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THE IMPACT OF SOCIAL CAPITAL ON MARKET EXPLORATION AND EXPLOITATION WITH MEDIATING ROLE OF INTERNAL COMMUNICATION

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ABSTRACT

Purpose – Present study aims to test the mediating role of internal communication on the relationship between social capital and market exploration and exploitation, and to link the impact of market exploration and exploitation to the firm performance.

Methodology - The hypotheses derived from the literature were tested on a sample of 173 information technology firms in Turkey. Survey data was gathered through questionnaires which were applied to the managers of the firms. Relationships among variables were analyzed through structural equation modeling using Amos 25.0 statistical tool.

Findings- Internal communication's full mediating impact on the relationship between social capital and market exploitation and exploration was supported. In return, market exploration was found to have a significant impact on firm performance which was measured by quality, innovation, reputation and customer satisfaction.

Conclusion- Social capital is an antecedent for an effective internal communication and should be well established in the firms. Internal communication has an impact on both market exploration and exploitation activities, thus it should be supported and encouraged within the firms. Market exploration activities should not be neglected since they may contribute to firms' performance especially in the long run.

Keywords: Social capital, internal communication, market exploration, market exploitation, research paper

JEL Codes: L20, D22, D83

1. INTRODUCTION

Since 1970s, rapid development in communication and computer technology changed the rules of global economic growth; and knowledge has become the most important capital especially for high-tech sectors (Chen et al., 2004). The dramatic shift from manufacturing to knowledge-driven services has increased the contribution of intangible assets and market-based capabilities towards firm performance (Ramaswami et al., 2009). Market exploitation and exploration activities are crucial for sustaining the current markets and expanding to the new markets. Recent literature suggests that internal communication can be fostered through the social capital of the firm (Hazleton and Kennan, 2000). In present research, it is proposed that internal communication mediates the relationship between social capital and market learning activities. This study contributes to the current literature through suggesting a new relationship which has been neglected in the literature.

2. LITERATURE REVIEW

In this part, the definitions and the relationships among variables, and theoretical background for the study will be presented.

Market Exploitation and Market Exploration

Market knowledge is considered as an important factor for the survival of the companies and firm performance (Narver and Slater, 2004). Market knowledge's importance has increased during the last decades since the source of competitive

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advantage has shifted from tangible assets to market-based assets and capabilities (Ramaswami et al., 2009). According to Lane and Lubatkin (1998), knowledge should be continuously replenished through generation and exploitation of the knowledge. Yli-Renko et al. (2001) argue that market knowledge may speed up product development, enhance technological distinctiveness and increase efficiency. Market exploitation and exploration are two main learning activities that promote acquisition and utilization of market knowledge (Lisboa et al., 2013). The conceptual distinction between exploration and exploitation has been discussed in various management areas including strategic management, organization theory and managerial economics (He and Wong, 2004). Exploitation activity is related to terms "refinement, choice, production, efficiency, selection, implementation, execution" whereas exploration is related to "variation, risktaking, experimentation, play, flexibility, discovery, innovation" (March 1991). Since exploitation is associated with the utilization of existing competences, technologies, and paradigms, its returns are usually positive and predictable; on the other hand, exploration is associated with searching for new alternatives, the returns are uncertain (March 1991). Levinthal and March (1993) state that exploration refers to a company's effort to broaden and deepen the companies' long-term success. Thus, the results of exploration can be realized in the long term and they can turn out to be negative due to uncertainty. Strategy studies relating ambidexterity perspective consider that exploitation and exploration as two distinct but complementary activities (Hsu et al., 2013). Tushman and Anderson (1986) develop punctuated equilibrium model suggesting firms can pursue different strategies in different time periods. In general, overemphasizing exploitation may lead to organizational myopia and competency trap, while overemphasizing exploration may lead to delay in responses to current market demands with existing capabilities (Hsu et al., 2013).

