MARCHE POLYTECHNIC UNIVERSITY

FACULTY OF ECONOMICS "GIORGIO FUÀ"

Doctoral school of management - 15° ciclo nuova serie (XXIX ciclo)

The Role of Business Innovation in the Internationalization Process: Loccioni Group Case Study

Curriculum Supervisor:
Prof. Gian Luca Gregori

Ph.D. dissertation of:
Frans Hysa

Academic Year 2015/2016

TABLE OF CONTENTS

INTRODUCTION

In recent years globalization and internationalization have become crucial to companies success or failure; new organizational forms such as alliances, agreements and other forms of business networks have become key-drivers for the opening of companies to international environments. Studying the internationalization process of small-medium enterprises gives a perception of how currently markets have become highly competitive.

This research is focused on innovation management, relationship marketing and internationalization processes. The objective of this research is to understand and analyze dynamics and connections between relations management and innovation strategies and how enterprises successfully adopt those in the internationalization process.

The research approach adopted is methodical, particularly directed to the review of the part played by open innovation (that includes necessarily relations) strategies to support the international processes of SMEs. The research has been developed with a case study methodology trough a positive and deductive approach (Silvestrelli, 1994). Yet, considering the author's physical presence for two years within the company (Loccioni Group) taken in consideration, there have been possible direct observations and analysis (interviews, surveys, meeting with management, access to corporate documents).

The study starts with an introduction to the main academic contributions in the management and relationship marketing field. Afterwards, it analyzes the two

interconnected themes of open innovation models and processes of internationalization among small and medium-sized enterprises, in order to detect the major empirical results and advance future theoretical evolvements.

In the modern literature of relationship marketing many authors have striven to define a new marketing paradigm (Kotler, 1992; Gronroos, 1994; Gummesson, 1999) or adjust outdated paradigms (Sheth & Parvatiyar, 1993; Morgan & Hunt 1994; Gummesson, 1997; Buttle, 1997). In fact, relationship marketing represents a great novelty due to the swift from unilateral and immediate transactions to long-term relations. Connecting with multiple actors that gravitate towards the company becomes a primary component to reach the competitive advantage (Morgan & Hunt, 1999).

Therefore, in the last decade corporations innovation processes have seen deep changes for several reasons: global crisis, intensification of international competition, reduction of products life-cycle and consequently increasing costs of R&D. This turbulent context brought about new dynamics in the innovation system with the introduction of Open Innovation paradigm (Chesbrough, 2003a; 2005) and an increasing inclination to collaborate with external actors such as companies, suppliers, competitors (Castaldo, 2011), universities and research centers (Perkmann & Walsh, 2007), consumers and lead users (Von Hippel, 2005).

Considering this scenario, two fields attracted researchers' attention: the Open Innovation (Chesbrough, 2003a) and innovation networks (Powell & Grodal,

2005; Pyka & Scharnhorst, 2009).

The research provides a real breakthrough in the correlation between innovation networks and open innovation in the internationalization process. The first consideration is that clients must be seen under a wider perspective: clients can be suppliers, distributors, end-user, buyers, etc. Reticular networks compose today economy where relations are key-drivers in innovation strategies as well. In fact, creating trust and commitment is the starting point to manage these complex networks. Companies have to be open to external relations while innovating.

The document is divided in four chapters covering scientific literature, case studies and empirical analysis.

The first chapter develops an analysis of existing scientific contributions to management and marketing, with specific focus on relationship marketing in the industrial market (interactive and networking approach).

The second chapter defines the role of relationship's approach to innovation. After an introduction to XX century's innovation, which has been represented mainly by closed innovation strategies, the research develops an attentive analysis of open innovation paradigm. In fact, within OI[1] strategies become crucial the role of relations and the old concept of internally developed innovation throughout R&D is outmoded. Yet, the second part of the chapter emphasizes on the startups environment, which is considered the one with the highest rate of innovation; this emphasis includes the analysis of startups' role in the innovation process, relations between corporations and startups and an analysis of the main actors involved in

[1] OI: Open Innovation

investing on startups: private equity and venture capital market.

The third chapter introduces the role of innovation (also throughout networks & relations) in the international process with reference to the main theories, the role of internationalization, the advantages and disadvantages on adopting open innovation strategies in the organizational structure. In fact, the chapter studies how adoption of open innovation strategies, also by leveraging companies' networks and relations, could facilitate the internationalization process of corporations. In particular, it is analyzed a specific tool of open innovation: the corporate venture programs. Indeed, these programs of collaboration and/or investment on startups could provide an important tool for companies seeking to innovate and get international. In the second part of the chapter there are two case studies: the first analyzes how French corporations are strongly investing in corporate venture capital in the recent years; the second case study analyses how Telecom Italia, an important Italian IT corporation, has adopted corporate venture programs thought its acceleration program and investments in corporate venture capital.

In the fourth chapter the research goes deeper into the analysis studying the Loccioni Group case, which is the main case study of this document. After briefing the reader about the company history from its foundation to the creation of the marketing and research for innovation departments, the analysis focuses on Loccioni's internationalization process finding a match with the scientific contributions widely discussed earlier. The analysis of the international process

has included the study of Loccioni's networks & relations and open innovation strategies. In the second part of the chapter, the author takes a proactive approach trough the proposal of a deeper adoption and implementation of open innovation strategies in the internationalization. Yet, this step forward includes consequential processes starting from the introduction of corporate venture capital and corporate acceleration/incubation initiatives to merger and acquisitions activities in the long run. The chapter, and the overall research, provides directions for future research in innovation management related to the internationalization process undertaken by SMEs.

1. FROM PRODUCTION MARKETING TO RELATIONSHIP MARKETING

1.1 MANAGEMENT IN THE SECOND INDUSTRIAL REVOLUTION, GREAT DEPRESSION AND NEW DEAL

This research is aimed to point out the role of innovation in the internationalization process for a company operating in the industrial business.

The first part is focused on analyzing and describing the literature in the marketing field. Likewise, it is relevant to describe deeper the characteristics of the business market against the consumer market.

Marketing is relatively a recent paradigm, considered as an important field of management. Its origins are found in the United States right after the second industrial revolution, which took place between 1870 and 1914[2].

In this short timeframe workers saw an unprecedented shift in their daily working activities. In fact, that period has been characterized as one of the most fruitful and dense in innovation history (Mowery & Rosenberg, 1989).

Blue collars do not work on each process of the good being produced; instead they actively get specialized in one technical activity with the result of a substantial reduction of costs and time of production increasing volumes and earnings for the company.

This early stage management of the production brought in some industries (steel,

[2] Although a number of its events can be dated to the 1850s, it is clear that the most influential inventions took the highest point in the last thirty years of the XIX century.

automotive, etc.) the growth of economies of scale[3].

The regeneration of the traditional management has been possible trough the American contribution. In fact, American innovative policies were conceived as a response of requirements of the modern society having an historical impact for the next generations. As previously observed, starting from the XIX century it is evident the significance of the American experience in this process. In fact, the American experience stands out significantly compared to the British. During this period there are several governments that take direct entrepreneurial responsibility pointing to economical activities that are crucial for strategic sectors in their territories (railway system, dams, banks) (Shonfield, 1967). The principles of the *laissez-faire* [4]were dominant into the American economic system during the last twenty years of the century, under the republican government.

Starting from 1880 to 1900, as a consequence of *laissez-faire* policies, American economy faced a massive concentration of wealth in few, large, private corporations. This is considered one of the main causes of the crisis that hit economy in the 1929 (Roosevelt, 1933).

In fact, second industrial revolution is followed by the biggest economic crisis that United States of America have ever seen: the Great Depression [5]which took

[3] Reduction in cost per unit resulting from increased production, realized through operational efficiencies. As production increases, the cost of producing each additional unit falls.

[4] One of the guiding principles of capitalism, this doctrine claims that an economic system should be free from government intervention or moderation, and be driven only by the market forces.

[5] The Great Depression was an economic slump in North America, Europe, and other industrialized areas of the world that began in 1929 and lasted until about 1939. It was the longest and most severe depression ever experienced by the industrialized Western world.

place in October 1929 with the collapse of the stock market.

The United States first and the rest of the industrialized Western world fell in a deep crisis that lasted for a decade. By 1932 the stock prices had dropped to only one fifth of their value of just three years before. The crisis spread into the economy contaminating investors, banks, and financial institutions leading them to insolvency. It determined a lack of confidence in general with a result of drastically falling levels of spending and lack of demand (with its consequences on the manufacturing system and employment rates).

The modernized world faced, what initially started as a financial issue, a stronger slump with social and economical consequences. The crisis is crucial for the creation of the modern liberalism considering the incredible impact and necessity of renovation brought by the Great Depression. Thus, the relation between the Government and the economy needed to be revised; the result was the leadership taken by the United States into the modern capitalism.

So, urgent changes into the political sphere were required as a response to new needs into the American society.

"In three years of Herbert Hoover's Presidency, the bottom had dropped out of the stock market and industrial production had been cut more than half. By 1932, the unemployed numbered upward of thirteen million. Many live in the primitive conditions of a preindustrial society stricken by famine" (Leuchtenburg, 1963).

The economic turndown determined the election of a new president: the Democrat

Franklin D. Roosevelt who introduced the New Deal[6], a number of major changes in the American economy.

He made history with his first speech to the nation where he declared that "the only thing we have to fear is fear itself" (Rosenman, 1938) giving to the nation a signal of his expectations from the new economic measures adopted.

Roosevelt understood that the United States, and the rest of the world as well, were getting into a new era and trough these new policies he put the foundations for the next economic growth of America. In several public debates, he underlined that in the previous decades the American economy had grown thanks to abundant productive resources, which had been a stable competitive advantage. Roosevelt pointed out how Americans had equal welfare opportunity living in an economic model where private initiatives were valorized thanks to demographic growth, redundancy of lands and technological advantage as consequences of the second industrial revolution. However, that advantage was modified when the power went in the hands of a small number of financial groups. In fact, the creation of monopolies and oligopolies lead to a distortion of the market reducing drastically the effect of the American economic system competitive advantage: an equal opportunity for the population to start a business.

Therefore, considering the great impact of the crisis in the economy, was necessary a new economic path able to increase the purchasing power of the

[6] Roosevelt became President in 1933 and promised a "New Deal" under which the government would intervene to reduce unemployment by work-creation schemes such as street cleaning and the painting of post offices

population trough relevant new policies (Roosevelt, 1933). The president decided to start public investments in strategic sectors for the stability of the economic system and therefore for the welfare of the population.

The New Deal had a huge impact on the American economy and globally as well. In fact, the American liberal system of those years anticipated the modern capitalistic systems; as previously discussed, the public economic initiative was already an asset for American culture, but trough the New Deal it took a systematic role in the economy by the individuation of institutional and entrepreneurial innovative solutions in that timeframe. The process involved a deep institutional transformation of the federal states [7]role. Indeed, the role of the federal government became the crucial element of the New Deal policies (Leuchtenburg, 1968), giving to the government a strategic role for the economic development and social cohesion in the country.

Roosevelt was a visionary leader who understood both how to direct the economy into the long term goals and protect market's mechanisms at the same time as a tutelage of the individual initiative. The integration between public and private initiatives of the American capitalistic model was an institutional response to the economic and social development issues emerged in the origin of the new century.

In conclusion, understanding the strengths of the American innovation in terms of the relationship between public and private sectors of the economy is crucial for a better understanding of this research. In fact, modern economic systems are

[7] The United States (U.S.) or America is a federal republic composed of 50 states and a federal district.

grounded on institutional programs that interpret the relationship between public and private system (Cafferata, 1983). The American experience in the first three decades of the XX century is a benchmark for modern capitalism, in particular for the definition of European capitalistic models. This process has been deeply described in order to describe how modern capitalist systems, and consequently enterprises, can nowadays evolve to respond to the new requirements of the contemporary society (Caselli, 1995).

At the center of the modern liberal thinking there is the relation between State and market (Martellini, 2005). The predecessor of this school is taken back to Adam Smith where the liberal movement assigned to the State and the private sector different and complementary competences; the State has the main role of regulation through a definition of institutional policies able to promote private initiatives, considered as main requirement for the economic and social development. The market has the goal to use completely the productive factors aimed to obtain collective well being. Thus, in this scheme the market is an autonomous entity, which has to intervene following the regulations imposed by the central government; in addition, the economic activity is considered as prerogative of the private initiative, which holds the propriety of the productive factors (Velo, 2004).

Innovation had influenced enterprises both internally and externally, that is why the historical context is relevant for the reader to catch the role if innovation in that period. The analysis of the American capitalistic model underlines how the

relationship between public and private sector has influenced the American economy giving to the government tools for an industrial policy able to support high-risk activities with large aspects of innovation. The new deal modifies the relationship between public and private sector starting an incisive public policy to defend the action of the market following a liberal thinking (Saraceno, 1950; Caselli 1970).

This long-term planning has supported scientific research trough enormous funding with a friendly regulation to collaborations among public-private sector, to technology transfer, patent protection, development of small medium enterprises and encouraging networks among businesses, universities and research centers giving to the economic system a long-term orientation coherent with industrial development needs (Velo, 2007).

The New Deal brought a managerial revolution, the origin of the modern finance, of the business organization and of marketing itself (Leuchtenburg, 1963).

1.2 THE MARKETING ERA: FROM PRODUCTION TO RELATION ORIENTATION

As described in the previous paragraph, marketing origins could be interpreted as consequence of the New Deal policies. As said, it is important to underline the historic context where new theories were generated.

