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The relationship between International Networking and Firm Performance in SMEs, UK

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Abstract

The main objective of this paper is to investigate the effect of international networking on the performance of British small and medium sized enterprises (SME). The international networking capabilities have been recognized as a vital element for growth and survival. In this research the data has been collected using online questionnaire and mail survey from a sample of 118 SMEs operating in manufacturing, service providing and R&D sectors in UK. The research hypotheses have been tested by applying Structural Equation Modelling (SEM) methodology. The Lisrel software was used to test and analyse the relationships among variables. The collected data has been analysed using Structural Equation Modelling methodology. The data analysis illustrates a positive and significant relationship between international networking activities of the SMEs and their performance. Learning, synergy of combined resources and knowledge sharing all were positively associated with profitability and to lesser extent on sales growth.

Keywords: International networking, Performance, SMEs, UK

1. Introduction

According to Gilmore et al. (2006) networking provides information for managers of firms about market and inter-organizational business to business relationships. There are many factors and strategies that increase the firms performances, chance for growth and also decreases the risk of failure (Watson, 2007, Tolstoy and Agndal, 2010; Hilmersson and Jansson, 2011; Kontinen and Ojala, 2012), but in recent years, a growing body of opinion are supporting the role of corporate linkages on better performance of firm and gaining competitive advantage. A key issue for decision makers of firms is having a great access to up to date information and the networks provide the most recent information very effectively and efficiently (Kent, 1994; Donckels and Lambrecht, 1995; Shepherd et al., 2000; Havnes and Senneseth, 2001; Watson, 2007, Tolstoy and Agndal, 2010). Network has been defined by Axelsson and Easton (1992, p. 154) as "sets of two or more connected exchange relationship". Nooteboom (1999) stated that, networks are cooperative linkages between different firms and departments within firms; According to Nooteboom (1999), networks can be defined as a "relationship within firms, between firms and combination of them". Furthermore, he suggested three different kinds of linkages; vertical, horizontal and Diagonal or diversified .Vertical linkage is consisted of products stream from suppliers to consumers in firm's value systems. Horizontal linkages are involved with combined resources, production and distribution systems in terms of similar and substituted products. Diagonal linkage is sharing common resources in regard to different products (dissimilar), which can be complementary products in terms of market or distribution. The natures of establishing networks are very complicated, because the networks are naturally "intangible", omnipresent and inconceivable, it means difficult to analysis or make sense of it (Thorelli, 1986; Turnbull et al., 1996). Networking provides information for managers of firms about market and inter-organizational relationships in business to business relationships (Gilmore et al. 2006). In the other words, managers use networking to make sense of what are people expectations and potentials to provide or acquire service or support (Mitchell, 1969). In recent years, scholars and researchers focused on firm's networking activities as a key factor for SMEs' growth and its impact on competitive advantage and performance. Due to nature of today's global business and high competitive business environment, international networking capabilities of firms have been recognized as a vital element to growth and survival for SMEs operating in international business. However, less attention has been devoted on understanding the relationship between international networking and firm performance and there has been still more space and necessity for researchers to investigate this relationship. Therefore this research is a direct response to this gap in literature and investigates the relationship between networking and firm performance in SME in UK.

2. Literature review and theoretical framework

A quite number of studies in developing and developed countries demonstrated that international networking and sharing business interests in different fields such as marketing and R&D are very common for gaining infrastructure requirements of companies (Sudweeks and Romm, 2000; Klerk and Kroon, 2007). The business cooperative groups or clusters are forming among the companies with the same or similar products or positioning in the close geographical areas. The owner/ managers of firms attempt to exchange and share experiences to learn from each other and develop products (Fernandez and Nieto, 2006). It is argued that the companies in this cluster strain to find cost effective ways of production by making trust and strong mutual knowledge ties (Hilmersson and Jansson, 2011). Firms can take advantage of networking in terms of increasing and sharing knowledge, inter-organizational and intra-organizational learning, facing with new potential opportunities, access to market information, combination of resources , new skills and benefits of synergy (Chetty and Holm, 2000; Klerk and Kroon, 2007). Furthermore cooperation networking enhances SMEs sales growth and chance of survive in continues changing environment (Watson, 2007) and acts as catalysis for firm innovation capacity (Powel et.al, 2005; Lavie, 2007) international performance (Kenny and Fahy, 2011); learning (Kraatz, 1998) and development of new product (Gronum et al., 2012). A number of studies emphasizes on the importance of international business networks for firms (Chetty, 2003; Bernardina and Jones, 2008; Kenny and Fahy, 2011; Kontinen and Ojala, 2012). Most of scholars propose that making relationships and business linkages during the internationalization process is very vital for all kind of organizations, where firms can link mutual resources with international partners (Coviello and Munro, 1997; Jaklic, 1998; Chetty, 2003; Chetty and Wilson, 2003). Canabal and White (2008) argued that the core element for SMEs internationalization process is the decision maker's expectation of internationalization and its potential effects on firms as growth in sales. Furthermore (Chetty, 2003) stated that the policy makers and management attitudes towards internationalization activities are based on their past experiences and managerial beliefs about firms growth and competitive advantage. In the context of SME's, OECD (2009) research