Social Capital and Internal Communication

Social capital concept has been frequently used since the 1990s alongside the established concepts of financial, real and human capital (Westlund and Bolton, 2003). The concept of social capital was developed by Jacobs (1965) for the use of community studies, then it spread to other disciplines including organizational studies (i.e. Burt, 1992; Nahapiet and Ghoshal, 1998). Bourdieu and Wacquant (1992) define social capital as "the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition". Coleman (1988) defines social capital by its function as "a variety of different entities having two characteristics in common: they all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure". Putnam (1993) defines social capital as "features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit". Nahapiet and Ghoshal (1998) identify three dimensions for social capital: structural, relational and cognitive. Structural dimension is related with network ties, network configuration, and appropriable organization (the overall pattern of connections among actors); cognitive dimension is related with shared codes, language, and narratives (resources providing shared representations, interpretations, and systems of meaning among parties); and relational dimension is related to trust, norms, and obligations (assets that are rooted in relationships). Adler and Kwon (2002) emphasize two different aspects of social capital: as bonding within the units of the firm and bridging to external networks. Yli-Renko et al. (2001) state that social capital can be crucial for long-term success of the technological firms. Nahapiet and Ghoshal (1998) argue that social capital facilitates the knowledge acquisition and exploitation through the exchange of intellectual resources. Internal communication is key for organizational learning and being responsive (Walter et al., 2006). Mitrega et al. (2012) accept internal relationship quality as a meta-construct which is defined as "interrelations within the company which comprises relations between superior and subordinate and employees from various departments with or without the existence of hierarchical bonds.

Relationship Among the Variables

Hazleton and Kennan (2000) suggest that an important antecedent of social capital is communication, and after social capital is created in the company, social capital starts fostering communication. For an effective internal communication capability, there should be enough social capital to support the process. Since social capital is related to collaboration and mutual trust, employees can find the appropriate atmosphere and motivation to share their knowledge and network within the company. Thus, it is proposed that internal relationship quality is determined by the social capital of the firm and in return predicts the effectiveness of internal communication. Thus, following hypothesis is generated:

H1: Social capital has an impact on internal communication

In order to obtain positive organizational outcomes, Walter et al. (2006) suggest that firms should be able to connect and integrate external relationships internally. Thus, internal communication can be seen as an indispensable part of network capability elements beside coordination, relational skills, and partner knowledge. Mitrega et al. (2012) state that in dynamic capability concept and resource-based theory, internal communication is treated as one of the key elements for competitive advantage. Ritter and Gemünden (2003) found that internal communication has a positive impact on network competence. Similarly, Yli-Renko et al. (2002) argue that internal communication fosters the evaluation of new

technological information and improves the efficiency of technical problem-solving. According to Song et al. (2016), high-quality networking is crucial for gathering useful information, especially under uncertain environments. Mitrega et al. (2012) found that internal relationship quality predicts the customer relationship quality. Similarly, Ritter and Gemünden (2003) argue that internal communication structure is a crucial part of firm's networking ability, since it contributes firms' ability to respond customer needs. Thus, following hypotheses are generated:

H2: Internal communication has an impact on market exploration

H3: Internal communication has an impact on market exploitation

Hazleton and Kennan (2000) argue that social capital increase the organizational advantage via communication, and organizational advantage improves the ability of the organization to adapt to changing environments. Based on the literature, it can be argued that internal communication which is fostered by social capital, may have a positive impact on market exploitation and exploration. Thus, following hypotheses are generated:

H4: Internal communication mediates the relationship between social capital and market exploration

H5: Internal communication mediates the relationship between social capital and market exploitation

He and Wong (2004) find empirical evidence that optimal balance between exploitation and exploration activities has a positive impact on firm performance, whereas the imbalance between them has a negative effect. Yli-Renko et al. (2001) argue that market knowledge may speed up product development, enhance technological distinctiveness and increase efficiency. Garcia et al. (2003) argue that exploiting current markets enables firm to ensure efficiency while exploring new markets enables firm's long run survival. However, the results of the study of Molina-Castillo et al. (2011) on manufacturing companies showed that under high levels of market turbulence (instability or unpredictability of markets), exploitation perform better in launching new products. Based on various findings related to the outcomes of market exploration and exploitation, following hypotheses will be tested:

