Open Innovation of Startup Companies in Jordan

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Lama Mohammed Issa Shahateet

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Supervisor: Prof. Nadine ROIJAKKERS

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ABSTRACT

This thesis investigates the Open Innovation (OI) process for startup companies on the Jordanian market. OI is a concept that originally falls directly in the gap between businesses and academics. It also determines what companies are looking for to bring inside the firm and allowing outside it. IO is also influential in tackling the challenges these firms encounter, such as their weak financial situation due to their relatively new establishment and due to underfunding. A further obstacle is the ability of the startup companies to consolidate a relationship with partners, and how much those partners will be motivated to collaborate since they need that in the Open Innovation strategy.

This thesis highlights how Open Innovation can help startup companies, in Jordan, in creating value for their products and services. As that one of the biggest problem that faces many starting up companies in Jordan is the lack of knowledge on how to grow, given the proliferation of young firms struggling to grow in a very competitive business climate and how to make the best use of OI processes to keep going.

The main goal of this thesis is to contribute to understanding the reason behind the lack ability of startup companies to build relationship with partners in their open innovation ecosystem. Through studying the relational and cognitive capabilities of the firm, more specifically the social capital as key factor. Therefore understanding how trust and shared goals as parts of social capital plays a role in their relationships

The research approach is an integrated approach of qualitative and quantitative method, as we conducted 10 interviews with 10 managers in the SMEs in Jordan and emailed 12 other managers to answer the survey. The participants were chosen from strategic and operational levels including managing directors and operational directors in the SMEs. As decision makers, it is important for the research to gain access to the perceptions of project managers and operational directors, as they are the ones who will give a clearer picture of these relationships. Drawing on the themes from the literature and the need to create a knowledge sharing culture based on trust. The interview questions are designed to explore how individuals make sense of their business relationships. This methodology is based, primarily, on the ever-growing and vital research that took place, around the world, within the last five years or more.

CHAPTER 1: INTRODUCTION

The main goal of this thesis is to investigate the Open Innovation (OI) process for startup companies on the Jordanian market. There was a noticeable lack of researches about the open innovation in Jordan, since that the percentage and budget of researches in Jordan considered low compared to other world countries. It was important for us to do this research to highlight the main importance of the open innovation for startups and to give more information regarding this topic.

This research also determines what startups are looking for to bring inside the firm and allowing outside it. This thesis contributes to the existing literature in terms of highlighting how Open Innovation can help startup companies, in Jordan, to improve their business. In this context, it helps in solving the problems that face several starting up companies in Jordan due to the lack of knowledge on how to grow in a very competitive business climate and how to make the best use of OI processes to keep going.

This thesis also contributes to understanding the reason behind the lack ability of startup companies to build relationship with partners in their open innovation ecosystem. Through studying the relational and cognitive capabilities of the firm, more specifically the social capital as key factor. Therefore understanding how trust and shared goals as parts of social capital plays a role in their relationships. After introducing the problem and goal of the thesis, we present a review of literature in Chapter 2.

Chapter 3 constructs the conceptual model of the study showing all relationships among the variables of the study. Chapter 4 explores the research method and data collection and analysis. While concentrating on startup companies, it identifies the concept of OI and points out the challenges that these companies face. It critically discusses the methodology applied and identifies the appropriate approach for investigating the research questions.

The main results of the study are presented in Chapter 4, including the results of correlation and regression analysis and test of research hypotheses. The results are discussed thoroughly in Chapter 5 while the final Chapter concludes of the main finding.

1.1 Theoretical Background

Innovation is "anything which might be an idea, practice, activity, or object that is perceived as new to an individual, organization, or any other unit of adoption" (Fruhling & Siau, 2007; Hsu, 2006). Innovation is becoming the new light for business to successes. Many recent studies indicate that product innovation, service innovation, process innovation, marketing innovation and administrative innovation are the most widely studied innovation capabilities (Lin, *et al.*, 2010). These few firms ranging from big companies to small and medium size enterprises (SMEs) tend to adopt the open innovation strategy. However, the evolution of the Internet technologies has opened the doors for SMEs to flourish and compete successfully in both local and international markets, (Schmid, Stanoevska-Slabeva, & Tschammer, 2001).

The founder of OI concept, Henry Chesbrough (2003a), supports his position with the argument that "Not all the smart people work for us. We need to work with smart people inside and outside our company". In other words, this is precisely why the value creation becomes an essential element of the process of using the OI concept.

This concept brought life to several companies, and gave them a boost to carry on their successful business process. Moreover, OI is not limited by the size, type or the age of the companies. The main reason to use this concept is to open horizons to new ideas, solutions or information that can lead the company to become more flourishing.
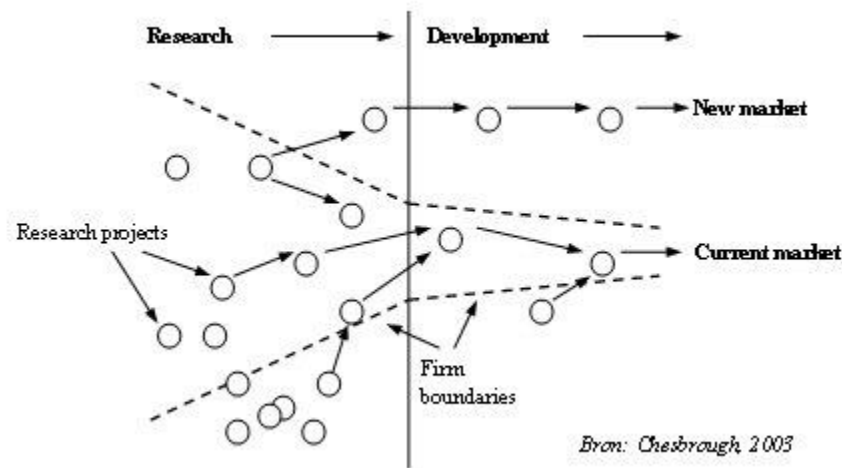
Figure 1 Open Innovation Model

Authors identify three forms of the Open Innovation model:

1- "Inbound Open Innovation, which refers to the use within a firm of external resources of innovation."

2- "Outbound Open Innovation, which refers to the use of external pathways for the purpose of developing and commercializing innovations (Chesbrough & Growther, 2006)."

3- "The so-called "Coupled Innovation Process" which combines the Inbound and the Outbound dimensions: rather than haring existing resources and experts, firms work together to develop a new knowledge and solutions (Gassmann & Enkel, 2004)."

The adoption of the OI concept may be for defending the firm through costs and risk reduction or for another important reason, which is improving the performance of the firm through more innovative ideas and activities.

1.2 Startup Ecosystem in OI

" *Startup Company is a new organization within the early years of life cycle*" (Tidd and Bessant, 2009). Other Authors also define it as company working to solve a problem for which the solution is not obvious and success is not guaranteed. (Blumenthal, 2013). In addition, startups have become an increasingly important source of manufacturing innovation as mentioned above (MIT Industrial Performance Center, 2015).

A startup ecosystem is formed by people, startups in their various stages and various types of organizations in a location (physical and/or virtual), interacting as a system to create new startup companies. These organizations can be further divided into several categories: universities, funding organizations, support organizations (like incubators, accelerators, co-working spaces etc.), research organizations, service provider organizations (as legal, financial services etc.) and large corporations. Different organizations typically focus on specific parts of the ecosystem function and/or startups at their specific development stage(s), (Grow Advisors, 2014).
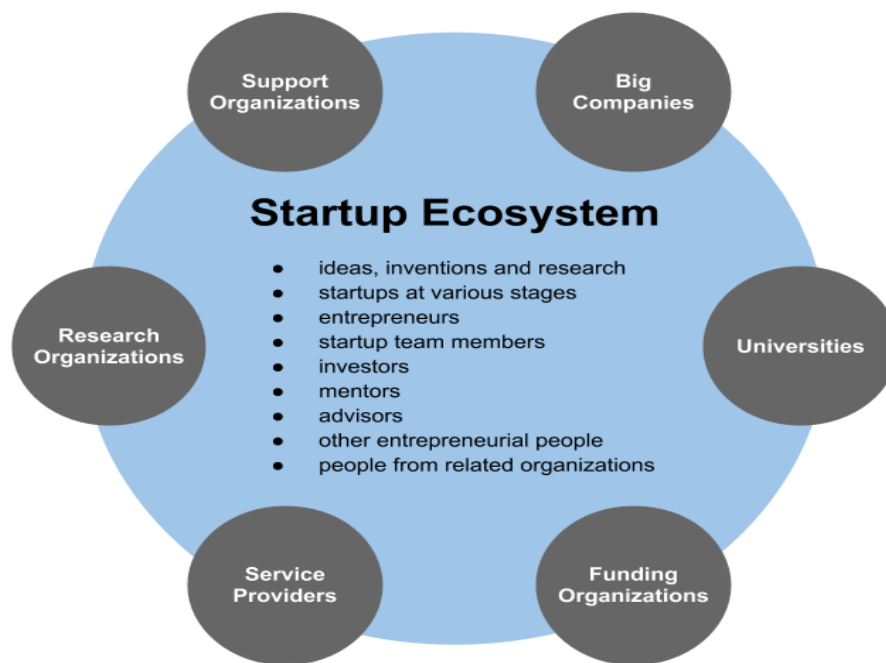
Figure 2: Startup Ecosystem

PayPal's co-founder Peter Thiel also defines in his book (Zero to One, 2014) that "startups are creators of Vertical Innovation and not Horizontal Innovation. Vertical Innovation refers to a new technology that has not been created before. A startup aims to create a monopoly in a niche market, and then expands to new markets. Meanwhile, Horizontal Innovation (also called globalization) is about bringing existing technology to places that do not have it."

Ecosystem innovation enables enterprises to look beyond their four walls to bring in ideas more quickly, enhance their innovation programs, and create shared value at the intersection of corporate performance and society to solve big or common problems (G2O YEA, 2015). In order of creating an effective innovative ecosystem startups need to build partnerships and networks, that when

turning to external open innovation partners, it was found that customers, universities, suppliers and the final consumers are all rated higher in importance. (Henry Chesbrough, 2013). The efficiency and effectiveness of cooperation between network member firms is often facilitated through the use of information technologies (Dodgson et al, 2006).

Furthermore, complementary products are considered in combination with the value chain the resulting relationships are often termed a "value network" (e.g. Amit & Zott, 2001) or an "ecosystem" (Iansiti & Levien, 2004). Such networks is an important part of open innovation cooperation in certain industries (e.g., Chesbrough, 2003: 68; Maula et al, 2006; Vanhaverbeke and Cloodt, 2006).

1.3 Types of SMEs Partnerships:

There are many types of partnerships in business in general, but partnerships for SMEs could not be exactly the same, as for big firms, and that's because of their position in the market, lack of finances and the their level of experience. According to connect to grow (2016) research paper they divided the SMEs partnerships into 5 main types. Depending on the involvement of element in innovation transfer and adaptation, plus other elements that develop the business model and external environment:

No.	Type	Description
1	**Alliances amongst multiple players**	These alliances brings shared benefits for both parties especially SMEs , because this type of partnerships usually allows SMEs to access new technology, skills, knowledge and markets which would be hard for them to do in their early stages.
2	**SME to SME partnerships**	This partnership is more of an exchange relationship for both parties, their benefits may not be mainly on the monetary profit, but more to exchange the knowledge and data they have.
3	**MNC to SME partnerships**	This type of partnership allows the SMEs to cross barriers and access new markets through new channels, customer, strategic knowledge and technology.