determines four kinds of barriers for internationalization; first one is financial limitations for starting international activities' such as exporting; second one is unawareness of opportunities regarding foreign business and the third is limited market research and not to be able to reach foreign markets information. Besides the constraints in managerial capacity, experiences, time and knowledge are added to this research. A number of studies emphasises on the importance of international business networks for firms (Coviello and Chetty, 2003; Crick and Spence, 2005; Bernardina and Jones, 2008; Kenny and Fahy, 2011; Kontinen and Ojala, 2012). Most of scholars propose that making relationships and business linkages during the internationalization process is very essential for all kind of organizations, where firms can link mutual resources with international partners (Sharma, 1992; Coviello and Munro, 1997; Jaklic, 1998; Chetty, 2003).

Networking as an important instrument for SMEs, creates chance and opportunity for internationalization process and facilitates entering foreign markets especially in small and medium sized enterprises (Hilmersson and Jansson, 2011). Networking via building trust, providing synergetic relationships, using complementary resources in different stages of value chain and interacting with other firms and SMEs accelerates internationalization (Dana et al., 1999; Jones, 1999; Souse, 2003; Kontinen and Ojala, 2012). To sum up, the majority of studies are in the favour of networking activities of firms and are emphasizing on the advantages and benefits of networking for firms (Chetty and Holm, 2000; Havnes and Senneseth, 2001; Watson, 2007; Kenny and Fahy, 2011; Gronum et al., 2012; Kontinen and Ojala, 2012). The review of literature shows that the number of studies in the field of international networking in SMEs context is very limited. Therefore this study focusing on investigating this important issue in SMEs context and contributes to the existing body of knowledge in this field.

International networking and firm performance

Considering the conceptual model, the main focus of this study is to investigate the effect of international networking activities of SMEs on firm performance. A quite number of studies attempt to measure and test that international networking has the potential of influencing on firm's performance (Roberston and Chetty, 2000; Loxton and Weerawardena, 2006; Hilmersson and Jansson, 2011). It has been argued that for increasing the understanding of internationalisations effects on SMEs should deeply investigate the firm's business networks and the way of using networks to internationalization of firms (Coviello and Munro, 1997; Chetty and Holm, 2000; Kenny 2009). Considering the arguments in support of international networking and its potential impacts on firm performances, expecting SMEs profitability and more sales growth due to international networking activities is reasonable (Chetty and Holm, 2000; Hilmersson and Jansson, 2011). Two important aspects of firm's performance refer to company's position in market (Jaworski and Kohli, 1993) and financial dimension (Narvar and Slater, 1995; Li and Lin 2006, Watson, 2007). The level of market place performance is refers to sales growth and the financial level is based on profitability. Therefore the hypothesis 1 can be developed as follows:

H1: International networking significantly affects the performance of SMEs

Network resources

Considering the internationalization of firms the RBV (Resource Based View) is mainly focuses on the firms existing capabilities and resources in terms of making major decisions such as forming and implementing strategies, market choices, international market entering mood, developing products and etc. (Grant, 1996; Bell et al., 2003). Firms should carefully consider their available possibilities and resources such as human capital resources, financial resources, machinery and related technology and even the entrepreneurs' own experiences and skills as well as environmental factors such as competitors' capabilities are very vital before entering of any new venture (Cooper et al., 1994). It has been discussed that firms should be aware of their unique and differentiated abilities and core competences (Werner, 2002). Besides according to Ritter and Gemunden (2003), in terms of managing international networks, firms should be able to recognize the cooperative companies' resources, capabilities and valuable information and learn how to apply them in their own business. Firms in cooperation networks are getting familiar of partner company's manpower, operational systems, and decision makers policies in order to figuring out their decisions and policies in network structure (Gronum et al., 2012). Referring to the literature which explains developing and using resources through networking (Ford, 2002), two key aspects of network resources can be proposed: focusing on information sharing