Marketing supports the matching between demand and supply, following the rules that sustain markets and the society. These components of the paradigm operate in order to avoid structural imbalances considering that exists different bargaining power among the economic actors involved. Firms, consumers, market and society of thirties are organized in order to coincide with the Government; public authorities have the condition where they can govern efficiently the whole system (Marris, 1972).

The New Deal introduced considerable innovations such as the creation of welfare and local development policies, creation of authorities[8] to regulate markets, redistribution of powers on behalf of federal authorities. Those innovations defined a deeply re-generated capitalism model, which is defined in literature as neoliberalism.

Several stakeholders [9] started to influence decision-making processes inside the companies. Public authorities increasingly undertake an active role as

[8] An agency or body created by a government to perform a specific function, such as environment management, power generation, or tax collection.

[9] A person, group or organization that has interest or concern in an organization.

stakeholders in the system. Therefore, the managerial revolution can be translated, for the enterprises, as the neoliberal reform introduced by the New Deal (Schlesinger, 1959). Thus, in that context the early marketing theories were born. In fact, their origins are found in the early XX century in the United States where were settled large corporations aimed to produce consumer goods such as Singer, Coca-Cola, Ford, Sears and many others. In the 20s, large corporations strategy was oriented toward the creation of a mass market for their products. In particular, their goal was to maximize their production in order to catch economies of scale in order to supply to the consumers standardized products at a competitive price. Thus, this process involved activities aimed to define an optimal equilibrium between price and quantity, give information, persuade consumers and, at the end of the process, distribute goods.

In literature there are several definitions of marketing from its origin to the modern relationship marketing. The author of this research finds significant a few definitions in order to better describe this chapter:

- "The term marketing includes any activity relating the movement of goods from the point at which they were produced to the one in which they are consumed. Therefore, it includes advertising, promotion, pricing, product planning and the analysis of the market in terms of current and potential customers" (Hepner, 1955).
- Robert J. Keith: "The consumer, not the company, is in the middle. In today's economy the consumer, [….] , is at the absolute dead center of the

business universe. Companies revolve around the customer, not the other way around. […..], marketing is emerging as the most important single function in business" (Keith, 1960).

- Theodore Levitt: "The view that an industry is customer-satisfying process, not a good producing process, is vital for all businesspeople to understand. An industry begins with the custom and his or her needs, not with a patent, a row material, or a selling skill… I do not mean that selling is ignored. Far from it. But selling, again, is not marketing" (Levitt, 1960).

All of the above definitions are valid to describe what marketing is and does; yet defining marketing as a fixed and static component would be reductive, considering its dynamic and flexible intrinsic characteristic which vary depending on the historical and economical timeframe. In fact, marketing can refer to different aspects of the relationship of the company with the market and vice versa.

So, trough the literature it is possible to distinguish among:

- Classical definition: the pool of activities within an enterprise that goes from the design of a product or service to its use by the consumer.
- Modern definition: the pool of activities by which an organization meets the needs of people or other organizations, using products or services, or supporting ideas and values.

Therefore, marketing role is crucial in the enterprises and it takes three different dimensions:

1. *Philosophical dimension:* marketing, as a system of thought that focuses on customer needs satisfaction.

Customer needs satisfaction becomes the primary goal of marketing activities. This philosophical dimension is driven by several principles:

- Individuals are looking for rewarding experiences as motivation
- What is considered rewarding depends on individual choices such as values, culture, and preferences
- Society brings constantly new values that are in evolution; this becomes a threat and opportunity for companies
- Validation of the consumer's sovereignty; individuals pursue their personal interests

The philosophical dimension of marketing implies for companies the necessity to put the customer at the center of their attention, meeting customer's expectations and needs.

2. *Analytical dimension:* it defines the strategic marketing which is an activity based on the analysis and research of new market opportunities.

At this stage marketing department have to set up a deep analysis of the macro environment where the company operates, analyze needs & consumptions dynamics and study potential business areas where the company can enter. The result of the analytical dimension is to provide strategic information for decision-

making departments.

In addition, strategic marketing is relevant for making decisions such as defining product-market fit, selecting segments for each product-market, defining the competitive positioning for every segment adopted and defining what product or service innovation to introduce in the market.

3. *Action dimension:* it is the operation marketing where decisions taken at top management are executed. Thus, these decisions are mainly focused on markets where the company already operates.

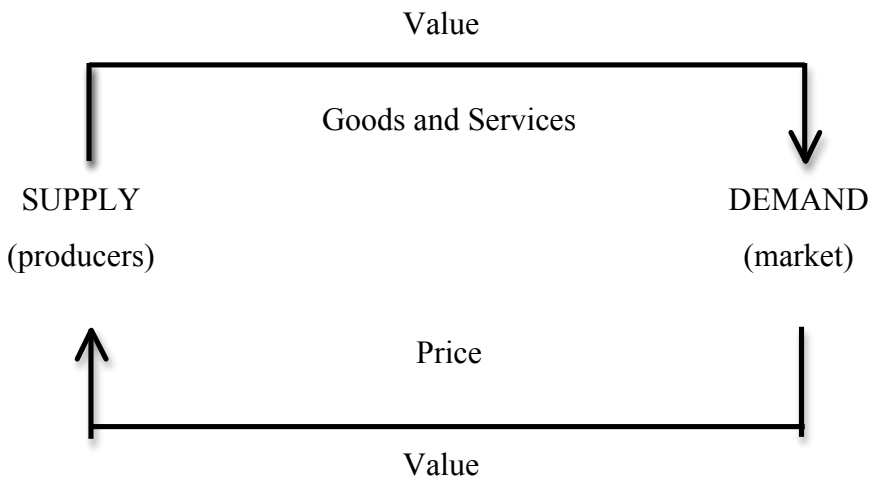
In addition, operation marketing has to interface with new markets and new segments as well. But, operation-marketing department is not in charge of making this kind of decision. On the other side, operation marketing is in charge of making decisions about product, price, placement and promotion. That is the *marketing mix, which* focuses on coordinating the four decisions making tools described above and on obtaining the target goal. So, in order to accomplish company's goals is important to develop a *marketing plan* which includes mission, values, marketing goals, strategic path to follow to name a few. At the end of the process, quantitative data collected in the marketing plan are formalized in the *marketing budget* where are described cost, revenues and expected profits from operations.

4. *Organizational dimension:* it consists in setting up procedures and tools that will be adopted; also includes planning and realization of structures able to allow human resources to manage marketing activities.

Therefore, marketing role is crucial in the company's dynamic since it has to integrate different functional areas.

The following Figure 1 gives a schematic representation of the demand and supply side in the economic system; on the supply side are producers supplying goods and/or services for consumers/other organizations that are positioned in the demand side.

Figure 1 – Demand vs. Supply schematic representation



However, considering organizations as entities that produce goods and services is not sufficient to describe a complex system such as modern economy. In fact, it is relevant to distinguish those enterprises starting from the late XIX century and the decades following it.

In the modern capitalism history Philip Kotler[10] distinguishes several strategies

[10] American marketing author, consultant, and professor; currently the S. C. Johnson Distinguished Professor of International Marketing at the Kellogg School of Management at North-western

adopted by enterprises to approach the market:

Orientation to production: starting from early industrialization process to mid XX century. An excess of demand compared to supply composes the market. The main focus of entrepreneurs is to reduce costs of production, in particular in those markets where price competition is dominant, such as commodities[11] market. Yet, main goal for enterprises is large volumes of production. In this period marketing activities are passive and the production function is much more relevant than marketing function; its activities are limited and merely focused on organizing distribution channels, sales and customer management.

Orientation to product: enterprises are focused on technology adopted into products rather than to the consumer. This strategy is risky because it can lead to *marketing myopia*[12]: a short-sighted and inward looking approach to marketing that focuses on the needs of the company instead of defining the company and its products in terms of the customers' needs and wants. In this scenario consumers prefer quality products with high performances. There is still a market with high levels of demand compared to supply; within companies there is a belief that great products will sell itself with a low marketing effort, but higher than in the

---

University. He is the author of over 55 marketing books, including Principles of Marketing, Kotler on Marketing: How to Create, Win, and Dominate Markets, and Marketing 3.0: From Products to Customers to the Human Spirit. Kotler describes strategic marketing as serving as "the link between society's needs and its pattern of industrial response.

[11] A reasonably interchangeable good or material bought and sold freely as an article of commerce. Commodities include agricultural products, fuels, and metals and are traded in bulk on a commodity exchange or spot market.

[12] The concept of marketing myopia was discussed in an article (titled "Marketing Myopia," in July-August 1960 issue of the Harvard Business Review) by Harvard Business School emeritus professor of marketing, Theodore C. Levitt (1925-2006), who suggests that companies get trapped in this situation because they omit to ask the vital question, "What business are we in?"

production orientation timeframe.

Orientation to sales: main focus is on selling what is produced. It is an inside-out perspective adopted in the short term for unsought good (low visibility), in case of overproduction or whenever there is a saturated market which requires a push on sales channel. The risk of this orientation is the lack of understanding of customers needs, like in the orientation to product strategy. In this scenario there is an oversupply and companies intervene aggressively on the market trough promotion, sales, branding strategies. In fact, branding becomes one of the key factors of differentiation of the product in the market used against competition. So, marketing has to create an efficient sales department in order to manage the sales process where the role of *sales director* becomes crucial for the company's success.

Orientation to market: it represents the opposite of previous approaches; in fact, orientation to market brings the attention of enterprises to understand customers' needs in order to produce coherent goods as a reply to the demand side. Yet, it is a pull perspective of the market where enterprises invest their efforts in understanding their customers' needs and act in order to satisfy those requirements. It could be considered what in the Lean Startup Methodology[13], which will be analyzed later in this document, is called a customer development strategy rather than a product development priority. In this context the concept of

[13] A method for developing businesses and products first proposed in 2008 by Eric Ries

segmentation[14] is created and companies choose which segments to develop and focus their efforts.

- During this period modern marketing tools are developed leading to *marketing management* that is one of the most recent theory regarding marketing; this movement had his maximum development during 80s.
- As result, marketing acquires a crucial role in the company and obtains a key position in defining new product developments that are created considering customers needs in order to give them substantial advantages compared to competition. Indeed, in the organizational framework, marketing assumes a central role in the company where the marketing director coordinates activities such as strategic and operation marketing.

Orientation to relation: starting from 90s the process of innovation of marketing due to huge changes in the production system and in the ICT took organizations to a new period for marketing: orientation to ralations. In fact, orientation to customers has become vital for enterprise since market has become more competitive thanks to technological innovation and globalization.

Globalization[15] has broken the equilibrium created in the thirties between companies, consumers, markets, society and state. The creation of W.T.O[16] is basically considered the origin of globalization; in fact, this new regulation of trades has dismissed the traditional separation between local and international

[14] The process of defining and subdividing a large homogenous market into clearly identifiable segments having similar needs, wants, or demand characteristics. Its objective is to design a marketing mix that precisely matches the expectations of customers in the targeted segment.

market. Thus, with the globalization the neoliberal order is gradually replaced by a liberalist order (Velo, 2007).

Therefore, marketing strategies had to adapt to this new environment, which was completely different compared to the past. The liberal current has always conceived the market as a part of the state governance; market is the place where freedom of economic activity is mandatory and is included in a path where public institutions act as guarantor. The relationship between enterprises and consumers has developed in this path; marketing entered in this process with its contribution to optimize the use of available resources (Drucker, 1989).

In addition, globalization brought in some conflicts between the liberal and liberalist thought. In fact, the market became global while institutions kept a local or continental dimension. Therefore, a conflict for the liberal thought was obvious: it is not logic to define a market a place where there are trades with the absence of the public institution. Within these conflicts in place between the liberal and liberalist thoughts, marketing was unavoidably involved bringing it to a natural evolution: the post-modern era.

Globalization settlement, evolution of the information technology [17]e the role of science had deeply changed the economic and social environment in those years. Thus, these events occurred in that historic period determined, in the current

[15] The worldwide movement toward economic, financial, trade, and communication integration.

[16] The World Trade Organization (WTO) is an international organization dealing with the global rules of trade between nations. Its main function is to ensure that trade flows as smoothly, predictably, and freely as possible.

[17] Set of tools, processes, and methodologies (such as coding/programming, data communications, data conversion, storage and retrieval, systems analysis and design, systems control) and associated equipment employed to collect, process, and present information.

interpretation of the XX century, the raise of the post-modern school of thought.

Post-modern marketing assumes that there is in place a historic transition; in fact, there are new values involved, a scientific revolution (Kuhn, 1977) that determines a discontinuity compared to paradigms shared in the prior era (Melucci, 1998).

Post-modernism is a revolution on the individual prospect first and on the social community later; is a strong distinction from the XVIII century illuminist culture, which founded rationalism. In this era, individuals do not have reference forward institutions. Several researchers of this current agree that post-modern individual is oriented to consumption, amusement, and esthetics; there is a deep transformation compared to the rational homo economicus [18]in the modernism that almost disappears in this new population (Bauman, 2007). Post-modernism individual is described as a person who uses less rationality in favor of emotions, sentiments, and temporary opinions. However, this new approach of the individual determines a decreasing level of the quality of contents and freedom of thought due to uniformity of tools, language, and emphasis, of the research itself. In fact, scientific researchers adopted this new paradigm as well changing the methods they used to adopt for research; they increased the bibliographic research on the internet, self-reference, papers-disclosure without deeper knowledge, giving relevance to the frequency of the citations instead of their content.