4	**MNC to multiple SMEs**	It is a partnership which develops SMEs' capacity to compete within the large firms' supply chain.
5	**Business-financier partnership**	This includes finding a committed, entrepreneurial partner who can provide finance that is structured according to the needs of their business. For entrepreneurs and business, owners looking to start or grow their businesses face many challenges due to lack of financial resources.

1.4 The Case of Jordan

1.4.1 Basic information

Jordan is a small developing Arab country in the Middle East with a population of around 8.2 million is 2016. The rapidly growing population, including a large influx of Syrian and Iraqi refugees that put more pressure on resources such as consumption of water and electricity. Water scarcity and a near-total reliance on imported energy are also presenting challenges.

Jordan's economy benefits from its well-educated population, strategic location, world-heritage tourism sites, and a reputation for stability in a turbulent region. Jobs are scarce outside large cities and are not being created fast enough to absorb a growing, youthful workforce whose education and skills do not always match the market's needs. Business development is hampered by regulatory and productivity challenges, as well as limited access to capital and an environment that inhibits innovation. Despite these challenges, Jordan's economic growth remained flat at 2.3% in 2016 and is expected to reach 3.1% in 2018, closer to but still below Jordan's potential. The outlook assumes no further deterioration of security spillovers in and around Jordan. Further, confidence in the macroeconomic framework is forecasted to strengthen due to the IMF agreement. The primary fiscal balance is projected to move into surplus in 2017, coinciding with a reversal in the hitherto increasing gross debt-to-GDP ratio. Despite expectations of higher oil prices and resulting higher energy imports, the current account deficit is expected to narrow from 2017, (Jordan Outlook, 2016).

1.4.2 Status of innovation process

The innovation process is taking part in the Jordan market, but still not in a very perceptible way. This is in spite of the fact that the government is actively supporting innovation as it launched a strategy for innovation consisting of set of projects at an estimated cost of around $14.5 million, to be implemented during 2014-2018, (The Jordan Times, 2014). On one hand, Jordan urgently requires enhancing innovations and entrepreneurships considering the raising emergency bills and the rapidly growing refugees' community. On the other hand, few companies in Jordan appreciate and recognize the power of ideas and research outside their community. Jordan's ranking in the Global Innovation Index (GII) 2014 indeed dropped by three places to 64th. This index outlines the world's most innovative economies and covers 143 countries (The Jordan Times, 2014).

Because relational capability gives the firm greater access to its surroundings, and thus provides a viable and effective mechanism to enact open innovation, it enhances the impact on performance. Jordan has high potential for innovation, strong scientific base, a large proportion of bilingual Arabic-English speakers, a highly skilled diaspora, and a history of successful innovative companies, (Ministry of Planning and International Cooperation, 2013). Despite all these advantages, Jordan's potential for innovation process is still slow.

The Official Letter from the Minister of Industry and Trade to the Prime Minister dated on 12 January 2005, Ref No 23/1/7/23002, defines SMEs as follows:

> • Micro business: 1-9 employees or less than JD 30,000 registered capital.
> • Small business: 10-49 employees and at least JD 30,000 registered capital.
> • Medium-size business: 50-249 employees and at least JD 30,000 registered capital.

1.4.3 SMEs sector in Jordan

Jordan does not have its own formal definition of SMEs. Microenterprises comprise 87% of the enterprises in Jordan's industrial sector (manufacturing contributes about 18% of GDP). While there is no official breakdown of SMEs by sector, SMEs make up the vast majority of Jordan's

industrial enterprises, according to the United Nations Development Program (UNDP). Industrial exports account for 90% of SMEs' overall exports. Within this, leather and garments are the largest category, making up 35% of SMEs' exports by value. According to the US embassy's Economic and Commerce Bureau, textiles (i.e., apparel) account for more than 30% of Jordan's total exports.

Chart 2: Jordan SME sector breakdown

Other , 13%

Industrial Sector , 87%
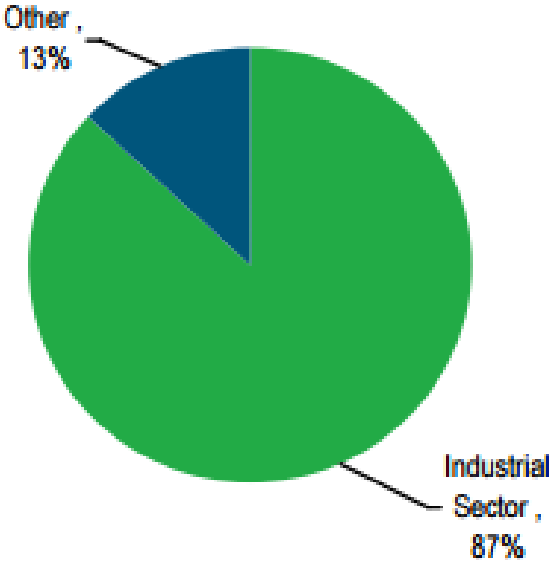
Source: Government ministries

Figure 3: Jordan SME sector breakdown

Economy in Jordan is nearly completely based on very small enterprises (micro) according to the Ministry of Industry and Trade (2015).

Regarding the capital of SMEs in Jordan the financial support system of innovative entrepreneurial ventures is still underdeveloped. While seed capital generally exists, grants for capital intensive entrepreneurial ventures are very small. Business angel networks are only rudimentary existing and banks are very conservative and risk averse in their investment behavior even with a third party coverage.

The venture capital instrument is still underdeveloped due to current legislation. It is a main problem for start-up companies and entrepreneurs, that no risk- or venture capital is available. Even "normal" credits by banks require complete guarantees. SME do not have the financial resources to have R&D activities on their own. Nearly no public funded program on applied R&D is available today.

In this research, the firms will be from different backgrounds and sectors, which were relevant in the same geographical location and offer insights to manufacturing, business-to business service and business-to-consumer service industry: Technology services, marketing services and products.

1.4.4 Research of Innovation in Jordan

In 2005, Jordan introduced a law whereby 1% of the net profit of public shareholding companies was transferred to a special R&D fund to finance research. Another law has since been introduced that compels public and private universities to allocate 5% of their budgets annually to R&D. although Jordan is still lacking the R&D comparing with other countries.

Despite low levels of R&D in Jordan, there is an unusually large amount of R&D that is performed within firms, which suggests that there is limited interaction between academic research and business development, and that academic research remains theoretical and is often inapplicable to the needs of the private sector.

CHAPTER 2: LITERATURE REVIEW

Open innovation is essential for continuous growth of SMEs especially in the high-tech industries (Yun and Mohan 2012). Colombo et al. (2012) argue that SMEs largely depend on the resources of their open innovation partners to implement their strategies. In addition, open innovation concept includes the transition from traditional closed, internal innovation process towards open innovation using external partners and exploiting external knowledge in creating new business or products and services (Rahman, 2012).

Traditional ways of running a business have been losing ground from new and more attractive ones, since technology has been constantly changing and organizations cannot rely on their current position (Porter, 1985). The innovation are becoming more as a way of helping companies to adopt and grow especially with verity of product and services in the market. SMEs are playing a good position in the innovation practices lately, CEOs and entrepreneurs are also more open now to the change of the way of doing business. Researchers also found that larger companies are becoming more rigid and the SMEs are taking their market share because of their ability to innovate and change by adapting new technologies and new market situation (Bower & Christensen, 1995).

Therefore, companies have started to look for other ways to increase the efficiency and effectiveness of their innovation processes. A good example would be the active search for new technologies and ideas outside of the firm, but also through cooperation with external partners such as suppliers and competitors, in order to create customer value.

Open Innovation and open business models are two concepts that have been launched by Henry Chesbrough (2003a; 2006a; 2007b). A key idea of Open Innovation is that multiple firms must often cooperate to create value for customers. Research inside and outside of Open Innovation has considered various network forms of cooperation, including alliances, networks, communities, consortia, ecosystems and platforms (West, 2014). Moreover, the findings of several research articles emphasized that despite OI's widespread applications, SMEs are facing some obstacles with its implementation for several reasons such as the low level of absorptive capacity, policies applied and financial statement constraints, and other perceived management challenges. (Van de Vrande *et al.*, 2009)

A SME's ecosystem consists of a set of intersecting networks. These networks can determine its success. Walter et al. (2006) define network capability as "a firm's ability to develop and utilize inter organizational relationships to gain access to various resources held by other actors". Also, most of the successful OI entrepreneurs are collaborating with external partners, whether suppliers, customers or universities, to keep ahead of the game and get new products or services to market before their competitors (De Backer, 2008).

Networking is an effective way to facilitate open innovation among SMEs (Lee et al., 2010). However, Heger & Boman (2014) found that network partnership is primarily used for activities such as data collection and limitedly used for fundamental activities such as strategy and decision-making; they also agreed that SMEs may benefit substantially from network approaches to foresight opportunities. Other researchers also pointed that SMEs are required to seek more cooperation with other partners, such as research institutions, universities, and intermediary institutions by establishing cooperation networks (Zenga, Xieb, & Tamc, 2010). Indeed that the exchange of knowledge between the internal and external parties is the core of open innovation concept. In other words, the boundary between a firm and its surrounding environment is more porous, enabling innovation to move easily, so if companies are going to continue to keep the customer as their focus and deliver what the customer truly needs, a strong and committed partnership ecosystem is more important than ever.

The value of products and services today is based more and more on creativity — the innovative ways in which they take advantage of new materials, technologies, and processes, (Hughes, 2013). And this is becoming more like a challenge for companies, because that the future of value creation for customers is having a different meaning compared to the past as it focuses more on the economics of creativity than on the economics of industrial scale.

Open innovation is helping firms to be more creative by implementing new ideas from outside the firm and enrich it with knowledge. Most startup companies that depend on this concept, eventually, seem to succeed when using it. Correspondingly, previous research made by Flanders, 2012 explained:

"The in-depth interviews with managers of small firms that have been engaging successfully in open innovation, resulted in a range of fascinating and diverse insights how those companies

benefit from open innovation and how they set up and managed partnerships with their innovation partners."

This gives a good indication that SMEs value creation increase when adopting the open innovation concept. The use of Open Innovation in SMEs can result in many benefits such as developing their accessibility to knowledge, resources and partners, these benefits can give solutions to many struggles that the SMEs face. SMEs are conceivably larger than the challenges that exist in large companies. Van de Vrande *et al*. (2009) argue that many SMEs face challenges that are related with organizational and cultural issues to deal with the increased external contacts. These challenges include:

- Venturing;
- Customer involvement;
- External networking;
- Research and development (R&D) outsourcing;
- External participations.

SMEs typically start with few financial resources; this lack of financial resources limits their ability to withstand unfavorable business conditions, and makes them vulnerable to even minor inefficiencies (Carson, 1985). This statement may also lead to create difficulties for SMEs to build partnerships and get financial support from banks such as loans that the status of uncertainty for the young Startups makes it harder as a previous study were made by three researches in Slovakia discussed (2014, 2016).

Enterprises consider innovations as a major engine to augment their performance and to reinforce their competitive position in the market. Many firms have paid most of their management attention to an extended focus on internal efficiencies of the development process, team structures, decision-making and cross-functional interactions.

