Investigation of the Effects of the Company’s Capabilities on Attracting External Collaboration and Company’s Performance

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Abstract
One of the major tasks of the managers is achieving the coordination between the company and external environment to enhance the company’s financial performance. This research aimed to focus on attracting external effective collaboration, and first investigate effects of three capabilities of innovation, information, and relational on it, and then examine the effect of this factor on market and financial performance of the studied companies. At first, the variables of innovation capability, information capability, relational capability, company’s financial performance, company’s market performance, and also attracting external effective collaboration were studied in the review of literature. Then, a questionnaire was designed and distributed among the companies that were participated in Tehran international exhibitions and collected data was analyzed by correlation coefficient tests and structural equation modeling. To analyze the data Excel, SPSS, and Amos software were used. Findings showed that the relational, information, and innovation capabilities of company can increase companies financial and market performance through attracting external collaboration.

Keywords: innovation capability, information capability, relational capability, attracting external collaboration, financial performance

1. Introduction
One of the major issues that managers face these days is trying to balance between the intensity of competition and the company’s properties (O’Cass et al., 2007). It is the duty of the managers to achieve coordination between company and external environment to enhance the company’s financial performance. Since the adoption of different approaches of measuring the performance may generally lead to identifying the strengths and weaknesses of the companies, however, financial and market performance reveal the company’s success in the market; these two factors are measured by several ways and approaches (Weerawardena et al., 2006). Studies show that about 70 percent of the company’s revenues are attributable to market performance and the brand. Therefore, organizational performance and market performance have a close relationship with each other (O’cass et al., 2009). Identifying the factors that affect its performance, directly or indirectly, has dual significance: first, a context is created to develop unique ways to present greater values to customers. Second, we can simultaneously achieve the organizational internal effectiveness and appropriate compliance with the external environment (O’cass, 2006).

Peter Drucker believes that a company has to main tasks: innovation and marketing. Marketing in the organization is visible in the concept of market orientation. Market orientation causes the organization to be informed of market trends and customers’ demands (the tool of these two issues is information capability and relational capability) and achieve market share through innovation in producing the products according to the customers’ desires. It can be concluded that organization marketing is resulted from information and relational capabilities.

The capability of attracting external effective collaboration is one of the characteristics of successful marketing which according to Wang et al. (2005), it can be affected by innovation capability, information capability and relational capability (effective factors on marketing), this effect can be transferred to financial performance and market performance, yet. So it will play a mediating role.
In today’s business environment, companies need external sources of information and capital to upgrade and improve their performance and innovation (Morgan & Berton, 2008). Even in industries where access to information is very convenient, companies are facing great difficulties to access information. To overcome such shortcomings, companies should develop their relational and information capabilities which are consisted of the ability to recognize the value of new information, integrate and use it for commercial purposes (Powell et al., 1996). The notion of relational and information capabilities is one of the stimuli of companies competitive advantage (Ketchen et al., 2007). It should be noted that no research explains the role of relational, information, and innovation capabilities in the performance and attracting external collaboration so far. The weakness of relational, information, and innovation capabilities leads in decreasing their ability to compete with potential and actual competitors, lack of understanding the needs of customers and finally decline in the position of the company in the market (LaBahn, 2000).

In today’s business environment, those companies will be successful that beside using internal sources of capital in their company, identify their external sources of capital and benefit from these sources in order to achieve the organization’s goals and satisfy the needs of its stakeholders. Companies’ failure in identifying and attracting external collaboration leads to the failure of companies’ strategic decisions, failure in innovative programs, and weak ability of the company in research and development activities (Ghaem et al., 2005).

Considering the above mentioned issues, it can be noted that this study by focusing on attracting external effective collaboration investigates the impact of innovation, information and relational capabilities on it and then analyzes the impact of this factor on the studied companies financial and market performance. It is noteworthy to mention that no study has been done on this content in our country. Hence the research question is as follow:

What are the effects of company’s capabilities on attracting external collaboration and company’s performance?

2. Research Background

2.1 Innovation Capability

Innovation capability provides external collaboration through two ways: first, the basis of internal knowledge and absorption coefficient for each company to assess and attract the resources of partners to build a competitive advantage (Zahra & George, 2002), is the companies with higher innovation capability to benefit from this collaboration and they can develop their internal capabilities better and strengthen it (Powell et al., 1990) and therefore have a greater incentives to cooperate. Second, innovation capability helps to attract the partners. Companies of the partners enter the business relations potentially with the hope of getting access to complementary resources which they themselves cannot have the access to IBID. Focal innovation capability of the company is considered as an evidence for the potential partners when they decide to collaborate with the company (LaBahn, 2000). In accordance with these reasons, the experimental results show that the vendors cooperate more in cooperative relations in product development with knowledgably customers (Athaide et al., 2003). If the company’s innovation capability is greater, the company’s attractiveness will increase and it causes more partners tend to collaborate and it leads to more effective collaboration.