Thus, the increasing usage of surveys might be an indicator of the diffusion of

[18] It is the figurative human being characterized by the infinite ability to make rational decisions. Certain economic models have traditionally relied on the assumption that humans are rational and will attempt to maximize their utility for both monetary and non-monetary gains.

these practices; in fact, surveys were conceived to monitor consumption while nowadays are used in most of social behavior analysis fields. Therefore, it is clear the connection between the vision of the post-modernism individual and post-modernism consumer. So, in this post-modernism way of thinking, the momentum of consumption acquires a crucial relevance. Indeed, researchers describe the post-modernism individual as an individualist and aware consumer who aspires to occupy a central position in the market and to influence the supply side with the ambition/result to invert the traditional bargaining power existing between enterprises and consumers (Brown, 1995; Fabbri, 2004).

Therefore, consumers expect higher quality and lower prices in a market that is less closed; they have increased they bargaining power so they select products that reflect the image consumers have of their selves. This new consumer is aware that products and service he or she gets contribute to the quality of his or her life, so the choices he or she makes are increasingly evaluated but not necessary rational.

In conclusion, this conflict between marketing scholars was about traditional marketing limits and its flexibility to adopt to a globalized economy that society was facing starting from ‘70s. As said, the problem was faced with two different approaches. The traditional approach, attempted to overcome single limits trough modification and elaboration of existing approaches. However, this studies could not overcome surmount the *marketing concept* (Kotler, 1986), according to which a firm’s goals can be best achieved through identification and satisfaction of the

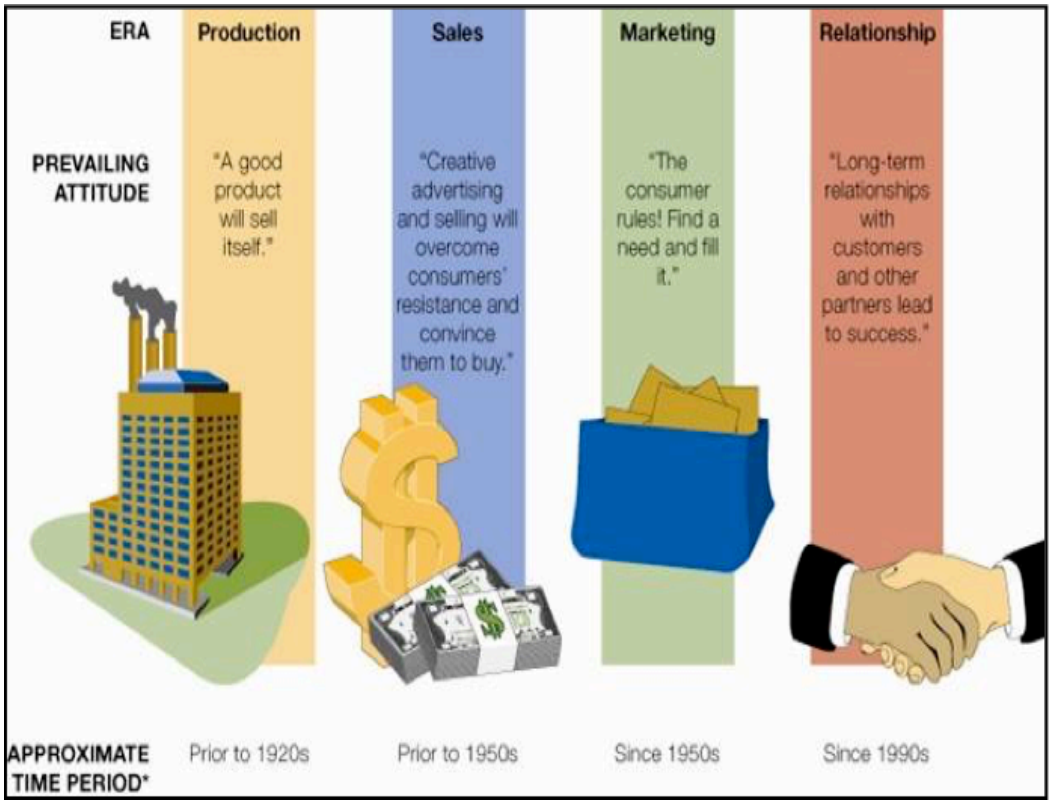
customers' stated and unstated needs and wants. [19]The second approach took a different overture, defining alternative and different approaches considering the traditional thought irreconcilable with the changes taking place (Arndt, 1983).

Therefore, these two different approaches lead to a different classification of marketing way of thinking. In fact, the first approach is seemed as an evolution of the traditional paradigm, as complementary. On the other hand, the second approach is seemed as an autonomous paradigm. Thus, this distinction is clear when is referred to *relationship marketing*. Indeed, some authors identify a substantial compatibility with the basic assumptions of traditional theory enhancing only a partial revision; on the other hand, other authors define this approach on opposite and irreconcilable positions with *marketing management*.

The following figure 2 describes the era of marketing starting from production marketing to relationship marketing.

Figure 2 – The era of marketing

[19] Kotler's elaboration of marketing concept is one of the most relevant which lead to the definition of *megamarketing model* which suggests to more Ps must be added to the marketing mix: public relations and power. Kotler P., (1986), "*Megamarketing"*, Journal of Marketing, vol. 47, pp. 44-54.



Source: discussion on key aspects of relationship marketing. Delivered by Harryadin Mahardika at Universitas Indonesia

Therefore, as a consequence of the critics to the traditional marketing theory, starting from mid 70s there is the development of an innovative approach defined by the *relationship marketing*. Thus, relationship marketing was introduced as a theoretical approach to solve the fact that marketing management was considered inadequate to be adopted efficiently both in industrial and service sectors.

Relationship marketing focuses on *industrial and service sectors* with the goal to start, negotiate and manage relations of trade with key groups of interest in order to pursue sustainable competitive advantages in specific markets, on the basis of long-term agreements with clients and suppliers (Hakansson, 1979).

So, according to this definition, marketing is conceived as a paradigm with the

goal to manage relationships. In other words, marketing should have the goal to create, keep and manage a network of long-term relations. Indeed, the ultimate goal for a company to survive and grow is pursued trough the *relational assets* (Costabile, 2001). In this approach both sides involved have an active role during the transactions between parts. The model of trade considered has bi-directionality since it does not include just goods and their monetary value anymore; it includes also information and social relationships. Furthermore, the novelty compared with traditional marketing is in the timeframe considered. In fact, in relationship marketing is considered a long-term timeframe due to intrinsic characteristic of relationships that require time to be analyzed, built and kept.

Relationship marketing theorizes an increasingly autonomy of the consumer who is conscious of his or her right to relate with companies and distribution channels, in order to obtain a profit of increased bargain power, which respects his or her individuality (Gummerson, 2006).

From the post-modern society analysis the knowledge consumer understands the weakness of the traditional distinction between production and consumption due to consumer's ability to influence decisional processes of the producer. The knowledge consumer has deep information that takes him or her to a higher position, compared to pre-modernism marketing, into the relationship with companies. This higher value of the consumer makes him or her a valuable interlocutor in order to set up production strategies for the company (Zorino, 2006).

Starting from mid 90's, Internet diffusion has drastically changed modern economies and societies developing a new era of marketing called *e-marketing*[20]. This new technology is disruptive. In fact, it does not merely facilitate the diffusion of information but rather is an enabler of influencing consumer's behavior due to his or her relationship on the network. In this new era, the old concepts are drastically canceled and relationships with consumers are changed where connections could be considered as generators of value.

Yet, many researchers agree that we are currently entering a new era for marketing: the experiences era, that could be analyzed as an evolution of the relationship marketing, where enterprises make revenues through the deep involvement of the customer feelings, passions and dreams. The experiences era include tools such as social media, storytelling, blogs and content marketing strategies.

Experiential marketing[21] (or engagement marketing) follows the post-modern theories where individual is put in the center; consumers want to satisfy their whishes due the fact that their primary needs are satisfied (during the production era, Figure 2). This new approach to marketing considers the desire of the post-modern individual to become crucial in the market rather than passively observer of companies' initiatives.

In conclusion, this document is aimed to focus on relationship marketing

[20] The process of advertising and selling products and services on the Internet, for example, on a company website or by email.

[21] Experiential marketing is based on the entire experience a consumer has with a product or service. Whereas traditional marketing sells by pointing out benefits and features, experiential marketing focuses on allowing the consumer to try the service or product for himself

considering the sizable literature available. So, in the next paragraphs the document will focus on analyzing positive interactions between relationship marketing and innovation in the industrial market.

1.3 RELATIONSHIP MARKETING IN THE SERVICE MARKET

During the second half of '70s there is, mainly in North America, an increasingly interest of applicability of marketing concept to the service sector. Thus, stakeholders involved are both researchers and sector operators; this phenomenon could be partially due to the high levels of growth that the service sector faced in those years. Indeed, American labor market in those years had almost ninety percent of new open positions in the service sector[22] (Nasar, 1992).

The born and rise of a specific field of research for the marketing of services has been highly influenced by the efforts of three top institutions: Centre for Service Marketing of Arizona State University (FICSM), American Marketing Association (AMA) and Marketing Science Institute (MSI).

FICSM focused on formalization, collection and re-organization of research papers that had been produced in those years; The American Marketing Association (AMA) organized the first ever press release on marketing of services in 1981 and afterwards created an internal independent department with the objective to implement research on that topic. The Marketing Science Institute created in 1977 the first group of research specific for the marketing of services; academics and sector operators composed this research group in order to consider different perspective of analysis.

As said, relationship marketing adoption found its natural environment in the

[22] In 1970 fifty-five percent of labor was involved in the service sector. This percentage increased to seventy-five percent in 1990.

service and industrial sector; in the service sector there are structural features that enhance the advantages that could be gained by the relationship marketing approach. Indeed, service sector has particular characteristics in the process of supply and purchase of the service, bidirectional information and interdependence of operators' behavior. Thus, in most cases the prospect customer is not able to define with accuracy the performance required until he or her concretely uses the service. The ability of a service to satisfy customers need can be evaluated only in retrospect.

Therefore, it is crucial for the service supplier to be able to obtain consumer's collaboration and activate an information exchange process in order to guarantee his or her satisfaction and increasing the quality perception of the service. In fact, for the consumer could be onerous and require competences the assessment of the service. So, in order to by-pass those limits, the costumer is lead to establish a stable relationship with a single supplier based on trust, in particular for those services perceived as particularly critic such as financial and health services. In fact, for the customer, long-term relationship decreases the risk of opportunistic behaviors by service supplier and negotiation costs (Morgan & Hunt, 1994).

A loyal customer guarantees higher profits for a longer time due to lower cost of activation and keeps stable relationships compared to acquire new customers (Reichheld & Sasser, 1990).[23]

In the recent years, the development of relationship marketing in the service

[23] An empiric research conducted on a sample of 100 companies in the 80's demonstrated that is possible to increment profits by 25% against a 5% rate of customer loss.

sector faced a strong acceleration thanks to development and diffusion of information technology tools. Indeed, when the relationship marketing approach wanted to be implemented in the early years, it came out the high costs of collections and elaboration of information necessary for customers analysis and relationship management. Indeed, the evolution of the information technology allowed to reduce significantly those costs and developed new opportunities for customized relationship management tools.

1.3.1 Customer loyalty development

The most recent researches on relationship marketing, in the service sector contest, are focusing especially on customer loyalty, which has gained an increasingly strategic role for companies due to a different competitive environment they are facing.

Bendapudi & Berry are two researchers that have given the highest contribute to study the customer loyalty dynamics. They have developed an interpretative model (figure 3), which identifies the variables that act on consumers motivations in order to keep long-term relationship with service providers. So, potential customers make decision based on their motivation.

In particular, operators have to consider two main aspects: customer's desire to establish a long-term relationship and the rate of dependency developed. In fact, considering an economic analysis, these aspects could be seen as costs the customer have already sustained in order to establish the relationship with the service provider and costs he or she should have in case wants to have a different

service provider.

