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HOW MNCS' CAPABILITIES TO BUILD INTERNATIONAL INNOVATION NETWORKS IMPACT THEIR INNOVATION STRATEGIES: AN EMPHASIS ON THE SOUTH

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Abstract: Coping with change is the main gate towards survival and growth of companies in nowadays globalized, dynamic, complex and illimitably changing business environments. Thus, innovation has become imperative. However, being innovative depends on many key features such as knowledge that is widely distributed worldwide, which requires external collaboration and alliances. In this logic, the present contribution aims at shedding a new light on the **capacities** of north multinational companies operating in the south countries, as a key to build innovation networks and then develop innovation strategies. The present (theoretical) analysis pretends highlighting the south multinational companies' hypothetical reactions regarding knowledge absorption and innovation networks. Likewise, it targets clarifying key issues that may thwart the innovation strategies of north multinational companies in south countries.
Key words: Innovation networks/Absorptive capacity/ South, North countries/ multinationals/ strategy

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TABLE

INTRODUCTION

As almost evident, a firm survival and growth depend on its capability to cope with change – in its wide manifestation. Business environment is perpetually globalized, since the world has become a small village due to the technological revolution and its fruits. The key issue towards leveraging such an exceptional situation is innovation. However, being innovative is not an easy task due to many reasons such as the rapidness of change, the multitude of innovation sources, the territoriality impediments and so forth. In this logic shedding a new light on the *absorptive capacity* of north multinational companies operating in the south countries, as a key to build innovation networks and then strategies is likely important.

Today, knowledge is widely distributed through different entities operating in different countries and continents, which requires external collaboration and alliances (Rohrbeck et al., 2009) among companies aiming at acquiring knowledge and developing innovations. In this vein, the *network analysis theory* (Freeman, 1991, Osborn and Hagedoorn, 1997) emphasizes the role of "networks" amongst organizations in innovation performance. These relationships and ties can be formal (strategic alliances and joint-ventures…) or informal such as inter-organizational flow through people: director exchange, employee mobility, social networks that cross the organizational-national boundaries. Innovation, according to this theory is a process of research and discovery of *newness* from unlimited and diversified sources (Chesbrough, 2003, Lichtenthaler, 2008, Chesbrough and Crowther, 2006).

The ability of north multinational companies working in south countries to build international innovation networks depends on their ability to recognize, assimilate, acquire and use the new information that are available worldwide , i.e. their "absorptive capacity" (Cohen and Levinthal, 1990).

It is claimed that the endogenous driver of Cohen and Levinthal (1990)'s pioneering definition is the fact that they consider "external knowledge does not equally benefit all firms, and that the benefits enjoyed by the firm are determined in part by the firm's own actions and resources" (Fabrizio, 2009: 255). According to this logic, north multinational companies, operating in south countries' ability to acquire just external assets and information is not enough. Instead, their capacity to manipulate the acquired knowledge and capabilities determines its real absorptive capacity.

To perform an overwhelming analysis about the abovementioned issue, it is necessary to carry out a theoretical study highlighting the state of art of this issue. Additionally, data analysis of the available numerical information will be implemented. Two main sources can be defined: the official numbers released about north multinational companies operating in south countries that have innovation networks and the available theoretical contributions about this issue.

Finally, the importance of the present contribution is rooted in the need to shedding light on the south multinational companies' policies, strategies and reactions regarding this matter. Likewise, it targets clarifying key issues that may impede the north multinational companies to develop innovation strategies in south countries. In sum, this study aimed to fulfill a perceived gap, enriching the literature with an innovative contribution.

1. MULTINATIONALIZATION OF COMPANIES AS A CATALYST FOR BORDERLESS NETWORKS

Although it has no standard definition (Susman, 2007), *multinationalization* of companies can be defined as an organized process of carrying out some business activities in foreign markets, situated outside a firm natural geographic environment. In other words, it is the process of increasing involvement in international operations (Welch and Luostarinen, 1988). Multinationalization is a natural output of the globalization the implies unification of markets, standardization and abundance of the products and services, homogenization of tastes and needs of consumers, new communication channels, universality of distribution and sale methods. Furthermore, "globalization has a longer history which incorporates processes of European colonization, the establishment of faster transport systems and telegraphic cables, the shifts in neoliberal capital enterprise production methods beyond the nation state, the post-Second World War increase in transnational migration, and the growth of diasporic communities" (Cover, 2016).