H6: Market exploration has an impact on firm performance

H7: Market exploitation has an impact on firm performance

Theoretical Background

Resource-based view (RBV) suggests that sustained competitive advantage derives from the resources and capabilities a firm control which are valuable, rare, imperfectly imitable, and not substitutable (VRIN) (Barney, 1991). Author argues that such resources and capabilities can be both tangible and intangible assets, such as a firm's management skills, organizational processes and routines, and the information and knowledge it controls. The global competitive battles in high technology industries require a new paradigm other than the resource-based view, since winners in global marketplace show rapid responsiveness to market needs, achieve flexible product innovation and coordinate internal and external capabilities effectively (Teece et al.,1997). The authors define such capabilities as dynamic capabilities. 'Dynamic' refers to the capacity to renew competences; 'capabilities' refer the key role of strategic management in adapting, integrating and reconfiguring internal and external organizational skills, resources and functional competences required in changing the environment (Teece et al., 1997). According to Möller and Svahn (2003, p.219), there is an 'internal' emphasis in dynamic capabilities definition, since the dynamic capability view (DCV) originates from the resource-based view of the firm, which considers strategic capabilities as a pool of the internal resources. Lin and Wu (2014) suggest that strategic management should consider resource-based view and dynamic capabilities view together instead of separating them. The findings of the authors show that dynamic capabilities can mediate the relationship between VRIN resources and firm performance. In present study, market exploration and exploitation can be accepted as integration capability and effective communication can be accepted as a reconfiguration capability from a dynamic view. On the other hand, social capital is considered as an important intangible resource for a firm (Chisholm and Nielsen, 2009). Thus, both resource-based view and dynamic capability view is adopted in this study. The hypothesized model can be seen in Figure 1.

H3 (H5)

Figure 1: The Hypothesized Model

- H1: Social capital has an impact on internal communication
- H2: Internal communication has an impact on market exploration
- H3: Internal communication has an impact on market exploitation
- H4: Internal communication mediates the relationship between social capital and market exploration
- H5: Internal communication mediates the relationship between social capital and market exploration
- H6: Exploration has an impact on firm performance
- H7: Exploitation has an impact on firm performance

3.DATA AND METHODOLOGY

A multi-item questionnaire measured on a 6-point interval scale (1=strongly disagree to 6=strongly agree) was used in this study. 6-point interval scale is preferred to avoid the tendency of respondents choosing the mid-points which is usually observed in 5-point Likert scales. Social capital scale is consisted of 7 items and developed by Nahapiet and Ghoshal (1998). Internal communication scale is consisted of 5 items and adopted from Walter et al. (2006) as a part of the network capability scale. Market exploration (4 items) and market exploitation (4 items) were adopted from the study of Lisboa et al. (2013). Birley and Westhead (1990) suggest that comparisons with competitors brings important information to the studies. Respondents were asked to evaluate their firms compared to their competitors (1=much worse than competitors to 6=much better than the competitors) based on the following indicators: i. product/service quality, ii.new product/service/process innovation, iii. company reputation iv. customer satisfaction (adopted from Wiklund and Shepherd (2003) and Moorman and Rust (1999)). Relationship among factors (path analyses) will be analyzed through structural equation modeling using AMOS statistical program version 25.0. Factor analyses and reliability tests were performed through SPSS 24.0. Sample data was derived from the first 500 information technology firms operated in Turkey. Survey data was collected through face-to-face interviews with the owners, top managers, and middle managers through structured questionnaires. The sampling method of the study is convenience/non-probability sampling. In total, 180 questionnaires could be collected within 2 months. 173 questionnaires were qualified for the research; therefore, response rate is 34.6% (173/500).

4.FINDINGS

4.1. Descriptive Analyses

Respondents were preferred from owners/partners or top-level managers, since they were assumed to have broader knowledge about their firms. When it was not possible to reach the owners or top-level management, questionnaires were directed to the middle-level managers and then to the first-level managers. According to the results, 48 respondents (22%) were top level managers, 58 (33%) respondents were middle level managers, 77(45%) were first- level managers. Ranks of the firm in the first 500 IT firms are as follows: 19% is in the first 100; 11% is in 101-200; 13% is in 201-300; 34 % is in 301-400; 23% in 401-500 interval. Thirty-three firms (19%) were between 2-9 years old; 52 firms (30%) were between 10-14 years old; 47 firms (27%) were between 15-19 years old and 41 firms (24%) were older than 20 years old. Thirty-two firms'

(18%) employee numbers are between 4-10; 34 firms' (20%) employee numbers are between 11-20; 46 firms' (27%) employee numbers are between 21-40; 30 firms' (17%) employee numbers are between 41-150; 31 firms' (18%) employee numbers are more than 150.