(Moller and Torronen, 2003; Li and Lin 2006; Walter et.al, 2006; Berghman et al, 2006; Kenny and Fahy, 2011), and combined resources (Kale et al., 2000; Rindfleisch and Moorman, 2001; Li and Lin, 2006). The information sharing dimension refers to the ability of firm to integrate, exchange, and deploy information in organization (Li and Lin 2006; Lu et al., 2010; Kenny and Fahy, 2011). Firms are dealing with two kinds of knowledge sources; internal sources of knowledge involves inter firm communications and external sources of knowledge are acquiring information via seminars, journals and partner firms (Lu et al, 2010). The other form of knowledge acquiring method which has been argued in network studies is making close relationship and interactions with cooperative companies via business clusters (Lane and Koka, 2006; Kenny, 2009; Li and Lin, 2006). The synergy focuses on complimentary resources of firms in networks. Small and medium sized firms in order to growth and survive have to think of partners resources and overcome their limitations in this regard (Hoang and Antoncic, 2003; Lu et al., 2010). Firm's willingness toward sharing own unique competences and making use of external resource, and compatibility with other partners are main issues in discussing synergy resources in network structures (Ford, 2002). Firms try to find any overlaps or similarities between their resources and cooperative firm's resources (Li and Lin, 2006). Combination and appropriate use of resources in order to enhancing firms' profitability and growth and also enhancing economy of scale are main concerns in network related studies. Hence hypothesis two suggests that:

H2: There is a positive and significant relationship between network resources and performance in SMEs

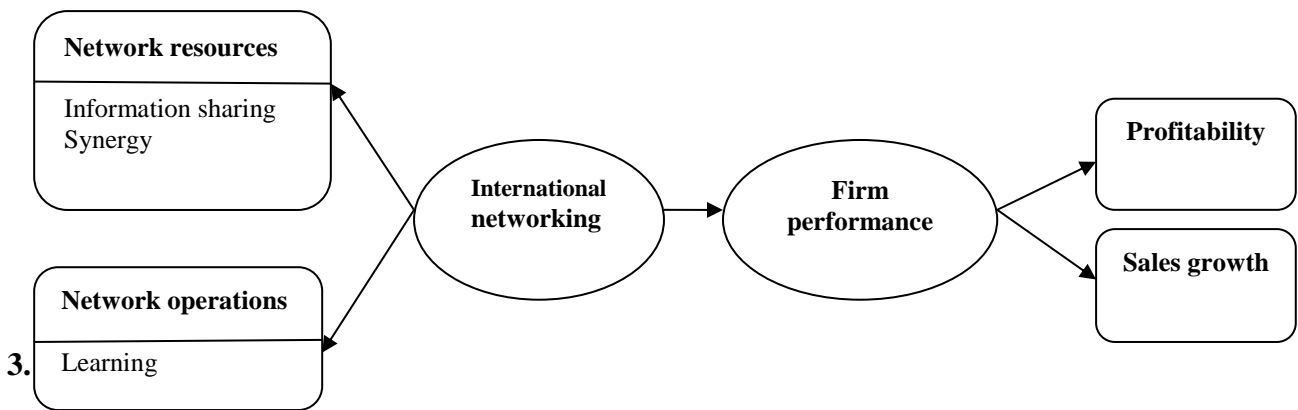
Network Operation

Network operation is based on the capacity and ability of firm to manage relationship and networks effectively. The key element of network operation is network learning, which enhances the firm's ability and capability by obtaining and implementing knowledge development (Bonner et. al, 2005). Learning via international linkages is very important for commutation since gaining competitive advantages for firms is a knowledge bases effort. Firms attempt to learn and acquire the opportunities before than other competitive firms or new arrivals (Kale and Sing, 2007). Network learning involves with firms leaning efforts via other partners and firms (Gronum et al., 2012). By having a suitable information transfer systems firms can share the information within the firm (Hoang and Rottaermel, 2005). Learning helps companies to act faster than competitors in problematic situations and can practice that information in future (Powell et al. 1996; Gulati, 1999; Kale and Sing, 2007). In addition, it focuses on learning activities and exploiting tacit information in organizations that helps them to choose appropriate and valuable partners (Helfat, 2007). The information gained via leaning activities of firms are valuable for partners and can be useful in case of complementary resources and even promoting the firms products quality and profitability (Hsu and Pereira, 2008). Therefore it is hypothesized that firm's learning via networks has impact on its profitability and eventually the firm performance. Hence this assumption has been reflected in hypothesis three:

H3: There is a positive and significant relationship between network operations and firm performance in SMEs

Synthesizing the literature and developing the hypotheses led to develop the conceptual framework of this research (see figure 1). The research model illustrates two main dimensions of international networking namely network resources and network operations as independent variable and firm performance as dependent variable. These variables and their measurement scales are discussed in details. Network resources involves firm's information sharing and synergy in network structures and network operations chooses the learning ability of firms during networking (Rindfleisch and Moorman, 2001; Ritter and Gemunden, 2003; Booner et al., 2005; Walter et al., 2006; Loxton and Weerawardena, 2006; Kenny and Fahy, 2011; Hilmersson and Jansson, 2011; Gronum et al., 2012). The other variable is the firm's performance which considers the more common expected performance as impacts on profitability and sales growth (Roberston and Chetty, 2002; Sousa, 2003; Loxton and Weerawardena, 2006; Kenny and Fahy, 2011; Hilmersson and Jansson, 2011; Tajvidi and Karami, 2012). In current study the impact of international networking activities of firms with two main dimensions will be tested in order to finding its effect on firm performance. The main construct and hypothesis will be explained in following section.