The advent of multinationalization era was marked, then, by the fact that the orthodoxy trade exchange basis could be better if the involvement of the newly powerful *agent* (the firm) increases and if the world become borderless in terms of capitals movement and free trade worldwide. Thus, with a stateless company, according to this approach, resources can be leveraged worldwide, opportunities can be seized and, finally, the integration would become an axiomatic truth.

It was after the relative refutation of most of the principles of international trade theories (i.e. absolute advantage by Adam Smith, comparative advantage by David Ricardo, the 2x2x2 model by Bertil-Ohlin…etc.) that politicians and scholars began to theoretically formulate new forms of internationalizing business witnessing the liberal enlightenments and having the openness of the markets as a background.

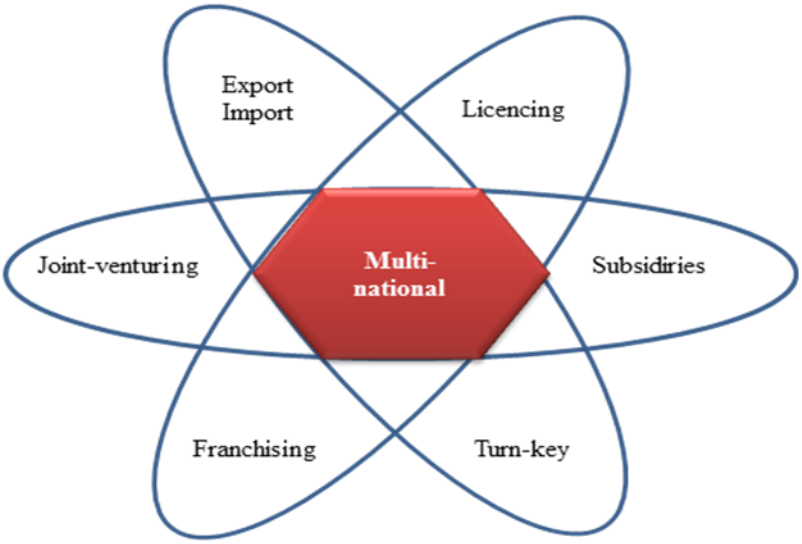
Back to the recent economic history, the interwar period (1918-1939) knew the trade exchange lowest rate ever. Thus, especially it was after the great depression (1929 – 1939) and the consecutive recessions and political instability that the Bretton Woods System (1944 - 1971) came as a new order that calls for: facilitate trade growth, promoting monetary cooperation and stability of exchange rates, establishing a multilateral system of payments and creating a reserve base. Three institutions were conceptualized to ensure the abovementioned targets, namely:

- ✓ International monetary fund: to ensure compliance agreed with respect to trade and international finance and establish credit facilities for the countries with temporary difficulties regarding their balance of payments.
- ✓ World Bank: was created to financial long-term development.
- ✓ The general agreement on tariffs and trade (GATT): aimed at liberalizing world trade.

In fact, the Bretton Woods system opens widely the gate to a new era marked by the globalization in the different aspects: economic, financial, political, cultural and environmental. Herein we do focus on the economic globalization. Gradually, the world economic integration increased and trade exchange marked higher rates. As markets become global, new structures emerged to deal with the new reality.

In this context, a company can cross its conventional borders by means of creating new subsidiaries in other countries rather than its home country, design new products or services to adapt to foreign cultures or languages (without crossing national boundaries), or licensing or franchising some of its services or goods. Thus, we can distinguish between geographic-based and output-based multinationalization. Geographic-based multinationalization includes carrying out a part of the firm operations such as production or commercialization in other countries, whereas product-based strategy can be seen through franchising and licencing and all the activities that MNCs involve in without moving physically to the different geographical areas. Figure 1 demonstrates the different forms leading companies to be multinational.