As the CEO and Co-founder of technology startup David Roth in 2013 highly agrees on this point he said: "*As technology entrepreneurs we should be taking this very seriously. No one player can do it all. We need each other to make sure all the customers' needs are met, and if we aren't willing to do that, we risk going out of business."*

In addition, relationships in startups network have an influence on their performance. In order to get shared benefits, companies have joint interest to create and maintain relationships within the networks (Johanson & Mattson, 1988; Johanson & Vahlne, 2003), especially that in order to successfully develop and commercialize new products, and achieve high innovation performance SMEs need to collaborate with external networks (Pullen, De Weerd Nederhof, Groen & Fisscher, 2008).

2.1 Challenges of Partnership Relations

Open innovation in SMEs is all about building networks to allow the flow of information and knowledge among the ecosystem. Startup companies face some challenges to build a relationship with partners in the beginning of their business journey. As building, a relationship with a business partner requires just as much work as any marriage such as trust, integrity and mutual understanding. These factors are likely to be the main basics for any partnership.

The development of SMEs capabilities can help them to overcome these challenges because they are considered as strong patterns of collective activities that enable firms to transform inputs effectively into superior value propositions (Zollo & Winter, 2002). SMEs are more aware now about the main role of these capabilities to increase their ability to grow. They are also aware of the importance of these capabilities to achieve competitive advantages, that's why there is a high need to develop them (Barney, 2002 and Day, 1994). Many researches confirmed the effect of SMEs capabilities on their innovation performance. To give an example a research which was made by department of business and innovation skills (2015) showed that variations in leadership and management skills are associated with variations in SME performance; both directly and indirectly through an increased propensity to adopt management best practices.

The SMEs capabilities effect on their innovation performance are clearly approved through the mentioned empirical studies and researches. I also want to point how these capabilities as part of social capital effect the ability of SMEs to build partnerships and this I will explain further in the following section.

2.3 Dimensions of the Study

Social Capital Definition

The term "capital" indicates that networks and norms of reciprocity are productive and important to generate mutual gains of co-operation (Habisch, 1999). Adler and Kwon (2002) viewed the social capital as 'the good-will engendered by the fabric of social relations and that can be mobilized to facilitate action'.

Other researches such as Putnam (1993) also defined social capital as "the characteristics of a social organization, such as trust, the norms and the networks that may make society more efficient by facilitating a coordinated form of action". His definition focused on the collective, and so have the definitions of social capital provided by institutions such as the World Bank and the Organization for Economic Cooperation and Development (OECD). As the World Bank defined it as "Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions". While OECD defines social capital as "networks together with shared norms, values and understandings that facilitate cooperation within or among groups".

The researches agreed that social capital values have an effect on business partnerships, that's why I have chosen social capital as a moderating variable in the first place. Social capital connections are highly important for interaction within your ecosystem. In addition, the concept of social capital theory, allows the accessibility of resources, these resources may not be accessible for others, depending on their different levels of relations in social networks. (Llewellyn & Armistead, 2000). These resources could be financial, technological, and knowledge. The key for SMEs to improve their performance is entering this door of resources.

The social capital is divided into two main types, which are the internal social capital and the external social capital. Internal social capital is the relationships inside the organization such as the relationship between the employees and their manager, while the external social capital is the relationships with external parties and stakeholders such as suppliers, creditors, customers, society, shareholders and regulators.
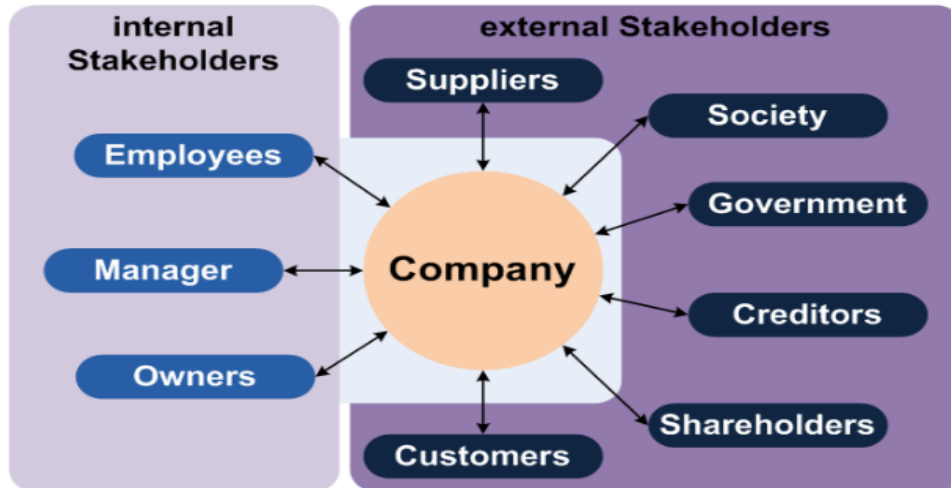
Figure 4: Internal and External Social Capital

The external social capital perspective predicts that the actors within a community use their personal connections and social relationships in order to reach the resources that they do not have, while the other actors in their network do, this creates many advantages for the actor. Nonetheless, the access to someone else's resources through a network relationship reveals the notion of reciprocity by the nature of the relationship. Reciprocity of the relationship provides mutual benefits for both sides in the relationship and actually produces an exchange process (Özlem Öğütveren Gönül, İpek Kalemci Tüzün, Mustafa M. Gökoğlu, 2013).

So external social capital also leads to cost reduction because it improves the following factors:
- The accessibility of external knowledge
- Positive reputation as a vital asset among regulators, customers and communities.
- The ability to recruit talents more because of the positive reputation
- The development of both business environment and social capital.

All of these benefits increase the importance of external social capital for SMEs and that is why they should pay more attention to it. The access of the resources is a primary key for growth in business.

2.3.1 Social capital dimensions
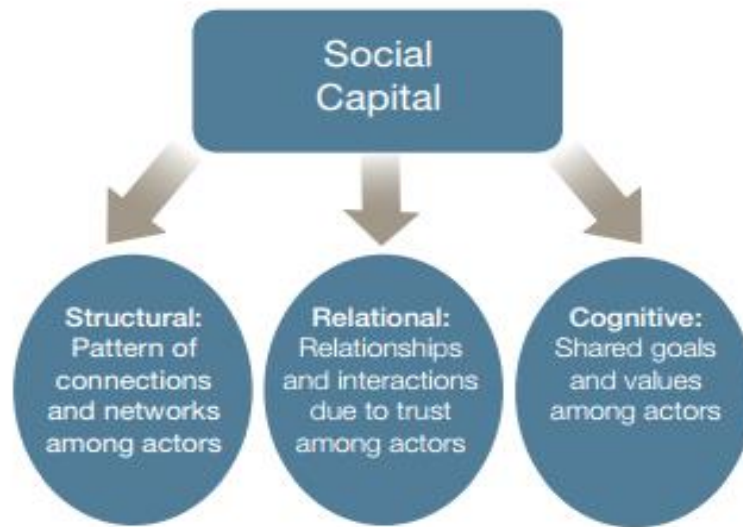
Figure 5: Social Capital Dimensions

2.3.2 Structural dimension

The structural dimension of social capital involves advantage of the internal organizational situation and structures for development of new capabilities and reconstruction of the existing capabilities (Colarelli O'Connor & DeMartino, 2006).

Structural capability is effective in the provision of organizational innovation capability since organizations should care about the internal operation of networking and communication among the organization. It can be also identified into three main categories: managerial capacity, communicative capacity and the organizational knowledge capacity (Nielsen, Susanne Balslev; Momeni, Mostafa , 2016) . All of this categories should be enhanced in all firms to achieve the innovation capability, which mean that these internal process plays also an important role in the ability of organization to innovate and grow.

Structural capability was explained shortly because in this research we want to focus on cognitive and relational capabilities only.

2.3.3 Cognitive dimension

The cognitive dimension acts as "the resources provider through shared meaning and understanding between the network members" (Nahapiet & Ghoshal, 1998). It also performs as the main base of partnerships through the shared objectives and culture that the two parties have. And those are the two main facets of cognitive dimension:

- The shared culture represents having the same perspectives, language, beliefs and plans, which make it easier for parties to collaborate and communicate with each other. This shared aspect makes partnerships more flexible and smooth. As many firms find it hard to create relationships if you do not share the same language and perspectives. In fact, more knowledge and experience is transferred and communicated well if actors have a shared culture. Firms also share codes among themselves, and these shared codes can also be conceptualized as a valuable aspect. Shared culture as a part of cognitive dimension enhances the degree of partnerships creation with external social capital.

- Shared goals represents the degree to which actors in the ecosystem share a mutual understanding to achieve valuable outcomes. Although the network type matters, the tasks and outcomes may differ in many perspectives, such as clarity and definition. Actors of an intercorporate network usually work toward a common goal set by managers, although they may also have to fulfill certain secondary goals related to their own products and markets. The importance of shared goals considered as a key player in collaboration process, SMEs can access benefits from partnerships more effectively if they find an actor with mutual goals, vision and understanding.

- External social capital often have different goals in mind when they enter a strategic alliance partnership with SMEs, however negotiation helps partners reach goals that are acceptable to most, if not, all of them. However, other external actors seek to have different types of partnership such as (SME to SME partnership, MNC to SME partnership…etc.) to fulfil some futuristic goals.

The cognitive capabilities is like a ground for business partnerships and internal operations.

In my research, I will be focusing on the shared goals aspect only and how do they affect the SMEs performance in open innovation.

2.3.4 Relational dimension

The relational dimension is the role of direct ties between actors (external social capital) and the relational, as opposed to structural, outcomes of interactions. The main factors of this dimension are trust, norms, and identification. It is also the main key for relationships between collaborators. A lack of trust may lead to competitive confusion about whether or not a network firm is an ally (Powell, Koput, & Smith-Doerr, 1996).

Relational capability also refers to a "person's capacity to develop and maintain healthy relationships with partners". Investing in this can protect and promote the wellbeing of individuals, communities and society. (Gasser, 2014). As well as the relational aspect is a distinctive feature of SMEs (Birley, 1985). It is also a driver for developing a strategic ways that are based on the ability to weave informal relationships, internal and external, through participation in networks (Marchini, 1995). Researchers also defined relational capability as "a partners active in business interaction through which they are capable of better understanding specific information related to relationships and gaining profits by collecting data from partners" (Zohdi , Shafeai & Hashemi , 2013).   I will focus on trust in my research considering it as the core of any business partnership.

2.3.5 Social capital and SME innovation

Effectiveness that runs among firms chiefly turns on their innovation performance, and this is acclimatized by the technological competence. However, developing countries are incapable of providing such expertise to implement in small firms, which can influence their capacity to deliver and proceed in any field of technology. (Arnold *et al.*, 2000). In fact, these issues attributed in rising obstacles that led to poor performance among them as well as with others.

Thus, this produce limitations on the facts and knowledge that effect academia, government institutions and other industries, (Intarakumnerd *et al*., 2002). Accordingly, SMEs offer a wide possibility for the rise and the growth of 'disruptive' technologies, which would largely play a huge role in elevating the level of SMEs performance in not only the local market but also internationally that, is considered a milestone and a revolutionary aspect.

Nevertheless, this can never be anticipated nor certain unless one of the vital problematic issues is being solved and studied carefully in order to avoid any future risks and that is the weak social capital base. (Cooke & Wills, 1999).

Undeniably, the absence of networking and competitiveness would majorly expose the sector to diminish race to compete and subject innovation to jeopardy.   (Porter, 1990). Law and order are always the best means to paving the way properly to come up with a masterpiece at the end are always the best weapon; consequently, it is significant but rather critical to have not only enterprises standing bare alone, but also an essential need of well –managed policies that hugely

arbitrate and support this enterprise. (OECD, 2005b). It needs two to tango! The robust ties and interactions between members of the system will hoist the chances of innovation to take place. Enhancing the social relations to a degree of sharing each other's account is referred to as the social capital of enterprises. Since this would vastly lead SMEs to succeed and prosper, it is of a great essence to develop these bonds.