4.2. Exploratory Factor Analyses and Reliability Analyses

Exploratory factor analyses and reliability analyses were performed through SPSS v. 24.0 statistical tools. The KMO and Cronbach's alpha values of the dimensions that were used in the analyses can be seen in table 1 (items are available in the appendix.).

Table 1: Factor Analyses and Reliability Analyses Results

Variable Name	N	кмо	Cronbach's alpha
Social Capital	7	0.87	0.876
Internal Communication	4	0.765	0.760
Market Exploitation	4	0.772	0.802
Market Exploration	4	0.794	0.845
Firm Performance	4	0.657	0.733
Total items	23		

Path Analyses

Proposed model was tested through path analyses and the results showed that model fit the data quite well (table 2: X ²(187, N=173) =209.436; p=.125; GFI=.91; CFI=.99; NFI=.90; TLI=.98; RMSEA=.026). In the model, impact of social capital on internal communication (std. beta 0.844; p=0.00) and internal communications impact on both exploration (std. beta=0.874; p=0.00) and exploitation (std. beta=0.985; p=0.00) were found significant. Regarding market exploration and exploitation's impact on firm performance, market exploration was found significant (std. beta 0.752; p=0.044) whereas exploitation was insignificant (std. beta -0.323; p=0.355). Thus, H1, H2, H3 and H4 were supported at p<0.001 level, and H4 was supported at p<0.05 level. However, H7 was not supported.

H1: Social capital has an impact on internal communication → supported

H2: Internal communication has an impact on market exploration \rightarrow supported

H3: Internal communication has an impact on market exploitation \rightarrow supported

H6: Market exploration has an impact on firm performance \rightarrow supported

H7: Market exploitation has an impact on firm performance → not supported

Table 2: Path Analyses Test Results for the Model (indirect impact with mediator)

Std. B	t value	p value
0.844	5.119	***
0.874	6.655	***
0.985	7.450	***
0.752	2.013	0.044*
-0.323	-0.926	0.355
	0.844 0.874 0.985 0.752	0.844 5.119 0.874 6.655 0.985 7.450 0.752 2.013

Note: *p<.05; ** p< .01; *** p< .001

GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; CFI= Comparative Fit Index; NFI= Normed Fit Index; TLI=Tucker-Lewis Fit Index; RMSEA= Root Mean Square Error of Approximation

Testing Internal Communication as a mediator

In order to test mediation impact of internal communication between social capital and market exploration/exploitation, first, direct impact of social capital on market exploitation/exploration was tested in the model without the mediation variable (internal communication), and model was found to fit the data (table 3: X^2 (187, N=173)=209.436; p=.125; GFI=.91; CFI=.99; NFI=.90; TLI=.98; RMSEA=.026). It was seen that social capital has a direct impact on both market exploration (std. beta 0.877; p=0.00) and exploitation (std. beta 0.989; p=0.00.

Table 3: Direct Effect without Mediator

Path	Std. B	t value	p value
social capital> market exploration	0.877	6.072	***
social capital> market exploitation	0.989	6.353	***
market exploration> firm performance	0.799	1.732	0.083
market exploitation> firm performance	-0.362	-0.827	0.408
X ² (187, N=173) =209.436; p=.125; GFI=.91; CFI=.99; NFI=.90; TLI=.98; RMSEA=.026			

Note: *p<.05; ** p< .01; *** p< .001

GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; CFI= Comparative Fit Index; NFI= Normed Fit Index; TLI=Tucker-Lewis Fit Index; RMSEA= Root Mean Square Error of Approximation

Then, direct impact of social capital on exploitation/exploration was tested when mediator variable (internal communication) was introduced in the model. As it can be seen in table 4, model fit the data (X^2 (185, N=173) =203.616; p=.166; GFI=.91; CFI=.99; NFI=.90; TLI=.99; RMSEA=.024). It was found that social capital's impact on market exploration (std. beta -0.585; p=0.219) and exploitation (std. beta -0.569; p=0.171) became insignificant. Hair (2010) suggest that if the independent variable became insignificant where mediating construct included in the model, it is called full mediation. Thus, in present model internal communication fully mediates the relationship between social capital and market exploration/exploitation.

