Entrepreneurial orientation, networks and performance: an empirical study of SMEs in Egypt

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Abstract

Building on the resource orchestration literature, we use a two step technique through structural equation modelling to test a model where entrepreneurial orientation (EO)mobilizes resources to influence SMEs performance. Using survey data from 180 SMEs in technical industry sectors, our results indicate that EO mediates (partially) social capital - firm performance relationships. This finding drive managers to understand that networks provide critical base for entrepreneurial activities, however, building large, high quality networks is essential to mobilize resources within EO to develop competitive advantage and achieve superior and positive firm performance.

Introduction

Entrepreneurial orientation (EO) is reflected in its three core dimensions: innovativeness, risk-taking and proactiveness; and has a positive effect on firm performance (Hean, Thi, & Ping, 2007; Rauch, Wiklund, Lumpkin, & Frese, 2009; William J Wales, Patel, Vinit, & Kreiser, 2013). Previous studies highlight that firms with high EO are more able to capture opportunities, adjust its operations in the marketplace to enhance performance and increase profitability (Y.-H. Li, Huang, & Tsai, 2009; Stam & Elfring, 2008). EO improves firm performance by facilitating firm's ability to identify innovative opportunities with greater

returns and being first mover not a follower in the market (Johan Wiklund & Shepherd, 2005). Innovative firms encompass a wide range of skills and knowledge that will enable the firm to build a unique and distinctive competences (Y.-H. Li et al., 2009).

Firms with innovative capabilities can renew and adjust its operations within the market that will improve and enhance the performance of the firm (Lumpkin & Dess, 1996). As risk-taking propensity is associated with being innovative and proactive in terms of being risk taker, it enhances the ability to search for new and risky ideas with greater returns (Julie Juan Li, Poppo, & Zhou, 2008). Firms characterized by risk-takers enhance the ability of being active, aggressive and leader in capturing opportunities and new ideas (Kreiser, Marino, Kuratko, & Weaver, 2013). Firms with high risk-taking propensity enable the firm to seize opportunities in order to make high returns so that risk-taking is associated with positive performance and success (Li et al., 2009; Lumpkin & Dess, 1996). As argued by Lumpkin and Dess (1996), a proactive firm is a leader not a follower in the industry, being characterized by an aggressive behaviour allowes firms to exploit opportunites ahead from competitors (Lumpkin & Dess, 2001).

However, the ability of EO to improve performance may be affected by limited access to resources (Ireland, Hitt, Camp, & Sexton, 2001), accordingly, firms with strategic alliances, networks and connections have greater access to unique resources which will improve competitive position of the firm as compared to competitors (Marino, Strandholm, Steensma, & Weaver, 2002; Shan, Song, & Ju, 2016). The social capital theory entail that relationship networks possed with others provide valuable resources for firms (Nahapiet & Ghoshal, 1998). Social capital postulate that a firm's connections contribute to the improvement of performance (Gao, Xu, & Yang, 2008), by providing innovative, high quality products at competitive prices (Lee, Lee, & Pennings, 2001). Peng & Luo (2000)

identified two types of ties: (1) ties with other firms, which are connections with suppliers, buyers and competitors and (2) ties with government officials, which are connections with government and financial institutions.

Recent studies tend to treat networks as a moderator in the EO-performance relationship (Boso, Story, & Cadogan, 2013; Luu & Viet, 2018) where the firm' ability to select and judge potential ties to develop networks with other firms and governement officials is contingent upon EO capabilities of the firm (Gunawan, Jacob, & Duysters, 2016). Although, recent trends call for the need to understand the antecednts of EO, it is suggested that networks might have a role in the formation of EO which in turn will affect the performance (Miller, 2011). Therefore, the purpose of this study is to examine the effect of networks on EO dimensions and the mediating role played by EO in networks-perforance relationship in a developing economy context "Egypt".