2.2 Information Capability

External partners are necessary depending on their information infrastructure to access the data in collaboration (Ketchen & Hult, 2007). Central technology of the company which is based on the information capability leads to internal correlation of the company and real time connection (Seggi et al., 2006). If the company invests on an advanced information technology and uses it for creating and exchanging of important information, this creates trust and credibility among the partners. Commitment to protect their information ensures the partners that the information and exchange of their information are safe, reliable and tidy and will lead to an increase in the probability of success in the collaboration. Experimental results show that information capability affects company’s performance through supply chain programs and relation with customers and vendors (D’Avanzo et al., 2003). Fawcette et al. (2011), have show that the largest shares of information technology make the supply chain collaborations more dynamic.

2.3 Relational Capability

There are three reasons why relational capability is important for collaboration: first, relational capability makes the company to distinguish between collaborative and trading relations and manage them according to different governmental mechanisms. Therefore, it can protect itself against opportunism and risks (Day, 2000). The company is also able to protect its intellectual investments and assets, and benefit the collaboration (Ghaem et al., 2005). Second, while information capability is useful in collecting and transmitting the recorded information,
relational capability facilitates tacit knowledge sharing in organizations’ body through creating relational sovereignty and informal relational channels (Lorenzoni & Lipparini, 1999). Capability to share the tacit knowledge within a network leads to improvement in directing and an increase in collaboration success chance (Dyer & Singh, 1998). Third, designing effective mechanisms of relational and contractual sovereignty is considered as a valuable resource for the partners because it ensures them that it tries for a fair and productive collaboration (Ghaem et al., 2008). Relational capability ensures the partners that relational problems can be solved as a minimum, avoidance or fairly and not be unfair on the right of the partners (Feng et al., 2008). The same as innovation capability, relational capability also can attract potential partners to collaborate and make the company benefit this collaboration.

2.4 Collaboration and Performance of the Company

Companies collaborate with each other to achieve more markets and better financial performance. While financial performance considers company’s sales growth, profitability and capital return, market performance means introducing new product to the market, market extension and penetration, increasing the quality and customer satisfaction, in comparison with the competitors in that industry. Previous studies show that effective collaboration of a company can improve the market and financial performance through several methods (Faems et al., 2005). First, collaboration enhances the partners’ access to the complementary resources, capabilities and other resources that potentially improve market performance. Second, collaboration accelerates the transfer of codified and tacit knowledge and reforms the innovation process of the company. Third, collaboration results in identifying new sources and practical applications, lower development costs, shorter development cycles, reduction in financial risks, better targeting, and increase in customers’ rights (Athaide et al., 2003). Researches on both supply chain and market collaboration have shown that collaboration leads to high levels of value creation and customer satisfaction (Allred et al., 2011).

Value creation resulted from collaboration, directly affects company’s performance (Hult, Hurley, & Knight, 2000). New products and markets enhance the possibility for increasing market share and income. Improvement in the quality of products and services increases the customers’ satisfaction, loyalty and retention and also increases sales, decreases the costs to attract and retain the customer, and enhances the share of market (Allred et al., 2011).

Youn et al. (1982) and Bradley et al. (1984) in their studies conclude that companies working in the sectors of pharmaceutical, electronics, food and equipment have low ability to raise capital, while the companies working in the sectors of cement, ceramic tile, paper and metals have high ability to attract the capital.

Riding et al. (1994), show that manufacturing companies have lower access to banking international credit compared to non-manufacturing companies.

Also, the results of Welsh and White (1981), and Wender Wijiest (1989), have show that manufacturing industries need major investment in fixed assets that are financed by debt and shareholders rights.

Chung (2004) discusses key economic variables such as changes in interest rates, changes in inflation rates, and the effects of investment alternatives. He also studies affecting social and potential variables such as local and regional developments and political changes and psychological components such as effect of news diffusion and rumors in macro level. At the level of micro components, the effectiveness of the financial ratios and the risk and stock returns is investigated. Based on the results of this study, affecting factors on external investment are categorized into two forms: macro variables including social and economic factors, and micro variables including company’s financial and management factors. In a study, Moore (2005) studies the relationship between innovation and attracting capital flows in hotel industry. Statistical sample size was 175 employees of Australia. Their findings show that attracting investment in each hotel is affected by innovation capabilities, employees learning, employees’ education and hotel’s interaction with its stakeholders.