Figure 1: The conceptual framework of the research



3. Methodology

Sample and data

In order to generalize the results of study, sampling methods and selecting the sample is crucial stage of the research process (Karami, 2009). The population for the present study includes small and medium sized enterprises known as SMEs in UK. Data collection stage of research plays a key role, because in this process all relevant information regarding research problems are identified (Donald et al., 2003). In this study the primary data has been collected using on-line questionnaire and mail survey from 510 SMEs operating in manufacturing, service providers and R&D sectors in UK. The questions mainly were developed using standard questions collecting from previous published research outputs. Furthermore, the on-line questionnaire has been constructed using Survey-Monkey software. In order to increase the response rate the questions were phrased in a simple form, easy to understand and answer. For the postal questionnaires the respondents were provided a pre-paid envelop to return the completed questionnaire. The questionnaires were constructed in two main parts to cover the variables related to the both dimension of the research model. The first part includes eight questions asking about respondents' demographic profile such as the participants' age, gender, working experiences, their position in the company, academic degree as well as the type and age of company. The second part of the questionnaire was designed in three sections which obtains information about major variables including knowledge sharing, synergy and learning (25 questions). The variables in the second part of questionnaire were measured in five point Likert scale. The similar method has been used in the studies by Hilmersson and Jansson, (2011) and Kenny and Fahy (2011). The total companies which have been asked to participate in this research were 510 small and medium sized enterprises thought the UK. Of the 510 companies 122 questionnaires have been received. Out of 122 completed questionnaires 118 questionnaires were usable. The total response rate was 23%.

Validity and reliability of the data collection instrument

In order to screen the appropriateness of questionnaire and test the validity and relevance of questions it should be pre-test or conduct a short pilot study (Karami, 2009). By carrying out the pilot study researcher can ensure that questions are in appropriate order and user friendly (Saunders et al., 2007). Regarding the present research it was determined that the first draft of questionnaire would be sent to small sample of respondents. After getting the respondents' idea about the content, appearance and the question flow, some part have been changed and the final questionnaire has been developed. The complete questionnaire has been sent to twenty sample companies via survey-monkey to complete. To test the reliability of the collected data the Cronbach's alpha test has been applied. The Cronbach's alpha for all of the total 25 questions is 0.83, it shows acceptable reliability index of the research model. In addition, the Cronbach's alpha for the international networking related variables is 0.79, and similarly for firm performance is 0.81; therefore it demonstrates that both main sections of questionnaire (International networking and firm performance) are at high reliability. Furthermore, the reliability tests for the research variables indicated in the conceptual model have been applied. The results of the Cronbach's alpha for the variables of international networking and firm performance have been illustrated in table 1.

Table 1: The reliability of the variables in this research

Measured item	Cronbach α
Network Resources	0.72
Network operation	0.75
Profitability	0.74
Sales growth	0.77

As the table displays the Cronbach α of all the four measured variables including network resources, network operations, profitability and sales growth is larger than 0.7. The results indicate that the reliability of the questionnaire and the inner identity of the questionnaire structure are fine and acceptable. The high reliability of the research questionnaire shows that selected statistical analysis is feasible and appropriate.

Measurement considerations

The literature review revealed that the format of the theoretical construct measurement in most of the international network studies was based on the five or seven point of Likert Scale. Therefore for the measuring the variables related to international networks and firm performance the five point Likert Scale have been adapted. Wide range of literature has been reviewed to determine the constructs and wording the questions according to indicators. Table 2 illustrates the measurement for each construct used in this research and the relevant supporting literature for each part of questionnaire.

Table 2: Measurement of constructs

Construct	Measurement	Relevant literature
Learning	Five point Likert scale	Walter et al.(2003); Bonner et al (2005); Ritter and Gemunden (2003); Gilmore et., al (2006); Kenny (2009)
Synergy of combined resources	Five point Likert scale	Kale et al., (2000); Rindfleisch and Moorman (2001), Li and Lin (2006); Kenny and Fahy (2011)
Information sharing	Five point Likert scale	Li and Lin (2006); Walter et al., (2006); Moller and Torronen (2003); Berghman et al., (2006); Yeoh (2004); Watson (2007); Kenny (2009), Tolstoy and Agndal (2010)
Performance	Five point Likert scale	Jaworski&Kohli(1993); Sousa (2003); Loxton and Weerawardena(2006); Roberstonand Chatty (2009); Lu et al.,(2010);Hilmersson and Jansson, (2011)

4. Data analysis

In this study in order to obtain a broad picture of the data and select the appropriate statistical tests, a descriptive statistical analysis including means, standard deviations have been used. Then the collected data has been analysed further using Structural Equation Modelling (SEM) methodology for testing the hypotheses.