Figure 1: Multinational modes



Source: Author's own compilation

Companies involve in multinational strategies due to many reasons. Some of these reasons depend on the company itself, its development requirements, its global vision and its growth strategy, whereas other drivers are related to the destination and the world conditions, as explained in the following paragraphs.

1.1. Reasons for companies to be multinationals

Endeavoring to increase their overall performance and leveraging the technological advances as well as the cheap manpower, within an international competitive framework, multinational companies create new businesses and business deals in other countries where they consider having competitive advantages. However, being multinational has its reasons, as explained in the following paragraphs.

Multinationalization is the main strategy for companies to open new markets in other countries rather than their home ones. This process has become common since the involvement of enterprises in international markets is being increased due to the many positive rewards it offers. For example, by opening new markets, companies are claimed to increase their markets shares. Likewise, they are supposed to strengthen their knowledge arsenal (Li and Lee, 2015, Williams and Lee, 2014), since new marketplaces imply new information, new forms of organization and new cultural values…etc. When involved in multinationalization process, a company is likely creating a sort of cultural interlocks,

enriching its organizational memory and intellectual capital stocks. Likewise, multinationalization is one major source of innovation and value creation (Ahuja, 2000).
More precisely, many reasons that favor the endeavor of firms to be multinational can be summarized in the following points. Companies usually involve in a multinationalization strategy if they perceive their traditional markets to become too small, which impedes the company's endeavor to continue growing in its sector. Thus, companies' natural development necessity is a main driver to enlarge the scope of their operations. In this vein, to access to a bigger market (larger volume) and be able to compete in an industry where other firms gain economies of scale worldwide explains also the multinationalization of many firms.

Likewise, working in a full capacity is usually a major target for many businesses. Thus, a company may seek taking advantage of its idle manufacturing capacity, which leads to thinking over establishing other facilities or even subsidiaries in different advantageous place of the world.

When a company perceives a scarcity of its products in foreign markets, it may find exporting this product to those markets to be an adequate solution, which is a wide gate to shift to a multinational company. This may occur also throughout other modes such as joint-venturing or licensing other companies operating in the same market to do so on behave of the concerned company.

Likewise, diversifying the risks of operating in a single market has been considered to constitute a main reason for many companies to do business out of their natural geographic borders. This implies reducing the demerits of markets imperfections and also the improvisations of suppliers as well as other world risks.

Multinationalization is also seen to influence positively the image of companies on the local markets. Companies then gain prestige and confidence when they become multinational. In other worlds, consumers, competitors and all the stakeholders may evaluate the process of being multinational to be a good sign on business performance and strategy successfulness, which influences their perceptions about the positioning and image of the mulinationalized company. Therefore, many managers seek strengthening the image of their business through involving in multinational strategies.

In some cases, the local markets present some kinds of lock-in due to many reasons such as external supplying crisis or internal political decisions and so forth. This has also been a main reason for many companies to go to other foreign countries, seeking other markets to compensate such a crisis.

Many scholars argue that multinationalization strategies strengthen firms' capabilities to compete successfully with other firms. Thus, it serves as a learning-through-doing process to gain competitiveness through competing with efficient competitors. Therefore, it is also claimed that one of the many reasons of being multinational is to be more competitive in the future. In this sense, multinationalization of companies may occur also as a reaction to the fierce competition in the domestic market or in response to an attack by an international competitor that threatens a company's position.

Finally firms may engage in multinationalization processes because of the fact that a given international market is more profitable than firm's domestic market. Furthermore, it is widely claimed that globalization of economies and markets has opened a wider gate for multinational firms to access to a multitude of resources (financial, raw materials, human resources…etc.). In this sense, many companies target cheaper premises, raw materials and labor, especially in developing countries, which constitutes a main motivation to do business abroad. Likewise, some governments encourage foreign investments through official grants and tax reduction; therefore many companies leverage such situations.