Carmen and Jose (2008), in a study titled “the role of organizational innovation and technological innovation in the relationship between market orientation and performance in cultural organization” investigate the mediator role of innovation in the relationship between market orientation and economic and social performance of the museums. In this experimental study, data collected from 276 museums (135 museums in Spain and 141 museums in France). Data analysis was performed using structural equation modeling and path analysis. The obtained results show that market orientation affects either directly (0.36 coefficient) or indirectly (with mediating role of innovation and 0.13 coefficient) the performance. In addition, innovation (with .041 coefficients) will have a direct impact on performance. This will suggest that museum managers should apply organizational innovation and technological innovation in their marketing models to improve economic and social performance. Subramanian (2010) study the relationship between market orientation and business
performance in 159 intensive care hospitals in the United States. To measure the marketing orientation, structured scale of MAKTOR is used and business performance is examined by the scales of revenue growth, return on investment and profit margins; after testing the hypotheses, the results show that there is a positive relationship between market orientation and business performance in these hospitals (Subramanian, 2010).

Tsiotsou (2010) studies the relationship between market orientation and service performance in 329 tourism industries in Greece and Lithuania. To measure market orientation, MAKTOR scale is used and services performance examined considering the quality of services and variability of services; after testing the hypotheses, the results show a direct relationship between customer orientation and service performance, and an indirect relationship between competitor orientation and intersectional coordination with services performance (Tsiotsou, 2010).

Goedhuys and Veugelers (2010), in a study analyze the capacity to attract investment and it’s affecting factors. This study combines the results of more than 60 researches to determine the effects of individual, demographic, work and non-work factors related to the capacity to attract the investment. As predicted, working factors had stronger relationship with the capacity to attract the investment compared to the other factors; on the other hand, non-work factors had a stronger relationship with innovation. Demographic factors such as marital status and sex of employees had a relatively weak relationship with fundraising capacity. Generally, analyses support this hypothesis that fundraising capacity has unique factors and then requires different interventions or solutions.

Hua and Lee (2014) have done a research titled “investigation of the relationship between company’s capabilities and financial performance in small businesses”. The aim of the study was to investigate the relationship between relational, information, and innovation capabilities and financial performance in small businesses. Statistical sample of their study included 62 small companies in China. The findings show that companies various capabilities has an impact on the financial performance of small companies.

Wang et al. (2015), in their study examine the impact of company’s capabilities on attracting external collaboration and company’s performance in Chinese companies. The findings show that company’s capabilities affect attracting external collaboration; external collaboration, in turn, leads to improved market performance and financial performance of the company. In addition, the effect of market performance on financial performance is confirmed. It should be mentioned that this study was the researcher’s resource in doing this research.

2.5 Research Hypotheses and Research Model

Research Hypotheses

1) Innovation capability has a significant impact on attracting external collaboration effectiveness.
2) Information capability has a significant impact on attracting external collaboration effectiveness.
3) Relational capability has a significant impact on attracting external collaboration effectiveness.
4) Attracting external collaboration effectiveness has a significant impact on company’s financial performance.
5) Attracting external collaboration effectiveness has a significant impact on company’s market performance.
6) Market performance has a significant impact on company’s financial performance.

Based on performance-practice-source framework (Ketchen et al., 2007), and considering Wang et al.’s (2015) study, conceptual model of the present study (Figure 1) shows that three dynamic capabilities make the company to adopt external collaboration strategy. Collaboration efficacy has a mediating role between capability and performance. Considering the research questions and hypotheses, research model is presented as follow:
3. Methods

This study is applied research, and given the time of data collection, it is descriptive-survey (cross-sectional), and data collection instruments a questionnaire that is translated according to the research of Wang et al. (2015), and after evaluating its reliability, it is used to measure the research variables. The population of this research includes companies that participate in Tehran international exhibition. To determine the optimal number of sample Morgan table is used. Since annually more than 60000 local companies participate in Tehran international exhibitions, sample size is 384 according to Morgan table. After completing the questionnaire and collecting the required data from field survey using correlation coefficient and structural equation modeling approach, model’s factors and their relationship have been identified and reported. It should be noted that in this study, Excel, SPSS, and Amos 22 software are used. For confirmatory factor analysis and path analysis, a model has been fitted which is according to the theoretical foundations of the study.