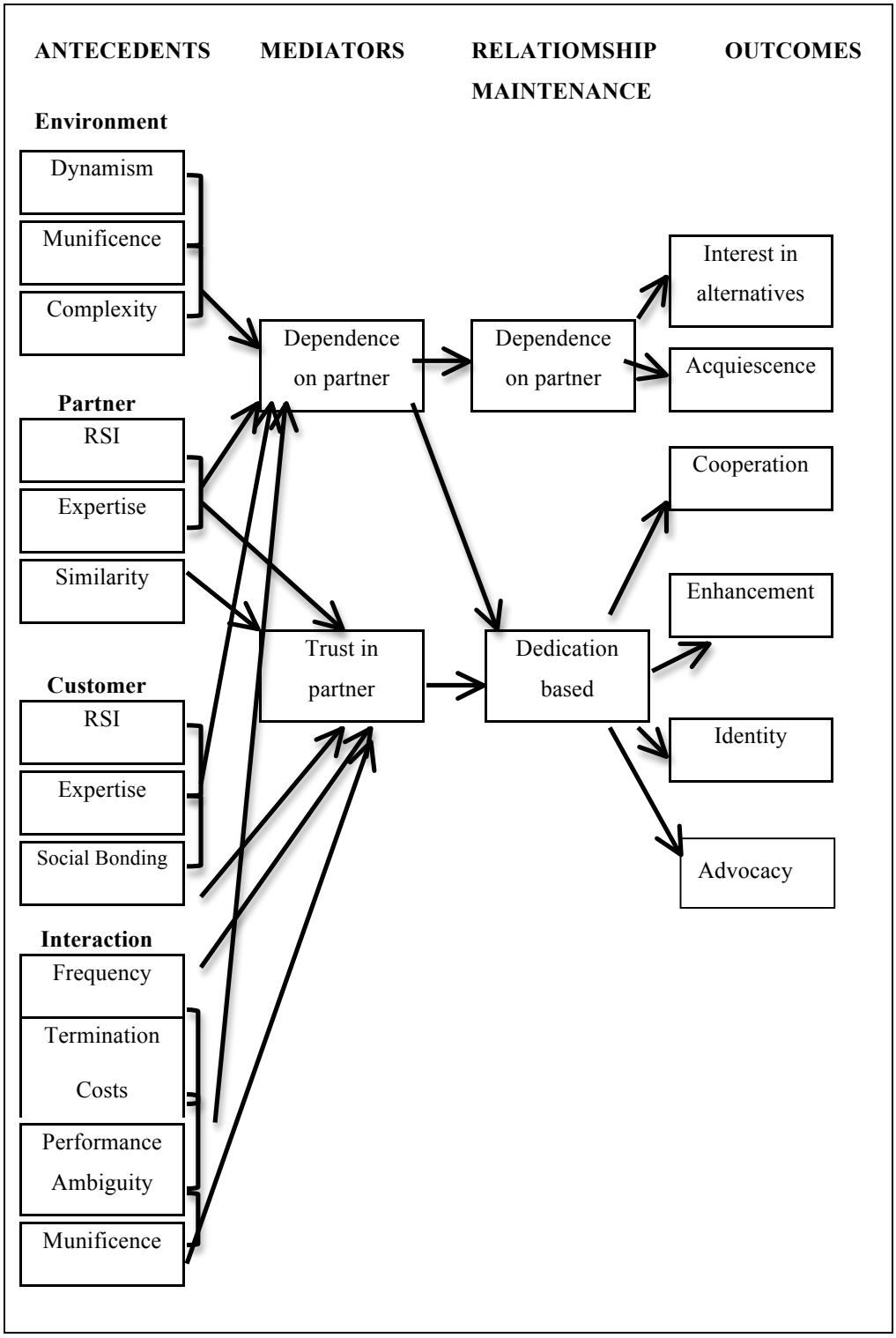
Therefore, in some cases consumers keep stable relationship with their suppliers because they have developed a high rate of dependency [24]from them and they do not have concrete alternatives. So, in this case, a lack of collaborative environment and trust between actors involved encourages opportunistic behaviors, putting in danger the long-term relationship itself. On the other side, whereas the long-term relationship is kept basically due to both sides will, it generates a strong faith between customer and supplier with the result of a considerable reduction of negotiation costs.

Bendapudi & Berry model identifies four different variables that influence relationships' characteristics

- Environmental variables
- Service provider characteristics
- Consumer characteristics
- Variables of interaction

[24] Levels of customization of the service required influence dependency rate; this includes adaption processes that both sides have developed. So, in case of termination of the relationship, there are costs of adaption involved (switching cost).

Figure 3 – Model of relationship maintenance from the customer's perspective



Source: Bendapudi N., Berry L.L., (1997)

Considering the environment where operators act, the model considers the following variables:

- Dynamism
- Complexity
- Environmental munificence (the capacity to support operators growth)

Dynamism: this characteristic of the environment influences the forecast capacity of companies. In order to reduce this level of uncertainty, parts involved could adapt long-term relationships; with higher dynamic environment there is a higher dependency relationship between actors involved.

Complexity: it refers to the heterogeneity of activities that a single operator has to manage. Thus, considering the particularity both of products traded and of the process of delivery of the service itself that distinguish this sector, consumers will search for an unique supplier able to satisfy most needs. So, higher complexity, quantity and importance of needs satisfied by one supplier, higher will be consumer's dependency.

Environmental munificence: it refers to the capacity of the environment to supply operators the necessary resources in order to guarantee survivor and, most relevant, growth. Therefore, with a high number of relations activated there will be a lower level of dependency between actors involved due to the variety of alternatives available.

The behavior and involvement in the relationship of the service supplier cause an important effect on client's perception of the relationship itself that impact on the

possibility to keep and develop it.

In fact, Bendapudi & Berry's model considers further variables that defines supplier's characteristics:

- *Specific investments operated*: includes investments in several areas such as human resources training, new infrastructures realization, internal re-organization, and development of new processes of trade to name a few. These investments clearly identify the involvement of the parts in the relation and supporting it to create a mutual trust. In addition, investments increase the value of the service perceived by the customer; as a consequence the customer will have a higher dependency on that specific service supplier and would effort higher costs in case of interruption of the relation.
- *Experience level***:** in the services context the level of experience of the supplier assumes a particular importance due to customer's difficulty to evaluate alternatives. Experience is a characteristic hard to estimate; having a relationship with a supplier with a known experience increases the dependency level. On the other hand, it also should be considered customer's level of experience and valuating the starting point of the two parts involved in the deal.
- *Degree of affinity*: the perceived similarity between parts contributes to generate an environment of trust among them thanks to shared values.

Supplier's behavior affects the possibility to build a long-term solid relationship. On the other side, customer's behaviors influence characteristics of the

relationship and its chances of being pursued on the long run.

So, the model includes three variables that are influenced by customer's behavior:

- *Specific investments***:** this variable has the same meaning of the supplier side. Thus, in this case, investments stand in time and costs for researching and valuating the supplier.
- *Level of experience:* customer's experience is mainly influenced by the capability of evaluating alternative services. So, consumers with less experience tend to underestimate risk by choosing a unique, trusted supplier able to satisfy the higher amount of needs. This turns into customers' dependency on service suppliers.
- *Social constraints:* personal and social relationships between the actors involved in the relationship have a crucial role in particular for the customer's side. Social constraints create an environment of trust between parts involved and it becomes harder for potential competitors to create a new relationship.

Each episode that occurs between supplier and costumer could potentially influence the relationship among them; Bendapudi & Berry's model considers different variables of interaction:

- *Frequency of episodes of contact:* this parameter will be higher in case of a relationship where there is a unique supplier for several services. However, in order to create a positive dependency perceived by the customer, it is important that episodes of contact give to the customer a sense of continuity

instead of a single transaction[25].

- *Cost of relation interruption:* these costs could be monetary (in terms of specific investments applied), research of a new supplier and psychological (in terms of lost of trust). So, when parts involved give a high value to these costs, there will be a stronger stability of the relationship itself. The actor (customer or supplier) with a higher level of dependency will have a higher perception of costs of relation interruption.
- *Opportunistic behaviors:* when these behaviors are poor or easily trackable, consumers and suppliers will prefer to have access to the market with single transactions with several counterparts; on the other hand, when there is a high presence of opportunistic behaviors on the market, it would be more convenient for consumers or suppliers to start and develop a long-term relationship involving mutual. Thus, the risk of opportunistic behaviors by service suppliers is really high due to the intangibility of the "goods" traded.
- *Level of satisfaction:* it has to be considered the level of satisfaction that parts have perceived in previous interactions. In fact, a good level of satisfaction increases costs of relationship interruption and increases risks of getting a worse service in case of using a different service provider.

As previously analyzed, the variables defined in Bendapudi & Berry's model highlight two characteristics that strongly influence relationships: mutual trust and dependency. As a consequence, these characteristics shape the willingness to start

[25] It is important that the customer has always, when possible, the same referents; it helps also to create and keep personal relationship (social constraints).

a new solid relationship, more specifically, some aspects such as:

- *Interest for potential alternatives:* in case of a long-term relationship started due to a lack of alternatives, the duration of the relation is strongly linked to this cause. In fact, the consumer would be particularly active in looking for potential alternatives and sensible to new offers received by competitors. On the other hand, when a relationship started due to a strong will of the consumer, is a deeply stronger relationship with a low value given to external competitors' offers.
- *Appeasement:* it is the inclination of actors to accept specific requests of the counterpart
- *Cooperation:* a cooperative relationship assumes both sides having an active role oriented to obtain a mutual goal. Thus, if one of the actors involved has the perception of being coerced in the activities, it will invest low levels of resources with a passive role. On the other hand, in case of voluntary relationships, there will be a natural cooperation between parts involved.
- *Dependency:* this aspect is estimated mainly in terms of investments made. In case of a forced relationship, investments are valued negatively since they represent an exit barrier in case of relationship interruption; in case of voluntary relationship, investments are valued positively since they increase relationship involvement and strength.
- *Unity***:** this aspect is really important between parts; it refers to the similarity and closeness perceived among parts, which are supposed to operate as team

members; unity is possible only in case of voluntary relationships.

- *Involvement:* it refers to consumer's will to directly promote the service provided by the supplier; this communication and promotion channel is strongly effective for the service sector. However, consumers will to promote the supplier could happen only in case of voluntary relationship.

To conclude, Bendapudi & Berry model defines some instructions for service providers about how to efficiently develop customer's loyalty. First of all, it is important to define customers motivation of starting a new long-term relationship with the supplier; then the model identifies (considering different cases) different variables on which to intervene. The goal is to build long-term relationships based mainly on voluntary actions; these relationships guarantee durable advantages for operators involved.

1.4 RELATIONSHIP MARKETING IN INDUSTRIAL MARKET: THE IMP PROJECT

The industrial market has particular structural aspects such as the high concentration and large dimension of operators, complexity and specificity of goods and services traded; these are defined business-to-business markets. Thus, in these contexts usually companies have a strong dependency on a limited number of both clients and suppliers.

Relationship marketing in the industrial market has been approached during 70's by researchers participating the *Industrial Marketing and Purchasing (IMP)* project. It started in Sweden at Uppsala University with the goal to conduct an empirical research on marketing approaches adopted by companies operating in the industrial market. Afterwards, thanks to contributions given by numerous European researchers the project expanded.

The initial target of the research was limited to develop interpretative schemes appropriate to describe the reality of industrial markets; these schemes were considered complementary of the traditional approaches. In particular, the fist research was aimed to verify wheatear the business relationships developed in the industrial sector had similar characteristics to those developed in the large consumer market.

Trough the IMP project there is a research that enhances how two out of three of companies clustered there is a situation where ten main customers represent more than 66% of the global revenue. In fact, in the industrial market the relationship

between clients and suppliers are hardly in terms of single transactions; long-term relationship in this context is the most common form of connection.

Empirical founding obtained in the IMP project has lead to a review of processes of trade in the industrial market; also it has been identified new variables that influence these processes and consequently new modality and tools that influence those variables. The attention is brought from unique transactions to stable relationships that are produced between operators in the industrial market.

The Scandinavian contribution for the development of the relationship marketing had two different and, at the same time, complementary approaches: *interaction approach* and *industrial network approach.*

1.4.1 Interaction approach

The interaction approach is developed in early 80's and is focused on analyzing relationship that are developed among enterprises (Hakansson & Wootz, 1979). These stable relationships have origin from multiple trades that are continuous among parts and contribute to define relationships' characteristics. Thus, this different analysis defines a new role for marketing itself; in a transactional approach, marketing goals are mainly in terms of positioning the product, with strategic goals previously defined, considering revenues and market share. Therefore, with the relational approach the marketing goals, including the operational structure, are defined considering the main customers where each of them is considered a market itself. Also, the relationship approach increases the complexity of the model; trades are not anymore just an exchange of goods,

services or money but create social relationship with authority and power. So, the IMP has focused its efforts in formalizing interpretative models for long-term relationships in order to define the main variables that influence relationships creation, development and characteristics.

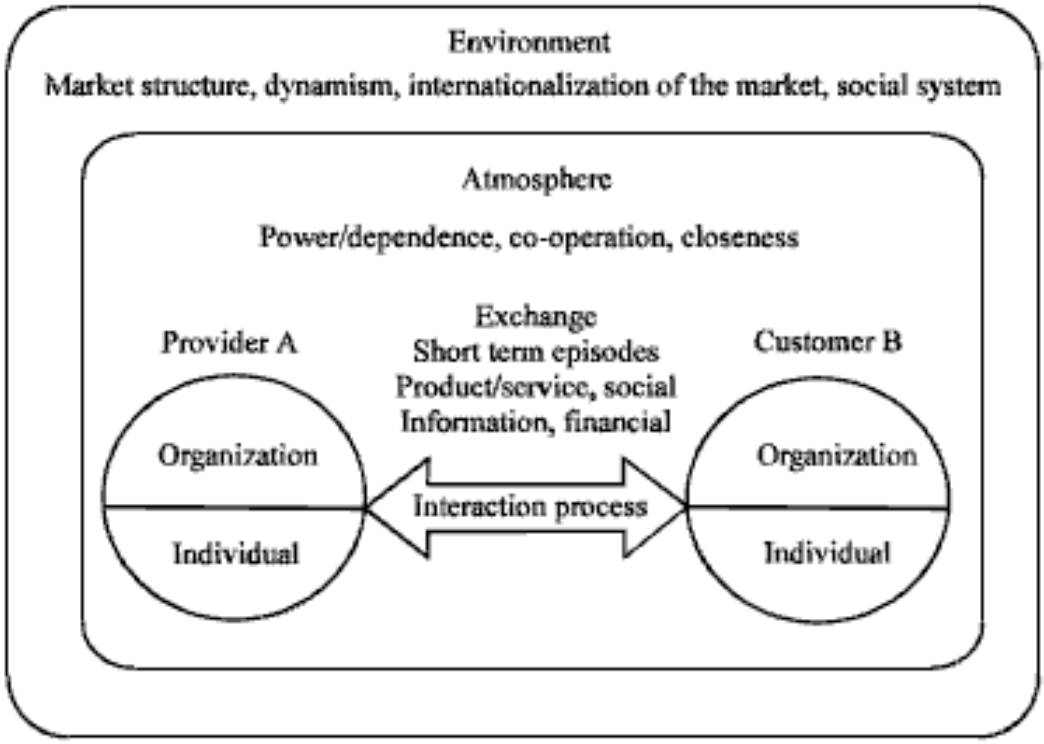
The researcher that mainly has covered this topic is Hakansson who developed a model (figure 4) that provides concrete operational guidance to companies with the goal to simplify the process of relationship management (Hakansson, 1982). The model considers four different factors that influence the characteristics and the process of development of relations:

1. The interaction process between parts involved
2. The characteristics of participants in the interaction process
3. The environment where the interaction process is developed
4. The resulting atmosphere created

Hakansson identifies two different momentum of the *interaction process*: the long-term episodes and aspects. Episodes define single transactions between parts that include trading of goods, services, financial activities, information or social. Thus, there are some differences with pure transactional episodes; relationships among parts become more relevant and increase the environment of trust between parts. Moreover, in a relational context, information has a heterogeneous configuration, which vary for its technical, economical and organizational nature, for its level of formalization, for the breadth, depth, typology of channels used wheatear are personal or impersonal. Therefore, information is more in depth and

may not directly concern the transaction in act; they may concern the relation. In fact, following one another episodes encourages their standardization and creates expectations regarding roles and behaviors of parts involved contributing to a stabilization of the relation itself. So, a long-term relation is seen as a consequence of numerous episodes and contacts between both people and departments.