The demographic profile of the respondents

The descriptive data analysis revealed that most of the participants were middle aged. The majority of participants 52% (N=62), were owner/managers of the companies studied. The second most dominant age category is the 41-50 age group, with 25% (N=30) of participants. Accordingly 28.81% (N=34) of participants were in the range of 51-60 years old. In terms of managerial positions of the respondents, a large number of participants (36%) were managers of firms. Comparing the gender and educational level of participants, the data analysis shows that the majority of participants have taken postgraduate degrees. In total 74% of participants have postgraduate (Master and PhD) qualifications. Also data shows that 58% of participants have more than 20 years of working experience. Further analysis of the data shows

that majority of participated companies were service providers with the rate of 39% (N= 46). The second dominant group of participated firms were manufacturing firms (22%, N=26) and the third one was R&D (15%, N= 18). And finally a small number of firms (10%, N=12) reported that they were operating in the other industry sectors.

The descriptive statistics analysis

In order to measure international networking, two variables namely network resources and network operations have been used in this research. Information sharing and synergy of combined resources have been used to measure network resources. Network operation is also measured by learning construct. The descriptive statistics for international networking is illustrated in table 3.

Table 3: The descriptive statistics analysis of international networking

Factor	Number of items	Mean	Standard deviation
Information Sharing	5	4.09	0.52
Synergy	6	3.80	0.48
Learning	5	3.69	0.58
Profitability	4	3.66	0.57
Sales growth	5	3.57	0.65

Factor Analysis

It has been discussed that “the validity analysis aims to test the coinciding degree of the measurement content to the research objectives” (Biedenbach and Muller, 2011, p. 23). In order to conduct validity analysis, exploratory factor analysis usually has been applied. In order to find whether the variables are suitable for confirmatory factor analysis, Bartlett’s Sphericity test and KMO measures has been applied in this research. As Biedenbach and Muller (2011) assert, if the value of significant level of Bartlett’s test is <0.001 in general, and KMO is greater than 0.5, then the variable is suitable for confirmatory factor analysis. In this research, the values of significance of the Bartlett test (0.000 <0.001) and Kaiser–Meyer– Olkin (KMO=0.70>0.5) indicate that the collected data has been well correlated and the factor analysis is feasible. The results of Bartlett and KMO test and factor analysing have been illustrated in tables 4 and 5.

Table 4: the result of Bartlett and KMO tests

Test	Value	
KMO	0.70	
Bartlett Test of Sphericity	Chi-Square	1062.41
	df	300
	Sig.	0.000

Source: Survey data

The result of factor analysing in table 5 illustrates that all 25 variables of the research have significant and high factor loading values (FL > 0.6).

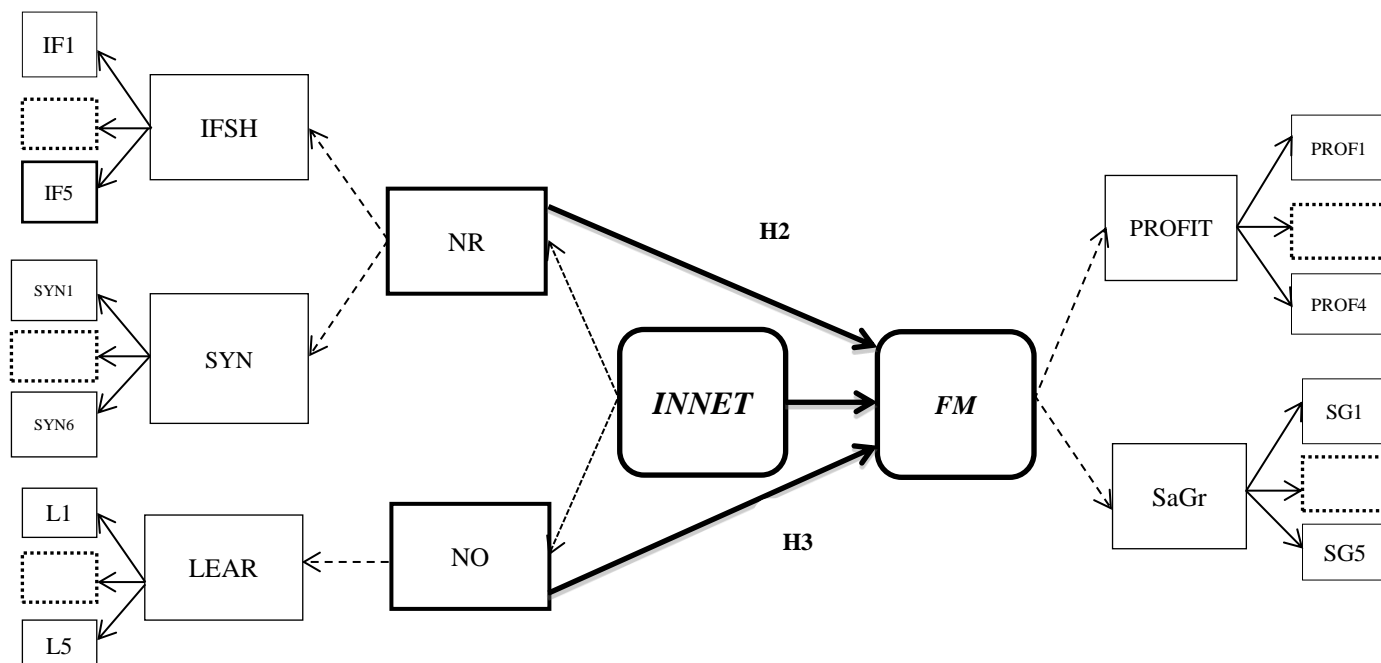
Table 5: Summary of variables and factor loadings