4. Results and Findings

Based on the descriptive findings of the study, 3.3 percent of respondents are less than 35 years old, 25 percent are between 36 and 40 years old, 25 percent are between 41 and 50 years old, 31.1 percent are between 46 and 50 years old and 9.4 percent are more than 50 years old and 6.1 percent have not answered this question. Also, 33.3 percent of the respondents are female and 66.6 percent are male and 6.1 percent have not answered the question. 31.4 percent of respondents have a bachelor’s degree and 65.5 percent have a master’s degree and in this section 3.1 percent have not answered the question as well. And finally, 3.3 percent of the respondents have job experience of lower than 10 years, 25 percent have between 10 to 15 years, 18.6 percent have between 16 to 25 years, 25 percent have between 21 to 25 years, and 21.9 percent have more than 25 years of job experience. 6.1 percent have not answered this question.

According to the descriptive data on the research variables (mean, standard deviation, maximum and minimum point) for the studied variables calculated in accordance with Table 1.

Table 1. Descriptive data of research variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>market performance</td>
<td>3.035</td>
<td>0.463</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>financial performance</td>
<td>3.016</td>
<td>0.641</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>external collaboration</td>
<td>3.006</td>
<td>0.478</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>innovation capability</td>
<td>2.99</td>
<td>0.339</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>relational capability</td>
<td>2.960</td>
<td>0.336</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>information capability</td>
<td>3.164</td>
<td>0.416</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>
4.1 Testing the Naturalness of Variables

The results of the research data naturalness are summarized in Table 2. According to this table, the values of Kolmogorov-Smirnov test and significant values for the variables the studied hypotheses are given.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Kolmogorov-Smirnov</th>
<th>Sig.</th>
<th>N=360</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Performance</td>
<td>0.947</td>
<td>0.331</td>
<td>normal</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>0.888</td>
<td>0.409</td>
<td>not normal</td>
</tr>
<tr>
<td>External Collaboration</td>
<td>0.933</td>
<td>0.349</td>
<td>normal</td>
</tr>
<tr>
<td>Innovation Capability</td>
<td>10.93</td>
<td>0.183</td>
<td>not normal</td>
</tr>
<tr>
<td>Relational Capability</td>
<td>0.951</td>
<td>0.327</td>
<td>normal</td>
</tr>
<tr>
<td>Information Capability</td>
<td>0.987</td>
<td>0.215</td>
<td>normal</td>
</tr>
</tbody>
</table>

As it is shown, the significance level of the variables is more than 0.05 and the null hypothesis is confirmed. Therefore, data on variables are natural. In this study, we are permitted to use parametric tests.

4.2 Calculating Correlation Coefficient

According to the naturalness of the variables, Pearson correlation method to test bi-directional relationship between the research components has been used.

<table>
<thead>
<tr>
<th>Statistical Index of Variable</th>
<th>Coefficient Correlation</th>
<th>Sig.</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>innovation capability and attracting external collaboration effectiveness</td>
<td>0.981</td>
<td>0.000</td>
<td>360</td>
</tr>
<tr>
<td>information capability and attracting external collaboration effectiveness</td>
<td>0.957</td>
<td>0.000</td>
<td>360</td>
</tr>
<tr>
<td>relational capability and attracting external collaboration effectiveness</td>
<td>0.901</td>
<td>0.000</td>
<td>360</td>
</tr>
<tr>
<td>attracting external collaboration effectiveness and financial performance</td>
<td>0.760</td>
<td>0.000</td>
<td>360</td>
</tr>
<tr>
<td>attracting external collaboration effectiveness and market performance</td>
<td>0.959</td>
<td>0.000</td>
<td>360</td>
</tr>
<tr>
<td>market and financial performance of company</td>
<td>0.944</td>
<td>0.000</td>
<td>360</td>
</tr>
</tbody>
</table>

In correlation matrix (Table 3), the correlation coefficient of the factors of the research are presented. Given the 95% confidence level and the level of significance of the Pearson correlation coefficient test (which is 0.000 for all the studied relationships and is less than the assumed value 0.05), it can be concluded that the studied relationships (lack of relationship between innovation capability and attracting external effective collaboration, information capability and attracting external effective collaboration, relational capability and attracting external effective collaboration, attracting external effective collaboration and financial performance, attracting external effective collaboration and market performance, market performance and financial performance of the company) are accepted. In other words, examined items in this study are confirmed. Since the value of all these correlation coefficient are positive, it can be said that these variables change in each other direction, i.e., if one of them increases, the other one will increase as well.
4.3 Sample Adequacy Test

One of the prerequisites of using LISREL structural equations is testing the sample’s adequacy, which KMO adequacy sample test is used to examine it.