1.2. Rewards of being multinational

The overall rewards of multinationalization of companies, can subdivided into two main blocks: firm-level and country-level. The macro-economic (country-level) advantages can be summarized in increasing investments (through FDI), employment and growth in host countries (Helpman et al., 2004, Desai et al., 2009). Likewise, it helps the host country in increasing its export and decreasing its import requirements. Furthermore, multinationalization influences also the national economic integration and break domestic monopolies. Finally, being multinational implies contributing in the inventions and innovations in the host countries, since more R&D will be implemented by the newly coming companies. Multinationals contribute also in building infrastructures and enhancing the different types of resources of the host companies. On the home countries of the multinationalized companies' level, the incomes derivate from the FDI and the relatively increasing taxes and duties influences the overall revenues of the concerned country, which may influences employment, infrastructure and overall development of these countries (Borensztein et al., 1998, Kose et al., 2009).

On the micro-economic level, witnessing the aforementioned evidences, we can underline three types of merits that the multinationalization of firms offers: production, commercialization, finances and human resources-related rewards.

Production-related advantages can be perceived through the use of the full capacity of the firm enhancing then its productivity (Contessi, 2015). Therefore, it may leverage the economies of scale, gaining then a competitive advantage. Likewise, multinationalization enables companies to take advantage of the less costly factors of production (i.e. labor, raw materials or energy), optimizing and rationalizing their production processes.

Commercialization or marketing-based advantages of being multinational are also a yield of having access to a wider market as well as to securing a relative stability in sales. This proximity serves also in eliminating the cost of international transportation. Likewise, customer proximity may obviously influence the related costs. As the positioning of the products and the image enhancement (internally and externally) is important, in this sense, being international means, for many, performance, growth and confidence. In addition to that, other rewards that may positively impact the commercialization of an internalized company are the fact that cultural barriers disappear as the process go ahead. Finally, all of this enhances also the companies' reaction against competition, which is very important for gaining increased market shares and standing on a solid basis.

The Financial merits of being international firm can be seen in diversifying the financing risks since it enables the access to a variety of international financial resources. The company will also have the opportunity to compensate the results of its different subsidiaries. It is also said that leveraging international tax planning, a firm is likely to "benefit from the opportunities and overcome the problems created by the expansion of the market (Russo, 2007)."

Widening companies scope to be multinational has also positive impacts on human resources of the company (Williams and Lee, 2014). In this context, people are involved in a continuous learning through which they acquire information about the markets, about new forms of doing things, cultures of the hosts countries and so forth. Likewise, the experiences of these people that will be back to the home country may influence the national markets, which can be seen as a form of enrichment.

1.3. Negative consequences, obstacles and critics of multinationalization of companies

Although Multinationalization is likely beneficial for companies, it has many obstacles and negative consequences. International markets (especially south markets) face a main problem of stability. Although, the lack of political stability is usually perceived in many southern countries, other elements intervene negatively in the markets normal working. For example, applicable legislation of some (south) countries hinders many innovative endeavors and behaviors that many north multinational companies target.

Concisely, the obstacles that the companies willing to move to multinational levels, can be classified into six categories based on the nature of the obstacle itself, i.e. financial, commercial, logistic cultural, legal and administrative. In this sense, companies may face financial problems impeding the realization of their strategic expansion worldwide. They may also face commercial impediments mainly lie in the unawareness of business opportunities and information about the new destination. Firms may also suffer logistic problems such as the potentially high costs of transport and lack of coordination and control in the case of internationalization through other forms rather than subsidiaries.

Cultural obstacles appear widely in the strategic thinking about the multinationalization of companies. For example, the cultural arsenal of the companies may chock with the host culture, values and tastes. In this sense, companies should find a solution to the language impediment and, at the same time, adapt to the new cultural and social environments.