Pierre Bourdieu (1986) is the innovator who tried to critically analyze social capital. He defined 'social capital' as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintances or recognition" (Bourdieu, 1986, p. 248). He influentially came to grips with the pros and values the power of network and social capital requirements.

Maskell (2001) recognized social capital a very fundamental facet in cooperating innovation with low technology productions, that it plays a major role in the process of improvement, delivery, quality and interaction with suppliers. Considering the narrow resources in SMEs, it effect their ability of being inventive or competitive, specially their lack of having sufficient financial support. In contrast, they can redeem this problematic area through considering the provision of social capital, which would vitally enrich SMEs' to originate by means of networking primarily through increasing their interactions with other organization.

Social connection interest will build a solid potential of expanding the valuable returns for small firms and enrich their resources and experiences from numerous informants that could include the great support and the multiple accesses to different domains that may involve the market and social capital, particularly, in developing countries.

This paper bring into play the power of social capital in relation with the performance of open innovation of the SMEs. This is achieved through institutions, technology base and social networks. (Feldman, 1994).

CHAPTER 3: THE MODEL

3.1 Introduction

In this chapter, we will formulate a conceptual model that will describe the relationships between social capital trust and economic motivation as independent variables, relational capabilities as a mediating variable and open innovation performance as a dependent variable. The model depends mainly on previous research depicted earlier in the literature review.

3.2 Research Questions

To achieve the aims specified above, one primary research question is investigated:

- Open Innovation is very much about the ecosystem with several partners. Small companies often take the back seat in such setups. How can startup companies level the playing field in such relationships?

To address the above questions, the following questions are investigated:

- How external social capital influence the SME open innovation performance?
- How trust factor of relational capabilities affect the external social capital?
- How shared goals factor of cognitive capabilities affect the external social capital?

3.3 Hypotheses of the Study

Based on the literature on social capital and OI we have developed 5 hypothesis we want to test in this dissertation. For each of them we indicate the major literature references below. They are used to build the conceptual model depicted in the next paragraph.

Hypothesis 1

Putnam (1993, p. 167) defined of social capital as "a features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions."

Social capital can be gained by managers by developing more qualitative ties with other parties in the market, having repetitive transactions with partners and preserve a high level of trust between the firm and its external stakeholders. (Jalali, Shamsodin , Dadbeh, & Sharifi, 2013). Investing in social capital brings long-term benefits as social networks based on mutuality, trust and mutual respect and appreciation, which will last longer.

The organizational dimension of social capital is remarkable, because many empirical researches amended that social capital improves a company's innovation performance, as it endorse employees to have access to resources that are established within a given network and simplifies the sharing of knowledge and information (Levin and Cross 2004, Tsai and Ghoshal 1998).

The success of business partnerships is considered to be dependent on the capability of managers in building social networks around the firm. The amount of social capital generated by managers is a function of personal and organizational transactions. In addition, it is highly associated with coordination between firm and its partners. Social capital facilitates the flow of information between departments and improves the ability to start new businesses (Griffith, D., & Harvey, M., 2004).

Social capital finally also plays an important role in interpersonal transactions on the marketplace. According to Fafchamps & Minten (2002), the positive effects of social capital on an entrepreneurs' performance arise from the followings:
1. Relations with other entrepreneurs;
2. Relations with lenders;
3. Family relationships.

Social networks enable entrepreneurs to work in an atmosphere of trust to exchange information and credit and improves the performance by reducing cost of transactions, which can finally lead to better efficiency results Fafchamps, M., & Minten, B. (2002).

Thus, in general, the theory of social capital indicates that better performance can be generated in the enterprise. Since OI rests on close interrelationships with network partners, the theory of social capital is completely applicable to it.

Hence our first hypothesis is:

H1: Business partnerships (social capital) have a significant impact on the SMEs Open Innovation performance.

Hypothesis 2

Relational capabilities have an impact on business performance: firms can improve their business performance by enhancing their relations (Zohdi, Shafeai & Reza, 2013). Dyer and Singh (1998) show that a relational advantage is created through the development of relational capabilities and define it as "a supernormal profit jointly generated in an exchange relationship that cannot be generated by either firm in isolation and can only be created through the joint idiosyncratic contributions of the specific alliance partners".

The relational dimension of social capital refers to the role of non-contractual elements in developing and maintaining actor relationships such as trust, norms, personal expectations, obligations and identification. These have been shown to play an important role in initiating both social and business relationships, and even strategic alliances (Blomqvist, 2002; Coleman, 1990; Liebeskind, Oliver, Zucker, & Brewer, 1996).

Trust is at the basis of all kind of relationships and not surprisingly, trust is the foundation for any successful partnership as it is "the obligation or responsibility imposed on a person in whom confidence or authority is placed (Collins English Dictionary, 2012)". In addition, trust implies that both parties participate in the relationship with both 'gives' and 'gets' (Marrison, 2011). Trust is the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly **shared norms** by the members of that community.

The topic of trust has been analyzed from several perspectives, within such disciplines as psychology, sociology and economics. With regard to the latter, over the last two decades a growing amount of attention has been paid to the subject of trust among actors within the same and different organizations (Dirks & Ferrin 2001; Gulati 1995; Krishnan *et al*. 2006; Saparito *et al.* 2004; Zaheer & Harris 2006; Zaheer *et al*. 1998) . Interpersonal and organizational trust are highly correlated (Zaheer *et al*. 1998). The deep trust in one another has allowed the partnership to be mutually beneficial despite their differences. Putnam (1993) regards trust as a source of social capital that sustains economic dynamism and governmental performance. Nahapiet and Ghoshal (1998) treat trust as a key facet in the relational dimension of social capital.

Thus, social capital is a capability that arises from the prevalence of trust in a society or in certain parts of it. It can be embodied in the smallest and most basic social group, the family, as well as the largest of all groups, the nation, and in all the other groups in between.

In addition, Morgan and Hunt (1994) argue that there are many factors that contribute to success or failure of relationship but the presence of relationship commitment and trust is central to successful relationship management. "Commitment and trust" are "key" because they encourage parties to resist attractive short-term alternatives in favor of the expected long-term benefits of staying with existing partners and to view potentially high-risk actions as being sensible because of the belief that their partners will not act opportunistically (Morgan and Hunt, 1994).

Trust is so important to relational exchanges that Spekman (1988, p. 97) assumes it to be "the cornerstone of the strategic partnership" because relationships characterized by trust are so highly valued. Morgan and Hunt (1994) argue that parties will desire to commit themselves to such relationships and that trust will influence the way in which disagreements and arguments are perceived by exchange partners. In addition, trust plays a key role in the willingness of network actors to share knowledge. A lack of trust may lead to competitive confusion about whether or not a network firm is an ally (Powell, Koput, & Smith-Doerr, 1996). Conversely, an atmosphere of trust should contribute to the free exchange of knowledge between committed exchange partners, because decision makers should not feel that they have to protect themselves from others' opportunistic behavior (Blau, 1964; Jarillo, 1988).

Morgan & Hunt (1994) argue that relationship commitment and trust develop more freely when firms pay attention to relationships by openly communicating information concerning expectations, market intelligence and evaluations of the partner's performance. In a similar vein, Berry (1995) explains that opening two-way lines of communication and guaranteeing the service is an essential tool for trust building. The social structure is important not only for the formation of social capital but also for the generation of trust itself. It allows for more rapid proliferation of obligations and expectations, imposes sanctions on defection from an obligation, and helps to generate reputation (Coleman, 1990).

In the total we can note how much is this factor important in business relationships, especially if the company is new in business. Therefore, the ability to trust becomes economically valuable to a firm when it affects the SME owner/manager's ability to act on opportunities that may emerge from networking, such as in OI. The ability to share information creates a commodity that is considered valuable and is capable of increasing the potential possibilities of the firms involved (Wicks et al. 1999).

Hypothesis 2:

H2: Relational capabilities (Trust) have a significant impact on Business Relationships with Partners of SMEs (or social capital).

The social capital is a capability that grow from the diffusion of trust in a society or in certain parts of it. It is incarnated in the smallest social groups, between family members, as well as the largest of all groups such as nations. For many researchers, social capital highly depends on trust. "The relationships, communities, cooperation, and mutual commitment that characterize social capital could not exist without a reasonable level of trust. Without some foundation of trust, social capital cannot develop (Qianhong Fu, 2004)".

In this discussion, trust will be operationalize in our research according to the definition of trust derived from Mayer et al. (1995), who asserts that trust comprises ability (competence), integrity and empathy (benevolence).
  - Ability (competence) is the degree to which external partners are willing to do partnerships if the SME is competence.

- Integrity is the extent to which the SME believes the external partners will adhere to a set of principles that they accept such as the openness and knowledge sharing.
- Empathy (benevolence) is the extent to which the SME perceives that the external partners will act in their best interests.

Hypothesis:

H2.1: Integrity has a significant impact on Trust.

H2.2: Competence has a significant impact on Trust.

H2.3: Benevolence has a significant impact on Trust.

Hypothesis 3

The 'Cognitive Dimension' is "the bundle of resources providing shared representations, interpretations, and systems of meaning among parties" (Nahapiet & Ghoshal, 1998). It involve the group's shared vision and purpose, as well as its unique language, and deeply embedded culture. It also refers to those resources providing shared representations, interpretations, language and codes, narratives and, in general, a common system of meanings among collaborates.

The cognitive dimension facilitates the summation and exchange of knowledge among different business partners in a network. Nahapiet & Ghoshal (1998) suggest that this sharing may develop in two different ways,

(1) "From the existence of a shared language and vocabulary, which are tools used for communication (to discuss, ask questions, etc.), and to influence perceptions"

(2) "From sharing collective narratives within communities as a powerful means of creating, exchanging, and preserving rich sets of meanings (Clark, 1972; Nisbet, 1969)".

When companies share goals, a common understanding of what is an innovation and how to carry it out can be expected. This will lead to innovativeness (Krause et al., 2007). On the other hand, when goals and cultures are misunderstood conflicts between companies arise (Inkpen and Tsang, 2005), with the result that companies tend to restrict exchanges, which produces a negative effect on their willingness to innovate (Inkpen and Tsang, 2005; Krause et al., 2007).

Researchers agree on the impact on this factor in the innovation performance of companies. Dakhli and De Clercq (2004) argue, "A higher level of shared values and common culture is associated to higher levels of innovativeness". The existence of common norms between firms indeed facilitates idea exchange between parties (Dakhli and De Clercq, 2004). Thus, those firms that share vision, norms, values and so on probably obtain higher innovativeness. Moreover, specific aspects such as a shared vision can be regarded as a mechanism favoring integration between parties in a network (Inkpen & Tsang, 2005) and thus becoming a critical element in the innovation process. Better communication and collectively shared knowledge and success are key ingredients creating "social capital" as expressed before. Thus, cognitive capabilities clearly enhance the social capital dimension of business partnerships.

H 3: Cognitive capabilities (Shared goals) have a significant impact on the Business Partnerships of SMEs (or social capital).