International networking	Factor L.	Performance	Factor L.
<i>Information sharing</i>		<i>Profitability.</i>	
IFSH1	0.68	Per1	0.70
IFSH 2	0.62	Per2	0.75
IFSH 3	0.63	Per3	0.73
IFSH 4	0.72	Per4	0.73
IFSH5	0.70	<i>Sales growth</i>	
<i>Synergy</i>		SG1	0.68
SYD1		SG2	0.60
SYD2	0.74	SG3	0.66
SYD3	0.71	SG4	0.71
<i>SYD4</i>	0.60	SG5	0.72
SYD5	0.68		
SYD6	0.67		
<i>Learning</i>			
L1	0.63		
L2	0.68		
L3	0.66		
L4	0.75		
L5	0.78		

Source: Survey data

The SEM model figure 2 shows that there are 4 latent variables named network resources, network operation,

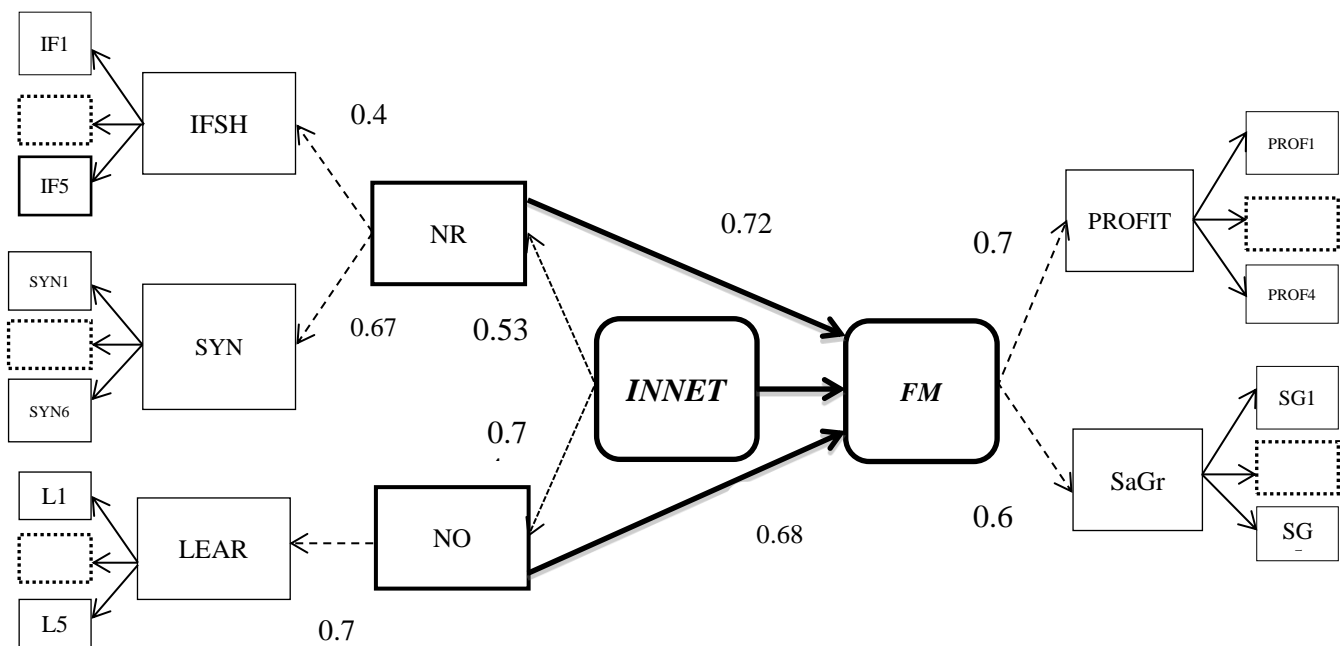
Figure 2: The conceptual model



Note: Latent Variables: NR: Network Resources; NO: Network Operations; INNET: International networking, FM: Firm performance; IFSH: Information sharing; SYN: Synergy of combined resources; LEAR: learning; PROFIT: profitability; SaGr: Sales growth- IF1 to IF5:5 indicators to measure IFSH; SYN1 to SYN6: 6 indicators to measure SYN; L1 to L5: 5 indicators to measure LEAR; PROF1 to PROF4: 4 indicators to measure PROFIT; SG1 to SG5 : 5 Indicators to measure SaGr

international networking and firm performance. In order to measuring these latent variables, five items has been designed to measure them including information sharing, synergy of combined resources, learning, profitability and sales growth. This research has three hypotheses which are indicated on the SEM graphical model. The results of all path coefficient and T-values are illustrated in figure 3 and table 4. Analysis of the data shows that that all path coefficients and t-values of the research variables which are used to measure international networking and firm performance such as information sharing and synergy for measuring network resources; learning for measuring network operation; and profitability and sales growth for measuring firm performance are positive and significant. In order to test the three hypotheses, t-values and path coefficients should be considered. If t-value is estimated more than 2 with acceptable p-value ($p < 0.05$) then it could be in supporting the determined hypothesis. The result of SEM analysis has been shown in figure 4 and table 6.

Figure 3: The results of the estimated model



Note: Latent Variables: NR: Network Resources; NO: Network Operation; INNET: International networking, FM: Firm performance; IFSH: Information sharing; SYN: Synergy of combined resources; LEAR: learning; PROFIT: profitability; SaGr: Sales growth- IF1 to IF5: 5 indicators to measure IFSH; SYN1 to SYN6: 6 indicators to measure SYN; L1 to L5: 5 indicators to measure LEAR; PROF1 to PROF4: 4 indicators to measure PROFIT; SG1 to SG5 : 5 Indicators to measure SaGr.