Legal, institutional and standardization restrictions may hinder the process of multinationalization, since tariff barriers (customs duties) and non-tariff barriers (e.g. quality control, health requirements, technical specifications, safety regulations, etc.) may constitute important obstacles hindering the endeavors of companies to open new subsidiaries in some countries. Furthermore, many countries impose some standards regarding not only the technical standards of their outputs but also the repartition of their dividends and the quota of the foreign workers to the national ones (e.g. Yu et al., 2014). Other countries governments may impose restrictions regarding the direct investment of incoming countries.

Consequently, the international expansion of any business is a process through which companies realize, out of their natural borders, some activities of the value chain in order to be closer to the end customer, from there; they begin progressing in their endeavors, assuming greater levels of commitment.

Finally, it is claimed that multinationals destroy, in some cases, the local competition and that their R&D outcomes are designed not to meet the needs of the host countries, but for realizing MNC's own strategies and interests. Likewise, multinationals are widely accused to threaten the sovereignty of host (poor) countries, since their bargaining bower is sometimes prejudicial to local affairs. Moreover, the debate about global pollution tends to point at multinationals as a main potential source of pollution worldwide (Leonard, 2006).

2. NETWORK THEORY AT GLANCE

A network is simply a concrete pattern of relationships established among entities in a determined social space. In business context a network is a set of special relationships and ties that links a given number of companies. Literature sustains that "network theory is a powerful methodology that has been widely applied in complex systems and fields where there exists a strong interdependence within entities" (Ruiz-Martin and Poza, 2015). Furthermore, network analysis theory (Freeman, 1991, Osborn and Hagedoorn, 1997) has become a framework of infinite researches in different fields aiming at extending our understanding about certain social and behavioral phenomenon. It focuses on how interactions among entities constitute a framework that can be "studied and analyzed in its own right" (Galaskiewicz and Wasserman, 1994). Scholars use the network analysis theory that bases on many principles and systemic assumption to understand the relational context and the related hidden drivers as shown in table 1.

Table 1: Network analysis principles and assumptions

Principles	Assumptions
• Behavior is interpreted in terms of structural constraints on activity rather than in terms of inner forces within units. • Analyses focus on the relations between units. • A central consideration is how the pattern of relationships among multiple (actors) jointly affects network members' behavior. • Analytical methods deal directly with the patterned relational nature of social structure.	• Actors and their actions are viewed as interdependent units. • Relational ties (linkages) between actors are channels for transfer of "flow" of resources. • Network models focusing on individuals view the network structure environment as providing opportunities for and constraints on individual actions. • Network models conceptualize structure (whether social, economic, political, and so forth) as enduring patterns of relations among actors.

Source: Rowley (1997)

As depicted in table 1, the main focus of network theory is that actors (e.g. companies) are interdependent and influence each other according to their positions in networks. Evidently stronger companies, in terms of R&D activities, leverage higher benefits from establishing networks (Laperche, 2007). Furthermore, the linkages among the actors forming the network serve as canals for resources flows. In addition, one major key consideration of this theory is that the behavior of each individual affects the group; therefore relationships are structured.

Establishing relationships and ties (i.e. networks) is a major aim of companies engaging in developing ongoing growth strategies. Conventionally; these *linkages* target knowledge creation and acquisition as well as innovation development (Freeman, 1991, Guan and Liu, 2016, Goes and Park, 1997). In this vein, globalization of R&D justifies the involvement in inter-firms relationships and collaborations since the geographical diversification of R&D addresses the benefits to absorb and combine specific technological capabilities of different national systems of innovation (Cantwell and Janne, 1999). Others such as Mansfield *et al.* (1979) argued that the need to respond to technical design requirements of different markets and support manufacturing activities abroad is a main motivation, because in this type of activity matching customers feedback with the manufacturing units of the company is essential. Likewise, Klepper (1996) considers that the product life-cycle determines the multinationalization process of companies since new products are first introduced mainly to meet local needs and then to be exported to similar countries in terms of needs, preferences and incomes and finally expand, over time, to more countries.