In my research, I will follow Tsai and Ghoshal (1998) in using the term **shared vision**, which embodies the **collective goals** and aspirations of the members of an intercorporate network. When a shared vision is present in the network, members have the following similarity:

- Shared perceptions as to how they should interact with one another;
- Shared mutual understandings;

This similarity will promote exchanges of ideas and resources; thus creating a shared vision. This shared vision can be viewed as a bonding mechanism that helps different partners of a network integrate knowledge. When partner firms bring contradicting or inconsistent goals into their strategic alliance, inter-partner conflict may arise.

Firms will share knowledge when an interaction logic is shared across network members (Helmsing, 2001). This logic is derived from the belief that values can be created through cooperation and knowledge sharing. Joint problem-solving arrangements enrich the network and are a strong factor of creating a shared narrative and language about success and future innovation (Uzzi, 1997).

Hence our hypotheses:

H3.1: Shared vision have a significant impact on the social capital of SMEs.

H3.2: Mutual understanding have a significant impact on the social capital of SMEs."

3.4 The Conceptual Model
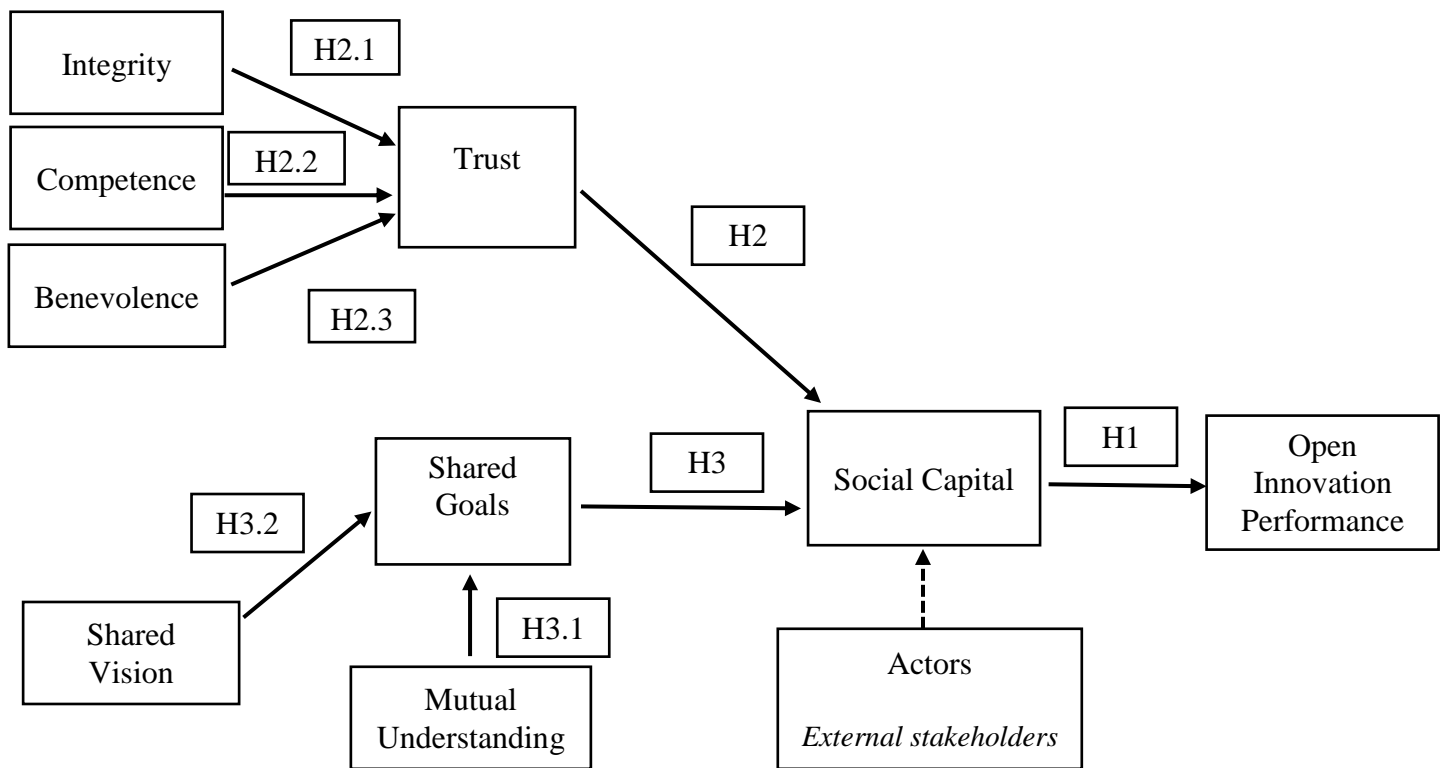
CHAPTER 4: METHOD AND DATA

4.1 Introduction

This chapter discusses the data used in this study, including the design of questionnaire, the data collection process, and the methodology. As OI is a rapidly evolving phenomenon in Jordan, an exploratory approach integrating the qualitative approach with a qualitative methodology is followed.

4.2 Questionnaire Design

The questionnaire was constructed to give information about the level of improvement that the open innovation brought to the startup. As it is mandatory to interact within the ecosystem to apply this concept efficiently, it was also important to highlight the reasons behind the lack of ability to build relationships within the ecosystem, so the questionnaire will reflect the opinion of the managers of SME's. On the other hand, the questionnaire helped in obtaining the basic information about those managers such as their, age, nationality, gender, and the scope that they work in, the education level, the rate of income, and so on. The types of questions used, in the questionnaire, are:

- Open questions.
- Closed questions.
- Single or Multiple questions.
- Ranking and rating.

However, this study focuses on open-ended questions and the ranking questions. Drawing on the themes from the literature (e.g. the role of relational capabilities in facilitating the relationships, the organizational processes as barriers to developing collaboration, and the need to create a knowledge sharing culture based on trust), the interview questions were designed to explore how individuals make sense of their business relationships.

4.3 Sampling Design

Purposive sampling of senior executives of SME's was undertaken in order to obtain participants who had significant responsibility for SME's or a sound knowledge of the implementation of SME's within their organizations. Those participants are experts or key informants. In all, 22 potential participants from a reputable and comprehensive corporate database of marketers were e-mailed firstly to gain their acceptance to participate in the interview. After that, the interviews were conducted by either mailing the questionnaire or direct contact using Skype. In case of contacting problems, follow-up e-mails were sent to increase participation rates. All respondents indicated that they would be interested in participating in the interviewing process.

4.4 In-depth Interviews

In qualitative research, it is important to use open-ended questions to small samples of participants (Silverman, 2001). Open-ended questions produce answers that need to be subsequently coded (ibid). The interview schedule have five parts that were identified in accordance with the research question and shaped according to social capital theory.

In-depth interviewing is often a reliable primary data collection method for qualitative research. The informal style of the semi-structured interview generates a discussion as opposed to a structured question-and-answer format. This methodology allowed the exploration of managers' experiences and considers appropriate. Further, the qualitative interviewing process has greater potential for eliciting rich information. A pilot study was conducted via telephone with an interviewee who fulfilled the requirements of the criteria sample. This pilot interview was not used in the sample but was an instrumental part of the iterative process of conducting the research in a rigorous manner.

Contents from the pilot study were used to develop the interview agenda consisting of 5 semi-structured, open-ended questions, and 20 closed-ended question.

4.5 Data Analysis

The participants were chosen from strategic and operational levels, for example, managing directors and operational directors in the SMEs. As decision makers, it was important for the study to gain access to the perceptions of project managers and operational directors as these could give key pictures of the relationships.

Interview transcripts were coded according to the common statistical techniques and mostly following the five-point Likert Scale. The data analysis and refining process involved two iterative stages. In the first stage, participants' comments and statements were categorized according to the ideas and concepts of the study. The second stage of the analysis involved grouping ideas and concepts into larger themes using the data coding procedures and using IBM SPSS well-known software.

In applying theory, I particularly chosen the trust factor to include according to the research conducted by many such as (Huysman & De Wit, 2004; Chow & Chan, 2008; Tsai & Ghoshal, 1998). The five key interview sections are as follows:

A. Specific biographical questions to the respondent and about the firm itself;
B. Social Capital;
C. Relational Capabilities (Trust);
D. Cognitive Capabilities (Shared Objectives);
E. Wider context.

4.6 Testing and Measuring Tools

As mentioned earlier, the research approach will be an integrated approach, which combines both qualitative and quantitative methodology, as a total 10 interviews, is conducted with 10 managers in SMEs as well as 12 managers were emailed with the surveys in the SMEs. The participants are chosen from strategic and operational levels.

The study applied statistical techniques to test the relationships among the variables of the model. Methods of data processing depended on a number of statistical analysis techniques. In view of the number and nature of the different variables which were used in the study, the following statistical methods where used:

- Frequency, means, standard deviations.
- Multiple correlation and regression analysis to analyze the type and the strength of the relation between the dependent and independent variables.
- Student's t-test for testing the significance of the dependent variables and predictors, as hypothesized.

In sum, regression analysis as well as testing of hypothesis are applied to test the significance of such relationships, as depicted below.

CHAPTER 5: RESULTS

5.1 Introduction

The aim of this chapter is to present and, then, discuss the main results of the study. It gives general information about startup firms, understudy, and explores the relationship between the major variables of the study. OI usage is discussed in details. Correlation coefficients matrix for the major variables of the study is also presented to measure the strength and direction of the correlation. All hypotheses of the study are tested, in this Chapter, and evaluated to preset rigorous conclusions.

5.2 Basic Information about Startup Firms

As can be seen, from Figure 6, nearly 60 per cent of startup firms in Jordan were established within less than 3 years while about 40 per cent were established between 3 and 6 years.
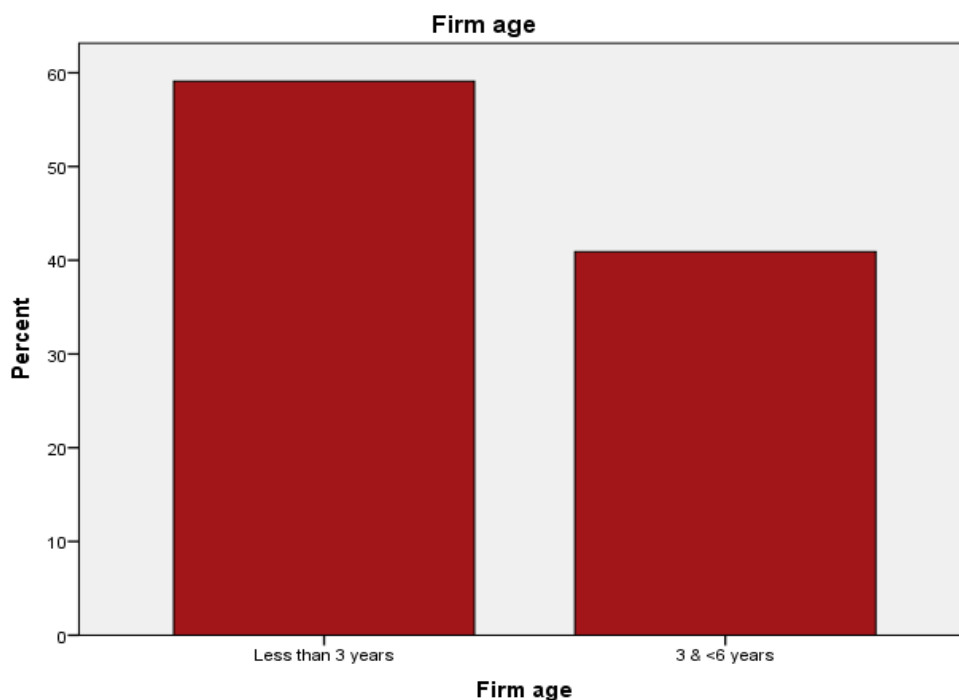
Figure 6: Percentage distribution of startup firms by age

As can be seen, from Table 1, nearly 73 per cent of the estimated number of employees were from firms that employees 6-20 workers, while approximately 23 per cent of employees came from firms that employ less than 6 persons. These percentages included full and part time employees.