Figure 4 – Interaction approach in the IMP model



Source: Hakansson H., 1982, "International Marketing and Purchasing of Industrial Goods", Chichester, U.K., John Wiley & Sons, pp. 10.

The *characteristics of participants in the interaction process* influence directly the type of relationship that could be developed between them. In particular, Hakansson focuses on the analysis of the technology used; the creation of a stable

and long time relationship implies integration between technological systems of the parts involved. [26] Thus, there is a necessity to adapt and to make specific investments in order to create a successful relationship.

Subsequently, the model considers the dimension of the parts involved, which affects their bargaining power in the relation. The implemented strategy is influent both through the definition of customers and suppliers portfolio and indirectly through the detection of the markets served that defines the scenario where relations could be developed. Moreover, previous experiences influence the level of trust given to the potential partner and the capacity of commitment in the relation. Last but not least, personal contacts developed during a relationship are critical both for exchanging information and for developing the environment of trust.

The *environment* where the interaction process is developed is considered by Hakansson in terms of the structure of the market, in particular on the level of concentration both in the demand and supply side; relevant are also the stability of the market shares and the number of operators present.

Afterwards, is also considered the stability of the environment besides relation.

In an environment that is basically static, a stable relationship improves the capacity to know the other part and it becomes easier to forecast its behavior. On the other hand, in case of a strong dynamic environment, if a company concentrates its resources to a limited number of contacts it could lead to a high

[26] In case of incompatibility of technological systems of two companies could create high costs of integration with the impossibility to create a long-term relationship.

opportunity cost in terms of lost of speculative opportunities. Yet, the level of internationalization of the market is taken in consideration both in relation to the social system of reference and in terms of legislative and regulatory constraints. Lastly, it is considered the position held by the company in the value chain for the supplier since it has to consider requests made by operators that are in a subsequent stage in the chain compared to his buyer.

The model studies also the *atmosphere* obtained trough the process of interaction; at the same time the atmosphere influences the interaction process as well. The atmosphere is defined as: "the emotional structure of the relation" (Sandstorm, 1990) that includes the attitudes that are taken by parts involved in the relation. This variable does not depend on past experiences and could influence the future development of the relation. Thus, in the first IMP project the atmosphere components where identified in terms of: power/dependence, co-operation and closeness between parts. Indeed, additional components were added: trust, mutual knowledge and commitment in the relation. A positive atmosphere for the development of a relation is able to reduce both transactional and production costs improving performances and ensuring a higher control on the other part behavior.

In conclusion, it is noticeable that Hakansson's model has merely a descriptive valence and implies simplistic assumptions that are not able to demonstrate the reality of industrial market. In the following years the author himself has tried to realize a partial overcome of the model trough the analysis of the combined influence of those variables on the long-term relations. However, the result lead to

fragmented models that were not able to understand the complexity of the system analyzed; thus, particular attention was put on those conditions that better facilitated the adoption of the relational approach and that make more evident the advantages.

1.4.2 Network approach

The network approach has been developed starting from middle 80's as an extension and evolution of the interactive approach; in this case the analysis is focused on multipolar relations that involve companies [27].

The main hypothesis says that existing relations between agents and third parties condition new ones that could be developed. So, in order to consider the possibility to develop and manage relations is necessary to take in consideration the whole network that companies are part of. Thus, the position and the role operators have into these complex structures define the quality and quantity of resources and competences that they are able to move (Hakansson, 1987). The organization and coordination necessary for the network's survival are not achieved hierarchically or through prices mechanism but trough cooperative interactions developed between agents involved; each of them with its own decision-making autonomy. Indeed, in this context companies loose their connotation of self-sufficient entities and become unities where their borders are modified depending on external relations adopted (Hakansson, 1990). So, a

[27] The development of the approach is basically the result of two groups of research: university of Uppsala, mainly thanks to Hakansson and Johansson that favors the process of relations inside a network, and Stockholm School of Economics where studies of Mattson are in favor of the analysis of the structural aspects of the network.

company has reduced decision-making power in terms of usage of its own resources when there are agreements with other parts. So, from one side a company has decreased its possibilities of operation and from another side has increased its chances and potential of action thanks to *relational assets* built. This approach has been formalized trough the detection of those variables able to influence and define the company's position inside the network and, indeed, the resources and competences that is able to move. Thus, network approach development defines new strategic planning systems that should be developed by companies. In fact, Swedish authors support the thesis that companies can not plan the temporal evolution of single transaction and neither can plan the evolution of the network itself, since these two variables are influenced by several and complex interactions between agents involved. Therefore, these new strategies should be developed trough an incremental logic, based on learning and adaption processes developed during interactions.

There is a new competitive context where strategic orientations of operators and operational tools available need to be changed. Timing has become a crucial element for companies success; product lifetime value has been drastically reduced and the innovative ability has to be focused on shorter period of time. It is essential to promptly perceive signals of change and synergistically exploit all the resources and competences that the company could access, both trough direct control and trough relations created. Thus, it is necessary a strong flexibility in order to operate in the new global context; the capacity of adaption could be

realized through the interaction and cooperation of members participating in a specific network.

Marketing management has showed its limits on focusing on operational aspects with the result of an overcome of the rigid functional division of marketing that was noticeable in companies during 80's. In fact, recent developments put marketing as integrator of company's strategy instead of having merely an operational leverage role (Velo, 2002).

Therefore, relationship marketing does not bring new regulatory models that are appropriate for the new competitive context where companies operate, but introduces a new philosophy of customer relationship management.

2. RELATIONSHIP-BASED APPROACH TO INNOVATION

2.1 DEFINITION AND MAINSTREAM OF INNOVATION

Definition

Literature provides a great variety of analysis and definitions for the term "innovation". However, both theory and practice of innovation lack a precise and commonly accepted definition of this concept.

Indeed, the innovation concept is interpreted very differently within the same company: employees who work in the same department may not have the same idea about the term "innovation", which is often confused with invention.

Hauschildt & Salomo (2007) acknowledge that the definitions of the term "innovation" share the following aspects. Innovations are:

"*New products or processes, from the qualitative point of view, clearly different from the previous state*".

Hauschildt & Salomo also argue that an invention itself is not an innovation. In fact: "*The invention must be commercially exploited in order to be qualified as innovation*"

Therefore, the invention must be at least put on the market as a new product, or should be used as a new process in production (Hauschildt & Salomo, 2007).

As to the importance of the commercial effect in every outcome of the R & D stage (Roberts, 1998) provides a broader definition of the innovation concept:

"Innovation = Invention + Commercial Exploitation"

Innovations are not only associated with new products or processes directly

applied to the manufacturing process, but also include all the means that allow exploiting and trading these inventions, and which lead to a more efficient application of the concept of innovation.

The process

The innovation is commonly defined as the commercial exploitation of a new idea or of an invention, while the definition of the specific innovation process depends on the type of innovation.

With reference to innovation, Hauschildt & Salomo (2007) ask themselves:

"*Where does it begin, and where does it end*?"

In reply to this question, literature highlights the definition of Ven & Poole (1989): *"the process of innovation refers to the time sequence of events that occur in the interactions of people who work together in order to develop and implement their innovative ideas within an institutional context"*.

More generally, figure 5 shows how the process of innovation can be considered as composed of three main stages (Bröring, 2005). Shilling (2009) argues that the R&D function involves a series of activities, which consist in fact finding, experimental research and marketing.

Figure 5: Stages of the process of innovation

Source: personal elaboration of data based on Cooper

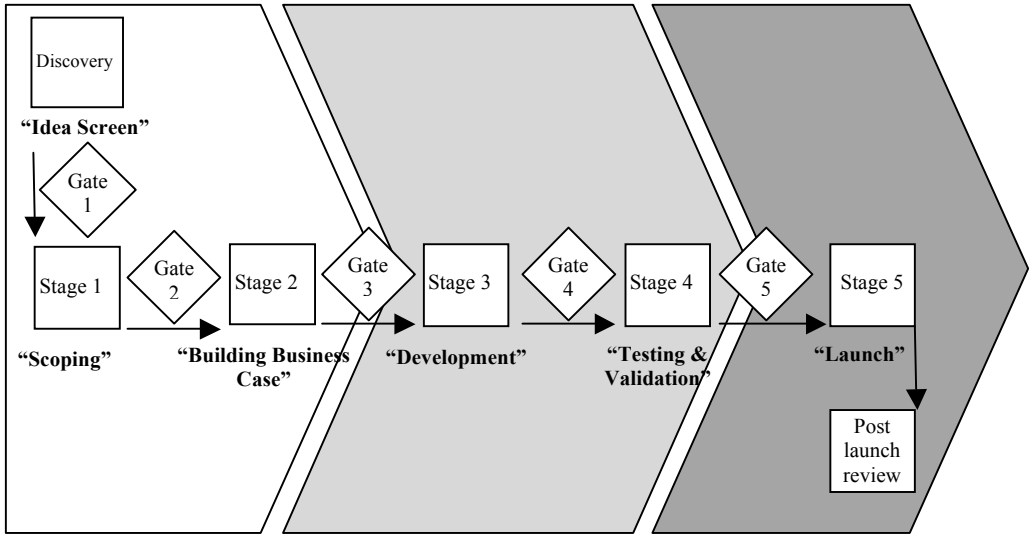
1. The first stage (front end of the innovation) consists in generating and selecting the new ideas, and assessing their technological aspect and suitability to be put on the market.

2. In the second stage the selected ideas are carried out and developed. At this stage various solutions are tested, while the different alternatives as to the product functions and design are examined.

3. Then, the third stage includes the marketing phase that is understood as planning and carrying out activities for launching on the global market.

Among the other various conceptual elaborations of the innovative process, literature highlights the "Stage-Gate" model of Cooper R. (1986).

Figure 6: Cooper's "Stage-Gate" model



Source: personal elaboration of data based on Cooper

The Stage-Gate process is preceded by the discovery stage, which has been added to the following release (Cooper, 2001) of the original model (composed of 5 stages only) that contains the pre-functions meant to find opportunities and

generate new ideas. The five stages are:

- *Set the target:* a quick preliminary investigation of each project that provides cheap information through desk research in order to narrow down the number of projects.
- *Develop the Business Case:* a much more detailed research carried out through the primary marketing and the technical research: the business case must include the definition and justification of the product and the project plan.
- *Development:* that is the detailed design and development of the new product together with simple product tests. Also the production plan and the market launch plan should be developed.
- *Testing and Validation:* this includes various tests on the product carried out on the market, in the laboratory and in the factory.
- *Launch*: start of production at full pace, start of marketing and sales. Launch on the market, production / operations, distribution, quality check. Post Launch Reviews.

Petroni & Verbano (2007) also claim that the innovation may be reached through two different kinds of activities:

- *Institutional:* carried out by companies that have R&D division
- *Non-institutional:* typical of the SMEs; it is characterized by continuous incremental improvement, imitation and customer-supplier circuit.

Policies

It is a well-known and accepted fact by business theory and standards that innovation is fundamental for the long-term survival and business growth of the company. Therefore, all companies should conceive and implement innovation policies based on their "mission", "vision" as well as on their long-term goals.

Beside the improvement and optimization of products and technology, the innovation policies must also treat the development of new technology and skills. This is due to the fact that, on one side, companies need to exploit resources in order to generate short-term incomes but, on the other, they should explore new fields of knowledge and technology for the future.

In this context, March (1991) argues that *exploration*: *"includes all those activities identified by such terms as research, change, risk taking, experimentation, action, flexibility"*.