Table 4. Sample adequacy test

<table>
<thead>
<tr>
<th>Sample adequacy test</th>
<th>0.914</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kroit-Bartlet test indicator</td>
<td>35.367</td>
</tr>
<tr>
<td>Kroit-Bartlet test degree of freedom</td>
<td>0.231</td>
</tr>
<tr>
<td>Sig.</td>
<td>0.001</td>
</tr>
</tbody>
</table>

The value of sample adequacy is 0.755. So the sample is suitable for using structural equation. Generally, high values (close to one) suggest that factor analysis is applied to the data. If this value is less than 0.5, the results of factor analysis will not be useful for the data.

4.4 Fitness of Research Models

For research structural equation modeling AMOS 22 software is used. For confirmatory factor analysis and path analysis, a model is fitted which is in accordance with the theoretical foundations of the research. The data obtained from this software is explained in the following section. Figure 1 shows the output of AMOS 22 software. Figure 2 shows the standardized coefficient of the model.

Figure 1. Model of the relationship between company’s capabilities with attracting external collaboration and impact on financial and market performance of the company in non standardized mode
Figure 2. Model of the relationship between company’s capabilities with attracting external collaboration and impact on financial and market performance of the company in standardized mode

Standard estimation values of factor loadings which are calculated using maximum likelihood method are shown in Figures 1 and 2. Then, components of the model’s well-fit have been reported. Fitness of the model means that the observed variance-covariance matrix or the predicted variance-covariance by the model should have the values close to each other or have fitness. Whatever our values are closer to each other in two matrixes, the model has more fitness. In structural equation modeling when the model is fit enough, we can trust the model’s estimations.

Table 5. Fitness indicators of the first model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Accepted Domain</th>
<th>Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMSEA</td>
<td>RMSEA&lt;0.09</td>
<td>0.000</td>
<td>confirmed</td>
</tr>
<tr>
<td>GFI</td>
<td>GFI&gt;0.9</td>
<td>0.987</td>
<td>confirmed</td>
</tr>
<tr>
<td>AGFI</td>
<td>AGFI&gt;0.85</td>
<td>0.966</td>
<td>confirmed</td>
</tr>
<tr>
<td>CFI</td>
<td>CFI&gt;0.90</td>
<td>0.01</td>
<td>confirmed</td>
</tr>
<tr>
<td>IFI</td>
<td>IFI&gt;0.90</td>
<td>1.056</td>
<td>confirmed</td>
</tr>
</tbody>
</table>
Used fitness indicators indicate that this model has proper fitness; therefore it has a high ability to measure the relationships between the components of research. Because the model is standard, the results of the study are reliable. All the hypotheses studied in this research can be proved based on the original model of the research presented in Figures 1 and 2.

5. Discussion and Conclusions

External collaboration is a key instrument in completing the activities that lead to internal organizational value creation and increases its competitive advantage, because in an economy based on knowledge and network, innovation is not located within the company but it is outside the company and is among its external partners (Powell, 1990). Collaboration can be considered as independent and close performance relations that are characterized by interactivity, open and direct relationships, supporting experience and innovation and having goals of common interest for all partners.

Dynamic capabilities of the company are categorized into three groups. The first group is associated with innovation and researchers have found that technological capability and innovation are involved in product design, new product development and business innovation. The second group of information management which mostly get use of gap edge information technology to improve communication, collection, analyses and dissemination of market information and navigation within the enterprise and between partners is formed (Nekara et al., 2011). The third group consists of raising and managing external relations. In this group, the studies seek for alliance ability, marketing capability, and relational capability (Allred et al., 2011). These three kinds of capabilities mostly cover the process of cross-functional business related to collaboration within the company including new product development, operation, property management, activities related to production and distribution, customer communication management and vendors’ communication management. To get access to more markets and better financial performance, the companies collaborate with each other. Where the company’s financial performance refers to sales growth, profitability and return of capital, market performance can be as presenting new products to market, market expansion and penetration, increasing quality and customer satisfaction compared to competitors in the same industry. Previous studies have shown that effective collaboration within a company can improve the market and financial performance in several ways (Ghaemz et al., 2005).

Collaboration increases accessibility to complementary resources, capabilities and other resources which potentially improve the market performance. Secondly, codified and tacit knowledge transfer is accelerated by collaboration and reforms the company’s innovation process. Third, collaboration leads to identify new resources and applications, reduce development costs, shorten development cycles, and reduce financial risks, better targeting and increase customers’ rights (Allred et al., 2003). Studies in both supply chain and marketing have shown that collaboration leads to high levels of value creation and customer satisfaction (Allred et al., 2011).

References


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