H4: Internal communication mediated the relationship between social capital and market exploration → supported

H5: Internal communication mediated the relationship between social capital and market exploitation → supported

Table 4: Direct Impact with Mediator

Path	Std. B	t value	p value
social capital> internal communication	0.919	5.169	***
Internal communication> market exploration	0.982	3.222	***
Internal communication> market exploitation	0.916	3.192	***
social capital> exploration	-0.585	-1.369	0.219 ns
social capital> exploitation	-0.569	-1.229	0.171 ns
market exploration> firm performance	0.778	2.013	0.059
market exploitation> firm performance	-0.352	-0.926	0.361

X²(185, N=173) =203.616; p=.166; GFI=.91; CFI=.99; NFI=.90; TLI=.99; RMSEA=.024

Note: *p<.05; ** p< .01; *** p< .001

GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; CFI= Comparative Fit Index; NFI= Normed Fit Index; TLI=Tucker-Lewis Fit Index; RMSEA= Root Mean Square Error of Approximation

5.CONCLUSION

Present study results showed that social capital is a significant predictor of effective internal communication. Social capital has also direct positive impact on market exploration and exploitation activities, and the total impact on exploration and exploitation increases when it combined with internal communication. These results are in line with the study of Hazleton and Kennan (2000) suggesting social capital leads to exploitative communication which in return brings positive organizational outcomes. When internal communication was included in the model, the direct impact of social capital became insignificant. This result indicates that internal communication acts as a mediator between social capital and internal communication. Internal communication's positive impact on both exploitation and exploration supports the findings of Mitrega et al. (2012) suggesting that internal relationship quality predicts the customer relationship quality. Similarly, Ritter and Gemünden (2003) argue that internal communication structure is a crucial part of firm's networking ability, since it contributes firms' ability to respond customer needs. Results of path analyses in the present study showed that only market exploration has a significant impact on non-financial firm performance (predicted by the indicators of quality, innovation, and customer satisfaction). As a conclusion, present study showed that internal communication fully mediates the relationship between social capital, and market exploration and exploitation. Firms should be aware of the importance of social capital and internal communication to foster their capabilities of market exploration and exploitation. Thus, communication channels should be diversified in the firms so that every employee from different departments can formally and informally exchange their information about the market, customers, new products and competition. The main contribution of the present study is to link between social capital, internal communication and market learning activities and support empirical evidence for the relationship. Second, market exploration's impact on firm performance is supported empirically as a contribution to literature. Even market exploration activities are riskier than exploitation activities, market exploration may create competitive advantage for the firms especially in the long run.

This study is not without limits. Other sectors such as finance, manufacturing, health can be included in the study for comparative purposes. To avoid manager bias, employees could be included as respondents. For future studies, relationship between market exploration and exploitation and firm performance can be analyzed in more detail. Beside internal communication, other variables such as partner relationships' impact on market exploration and exploitation can be examined. As implications for the managers, it can be advised to focus on building and maintaining social capital and internal communication within their firm. The instruments fostering internal communication would increase overall market learning activities of the firm and in return bring positive organizational outcomes. Especially in high technology sectors, firms should engage in market exploration activities, even the results are not shown in short run, exploration of new markets would benefit the firm in long the run. However, it should be in mind that exploration activities hold some risks compared to exploitation activities, thus firms should maintain and keep on focusing on current markets as well, and the resources that are allocated to them should not be endangered.

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APPENDIX: Factor and Reliability Analysis Results

Factor loadings	Variance Explained	Cronbach's alpha	Number of items
	57.51	0.876	7
0.786			
0.782			
0.774			
0.765			
0.762			
0.72			
0.716			
	58.513	0.76	4
0.807			
0.79			
0.74			
0.688			
	62.883	0.802	4
0.85			
0.805			
0.769			
0.744			
	68.365	0.845	4
0.855			
0.834			
0.832			
0.784			
	55.81	0.733	4
0.811			
0.752			
0.751			
	0.786 0.782 0.774 0.765 0.762 0.716 0.807 0.79 0.74 0.688 0.85 0.805 0.769 0.744 0.855 0.834 0.832 0.784	ST.51 ST.5	ST.51 0.876