Instead, same March defines *exploitation*: *"activity that involves refinement, choice, production, efficiency, selection, implementation and execution."*

Beside the difference between the above mentioned *exploration* and *exploitation*, and among the goals of innovation policies, literature also highlights the opposite needs indicated in the following bulleted list:

- Incremental vs. radical
- Continuous vs. discontinuous
- Sustainable vs. disruptive
- Well defined innovation processes vs. flexibility in the opening of

innovations

Regardless of the above-mentioned dual model, the policy of innovation is composed of two main parts (Massieu, 1995): the technological dimension and the market dimension. The innovation policies must therefore address the following issues:

- Functions or demand that the innovation should fulfill
- Required technology to meet these functions and demands
- Target market
- Required manufacturing processes

These four aspects, which have been duly analyzed by Massieu, treat the "what" and "where" issues of the innovation. However, no reply has been given as to "how" the technology required for the innovation should be adopted. For e.g.: technology can be developed within the company, or generated by third parties.

This characteristic allowed Chesbrough to distinguish, in 2003, between *Closed* and *Open Innovation*. He then argued that high tech companies in particular changed their way to innovate. These companies shifted from the "closed" innovative model to the "open" innovative model. Since then, this paradigm has reached the attention of a number of students and professionals.

2.2 RELATIONSHIPS MATTER: OPEN VS. CLOSED INNOVATION

Closed Innovation

The Closed innovation model foresees that (Chesbrough, 2003c): "*Successful innovation requires control*".

It can be seen as an approach mainly based on in-company level, since it is uncertain whether other types of technology, especially of the sought quality, are available outside.

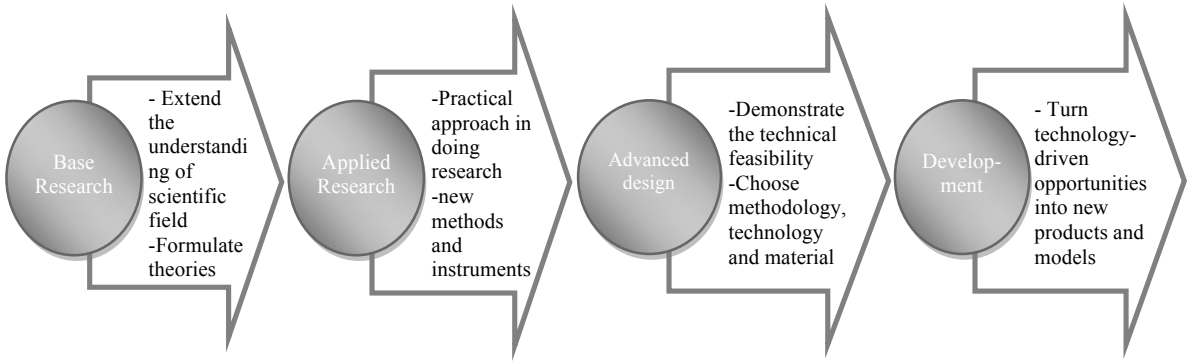
This internal autonomy can be resumed in the following "rules" of the "Closed Innovation" model (Chesbrough, 2003c):

- The company should hire the most skilled and smartest staff
- The company may profit from innovative efforts by carrying out discovery, development and sales independently
- In order to be the market leader, it is necessary that discovery and research must be done in house
- Being the market leader is also a guarantee that the company will win the competitors
- Being a leader of the R&D investment field leads to a larger number of smarter ideas and to win the competitors
- The preventive management of the intellectual property (IP) must prevent competitors from taking advantage of the ideas and technology of the company

The process

Resuming the notions of the innovation process and with reference to the R&D function, two main fields can be distinguished: base research and applied research and development (Gottardi, 2006; Petroni and Verbano, 2007; Schilling, 2009), to which the advanced design stage can be added (Gottardi, 2006).

Figure 7: Typical R&D activities and outputs of the innovation process



Source: Gottardi G., CEDAM (2006): Innovation and projects management

According to Gottardi, 2006; Petroni and Verbano, 2007; Schilling, 2009, the above-described stages can be detailed as follows:

1. Base research (pure research): activities that are meant to extend the understanding of a special scientific field. This involves long-term goals, while the results are pursued without considering the immediate commercial applications
2. Applied research: it defines the manufacturing process for the knowledge generated in the previous stage
3. Advanced design: it deals with the demonstration of technical feasibility
4. Development: activity that tests the industrial production and economic

utility of the options proposed by base and applied research

According to the *closed model*, regardless of the number of the above-described stages effectively carried out in house, the company tends to avoid any contact with the outside and keeps the research activity within the organization ("in-house").

This means that the innovation processes:

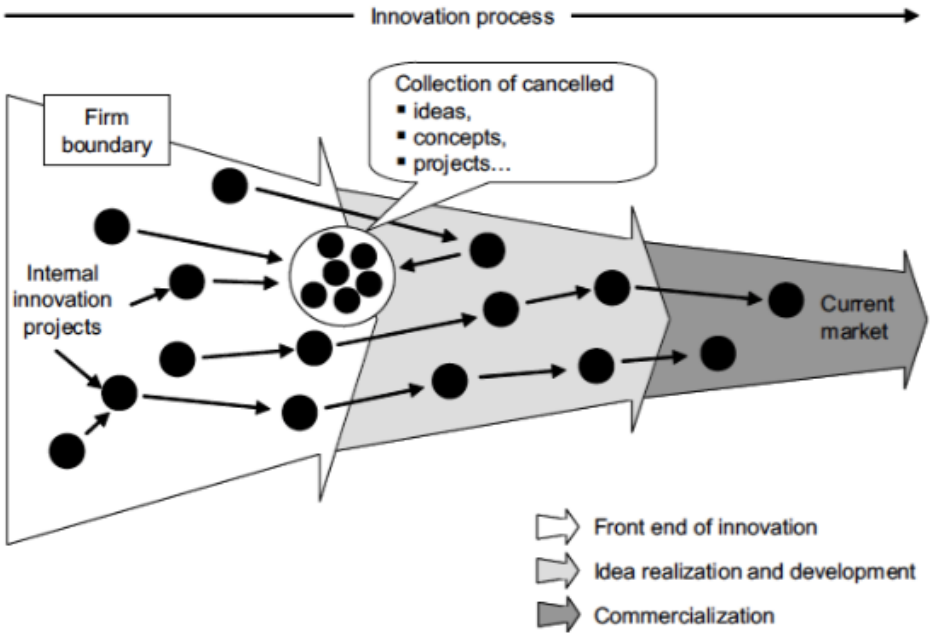
1. Have to start from the first stage only
2. Are developed by using in-company resources and skills only
3. May come out of the process and be marketed only through the distribution channel of the company. Therefore:
4. Innovation processes that are rejected or canceled, are kept in the company archives and become useless, until other R&D groups decide they are worth using

Further to this innovation model, and with reference to the above-cited items, many promising technologies could never be exploited. According to Wolpert (2002), this is due to two main reasons:

- Some companies are selling their intellectual property to other companies and organizations
- Not all companies can manage every new research, or have the necessary resources to take advantage of these opportunities

Therefore, the *closed innovation* model could be defined as figure 8 shows:

Figure 8: Closed Innovation Model



Source: Chesbrough, 2003c

The model shows that only a few of the various innovative in-house projects can overcome the internal selection and become marketed as new products.

Beside the Cooper model, literature indicates the sintering of the product innovation process as described by Van der Meer (2007), who resumes the activities in three main steps:

1. Concept stage (front end of the innovation): stage of the invention and creativity during which new ideas are sought. A management policy should be adopted in order to create an environment that fosters innovation
2. Development stage (development stage of the innovation): the ideas are implemented in projects, and the company seeks to promote the necessary

mechanisms to support the projects

3. Business stage (commercialization): the selected projects are transformed into new business; the company management follows the classical approach of planning, action and control

Limits

Over the time, the *closed innovation* model proved to be limited and subject to faults; new models more suitable to the new context in which companies operate highlighted that.

Table 1 shows the main limits of the *closed model*, highlighted by literature, and summarized in chronological order and by author.

Over the time, these factors together with other context variables led to leave the virtuous cycle of the *closed model*, in favor of new innovation models, and in particular of the *open innovation* model.

Table 1: Limits in the closed innovation model

AUTHOR	LIMIT HIGHLIGHTED IN THE "CLOSED INNOVATION" MODEL
Chesbrough, 2004	The ideas developed within the company, which do not meet the business models are rejected and forgotten; thus, the possibility of obtaining additional revenues through their sale on the market is lost
Chesbrough, 2004	When a project is canceled during the development stage of a new product, it shall be put aside and no alternative use shall be foreseen, for e.g.: on another market
Chesbrough and Crowther., 2006	The low percentage of acceptance and marketing of the in-house innovative initiatives may cause, beside the underuse of the resources, the demotivation of researchers who hold the set-aside knowledge and/or who supported certain projects that proved to be inapplicable within the company. These ideas often stay set apart and are forgotten until their proponent leaves the organization to develop them independently.

Chesbrough, 2003(b); Chesbrough et al., 2006	Many opportunities are lost in case other parties' technology is necessary, but the company cannot acquire it, nor manage it.
Chesbrough et al., 2006	Organizations based only on R&D encounter difficulties not only in case it is impossible to profit from the spillover effects generated by the research, but also in case they cannot be marketed through the company inner network.
Lichtenthaler, 2009	A "closed" innovation policy limits the ability of the company to reach the strategic benefits that instead may be obtained through external resources.
(Chesbrough, 2003(b); Chesbrough et al., 2006),	The traditional model is not reliable against faults of the second type (that is the case in which an apparently unsuccessful project may prove valuable later), which make the company block high profitable projects, without being aware of that.

Source: personal elaboration of data

Evolution of the traditional model

According to Prahald & Krishnan (2008), the industrial revolution (see Chapter 1) gave birth to the first innovation model, the Ford T-Model. Innovations can be developed on four different dimensions (the 4 p): "product", "process", "position" and "paradigm". This way they carried out a new and revolutionary manufacturing system.

From then, the concept of collaboration and innovation started to spread and to characterize the R&D function management models, which were outlined by Nobellius in 2004. According to Nobellius, the transition from innovation understood as isolated event in the laboratory to integrated innovation that requires the R&D division management, is dynamically developed through five generations:

1. Corporate research labs
2. Business unit development
3. R&D Projects
4. Cross-functional projects
5. Cross-boundary projects

These models led to the definition of *open innovation* of 2003, as new paradigm of innovation in response to the limits highlighted in the previous paragraph.

Open Innovation

Over the years companies understood the progressive decrease of the importance of control in the innovation process according to the traditional model, and thus drew their attention toward the *open innovation* issue (Chesbrough, 2003).

By this term coined by Henry Chesbrough in 2003, researchers and professionals mean the innovation model in which companies not only use in-house knowledge and ideas, but also open their innovation process up, using third parties ideas and technology on in house market and on the external market. This concept may be formalized by the words of Chesbrough (2003):

"*innovation initiatives must gain access to and leverage from the insights, capabilities, and support of other companies without compromising legitimate corporate secrets*"

According to Chesbrough (2003) this kind of innovation may be summarized in the following points:

- Not all the most skilled people work with us and the capacity to enhance

external expertise and skills has become an advantage factor for the company

- Research and Development of third parties can generate remarkable value: in-house Research and Development is always and only a fraction of the value that can be created
- There is no need to develop in-house research in order to generate value. It is more important to build a new business model, than to get first to market
- If the company can enhance the smartest ideas, it shall win the market
- The company must be able to enhance third parties researches and transfer them to its own business model

Literature analysis reveals multiple definitions of open innovation. Table 2 gathers opinions by different authors since Chesbrough coined the first definition of open innovation.

Table 2: Main definition of Open Innovation according to different authors

AUTHOR	REFERENCE	DEFINITION
Henry Chesbrough	Open Innovation: New Imperative for Creating and Profiting from Technology, Harvard Business Press, Boston (2003)	According to the Open Innovation paradigm companies that want to improve technology may and should use ideas coming both from within and from the outside, as well as in-house and external ways to reach the market. The Open Innovation creates by combining in-house and third parties ideas, architectures and systems with the features defined by the business model.
Rick Harwig, Ceo Philips Research	Philips Research: Password, Issue 19, 2004	Philips adopted the Open Innovation model as working method that enhances the collaboration with partners from the academic and industrial world who have skills and interests that match with those of the company. Philips joins forces with companies equal for standardization, and gains momentum in the upcoming directions of technological development, which is the target of the company, and actively creates strong local networks of main factories and research institutes that help the high tech regions to grow.
Henry Chesbrough	Open Business Models: How to Thrive in the new Innovation Landscape, Harvard Business Press, Boston (2006)	Open Innovation is composed of incoming and outgoing knowledge flows that have the purpose of accelerating the in-house innovation process and increasing the number of the markets for the use of innovation outside. Open Innovation means that companies should make better use of third parties ideas and technology in their business, letting their unexploited ideas be exploited by other companies. This process requires that companies adopt an open business model that lets ideas and technology flow in and out of the company.