Theoretical Background and Hypotheses development

- Managerial ties and SMEs performance

Peng & Luo (2000) identified two types of managerial networks: (1) ties with other firms and (2) ties with government officials. Ties with other firms include suppliers, buyers and competitors (Boso et al., 2013). Business ties will provide greater opportunities for shared knowledge, information, resources which in turn will ensure higher quality, lower cost, timely delivery and reduced uncertainty (Acquaah, 2007; Y. Li, Chen, Liu, & Peng, 2012; Park & Luo, 2001). Firms having ties with government officials may increase institutional support through access to unique, rare information such as land and capital as well as updated and confidential information about policies and regulations (Florin, Lubatkin, & Schulze, 2003; Peng & Luo, 2000). Applying on emerging economies, business and social ties lead to greater performance as government support is weak (Luo, 2003). This argument is

supported through results of Luo, Huang, & Wang (2012) that show that the importance and reliance on social ties decline with the improvement in the institutional structure. Although both ties are considered an important source of resources in improving firm performance. Li et al (2012) and Zhang & Li (2008) highlight that business ties are more important and effective in capturing opportunities than social ties. To sum up, networks improve SMEs performance through reducing costs, innovative time, increasing economies of scale (Gronum, Verreynne, & Kastelle, 2012). Therefore, we hypothesis the following:

Hypothesis 1: Managerial ties and networks positively affect SMEs performance.

- EO mediates the relationship between managerial ties- SMEs performance

In general, EO refers to the firm's ability to explore and exploit new opportunities (Lumpkin & Dess, 2001). It captures the firm's ability to be innovativeness, risk-taking and proactiveness (Covin & Slevin, 1991). However, rapid technological changes, differences in culture and instiutions impose a greater obligation over SMEs to survive and grow (Lin & Lin, 2016). Network is cosidered one of the crucial factor to enhance and improve SMEs performance through acquired knowldge and information (Zhang & Li, 2008). Emerging economies are characterized by less sophisticated institutional frameworks with poorly enforced property rights as well as weak developed capital markets (Estrin & Prevezer, 2011). Emerging economies environment are diverse, instable, low-income and high growth potential which make them attractive in order to understand new insights and modifications to existing theories (Meyer & Peng, 2016). The presence of problems in formal and informal institutions will lead to the appearance of networks and connections (Xu & Meyer, 2013). In a developing economy like Egypt, government rules, regulations and strict bank regulations over fund and information are the main obstacles facing SMEs in specific and entrepreneurship in general (Farid, 2007). Ghecham (2010) highlights that bad quality of

formal institutions and strict informal constraints lead to the appearance of 'Wasta' networks name in Egypt.

However, most of the previous studies treat networks as a moderator in the EO-performance relationship (Boso et al., 2013; Luu & Viet, 2018; Rauch et al., 2009). Although several studies examined the link between EO and firm performance as well as several variables have been studied as antecedents of EO, there is little understanding of the origin of the EO. "Although entrepreneurship is a promising site for work on the network forms of social capital, empirical research on the role of networks in entrepreneurship has been limited" as highlighted by Burt, 2000 (p. 371). Stam and Elfring (2008, p. 108) raise an important research question that requires further investigation: " Does differential access to social capital results in different levels of EO?" There is a lack of research investigating the inter-relationship between EO and social capital (Wang & Altinay, 2012). Wales (2016) reveals that network theory is considered as one of the theoretical areas suggested in studying EO, as firm's networks affect the influence and the effectiveness of EO (Covin & Miller, 2014; Miller, 2011).

Li et al (2012) theorize that SMEs due to their limited access to resources may depend on connections and networks with other firms or with government officials. As social capital represents firm resources, it needs to be translated and used effectively in order to improve and enhance firm performance (Brush, et al, 2001). The availability of social capital is necessary but not sufficient to create competitive advanatage and greater returns (Clercq & Arenius, 2006). Hence, firm's EO capabilities are needed to judge and select potential ties relevant to the firm (Gunawan et al., 2016). Therefore, we hypothesis that:

Hypothesis 2: EO partially mediates the relationship between managerial ties and firm performance.

Data and Methods

- Measures

All items used in the research were adopted from existing tested measures with a seven point likert scale to gurantee reliability and validity of scale. Table (1) represent constructs, measurement items and related reliability within the used scale. EO divided into three dimensions: innovativeness, risk-taking, proactiveness. Five items are used to measure the innovativeness while three items are used for risk-taking, proactiveness (Boso et al., 2013). SMEs performance is measured by a scale adopted from Vorhies and Morgan (2005), the scale includes customer satisfaction, market effectiveness and financial performance ,where each variable is measured using four items each (Engelen, Gupta, Strenger, & Brettel, 2015). The questionnaire was developed in English in accordance with measures and data required to test developed hypotheses and then translated into Arabic language. The questionnaire was translated into Arabic first, then translated back to English to make sure that all items and questions have the same meaning. The data collection yielded responses from 180 SMEs in electronics industry out of 190 questionnaires sent, yielding approximately 95% as a response rate.

