the descriptive statistic for this factor. The Cronbach alpha was .75 indicates satisfactory internal reliability of the scale. However, organizational performance will be scored as the mean of the responses to the seven dimensions of performance.

Data Analysis

This research seeks to investigate the effect of intensity of market competition on the organizational performance of Jordanian industrial companies. To achieve this objective, the relationship will be tested firstly using the correla-

Table 5: Descriptive statistics for organizational performance

Variable	*Mean*	*Std. deviation*
E1. Return on Investment (ROI)	3.36	1.03
E2. Sales growth rate	3.42	0.87
E3. Cash flow from operation	3.70	0.81
E4. Customer satisfaction	4.09	0.46
E5. Product quality	4.30	0.53
E6. Market development	4.18	0.64

tion analysis (Pearson correlation matrix). After testing for multicollinearity and other requirements (Hair et al. 2006), the second analysis to test the hypothesis of the study is multiple regression analysis using SPSS program.

RESULTS

Table 6 shows the correlation matrix of the study. The correlation is significant between intensity of market competition and organizational performance (p= .01). Similarly, the correlation between size and organizational performance is significant. The tolerance and variable inflation factor (VIF) values are in the acceptable range. Thus, no support was found for the existence of multi-collinearity problem. Finally, the Durbin-Watson test was undertaken to test if the residuals were correlated. However, the acceptable value of Durbin-Watson is between 1 and 3 and the preferable value is closer to 2 (Field 2000). The test indicated a value of 1.703, which is considered between the acceptable levels. Thus, multiple regression analysis is relevant to test they study hypothesis successfully. As shown in Table 7, the model is significant (F = 11.887; P =0.000); and is able to explain 44.5 % of the variance on organizational performance. As shown in the table, the result of the regression indicates that the direct effect of the intensity of market competition on organizational performance is significant (beta= .547, t-value= 4.012, p= 000). The result of the regression, however, supports the hypothesis of the study. The result of multiple regressions is consistent with that of correlation matrix.

Table 6: Correlation matrix

	(1)	*(2)*	*(3)*
1.Competitiion	1		
2.Performance	.534(**)	1	
3.Size	.024	.404(*)	1

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

DISCUSSION

This study was designed to examine the impact of intensity of competition on the organizational performance of Jordanian industrial companies. To investigate this relationship, 33 industrial companies listed at Amman Stock Exchange by the beginning of 2010 were surveyed. The result of multiple regression analysis indicates that the intensity of market competition has appositive strong effect on organizational performance of such companies. This result, however, is expected as Jordanian companies have faced intense competition lately due to attractive investment climate of Jordanian market. This result, however, is consistent with that of previous limited research (Konings 1998; Brown and Earle 2000;Chong and Rundus 2004; Nickell 2006). Thus, it can be argued that Jordanian companies proved their ability to face the increased competition especially that come from the foreign companies. This, however, is consistent with the argument of Chong and Rundus (2004) in that when companies face a high competition, they try to satisfy their customers by producing high quality products. This in turn leads to a higher level of organizational performance.

Table 7: Regression results

Independent variables	*Unstandarized coefficients*		*Standarized coefficients*	*t- value*	*Sig.*	*Tolerance*	*VIF*
	B	*Std. Error*	*Beta*				
(Constant)	1.214	.544		2.232	.033		
Competition	.447	.111	.547	4.012	.000	.999	1.001
Size	.361	.124	.397	2.907	.007	.999	1.001
Adjusted R Square	.405						
F	11.887						
Sig.	.000						

As with most studies, this study has limitations. First of all, the survey is aimed in the industrial sector companies in Jordan and therefore not be valid for other sector. This would provide a potential source of bias to generalization. The small sample size is another limitation of this study. This would provide a potential source of bias to generalization. Further research may investigate the effect of the several factors on organizational performance at a time using other factors with larger sample. Additionally, this study was based on quantitative approach. This approach has shortcoming as it captures an event at a point of time. Future research could use a qualitative approach (that is, case studies or face-to-face interviews) to enable more in depth understanding of the effect of different factors on organizational performance.

Despite these limitations, this study is the first to explore the effect of competition factors on organizational performance of Jordanian companies. Although its findings should be considered as preliminary, it would encourage researchers in Jordan and other Middle East countries to direct their effort to a further exploration of this area.

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