Table 1: Estimated number of employees

Number of employees		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	5	22.7	22.7	22.7
	6-20	16	72.7	72.7	95.5
	21-100	1	4.5	4.5	100.0
	Total	22	100.0	100.0	

The types of startups were 81.8% services providers, 9.1% research & development and 9.1% manufacturing. All of the interviewed startups were private companies.

Table 2: Percentage distribution of firms by industry

Firm type		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manufacturing	2	9.1	9.1	9.1
	Service	18	81.8	81.8	90.9
	R&D	2	9.1	9.1	100.0
	Total	22	100.0	100.0	

5.3 Open Innovation Usage

All of the startups included in this research are applying the open innovation concept. Most of startups were using the open innovation concept since they started their business that is 31.8% were using it for 3 years.

Table 3: Length of using OI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	6	27.3	27.3	27.3
	1 Year	6	27.3	27.3	54.5
	2 Years	3	13.6	13.6	68.2
	3 Years	7	31.8	31.8	100.0
	Total	22	100.0	100.0	

The main two motivation for using OI was both: collect new development ideas (72.7%) and strengthen the relationships with other partners (71.5). Other motivations where between (40% and 30%), and the lowest motivation was for sharing the risk on complex investment.

Table 4: Motivation of using OI

	Motivation of using OI	Percent
Valid	Collect new development ideas	72.7
	Have a better understanding of the clients' needs and expectations	36.4
	Access to new technologies or know how Speed-up the time to market	31.8
	Access to financial sources	36.4
	Improve your innovation efficiency	40.9
	Share the risks on a complex investment	18.2
	Strengthen the relationships with your partners	71.5
	Valorize the intellectual property and your patents	36.4

The open innovation usage in startups where positively high, that (59.1%) was extremely improved and (36.4%) very much improved. A very low percentage of (4.5%) only was for moderate improvements as it displayed in Table 5.

Table 5: Level of improvement using OI

Level of improvement using OI		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderate improvement	1	4.5	4.5	4.5
	Very much improved	8	36.4	36.4	40.9
	Extremely improved	13	59.1	59.1	100.0
	Total	22	100.0	100.0	

The 59.1% of startups agreed that relationships with external partners are extremely important to their open innovation performance and only 9.1% agreed that it is not that important.

Table 6: The importance of external partnerships

The importance of external partnerships		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not that important	2	9.1	9.1	9.1
	Important	1	4.5	4.5	13.6
	Very important	6	27.3	27.3	40.9
	Extremely important	13	59.1	59.1	100.0
	Total	22	100.0	100.0	

As can be seen from Table 7, the partnership with business financier was (45.5%) extremely important and (36.4%) important. The lack of finances of startups encourages them to seek for partner who could support them regarding this issue. In addition, the relationship with MNC was (54.5%) extremely important for the reason that startups are optimistic and ambitious to cross borders and go international. Alliances among multi players took a share of (45.5%) extremely important due to the shared technology, resources and benefits that will be gained. SME to SME partnership were less important than other partnerships that (31.8%) agreed that its extremely important and that because they are more likely to search for partners with more experience and have strong financial statement.

Table 7: Partnership types for SMEs

		Alliances among Multiplayers	SME to SME Partnership	MNC to SME Partnership	MNC to multiple SMEs	Business Financier Partnership
Valid	Not at all important	13.6	22.7	4.5	4.5	
	Not that important	13.6	22.7	13.6	18.2	13.6
	Important	18.2	18.2	13.6	13.6	36.4
	Very important	9.1	4.5	13.6	13.6	4.5
	Extremely important	45.5	31.8	54.5	50.0	45.5
	Total	100.0	100.0	100.0	100.0	100.0

5.4 Correlation Results

Before assuming the functional relationship among the major variables of the study, it would be better to test for the strength and direction of the correlation among the variables of the model. Pearson's correlation test is one of the most commonly used method to calculate the correlation coefficient between two variables. However, in common usage it most often refers to the extent to which two variables have a linear relationship with each other.

In our study, we calculated the bivariate correlations coefficients and presented them in a matrix form, as below. Correlation coefficients, presented below, are high and significant between "Trust" from one side and "social goals", "Integrity", and "comp" from the other side, with each higher than 68%. It is also significant at the 0.01 level and relatively high for "social goals" and "comp". Higher correlations support our previous finding regarding the significance of the relationship among almost all variables of the model. However, weak correlation exists between "integrity" and "Open Innovation". It should be stressed that correlation does not mean causation but it is considered as a supporting evidence.

Table 8: Correlation Coefficients among the Major Variables of the Study

		Trust	SO	Social	OI	Integrity	comp
				Correlations			
Trust	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	22					
SO	Pearson Correlation	.679**	1				
	Sig. (2-tailed)	.001					
	N	22	22				
Social	Pearson Correlation	.381	.316	1			
	Sig. (2-tailed)	.080	.152				
	N	22	22	22			
OI	Pearson Correlation	.172	.161	.175	1		
	Sig. (2-tailed)	.443	.475	.435			
	N	22	22	22	22		
Integrity	Pearson Correlation	.742**	.207	.104	.139	1	
	Sig. (2-tailed)	.000	.355	.644	.536		
	N	22	22	22	22	22	
comp	Pearson Correlation	.836**	.784**	.309	.081	.331	1
	Sig. (2-tailed)	.000	.000	.162	.719	.132	

| | N | 22 | 22 | 22 | 22 | 22 | 22 |

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

5.5 Test of Hypotheses

In this section, eight hypotheses are tested for statistical significance of the relationships among the major variables of this study. The results of the tests are presented below.

H1: Business partnerships (social capital) have a significant impact on the SMEs Open Innovation performance.

The first hypothesis in this research was to measure the significant effect of social capital on the open innovation performance. The respondents answered three main questions to define this effect, which are: Question 11 (which measures the importance of external partnerships on the open innovation performance), Question 12 (that measures the importance of partnership regarding its type) and lastly Question 13 (which indicates the most important partnership in the startup open innovation performance). As can be seen from regression results below, there is no statistical evidence that the H1 hypothesis could be accepted since the value of t-statistic is small and the significance level is higher than 5%. This means that social capital has little effect on OI in Jordan.

Table 9: Results of regression analysis: Open innovation social capital

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.077	.602		6.778	.000
	Social	.128	.161	.175	.797	.435
a. Dependent Variable: OI						

H2: Relational capabilities (Trust) have a significant impact on Business Relationships with Partners of SMEs (or social capital).

The second hypothesis in this research was to measure the significant effect of relational capabilities on the social capital through measuring trust. The respondent answered question 16, which indicates the importance of trust as a major part of relational capabilities. The five-point Likert Scale was used to measure the opinions of respondents' answers, as shown in the Appendix. Regression results, presented below, provide a statistical evidence that "Trust" has a significant effect on social capital at the 0.10 level of significant. Given this result, one can conclude that there is a chance of 92% that social capital will increase when "Trust" increases.

Table 10: Results of regression analysis: Trust and social capital

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.642	1.648		.390	.701
	Trust	.893	.485	.381	1.842	.080
a. Dependent Variable: Social						

The results of testing hypotheses H2.1, H2.2, and H2.3 below, imply that there is a strong evidence that each hypothesis is acceptable, even at a significance level below 1%. This goes in line with other studies presented in the review of literature and supports the idea the Jordan's data, in this context, follow the common practice and do not contradict with the theory as such.

H2.1: Integrity has a significant impact on trust.

Question 17 is used to test the above hypothesis as how much partners are willing to collaborate regarding the first trust factor, which is **integrity.**

Table 11: Results of regression analysis: Trust and integrity

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.543	.375		4.118	.001
	Integrity	.572	.116	.742	4.951	.000
a. Dependent Variable: Trust						

H2.2: Competence has a significant impact on trust

The answers of Question 18 (how much partners are willing to collaborate regarding the second trust factor, which is competence) are used to test H2.2.

Table 12: Results of regression analysis: Trust and competence

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.144	.331		3.461	.002
	comp	.675	.099	.836	6.817	.000
a. Dependent Variable: Trust						

H2.3: Competence has a significant impact on trust.

Here, Question 19 (how much partners are willing to collaborate regarding the first trust factor, which is benevolence) is used to test H2.3.

Table 13: Results of regression analysis: Trust and benevolence

Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1 (Constant)	.892	.246		3.624	.002	
ben	.733	.072	.916	10.184	.000	
a. Dependent Variable: Trust						

The third main hypothesis in this research was to measure the significant effect of cognitive capabilities on the social capital.

H3: Shared goals have a significant impact on the Business Partnerships of SMEs (or social capital).

- Question 19 which indicates the importance of objectives as a major part of cognitive capabilities
- Question 22 to indicate how much partners are willing to collaborate regarding the first trust factor, which is **shared goals.**

As shown in the Table below, the probability of accepting H3 is remote since significance level is greater the 10% (15.2% here).

Table 14: Results of regression analysis: Social capital and shared goals

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	2.164	1.020		2.122	.047
	SO	.423	.284	.316	1.488	.152
a. Dependent Variable: Social						

The results of testing hypotheses H3.1 and H3.2 below imply that there is a strong evidence that both hypotheses are acceptable, even at a significance level below 1%. This supports the idea the Jordan's data, in this context, follow the common practice and do not contradict with the theory as such. The details of regressions are shown below.

H3.1: Mutual understanding have a significant impact on the cognitive capabilities (shared goals) of SMEs.

Here, Question 24 (how much partners are willing to collaborate regarding the first trust factor, which is mutual understanding) is used as independent variable or a predictor.

Table 15: Results of regression analysis: Shared goals and mutual understanding

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.843	.297		2.842	.010
	MU	.745	.083	.900	8.987	.000
a. Dependent Variable: SO						

H3.2: Shared vision have a significant impact on the cognitive capabilities (shared goals) of SMEs.

Question 23 (how much partners are willing to collaborate regarding the second cognitive capabilities, which is shared vision) is considered as independent variable and shared goals (objectives) as dependent variable.

Table 16: Results of regression analysis: Shared goals and shared vision

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.514	.161		3.194	.005
	SV	.888	.048	.974	18.616	.000
a. Dependent Variable: SO						

5.6 Interviews

The interviews are extremely important for the study because they give deep insights into the ideas and thoughts of the managers in the startups, which can be used to give more information, the following table display detailed information about the interviewees:

NO.	Name	Gender	Position	Startup Name	Startup age	Startup Description
1	Haya Shubailat	Female	CEO & Co-Founder	E-advise me	3 years	Developing Business and consultation
2	Bilal Raslan	Male	Chairman & Founder	TTI	4 years	Idea exhilaration platform
3	Mahmoud Darawsheh	Male	Founder	Mind Rocket	3 years	Smart application for deaf people
4	Muhanned Souab	Male	Owner Manager	Incitement Jordan	3 years	Motivational Platform for Youth
5	Ahmad Moor	Male	CEO & Founder	Liwwa	2 years	Loans for Medium enterprises
6	Gaith Jann	Male	Founder	Kooan	3 years	Social active Library
7	Ala'am AL Qadi	Male	CEO	Flamingo	2 years	Printing services
8	Haneen Ayyad	Female	CEO & Founder	Jasmine J	1 year	Jewelry for VIPs
9	Ahmad Friehat	Male	CEO & Founder	Pro-Ideas	3 years	Marketing Events
10	Fadi Issa	Male	COO	Maqdouskom	1 year	Food delivery

Startup 1:

Q1: Hello Ms. Haya can you give us an introduction about your startup business?