Joakim Henkel	Selective Revealing on Open Innovation Process: The Case of Embedded Linux, Research Policy (2006), Vol. 35, pp. 953-969	The opening of innovation processes may lead to go far beyond the market-mediated exchange, where technology is treated as marketable commodity, to be purchased and sold on the market under proper circumstance. Companies may let technology be available to the public, to obtain collaboration.
Michael Docherty	Primer on "Open Innovation": Principles and Practice, Visions Magazine, April 2006	Made popular by the book "Open Innovation" by Chesbrough, this term refers to the wide concept of exploiting third parties sources of technology and innovation to stimulate the in-house growth. It also refers to the spin-off and outsourcing processes for unused intellectual property.
Joel West and Scott Gallagher	Challenges of Open Innovation: the Paradox of Firms' Investment in Open Source Software, R&D Management (2006), Vol. 36, No. 3, pp. 319-331	The Open Innovation stimulates and systematically explores a wide range of sources of in-house and external innovations, and consciously integrates this exploration with business resources and skills, thus exploiting the arising opportunities through different channels.
Charles Leadbeater	Open Business (2007), "Open Platform to Develop and Share Innovative New Business Ideas". www.openbusiness.cc/ 2007/03/14/two-faces-of-open-innovation/	The Open Innovation model shows two aspects: Open Innovation IN is the base model in which ideas come to the company from different sources (crowdsourcing). The Open Innovation OUT foresees a group of people, a society, who create an operational system or a platform with some instruments, on which everyone can add ideas and contributions. The Open Innovation IN lets the broader set of contributions flow into the company development funnel. The Open Innovation OUT has been conceived to allow the evolution of the innovation process that grows and develops every time someone adds his own piece of information, code or module.

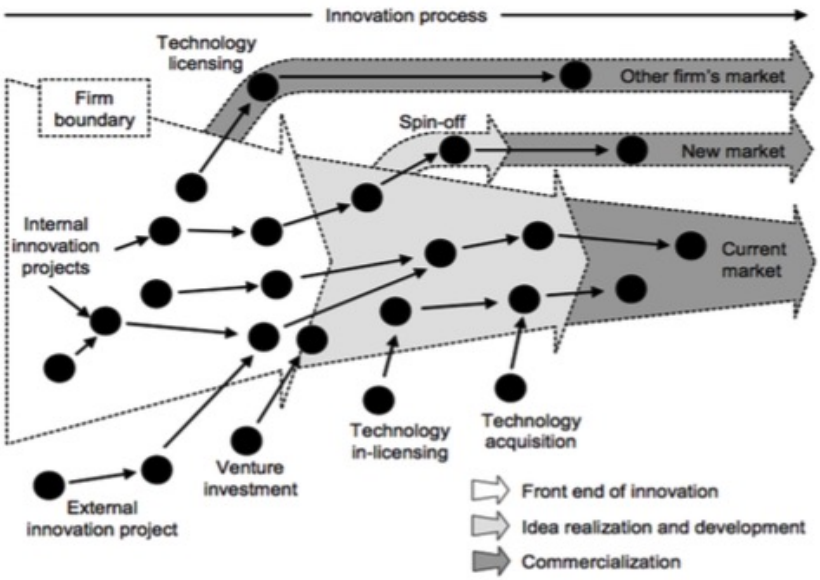
Based on the above listed definitions and on the analysis of literature, some characteristics may be highlighted, which distinguish the *open innovation* model from the c*losed Innovation* model.

The process

The linear and sequential evolution described in the *closed* model has evolved into a kind of model that can be represented by a spiral. In fact the various stages of the innovation process overlap and are hard to distinguish due to the increase of mutual interactions both within and outside the company (Petroni & Verbano, 2007).

According to the traditional model, the innovation process can be represented as a funnel. In the different stages of the process, the company avails itself of both in-house and third parties scientific and technological resources (Chesbrough, 2003).

Figure 9: Closed Innovation Model



Source: Chesbrough, 2003c

Unlike the closed innovation model the launch of an innovation project may be activated by both in-house and third parties technology and ideas, which can be added to the innovation process at any time and by different means, for e.g.: through investments in technology, licenses and joint ventures.

Moreover, the marketing of the idea as well as its launch on the market can take place either through the company distribution channels, or in other ways, as for e.g.: through spin-off ventures and out-licensing (Chesbrough, 2003).

The *open innovation* model is therefore applied to all the three stages of the innovation process (front end of the innovation, generation of ideas and development, marketing):

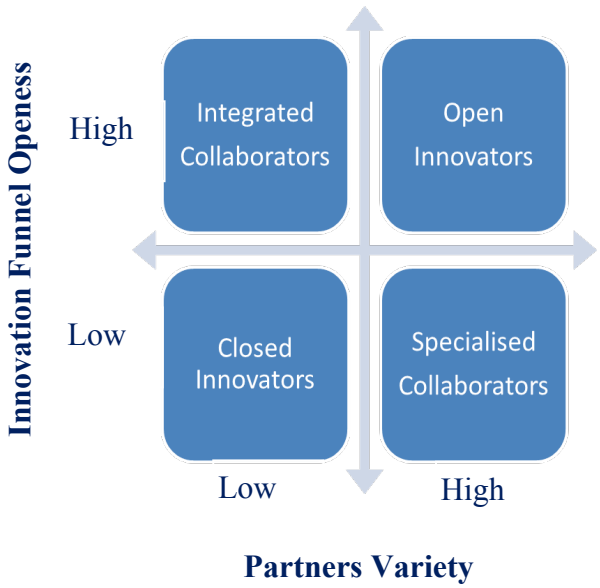
1. During the stage of front end of the innovation, companies seek the solutions of the problem outside (for e.g.: inventors, Start-up, potential in-house sources of innovation)
2. In the stage of the generation of ideas and development, companies may purchase IP patents, or acquire third parties innovations, which have already been marketed but can give new opportunities. Companies can also sell their technology patents to generate additional sales
3. During the marketing stage companies may continue to sell technology, which has been already marketed through the distribution channels of third parties

Classifications

The analysis of the existing literature highlights the main and latest classification

of the *open innovation* proposed by Lazzarotti & Manzini (2009), who highlighted four main types of collaboration. The variables considered for the classification are the number and type of partners with whom to collaborate (partners variety) and the number and degree of openness of the innovation process stages According to Manzini & Lazzarotti (2009), the degree of openness of the innovation process depends on the number and type of the innovation process stages for which the company looks outside. The range varies from total closure with companies very focused on innovation of very few stages and with very few partners (this is the case in which the *open* process is considered too risky, therefore the company limits the collaborations and establishes strict controls) to ideal *open* model in which technology collaborations are considered as strategic opportunity, therefore companies devote time and resources to their exploration.

Figure 10: "Different modes of open innovation



Source: "Different modes of open innovation: a theoretical frame work and an empirical study", Lazzarotti V., Manzini

The four models may be described in detail as follows:

1. *Closed innovator*: the innovation process is open to very few collaborators and in one stage of the innovation process only (for e.g.: the company avails itself of third parties prototyping services for the development of a new product)
2. *Specialized collaborator*: as in the case of the *closed innovator*, the innovation process is open in one stage only, but the company can work with many different partners (for e.g.: companies that involve customers, experts, suppliers, research institutes in the stage of generation of ideas)
3. *Integrated collaborator*: the innovation process is open in all its stages, but the company focus is on the relationships with few types of partners (typically customers and suppliers)
4. *Open innovator*: the innovation process is completely open. The company can manage a high number of technology collaborations with many partners

Parties involved: Innovation sources

According to the above described classification of Manzini & Lazzarotti (2009), the degree of openness of the innovation process depends also on the number and type of partner with whom the company collaborates. Von Hippel (1988) proposes the list of the main external sources of knowledge:

1. Suppliers and customers: this is the case for example of the "lead customers" who develop ideas and solutions of the problem, sometimes without involving the suppliers, and propose totally innovative market

concepts and design

2. University, the government, and private research laboratories: beside the government R&D spending, there are also academic researches, which are sometimes financed by companies to generate external spillover
3. The competitors, who are often limited by external sources to generate innovation solutions
4. Other kinds of organizations
5. Other countries

The innovation intermediaries represent another important category of innovators, that is: companies that provide information, technical knowledge and finance to allow transactions. The financial intermediary can be defined as a supplier who licenses his own IP to manufacturers and innovators, thus facilitating the exchange and sharing of knowledge between public, industrial and business research, and in general favoring collaborations. (Chesbrough et al., 2006; Sousa, 2008). In particular, Chesbrough (2006), identifies three categories of innovation intermediaries:

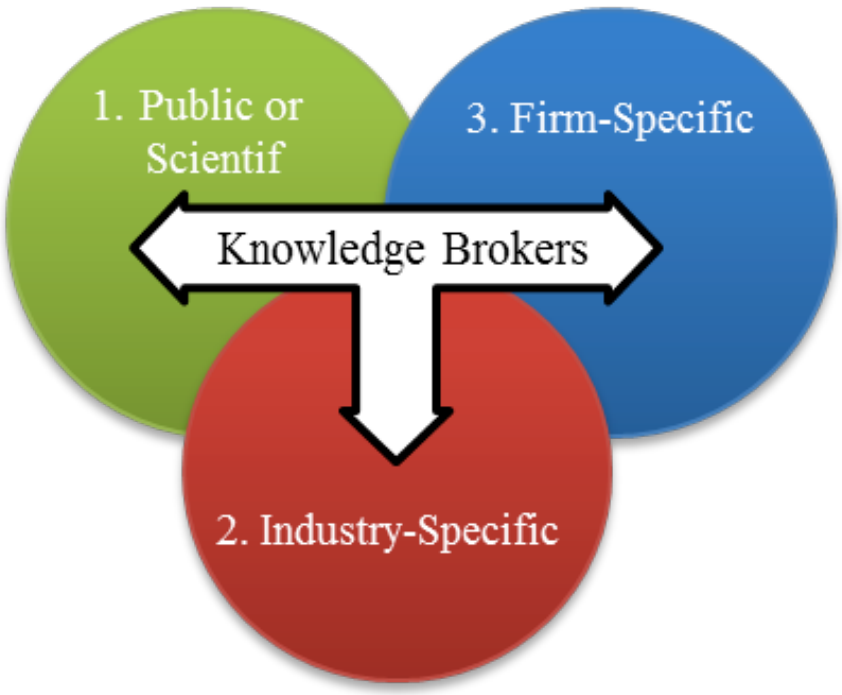
- agents
- brokers
- market makers

In particular, literature highlights the knowledge brokers category. According to their knowledge and skills, Leonard (1995) distinguishes three main kinds of brokers, as from the scheme of Figure 9:

- Public-scientific
- Industrial
- Specific of the company

Knowledge brokers are entities (organizations and persons) that favor the sharing and exchange of knowledge between the sources. Beside their technical skills, knowledge brokers hold what might be called relationship knowledge, or knowledge about knowledge, which allows them to access others' knowledge. They also supply tools and management instruments to access knowledge. Knowledge brokers differ from other knowledge suppliers in their active role in providing connections and favoring relationships. They are the active change agents who may help customers to continuously adapt to the environment.

Figure 11- The role of knowledge brokers into innovation



Source: Personal Elaboration

Comparison

In conclusion, table 3 shows the main differences between the two models.

Table 3: Closed Innovation Vs. Open Innovation

CHARACTERISTIC	CLOSED MODEL	OPEN MODEL
1. Importance of business resources	Focus on the in-house resources by limiting the interaction with the outside	Equal importance given to in-house and third parties resources
2. Relationship between the business model and the search results	Search results that depend on the business model adopted by the company, with huge R&D investments.	The company seeks and invests in skilled people coming from within and outside the company, therefore the search results may reach the market through different channels
3. Measurement fault in the assessment of projects	Be careful to the measurement faults of type I (false positive)	The company may reconsider even the previously rejected projects, therefore it has to pay attention also to the measurement faults of type II (false negative)
4. International knowledge and technology flows going out of the company	Resistance to promote international knowledge and technology flows outside the company	Willingness to consider international third parties channels to promote and market knowledge and technology through licenses, ventures and spin off.
5. IP management	Protection of the discoveries, so as to prevent the competitors from taking advantage	Fundamental innovation element with IP flows coming to and from the company, which favors the use of markets to exchange valuable knowledge. The IP, sometimes, may be sold through publications or may be donated.
6. Number of intermediaries	The company avails itself of a few intermediaries	Significant number of intermediaries who facilitate the sharing of knowledge between public, industrial and business research, thus accelerating the combination of complementary knowledge and skills and favoring the collaboration.
7. Analysis of capability and performance	Traditional models based on just-in-time relationships with suppliers or total-quality manufacturing procedures	New metrics to measure capability and performance, as well as the analysis of the percentage of innovative activities executed outside, the utilization rate of the company patents, the time necessary to make the idea known to the market and how this can be divided by the different channels, and the percentage of in house ideas generated through third parties licenses.

8. In company and third parties R&D	Company focused internally only, who reject all ideas coming from third parties, since "if you want a thing done well, do it yourself" (not invented here syndrome).	Companies should develop processes that ensure the absorption of the imported things, through three capabilities: 1. "Absorptive capability", which consists in the acquisition, absorption, transformation and exploitation of knowledge. 2. "Relational capacity", which consists in the ability of selecting proper partners and establish strategic alliances. 3. "Multiplicative capability", that is the capacity to transfer in house knowledge outside.
9. Collaborations between companies	Very limited or absent: only internal collaboration between R&D teams.	Agreements which lead to vertical as well as horizontal alliances between companies. Researchers work in team, not only in house teams, but establish agreements based on mutual trust developed by common standards and rooted in a network of interactions.

Source: personal elaboration of data

2.3 BOOSTING INNOVATION: STARTUP ENVIRONMENT

The previous paragraphs highlighted that one of the factors that modified the economic conception of innovation is the birth and the following development of start-up companies that strongly influenced the innovation vision of larger corporations. The start-up companies not only forced larger corporations to change their attitude and open up to innovation, but also inspired a cultural change and now they are no more perceived as threats, but instead as opportunities.