Table 1: Constructs, measurement items and reliability tests

Construct	Variables	Method used to construct the variables	Cronbach alpha	Source
Entrepreneurial Orientation EO	Innovativeness	– Our company is known as an innovator among businesses in our industry. – We promote new, innovative product/services in our company. – Our company provides leadership in developing new products/services. – Our company is constantly experimenting with new	0.91	Boso et al. (2013)

		products/services. – We have built a reputation for being the best in our industry to develop new methods and technologies.		
	Risk Taking	– Top managers of our company, in general, tend to invest in high-risk projects. – This company shows a great deal of tolerance for high risk projects. – Our business strategy is characterized by a strong tendency to take risks.	0.93	
	Proactivness	– We seek to exploit anticipated changes in our target market ahead of our rivals. – We seize initiatives whenever possible in our target market operations. – We act opportunistically to shape the business environment in which we operate.	0.91	
Firm Performance	Customer satisfaction	Please evaluate the performance of your firm over the last three years compared to your major competitors in terms of: - Increasing Customer Satisfaction - Delivering value to your customers - Delivering what your customers want - Retaining valued customers	Overall 0.88	(Engelen et al., 2015)
	Market Effectiveness	- Market share growth		

		- Growth in sales revenue - Acquiring new customers - Increasing sales to existing customers.		
	Financial Performance	- Profitability - Return on investment (ROI) - Return on sales (ROS) - Reaching financial goals		
Network	Ties with other firms	To what extent do you agree with statements about relationships with buyers and suppliers: - We have cultivated close connections with our buyers. - We put great emphasis on understanding our buyers' needs. - We focus on developing relationships with our buyers. - Personal relationships with our suppliers are important to the firm. - We have invested in relationships with the managers of our suppliers. - We understand our suppliers' strengths and weaknesses.	0.832	(Y. Li et al., 2012)
	Ties with government officials	To what extent to you agree with statements about relationships with governmental officials: - We ensure good relationships with influential government officials. - We have invested heavily in building relationships with government officials.	0.887	

		- Improving our relationships with government officials have been important to us. - You received support for R and D activities from local institutions. - You or your employees received specific training by local academic institutions. - Your firm received benefits from research activities carried out your academic institutions. You consider that you cannot receive support from external firms directly instead of from local institutions. - You consider the role played by the trade associations in the local area as strategically important.		

- Research population, sample

According to the industrial development authority, manufacturing firm SMEs are firms with less than 100 employees. The research population was determined to include all electronics industry SMEs in Cairo, Giza as well as 10th of Ramadan and 6th of October cities, where those areas represent the main industrial areas within Egypt as shown below in table 2.

Table 2: SMEs population technical industries in Egypt

	Cairo	Guiza	6th October	10th of Ramadan	Total
Technical industries	207	34	85	134	460

Source: Industrial Development Authority (2016)

The sampling unit is composed of owner and manager of SMEs as they are the fully understanding the main business activities which will improve the accuracy of the responses (Semrau, Ambos, & Kraus, 2016). No research frame is available for SMEs in Egypt due to the availability of different sources for SMEs categorization. Accordingly, this research follows a non-probability sampling design, where the choice of the subjects or firms to be included in the sample will follow *judgmental sampling* where researcher's judgement and opinion is needed to exclude businesses that are not relevant to research areas and variables.

To control the common method bias, the study applied several procedural remedies: respondents were assured a high level of confidentiality during data collection where no implications for right or wrong answers; measurement items were constructed carefully to avoid any item ambiguity or complexity; finally, data were collected from owners and managers of SMEs (more than one respondent) within the same firm (Luu & Viet, 2018).Accordingly, common method bias is not likely to be a serious concern in our study.

The questionnaire was developed in English in accordance with measures and data required to test developed hypotheses and then translated into Arabic language. The questionnaire was translated into Arabic first, then translated back to English to make sure that all items and questions have the same meaning. Data was collected through a *self-administered questionnaire;* a well-developed questionnaire provides accurate and useable data that will support data analysis and results. The layout is a very important step in designing the questionnaire, to guarantee that is attractive and not boring for respondent (Gilham, 2000). The layout of the questionnaire is organized as follows: a) The questionnaire starts with a brief introduction (cover page) that explains the aim of the research and the importance of the respondent's answers to the research to attract attention and ensure the confidentiality of their answers. b) There is a logical order applied to avoid confusion, such that sensitive or personal questions are kept at the end of the questionnaire. c) Questions are