"Yes, I and my partner were very passionate about developing businesses and both of us have more than 7 years' experience of working with NGOs and we became with the idea of starting the startup to cover some niche market in the NGOs business such as the implementation of business partners and donors. Our startup provide services such as strategic planning, business development, fund raising and even technical assistant in the field, and our aim is to help NGOs and other companies in the transformation phase wither their goal is to increase numbers or to scale their projects to bring them closer to opportunities".

Q2: What is your main motivation for using Open Innovation?

"Definitely strengthen relationship because it also help us to build trust which gives us a better reputation, it also strength our partners reputation and relationship. It's also because Jordan is a small market it also provides new opportunities wither its access too new markets, access to financial funds and resources."

Q3: How much did the open innovation improved your business?

"I think it extremely improved because it helped us to stand out compared to traditional consultant companies. Because we are small, it is important to us to keep innovating our services. We also have to make sure that our trust rate is high".

Q4: In your opinion, what factors affect building partnerships for SMEs?

"I think different management style could be one of the reasons, as well as the lack of resources wither its financial or anything else which make the company more open in the term that make them feel that they need to diversify. Commitment always plays a big role also. I would also say the problem of their ability of attracting talent which leads to the business growth."

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"By showing their ability to scale their operation by showing talent and trust and showing their ability to partnership in transparent manners."

Startup 2:

Q1: Can you give us an introduction about your startup business?

"Basically, we support youth and startups by giving awareness workshops to them, networking and innovation sessions."

Q2: What is your main motivation for using Open Innovation?

"Because we are a component of the ecosystem and we are there to support creative ideas within the system, as you know in Jordan there is a huge gab in finding quality in ideas. So our main objective is to support the ecosystem which we identified in our problem statement that's we are collaborating within the ecosystem to improve and achieve our objective."

Q3: How much did the open innovation improved your business?

"A lot because we are a player in an ecosystem where we have lot of other organization, so being able to have access to data from other organization is very important to us so we would be able to organize activities and KPI's".

Q4: In your opinion, what factors affect building partnerships for SMEs?

"Yeah, we have a good position in the market so the main obstacles the different style in management specially that we have an NGO mentality, and trust between partners in the ecosystem is important which allows to access data and knowledge. It would be also changing priorities and scope, it is happening now actually that we are working on a project and the other partner is changing the scope which makes us less interested in the project. Also the changes in the management could be a big reason."

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"Number one is tracking record and being able to successfully deliver and complete project. The financial capacity as well and what I mean is quality and quantity."

Q6: Are there any suggestions or comments that you would like to add?

" the social and culture effects the innovation in Jordan, having NGOs and social enterprises needs time to maxim maize the potential of such cooperation in partnerships, as well as not having in Jordan a big umbrella to provide kind of national agenda to align their efforts. The lack aligning startup efforts as there is no available solid research center to provide accurate data and so."

Startup 3:

Q1: Can you give us an introduction about your startup business?

"We are a Jordanian startup that works on smart technology for deaf, which translates the signs into scientific language spoken and written. We are now serving more than 30 companies around the world."

Q2: What is your main motivation for using Open Innovation?

"Using the open innovation concept in our startup is a data sharing and knowledge, especially that at the beginning the startup environment is small which makes it hard to access more knowledge.

The closing of resources will lead to problems for the startups and the risk of failure chance would increase. And it's important to have feedback from experts which leads to make better plans and decisions.**"**

Q3: How much did the open innovation improved your business?

"Very much because we were able to have more connection with investors and to know more about the market which helped us to enhance our business. It also helped us to transform the application into smart scientific language to help other around the world. We wanted to get out from the traditional box which allowed us to reach international partners such as Saudi Arabia and France."

Q4: In your opinion, what factors affect building partnerships for SMEs?

"To be flexible in providing services and to set clear standards with other parties. "

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"Increasing their networks and connections. Balance between global an international expansion and try to thin more about going international. To have a good reputation also is important, building a well-established technology also. Being more careful about the culture and geographic of any partner and seek for partners who would help in doing market researches and value to the startup instead of giving services only."

Q6: Are there any suggestions or comments that you would like to add?

"Startups should focus on the core of their business instead of looking only on how their business goes, also startups should be more open and not only seek for funding and make more effort on enhancing their business."

Startup 4:

Q1: Can you give us an introduction about your startup business?

"Our startup is called incitement Jordan and we mainly working with youth, its motivational platform for youth which we do an event every two month and after the event we organize something we call cold action which could be a project or awareness program. And each project have its own donor. We also have many partnership with other startups which have the same mindset and interest which allows us to share information and data. "

Q2: What is your main motivation for using Open Innovation?

"The main reason is to strengthen the relationship with other partners in the ecosystem and the allowances of exchange of data and experience."

Q3: How much did the open innovation improved your business?

"Very much!"

Q4: In your opinion, what factors affect building partnerships for SMEs?

"To have the same vision and mission, also the transparency between partners and the trust building. To have same values, or having the same experiences in business."

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"To have negotiation and communication skills, attending event and interact with people to introduce the startup to seek for mutual that may have. Share information and contact and try to make people notice you. And seek partners who have common goals."

Q6: Are there any suggestions or comments that you would like to add?

"Most startups in Jordan are willing to do innovation and accept change in the industry, but some numbers still did not involve in such stage. Also being entrepreneurs is not meant to be for every one and the efforts that big companies try to do is to increase the number of entrepreneurs even if they don't have the skills to be."

Startup 5:

Q1: Can you give us an introduction about your startup?

"We land SMEs in Jordan, and we allow other partners to participate in the exchange."

Q2: What is your main motivation for using Open Innovation?

"I can't answer this question because the transparency is very important to our company, so am not really sure if I can answer that."

Q3: How much did the open innovation improved your business?

"I can't say."

Q4: In your opinion, what factors affect building partnerships for SMEs?

"Startups usually purse partnership because of the need of the credibility. I can also say ethics."

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"Just being in business."

Q6: Are there any suggestions or comments that you would like to add?

"No comment."

Startup 6:

Q1: Can you give us an introduction about your startup business?

"Our startup is a socially active books store in cultural palace in Ma'adaba, we have a health environment to share knowledge and data. Actually it started by selling books on an old Mercedes car in the streets and that how we could open the library."

Q2: What is your main motivation for using Open Innovation?

"The main reason is that it's effective to share knowledge"

Q3: How much did the open innovation improved your business?

"Very improved, it really helped up in gaining access to a lot of people and its boosting our business as well."

Q4: In your opinion, what factors affect building partnerships for SMEs?

"Lack of finance. The structure of the startup, being clear and have determined goals as a startup."

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"in order to strength the partnership you have to be extremely organized, have a well-established structure, commit with time, spending a lot of time to participate in social events."

Q6: Are there any suggestions or comments that you would like to add?

"Large companies should pay more attention to startups and should be open to share knowledge and information."

Startup 7:

Q1: Can you give us an introduction about your startup business?

"The goal of our startup is to provide innovative printing to all segment wither its C2C or B2C, we wanted to make it easier to everyone to be able to print what they love on any material they want."

Q2: What is your main motivation for using Open Innovation?

"The open innovation allows us to make more communication with other parties in the ecosystem, and the flow and exchange of information help us to create more beneficial services to our clients and customers."

Q3: How much did the open innovation improved your business?

"It helped us in the matter to grow our business faster as we are a new startup, since that we collaborated with other startups in the Jordan market which increased our publicity and improved our reputation."

Q4: In your opinion, what factors affect building partnerships for SMEs?

"Through my experience I would say the ability to trust other partners in the relationship because everything you build you build it on trust and ethics. In addition, trust is important to us to be able to access many resources we need as a startup. And reputation of course!"

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"It's all about building good communication in my opinion, and the mutual respect is very important, the management of the organization a how much they would be able to adopt new changes in the market as well as their ability to innovate and accept more ideas."

Q6: Are there any suggestions or comments that you would like to add?

"The effort that the startup make to collaborate with other partners and the long-term vision that they have."

Startup 8

Q1: Can you give us an introduction about your startup business?

"We create unique jewelry to VIPs."

Q2: What is your main motivation for using Open Innovation?

"Attracting creative talents and ideas."

Q3: How much did the open innovation improved your business?

"Very much!"

Q4: In your opinion, what factors affect building partnerships for SMEs?

"Lack of communication."

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"Making connection with people."

Q6: Are there any suggestions or comments that you would like to add?

"No comment."

Startup 9

Q1: Can you give us an introduction about your startup business?

"Flamingo s new experience of online marketing services, we specialist in creating a new marketing solutions."

Q2: What is your main motivation for using Open Innovation?

"The success of others"

Q3: How much did the open innovation improved your business?

"Very good!"

Q4: In your opinion, what factors affect building partnerships for SMEs?

"Lack of announcement, the performance of sales representation and brand reputation! Also the financial statement and the risk concerns of partnership."

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"Through manufacture a new marketing solution."

Q6: Are there any suggestions or comments that you would like to add?

"No comment."

Startup 10

Q1: Can you give us an introduction about your startup business?

"Maqdouskom was first established to solve the waiting for food problem, many restaurants don't have the ability to deliver food on time as it needs strong logistics and they specialize with food industry, hence we are here!! ."

Q2: What is your main motivation for using Open Innovation?

"Your experience plus my experience equal four time better expertise"

Q3: How much did the open innovation improved your business?

"It improved the technical and it part more"

Q4: In your opinion, what factors affect building partnerships for SMEs?

"The information flow, communication in and outside firm"

Q5: In your opinion, how can you as an SME strengthen your ability to build partnerships?

"Through better communication channels."

Q6: Are there any suggestions or comments that you would like to add?

"Our experience shows that open innovation works better with IT and other related technical parts, for logistics, more effort need to be added to gain more value which make it harder"

CHAPTER 6: DISCUSSION

6.1 Discussion Summary

After presenting the results of the research, in the previous Chapter, it is essential to discuss the main results, especially those related to the conceptual model that is formulated in Chapter 3.

First, despite the challenges that face Jordan, the outlook for OI processes is promising, as we saw from the descriptive statistics of managers of startup firms. Further confidence in the macroeconomic framework and healthy business environment is expected to strengthen due to the good business environment. The innovation process is taking part in the Jordan market, but still not in a very perceptible way. This is in spite of the fact that the government is actively supporting innovation as it launched a strategy for innovation consisting of set of projects at an estimated cost of around $14.5 million, to be implemented during 2014-2018, (The Jordan Times, 2014). On one hand, Jordan urgently requires enhancing innovations and entrepreneurships considering the raising emergency bills and the rapidly growing refugees' community.

Second, the quantitative analysis of the results of the purposive sample survey helped in obtaining the basic information about the managers of startup firms such as their age, nationality, gender, and the scope that they work in, the education level, the rate of income, and so on. Drawing on the themes from the literature (e.g. the role of relational capabilities in facilitating the relationships, the organizational processes as barriers to developing collaboration, and the need to create a knowledge sharing culture based on trust), the interview questions were designed to explore how individuals make sense of their business relationships. Purposive sampling of senior executives of SME's was undertaken in order to obtain participants who had significant responsibility for SME's or a sound knowledge of the implementation of SME's within their organizations. Those participants are experts or key informants. These results can be utilized to become a backbone for other future studies not only for Jordan but for other Arab countries or countries with similar business development stage.