Internationalization of R&D is a main driver of collaboration amongst multinational companies since developing the needed innovation requires different inputs from different stakeholders and market players. However, the geographical characterizations may influence positive or negatively the innovation networks performance. Since synergetic effect among companies is, in some hindering environments minimal.

3. SOUTH COUNTRIES MAIN ASPECTS

Although the denomination "south/north countries" is polemic, there is a somehow consensus among researchers about its economic, political and social implications. Despite the origin of this term, it stands for a presumed geographical delimitation of a block of less developed countries in comparison with the other subset of the world. In an etymological-economic sense, the term *"south"* aims emphasizing the perceived gap among the economic developed countries and the under-developed ones.

In order to confine and define the countries covered by the description "south", it is necessary to identify the North countries and then drop the rest of the world in the south's box. In general, northern countries are marked by main characteristics such as a high Human development Index (HDI between 0.85 and 0.94)[1], a high GDP / inhabitants, high technology, finance, innovation, research and development indexes and stable political systems with mature population and greatly developed infrastructures. North countries can be subdivided into two main groups with perceived parities: A first group including powerful countries such as United States of America, Japan and Eastern Europe. These countries are undoubtedly the global economic engines. A second group includes Russia, Canada, Australia, New Zealand, Eastern Europe and South Korea...etc. These are classified as southern countries, even though they account with less development in comparison with the first group.

South countries block, then, include the remaining part of the world. It can be portrayed through three main categories according to the socio-economic development: the block designated as *emerging* countries which is mainly composed of China and India, the block including Brazil, Mexico, Argentina, Venezuela and South-Africa, the block composed of oil-producing countries such as Iraq, Kuwait, Kuwait, United Arab Emirates, Saudi Arabia, Qatar and Iran and finally the Maghreb and North African countries and South American countries that are not included in the BRICS, black African and Asian countries that are the least developed countries.

Although there are common characteristics and denominators among all the south countries, the ones included in the first block are characterized by being technologically more developed with important market potentials. They are considered as the future world markets and the real competitor to the *first world*.

Despite the Brandt line considerations, south countries encompass mainly the countries with relatively lower socio-economic indexes such as per capita income and HDI (Edirisuriya et

[1] More information in: http://hdr.undp.org/en/data

al., 2015, Paroussos et al., 2015). Likewise, they are characterized by being deficient in terms of social, education and health systems[2]. Furthermore, lots of their political systems are either still in transition period or clearly authoritarian and dictatorial. The economic activities in south countries are in most of cases under-developed, since the related policies are still in-between of applying the capitalist system principles and incompetence of the policymakers to conceive a real and efficient economic measures enabling leveraging the infinite internal and worldwide resources. The demographic explosion and disordered development marks also these countries which influences negatively the endeavors and policies of carrying out controllable development strategy[3]. In sum, south countries are still suffering from many critical problems regarding the development in its wide manifestations.

4. THE CAPABILITY OF MNCS TO BUILD AND LEVERAGE MULTINATIONAL INNOVATION NETWORKS: HOW DO THEIR ABSORPTIVE CAPACITIES MATTER?

As already discussed, the *network analysis theory* (Freeman, 1991, Osborn and Hagedoorn, 1997) emphasizes the role of the collaborations and networks among organizations, since "two heads are better than one". These relationships can be formal contractual such as strategic alliances and joint-ventures, or informal such as inter-organizational flow through people: connections, mobility, social networks that cross-organizational boundaries. Innovation, according to this theory is a process of search and discovery of newness from unlimited sources (Chesbrough, 2003).

By definition, a multinational company is a firm that operates in more than one nation. This implies that it is naturally multi-relational, not only for the mere execution of its conventional operations but also for leveraging extra-national knowledge and developing innovations (Uzunidis and Boutillier, 2012). This, in turn, depends on its capability to identify and then leverage the existing knowledge. In other words "organizations can produce more innovations and enjoy better performance if they occupy central network positions that provide access to new knowledge developed by other units. This effect, however, depends on units- absorptive capacity, or ability to successfully replicate new knowledge" (Tsai, 2001).