The results of testing the SEM model revealed that the firms involved in international networking were performing better than the firms that were not involved in international networking (path coefficient, 0.48 and t-value t:8.84). Therefore H1 is accepted. This finding suggests that small and medium sized firms need to establish networks either off line or online to share the resources and capabilities with the other firms. This major finding has been supported by further detailed analysis in this research. Hypothesis 2 is testing the relationship between network resources and firm performance. It has been found that the relationship between network resources and firm performance (path coefficient 0.75 and t-value t: 9.33) is positive and significant. Therefore H2 is accepted. Furthermore, this study shows a positive and significant relationship between network operations and firms performance (path coefficient 0.67 and t-value t: 3.61). Therefore, the result of this research suggests that network operation positively influence the firm performance. As it can be seen in table 6, for international networking variable's constructs, the path coefficients are: information sharing ($\beta = 0.47$), synergy ($\beta = 0.67$), learning ($\beta = 0.74$). Similarly, for the firm performance variable's constructs, the path coefficients are: profitability ($\beta = 0.79$), and sales growth ($\beta = 0.68$). These findings show that all of the three international networking and firm performance coefficients have considerable value. Accordingly, it can be concluded that there is a positive relationship between international networking and firm performance in in SMEs.

Figure 4: The results of the estimated model

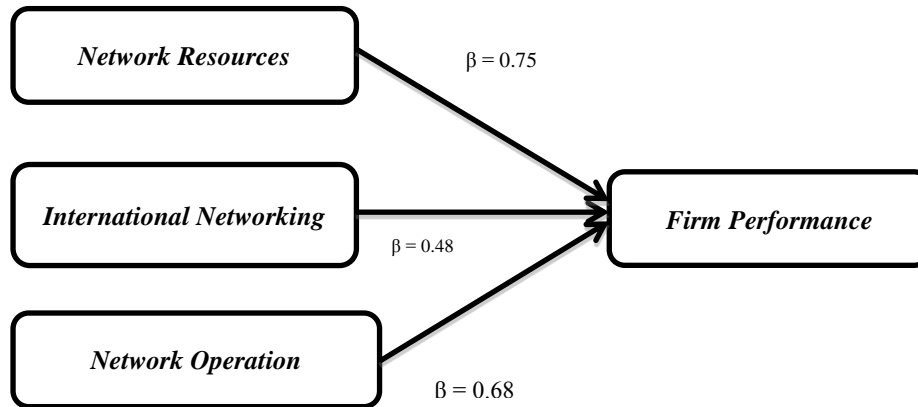


Table 6: The results of SEM analysis

Hypotheses	Path coefficient	C.R.	p value	Test results
H1: INNET → FP	0.48	8.84	***	Accepted
H2: NR → FP	0.75	9.33	***	Accepted
H3: NO → FP	0.67	3.761	***	Accepted
$\left[\begin{array}{l} INNET \longrightarrow IFSH \\ INNET \longrightarrow SYN \\ INNET \longrightarrow LEAR \end{array} \right.$	0.47	*		
	0.67	3.85	***	
	0.74	3.79	***	
$\left[\begin{array}{l} FP \longrightarrow PROF \\ FP \longrightarrow SG \end{array} \right.$	0.79	*		
	0.68	3.25	***	

*: the item value compared by other items is assign as 1. ***: The probability of getting the C.R. is less than 0.001.