Third, all of the startups included in this research are applying the open innovation concept. Most of startups were using the open innovation concept since they started their business that is 31.8% were using it for 3 years. Not surprisingly, all the startups agreed that trust is extremely important in any kind of partnerships. The main two motivation for using OI were both: collect new development ideas (72.7%) and strengthen the relationships with other partners (71.5%). The importance of other motivations were between (40% and 30%), and the lowest motivation was for sharing the risk on complex investment. The open innovation usage in startups where positively high, that (59.1%) was extremely improved and (36.4%) very much improved. A very low percentage of 4.5 only was for moderate improvements. These figures provide evidence that OI in Jordan is expanding, in terms of usage and expected to expand further for many years to come.

Fourth, we calculated the bivariate correlations coefficients are high and significant between "Trust" from one side and "social goals", "Integrity", and "comp" from the other side, with each higher than 68%. It is also significant at the 0.01 level and relatively high for "social goals" and "comp". Higher correlations support our previous finding regarding the significance of the relationship among almost all variables of the model. However, weak correlation exists between "integrity" and "Open Innovation".

Fifth, test of the hypotheses of the model provided statistical evidence of accepting six (out of eight) hypotheses of postulated in this research. There was a significant effect of social capital on the open innovation performance. In addition, this research indicated the importance of trust as a major part of relational capabilities. The results of testing hypotheses H2.1, H2.2, and H2.3 imply that there is a strong evidence that each hypothesis is acceptable, even at a significance level below 1%. This goes in line with other studies presented in the review of literature and supports the idea the Jordan's data, in this context, follow the common practice and do not contradict with the theory as such. The results of testing hypotheses H3.1 and H3.2 imply that there is a strong evidence that both hypotheses are acceptable, even at a significance level below 1%.

Sixth, regression results revealed that there is no statistical evidence that the H1 hypothesis could be accepted since the value of t-statistic is small and the significance level is higher than 5%. This means that social capital has little effect on OI in Jordan. Regression results also provide a statistical evidence that "Trust" has a significant effect on social capital at the 0.10 level of significant. Given this result, one can conclude that there is a chance of 92% that social capital will increase when "Trust" increases.

Seventh, managers of startups in the first open question predicted that following effects on the ability to build partnerships:
- The structure of the startup
- The changed environment in the firms
- Financial resources
- Flexibility in dealing with partners
- Having attracting talents
- The mutual outcomes

These are the main factors that is summarized rom the interviews, not surprisingly these factors are very critical bases for any time of partnerships especially for SMEs because they are considered fresh in the business.

Eighth, when the managers were asked to point the ways that SMEs can use to strength their ability to build partnerships they emphasized that personal communications and showing up in social and important events is very important. As well as they highlighted other ways such as building good reputation and efforts in business. Communications and negotiation skills also took a part in the conversation as they mentioned the importance of these two elements in relationships with other actors in the ecosystem. Having a solid technology and uniqueness can increase also the chance of attracting partners.

Ninth, the final open question asked respondents to add any comment they want on the research topic, most of them did not have anything to add but the others made a good points in illustrating some other challenges they face. These challenges are not having strong established research organizations to provide them with suitable and accurate data and information, the low awareness of open innovation in Jordan, which make harder for companies to share knowledge and resources. In addition, the loss of focus and identity of some startups caused by their searches for going international without having the experience and knowledge of different cultures , needs for every region.

6.2 Learning Outcomes

6.2.1 Managers:

- Managers of big companies should pay more attention to the SMEs by exchanging knowledge to seek market growth and enhance the economy of Jordan.
- Managers of SMEs should be more open to changes in the business where everyone can have win-win partnerships within the ecosystem.
- Business of all types have to understand the importance of trust in partnership.
- There are many social and cultural challenges face the innovations in Jordan, that is why SMEs should come together to solve these kinds of challenges.
- Networking is an effective way to facilitate open innovation among SMEs. Intermediaries play an important role in facilitating external knowledge sourcing and establishing collaboration networks.

6.2.2 Government:

- SMEs is growing now in Jordan, the government should pay more attention in the sense of investing and encouraging them to grow and innovate.
- The SMEs are creating job markets, enhancing the economy this is the reason why government have to help these startups to access more knowledge and data by providing reliable research papers and studies endeavors that the SMEs can benefit from.

- SMEs face specific challenges in implementing Open Innovation due to restrictions of their resources. Governments have to impose less strict regulations and set convenient laws that allow them to easily access resources whether they were financial resources or any other references.

6.2.3 Academics

Although, the literacy rate in Jordan is one of the highest in the region, Jordan's primary and secondary education systems do not promote innovations. The system is built on memorizing textbook facts instead of creative learning systems or explorative research. In this sense, the academic system up to the BA grade is an extension of the rigid school system. Only in master courses, students are exposed to independent learning and are applying creative learning concepts. Interests in innovations are thereby stimulated far too late in the educational system.

The Ministry of Education in Jordan have to start applying more subject of innovation in the education system of schools and universities, and the academics should also raise the awareness of these subject.

6.2.4 Researchers

Jordan still lacks scientific research papers about innovations. This study recommends that further research endeavors are needed for startup firms in Jordan. The future research papers could be on how the social and cultural challenges can influence the innovation growth in Jordan.

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APPENDIX: THE QUESTIONNAIRE

OPEN INNOVATION SURVEY

Filtering Questions

1. How many years has your firm been in business?
□ Less than 3 years   □ 3&<6 years   □ 6&<9 years □ 9&<12 years   □ 12 years or more

2. Please estimate the number of employees in the firm
□ 1-5   □ 6-20   □ 21-100   □ 101-250   □ 251 or more

3. What is the type of your firm?
□ Manufacturing   □ Service   □ R&D   □ whole sales   □ Retailer

4. What is your job (position) in the firm?
□ Owner manager □ Manager   □ Supervisor □ Employee

5. Is the company private or public?
□ Private   □ Public

6. Has your company been invested by venture capital companies?
□Yes   □ No

Open Innovation Application

7. Are you using the Open Innovation Concept?
□Yes   □ No
8. For how long have you been using the IO Concept?
□ Less than 1 year □ 1 year   □ 2 years   □ 3 years   □ More than 3 years

9. What are the motivations of your company to use open innovation concept?(You can choose more than answer).
1. Collect new development ideas
2. Have a better understanding of the clients' needs and expectations
3. Access to new technologies or know how Speed-up the time to market
4. Access to financial sources
5. Improve your innovation efficiency
6. Share the risks on a complex investment
7. Strengthen the relationships with your partners
8. Valorize the intellectual property and your patents

10. How much did the Open Innovation usage improved your performance?

Very little (1)	Little (2)	Moderate improvement (3)	Very much (4)	Extremely improved (5)

11. How important is the relationship with external partners to your open innovation performance?

Not at all important (1)	Not that important (2)	Important (3)	Very important (4)	Extremely important (5)

12. What type of partnership is the most important to your company?

Type of Partnership	Not at all important (1)	Not that important (2)	Important (3)	Very important (4)	Extremely important (5)
Alliances amongst multiplayers					
SME to SME partnership					
MNC to SME partnerships					
MNC to multiple SMEs					
Business-financier partnership					

13. How important are the following partners in your open innovation performance? (Tick one box among the five choices for each line)

Partners	Not at all important (1)	Not that important (2)	Important (3)	Very important (4)	Extremely important (5)
Research Organizations					
Universities					
Support Organization					
Large Companies in the same industry sector					
Service & Technology providers					
Funding Organizations					

14. What factors do you believe that it affects your ability to build partnerships?(You can choose more than answer).
1. Different management styles
2. Lack of financial resources
3. Commitment levels
4. Risk concerns
5. Disparities in skills and roles.

15. What are the most important benefits that you gain from building partnerships? ?(You can choose more than answer).
1. Shared Risk
2. Fast and efficient implementation of business
3. Increasing Market Access
4. Financial Support
5. Access to knowledge and experiences

Trust Factors

16. How important is the trust in your relationship with external partners?

Not at all important (1)	Not that important (2)	Important (3)	Very important (4)	Extremely important (5)

17. Indicate how much the following partners are willing to collaborate according to the level of your business integrity , Integrity in partnerships is a main factor of trust, which is the quality of being honest and having strong moral principles.

Partners	Not willing at all (1)	Not willing (2)	Willing (3)	Very much willing (4)	Extremely willing (5)
Research Organizations					
Universities					
Support Organization					
Large Companies in the same industry sector					
Service & Technology providers					
Funding Organizations					

18. Indicate how much the following partners are willing to collaborate according to the level of your work competence. Competence indicates sufficiency of knowledge and skills that enable you to act in a wide variety of situations. Because each level of responsibility has its own requirements.

Partners	Not willing at all (1)	Not willing (2)	Willing (3)	Very much willing (4)	Extremely willing (5)
Research Organizations					
Universities					
Support Organization					
Large Companies in the same industry sector					
Service & Technology providers					
Funding Organizations					

19. Indicate how much the following partners are willing to collaborate according to the level of your benevolence. Benevolence refer the commitment to achieving the values derivable from life with other people in society, by treating them as potential trading partners, recognizing their humanity, independence, and individuality, and the harmony between their interests and ours.

Partners	Not willing at all (1)	Not willing (2)	Willing (3)	Very much willing (4)	Extremely willing (5)
Research Organizations					
Universities					
Support Organization					
Large Companies in the same industry sector					
Service & Technology providers					
Funding Organizations					

20. What other factors do you believe affect trust in building partnerships for a startup? (you can choose more than an answer).

1. Financial statement
2. Teamwork skills
3. Competition
4. Risk

Shared Objectives

21. How important are shared goals in your relationship with external partners?

Not at all important (1)	Not that important (2)	Important (3)	Very important (4)	Extremely important (5)

22. Indicate how much the following partners are willing to collaborate if you have a shared vision with them

Partners	Not willing at all (1)	Not willing (2)	Willing (3)	Very much willing (4)	Extremely willing (5)
Research Organizations					
Universities					
Support Organization					
Large Companies in the same industry sector					
Service & Technology providers					
Funding Organizations					

23. Indicate how much the following partners are willing to collaborate if you have shared goals with them

Partners	Not willing at all (1)	Not willing (2)	Willing (3)	Very much willing (4)	Extremely willing (5)
Research Organizations					
Universities					
Support Organization					
Large Companies in the same industry sector					
Service & Technology providers					
Funding Organizations					

24. Indicate how much the following partners are willing to collaborate if you have mutual understanding with partners

Partners	Not willing at all (1)	Not willing (2)	Willing (3)	Very much willing (4)	Extremely willing (5)
Suppliers					
Universities and research bodies					
Entrepreneurs and other start-ups Companies					
Large firms in the same industry sector					
Technology providers					
Banks					

25. What other factors do you believe affect the shared objective in building a startup partnership?(You can choose more than answer).
1. Shared resources
2. Shared benefits
3. Competition
4. Shared Risk

26. In your opinion, what other factors affect building partnerships for SMEs?

27. In your opinion, how can you as an SME strengthen your ability to build partnerships?

28. Are there any suggestions or comments that you would like to add?

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Richting: **Master of Management-International Marketing Strategy**
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Shahateet, Lama Mohammed Issa

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