Although a multinational is supposed to enjoy wider relationships and diversified resources, some companies' ability to establish networks for carrying out innovation may depend on their overall capability to absorb knowledge. This main competency in conditioned by the human and material capabilities of the company itself. In this context, it seems to be important to recall the definition and dimensions of the absorptive capacity as reported by literature, in order to make some projections according to the specificities of MNCs.

Historically, the concept of *absorptive capacity* is rooted in macroeconomics, in which it refers to "the total amount of capital, or the amount of foreign capital, or the amount of foreign aid (capital plus technical assistance) that a developing country can use productively" (Adler, 1965), or to the overall ability of an economy of a country "to utilize capital productively" (Feeny and de Silva, 2012). However, the broad capacity of a given economy to leverage external material or/and financial resources is no longer the appropriate measurement, especially in the globalized economy-of-innovation era. A shift then from

[2] For more information see: http://www.worldbank.org/
[3] For more information see: http://hdr.undp.org/en/data-theme/demography

financial resources to knowledge ones is recognized, forming a backbone of a bulk of literature about the evolutionary theory.
It is claimed that the term was borrowed to management primarily by Cohen and Levinthal (1990), defining it as the ability of companies to leverage the information existing in their environments. Later on, Zahra and George (2002) re-conceptualized the term, reassigning four dimensions to be “the ability of companies to recognize, assimilate, acquire and exploit the extramural new information and knowledge”. Assuming these dimensions and making projections on the multinational context enables highlighting their influences on multinational innovation networks. The components and importance of these dimensions are exhibited in table 2.

Table 2: Dimensions, components and importance of absorptive capacity

Dimensions/Capabilities	**Components**	**Role and Importance**
Acquisition	* Prior investments * Prior knowledge * Intensity * Speed * Direction	Scope of search Perceptual schema New connections Speed of learning Quality of learning
Assimilation	Understanding	Interpretation Comprehension Learning
Transformation	Internalization Conversion	Synergy Recodification Bisociation
Exploitation	Use Implementation	Core competencies Harvesting resources

Source: Zahra and George (2002)

According to the model by Zahra and George (2002), companies should be able to recognize and assimilate the importance of the knowledge existing in their environments. Furthermore, they assume that such a capability is crucial for new connections and speed of learning and interpretation. Since MNCs usually face a problem of quickly understanding and decipher the key features of the new environments and given that companies differ according to their abilities to do so, this witnesses that the early birds catch the worm and that the stronger is likely who leverage the situation the most. In this vein the wider is the experience of the MNCs and the stronger is its ability to know the valuable information regarding specific markets, the stronger are their abilities to establish, and take advantage of, networks for developing successful innovations.

The ability to acquire and exploit the identified and assimilated knowledge is also a key towards successfully re-codifying of newly acquired information. This competence requires, in turn, a familiarization with foreign markets, conditioning to a large extent, the capability of companies to take advantage of networks tradeoffs.

5. MULTINATIONALS WORKING IN SOUTH COUNTRIES: HOW NETWORKS IMPACT INNOVATION STRATEGIES

It has become almost evident that the development of innovations is a strategic activity that enables companies to achieve competitive advantage and performance (Damanpour and Evan, 1984, Calantone et al., 1997, Guan et al., 2009, Zheng-Zhou, 2006). However, developing a successful innovation strategy involves making a series of decisions and also implementing a series of organizational skills and capabilities. These skills or competences can be engendered through networks (Danneels, 2002, Molina-Castillo et al., 2011, Goes and Park, 1997, Antoncic and Prodan, 2008).

Further, cooperation and networks among companies is likely a strategic orientation for innovative companies aiming to cope with change requirements (Chesbrough, 2003, Gnyawali and Madhavan, 2001, Tidd, 1995, Tsai, 2009). Recalling Miles and Snow (1978)'s four strategies (prospector, defender, analyzer and reactor), they argue that companies develop their adaptive strategies according to their perception of their environments. According to them, organizations that adopt *prospector* strategy prioritize innovation to meet new and changing customer needs and desires and to create new demands. The main characteristic of this strategy is that often leads the company to burgeon in changing and dynamic business environments, and succeed in discovering new opportunities. Moreover, they often foster creativity.