INNET: International Networking, FP: Firm Performance, NR: Network Resources, NO: Networking Operation, IFSH: Information Sharing, SYN: Synergy, LEAR: Learning, PROF: profitability, SG: Sales Growth.

5. Discussion and conclusions

The main question in this research is to what extent the small and medium sized firms' involvement in international networking enhances their performance. To answer this question a very wide range of literature has been reviewed and three hypotheses have been developed. Generally speaking, data analysis results revealed that there is a positive, strong and significant linkage between international networking and firm performance in SMEs. This major finding has been supported by the results of two more tests which showed that relationship between network operation and resources and firm performance were strong and significant. Learning as one features of International network operation has the positive and most significant effect on increasing firm performance in compare to network resources (0.67). Synergy of combined resources as one feature of international network resources has more positive effect (0.67) than information sharing as the second feature of network resources (0.48). Both synergy and information sharing (network resources) have positive and significant impact on firm performance (0.75). International networking activities of firms have positive effect on firm performance (0.43). The effect of international networking activities of firms on profitability (0.57) is greater than its effect on sales growth (0.38). Overall these findings resulted in accepting hypothesis 1. The relevant previous researches noted to the effectiveness of cooperation networks on SMEs including economy of scale (Safford, 2004), "as a catalyst for firm innovation capacity" (Lavie, 2006), firms Survival and growth (Watson, 2007), network learning (Kraatz, 1998) low production cost and sales growth (O'Doherty, 1998), make use of complementary resources (Chetty and Holm, 2000), Synergy (Klerk and Kroom, 2007). Hypothesis 2 which assumed that there is a relationship between network operation and firm performance was supported in this study. A positive and significant relationship was found between network learning and firm performance. This finding is inconsistent with previous researches such as Bonner et al., (2005) who argued that owner/mangers of firms don't pay more attention to networks learning activities of firms. In another study Kenny (2009) found negative relationship between network learning and international performances. In a study by Floren and Tell (2004) pointed to the significance of networking leaning and the role of trust in enhancing the network activities in groups and cooperative linkages. Kale et al., (2000) also discussed that even the companies that are more experienced in alliance practices couldn't learn from their previous experiences. The third hypothesis in this study was to test the relationship between network resources and firm performance. In this study a positive relationship was found between network resources and firm performance. Therefore H3 was supported. There are some empirical studies that their findings didn't support the findings of these research (Lin and Lawton, 2006; Bergham et al., 2006; Mohannak, 2007). However, the findings of this study are supported by previous studies which pointed to role of network resources in acquiring new skills, knowledge and synergy (Hamel, 1991; Kale et al., 2000; Kogut, 2000; Kale and Singh, 2007; Kenny and Fahy, 2011). The findings of this research indicate that the relationship between synergy of combined resources and firm performance is positive and significant. This finding has been supported by Tolstoy and Agndal (2010) research. They argued that SMEs limitations in resources make them to search for available recourses with partners in their cooperative networks. This research proposes that network based business is a key tool for firms' success specially for enhancing firm profitability and growth. The major contribution of this research is that using SEM model it tested the relationship between international networking constructs and firm performance constructs simultaneously in a comprehensive model. These relationships have been tested by the previous researches (Agndal and Chetty, 2007; Watson, 2007 Tolstoy and Agndal, 2010) partially. The other contribution of this research to the firm performance is that it empirically supports the literature on firm performance which focuses on resources and capabilities of firms. Similar to the existing literature, this study suggests that the ways of identifying and capturing those capabilities are via cooperation linkages such as business alliances (Hamel, 1991) sharing important and valuable information (Zaheer and Zaheer, 1997) learning (Powel et.al, 1996) network characteristic, operations and resources (Kenny, 2009). In addition it has been captured that organizational learning as one of network operation features occurs in a significant level during the international networking process of SMEs. International networks enable firms to learn from their partners, customers and competitors. They also modify their network procedures as they learn from their experience. The findings of this research lead SMEs managers in formulation and implementation of network strategies and it accents the importance of international networking activities of firms on performance. If the firm strategy is to increase the sales growth and profitability managers can focus on cooperation linkages and plan to extend networks.

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