The maintenance and evolution of firm's organizational competences depend on innovation strategy it adopts (Brockhoff and Guan, 1996). Many researchers considered that networking competences are positively related to the settled innovation strategy (Akgün and Lynn, 2002). Others such as Ali (2000) argue that the involvement of networks and alliances determine to what extent the innovation strategy succeeds. Likewise, Zheng-Zhou (2006), argued that an innovation strategy requires higher investments in R&D which targets mainly the exploration of extramural technologies for developing innovations.

Consequently, companies that are characterized by being pioneers in adopting pro-innovation strategies (e.g. prospector organizations) may have to develop additional measures; favoring networks and alliances that enable them to develop innovations for potential future markets (Miles et al., 1978). In sum, multinational companies that adopt strategies that clearly foster innovation is likely more involved in networks.

Based on the above evidences, cooperative ties for innovation purposes are needed everywhere in nowadays globalized markets; however companies operating in south countries may face real challenges in establishing networks for innovations. These challenges can be reflected in the following key issues.

Although the globalization of R&D is significantly growing whereas traditionally MNCs develop most of their main R&D in their home countries (Uzunidis and Boutillier, 2012), the intellectual property problem remains a convincible reason limiting the geographical scope of R&D worldwide. This implies that the demand to innovate abroad and thus establish international networks for innovation may be reduced in terms of both quantity and quality, especially in south countries where the IPR is not firmly protected (Tanaka and Iwaisako, 2014).

The host environments have obviously their own specifications and, in this case, imperfections. Especially, less developed markets are usually subject to countless hindering features that impede the settlement of foreign ties and innovation linkages. For example, MNCs working in Asia may prefer not entering in local networks since the imitation and diffusion of information is highly recognized. In this case, many companies enter in external-to-external networks, instead of establishing local-to-external ones, which shape its main strategy to bring to live innovative and adaptable outputs. In less developed countries, the incubator legislations may limit formal external-to-external relationships, instead of encouraging internal-to-external ones with the sake of absorbing foreign innovations.

Finally, the fact that MNCs networks in south countries may be either limited or insufficiently efficient due to the many reasons that are already mentioned should obviously impact the innovation strategies of these MNCs, since in nowadays globalized R&D and markets "a woven networks all around the world aiming at collecting a great number of information conversable into innovation" is likely detrimental for strategic orientations of MNCs (Uzunidis and Boutillier, 2012).

CONCLUSIONS AND FUTURE RESEARCH TENDENCIES

The fact, that innovation networks are nowadays highly needful thus MNCs could economize and leverage external relationships in developing new outputs. However, doing so is not easily reachable for companies operating in south countries, due to the specificities of these latter. Companies should know and leverage local markets needs and then behave adequately to satisfy these requests. Therefore, they should establish local networks to acquire knowledge and then develop innovations. Although these networks are highly valuable sources of knowledge, the manipulation of that information may be limited to the mere local markets. Thus, they have also to establish multinational external linkages to respond to potential and emerging markets. The cost of developing such strategic linkages is sometimes significant, since companies have to foster their own absorptive capacities in order to leverage the related rewards.

The stronger is a firm, in terms of R&D, the more it cooperates within technological networks, thus enriching and developing its fund of knowledge in order to build up new knowledge and to implement new innovation processes (Laperche, 2007). Thus, mingling this evidence with the heterogeneous learning and adaptation capabilities of companies operating in southern countries enables questioning the role of their absorptive capacity in establishing fruitful innovation networks.

Based on the aforementioned arguments, I propose two main hypotheses for possible analysis in future empirical studies. *Proposition 1: Multinationals' capabilities to build international innovations depend on their absorptive capacity. Proposition 2: Multinationals' capabilities to build international innovation networks condition their innovation strategies.*

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