The term start-up indicates the stage in which a new business is started, although the common language uses this term to indicate the same company characterized by small dimensions, founded on the base of an innovative idea. During the last 15/20 years there has been a *boom* of start-ups in the world due to many factors: development of venture capital markets, opportunity to reach new knowledge more quickly (especially through the internet), easier access to markets and the understanding of new ideas & team potential.

However, few are the companies that survive after the initial stage and even fewer are those able to stabilize their position on the markets. Empirical researches showed that there are 4 crucial factors that affect the success of ideas at an early stage:

- In-house skills and characteristics of the co-founders
- Resources dedicated to R&D activity
- Third parties skills, in particular relating to relational capital (venture capital, incubators etc.)
- Location of the company

The first factor is the most important one, at least for what concerns the stage prior to the business start-up. The co-founder is the heart of any company, in particular for a company still in the preparation stage. The person generates the innovative idea, but the idea itself, however good, is not enough to determine the success of the project. There are many factors that affect the choice of the individual to take this path. Employees of large multinational companies that failed to exploit opportunities generated within their R&D divisions founded many start-up businesses. Other widely known and very successful start-ups were founded within universities, like Google or Facebook are the most famous examples; others were founded by private initiatives of people who strongly believed in their ideas. All the co-founders who decided to venture into such initiatives must have the same characteristics: willingness to take risks, great ambition and the "confidence" to believe in the success of their project. The cultural or working background where the individual grew up is also very important, since it is the ground where the knowledge base necessary to the development of the project is rooted. The analysis should also consider and highlight the importance of the environment of the co-founder. The easiness of

reaching tangible or intangible resources is fundamental for the development of an initial project, in particular with reference to the already mentioned exploitation of research institutes, incubators and university facilities.

The characteristics just described of the co-founder and the environment should also be available at the same time as concrete business opportunities. The opportunity is defined by an existing market need, or a latent demand that cannot be achieved by existing products yet.

Finally, the co-founder relational network should also be considered before starting a project. The start-up is not an independent entity, but should be considered as acting in a dynamic environment where relationships become more and more important.

An idea, in order to be transformed, implemented and developed should meet the requirements just mentioned.

Before analyzing the second factor, it is necessary to introduce a new concept, the *Blue Ocean Strategy*. It is a new business strategy directly connected to the *open innovation* paradigm, which has been defined for the first time in 2005 by W. Chan Kim and Renée Mauborgne. The BOS is opposed to the Red Ocean Strategy that treats all the already saturated sectors, where the market shares have already been established and it is necessary to steal shares from the competitors in order to reach the business development. Instead, the Blue Ocean Strategy refers to unexplored markets, where the possibility of business development is very high since there is little or no competition at all. Before competing to fulfill the

demand, the demand should be created. The above mentioned does not imply that BOS concerns only the invention of new products, sometimes it relates to the exploitation of already known technology or products, which are used in a totally new way so as to create a new market demand for those products.

This premise is fundamental to understand the importance of an R&D division in a start-up. To be successful the start-up must adopt the *Blue Ocean* type of strategy since it would be a mistake to create a company from scratch to operate in already saturated markets. The new company would be immediately cannibalized by large businesses or would have no hope for development.

The early stage of start-ups is often a real research project. The skills and knowledge acquired at this stage are not only the initial input for the start, but are also very important as to the development through the relationships with external resources. Yet, it has to be mentioned again the importance of incubators, research institutes, VC operators who can offer new co-founders the tools and knowledge to develop and test their highly potential ideas. Considering that R&D centers have high financial needs, the start-up project should be based on a significant amount of deep knowledge of the matter. It is the resource-based outlook according to which the main resource of these future enterprise is the *know-how* that transforms the outlook into *knowledge-based*.

The prospect of technology transfer is the base for the creation of spin-offs. The phenomenon of these new enterprises is the result of a research carried out by a different organization, which has produced innovation as result. A newly founded

company will then implement, develop and make profit from that innovation.

The third factor, is the importance of external relationships for the success of the company, which has already been examined several times during this research, since a network of relationships with third parties is the most important for a start-up. New enterprises that may not have enough resources and skills need to be supported by external operators, at least at an early stage. However, joining the network does not guarantee the success of the project, but allows the participants to share and exchange tangible and intangible resources, which are necessary and complementary to the development of the enterprise. As an example, we shall see the venture capital operators supporting the start-ups not only with tangible resources, like capital, but also with technology and management skills; otherwise the company would not be able to operate on the market. The basic principle underlying the need to own a relational capital is based on the creation of leveraging opportunities, that is the possibility for the company to avail itself of third parties skills. These skills can be integrated with in-house skills in order to achieve the optimal level of resources that allows the enterprise to survive in highly competitive market conditions. This concept of sharing allows small businesses to easily profit from external R&D centers, whose management cost would be too expensive if it were in-house departments. The efficiency of the exchange processes between start-ups and external support organizations depends on both the availability of organizational mechanisms that allow knowledge to be shared, and on the real interest the various actors have in pursuing this target.

In conclusion, empirical studies demonstrate that new enterprises establish relationships with a few operators, even one only (in general incubators or VC companies), and after a while they expand their network. The ability to establish an adequate network is fundamental since this selection will affect more or less positively the future of the enterprise.

The fourth factor of success of a new enterprise that is directly connected with the relational variable is location. The most important elements for the location of the enterprise are listed below:

- Economies of agglomeration
- Cost and availability of inputs
- Availability of skills and human resources
- Proximity of sale and supply markets
- Availability of facilities and services
- The socio-economic relationship network

As to the start-ups, the selection shall be focused mainly on the last element, in particular at an early stage. What has been said about the third factor, as to the need for the enterprise to exchange resources and skills, is even more valid for what concerns the location. The start-up at an early stage will hardly reach success if estranged from the context that can favor its development. Any relocation will be made at later stages, when it is necessary to pay greater attention for example to the cost of inputs that has become significant. A typical example of that situation is the Silicon Valley, which has been for decades a catalyst for

technological innovations. The Silicon Valley has become a highly favorable environment for the share and development of knowledge.

In conclusion, enterprises at an early stage or “start-ups” are the main issue that has been discussed in this paragraph since this stage is the most critical. Indeed, at later stages, when the company has managed to penetrate and settle in the market, it follows the life cycle of any enterprise. It can stay small or medium size, it may be acquired by bigger businesses, it may fail, or become multinational, but any of these outcomes depend on the four above-mentioned factors.

Start-ups have fertile ground to grow when big businesses are no longer able to innovate independently. There are several variables (for e.g.: increase of the product systemic complexity, difficulty of interaction between product innovation and process innovation, or interaction between manufacturer and user as source of innovation), which affect the increase of the level of difficulty for a single company in pursuing policies of technological development based on self-reliance. In other words, it becomes more and more difficult for a company to innovate “alone”.

As a consequence, the large corporation is no longer an adequate organizational response to the challenges of scientific-technological evolution. In fact it operates in a situation whose costs and production risks related to knowledge are very high. The single company cannot afford, from both the technical and economic point of view, to carry out the entire innovation process, and at the same time, cannot keep the same degree of control on the sales markets.

2.4 INVESTING ON STARTUPS: VENTURE CAPITAL MARKET

2.4.1 Private equity origins

United States

In literature there are examples of venture capital origins dated with Roman Empire's age (Levin, 1994; Liaw, 1999).

However, if we consider private equity as we know it today its origins could be found in the United States after the Second World War.

In 1946 was created in Boston[28] the American Research and Development (ARD), the first equity investment company with the goal to finance both the Massachusetts Institute of Technology (MIT) [29]and high-tech companies. The ARD started its activities by investing in companies that were developing military technologies. Its capitals came from a closed found participated by investors such as Karl Compton[30], Georges F. Doriot[31] and other important local businessmen.

[28] Boston is the capital and largest city of the Commonwealth of Massachusetts in the United States.

[29] The Massachusetts Institute of Technology (MIT) is one of the most important research universities in the world , born in 1861 in Boston , Massachusetts. It grew 5 schools and 32 departments organizing undergraduate and postgraduate specialization in various fields of science. The mission of MIT is to advance knowledge and educate students in science, technology, and other areas of study that may be useful to the nation and to the world in the twenty-first century. The Institute is committed, in fact, to generate and to spread the knowledge in the world, so that its students are prepared to face the great challenges of the present day. " We try to develop each member of the MIT community the ability and passion to work with wisdom, creativity and effectiveness for the improvement of mankind ". http://web.mit.edu/

[30] MIT president

[31] Harvard Business School professor

Private equity market development was influenced by the emanation of the Small Business Investment Act in 1958. Thus, it allowed creating Small Business Investment Companies (SBIC), which are private institutes, regulated by the government, founded with both private and public resources. These companies were specialized in investing in startups, early-stage companies with high potential of growth. Thus, SBICs had significant benefits both fiscal and regarding financing activities [32]compared to other investment companies. On the other hand, the abuse of debt as a source of financing lead to the suspension of the incentive programs with a consequent reduction of this new market during 60's and 70's.

Furthermore, new developments of the private equity market started at the end of 70's where in 1978 was issued the Revenue Act, which reduced taxation on capital gain. Indeed, the following year the United States Department of Labor released new norms called Employee Retirement Income Security Act (ERISA[33]) regarding retirement funds. In fact, previously the reform, retirement funds were not allowed to invest in high-risk activities; the reform contributed to expand private equity market and the creation of new limited partnerships.

---

[32] They could obtain subsidized loans for an amount that could be four times the initial capital provided.

[33] The empoyee Retirement Income Security Act is a federal law of 1974 , by which vengo- no defined minimum standards for retirement plans in the private sector . ERISA does not require any employer to establish a pension plan , requires only to those who draw up plans to meet certain minimum standards . The law does not specify what a participant is paid, but requires plans to regularly provide participants with the information on the same floor . Moreover , ERISA also guarantees the payment of certain benefits through the Pension Benefit Guaranty Corporation , a federal accountant company , whether a particular plan is terminated . http://www.dol.gov/ .

During 80's the private equity market faced some contrasts: on one hand were defined some successful investments in companies like Apple Computer, Cisco System and Microsoft; on the other hand, during the second part of the decade there was an abrupt reduction of money collection due to bad performances. Indeed, performances were worsening for several reasons: high concentration of the market in specific industrial sectors, disequilibrium between demand (limited) and supply (excessive) of financial resources and the high rate of new operators entering the market with the consequent increase of transaction costs (Gervasoni & Sattin, 2008).

These limits were overtaken in the following decade allowing a new and intense sector expansion period. In fact, during those years some operators left the market causing a reduction of the supply side and consequently a reduced gap with the demand; the positive trend of the stock market lead to new initial public offers (IPO); the development of new technologies created new investment opportunities for the private equity operators.

Therefore, the American market has faced a higher development of the private equity market compared to other countries becoming the global leader in this sector. Thus, that was possible thanks to normative facilitations and their global leadership position in the information technology, a sector where there are big investment opportunities.

Europe

The European market of private equity developed later than the American

experience following its benchmark but, at the same time, with different characteristics.

In Europe the first country that created and developed a private equity system was the United Kingdom[34], one of the most important countries in the world for financial services and investments in equity. In fact, in 1945 the Bank of England (BoE[35]) with other important credit institutes founded the 3i- Investing in Industry – with the goal to supply resources to finance companies with high rates of growth.

The 3i was born a year earlier than the American Research and Development (ARD) society but it did not define the development of the private equity market in Europe. In fact, European market developed starting from 80's as a consequence of interventions of European institutions. Thus, the European Council created in 1980 the Venture Capital Liaison Office, an office in Brussels with the goal to connect operators in the market and help small business owners to access venture capital market; in 1983 was created the European Venture Capital Association (EVCA).

The European institutions took those measures in order to create a unique and solid European market able to compete with the American. However, the high European segmentation was an obstacle to those goals and, on the opposite, took to instability of the market during the second half of 80's and early 90's. Thus,

[34] A country of Western Europe comprising England, Scotland, Wales, and Northern Ireland.

[35] The Bank of England (BoE) is the central bank for the United Kingdom. It has a wide range of responsibilities, similar to those of most central banks around the world. It acts as the government's bank and the lender of last resort. It issues currency and, most importantly, it oversees monetary policy.

those negative performances were due mainly to the recession going on during those years, which did not allow obtaining satisfactory return on investments.

In 1997, the Venture Capital Trust Act introduced intermediaries dedicated to private equity investments into small companies (Caselli, 2011). Moreover, in UK were also introduced Venture Capital Trust (VCT) [36]institutes where the trustee is a management company of the private equity fund. Thus, the trust has the role to collect money among investors, trough the stock market, and exploit those resources into small-medium enterprises' growth.

During the late 90's Europe faced high growth rates of the private equity market with some solid differences with the American market and among different countries inside the union.

Italy

Private equity market in Italy has different characteristics compared to the American model and the rest of the European union countries. In fact, the Italian market has its peculiarities with a strong industrial presence and high density of family based enterprises. Therefore, in this context entrepreneurs might not be open to venture backed initiatives due to their fear of loosing control of the company's management or that the investor would influence company's strategic goals. So, private equity in Italy has developed differently than in the USA where it developed easier due also to the presence of large corporations. On the other

[36] The VCT, entered into force with the Finance Act, 1995, they are listed funds whose assets are invested in new shares and other non-listed companies small securities, subject to stringent portfolio diversification limits.

hand, private equity investments are crucial for family-based firms since those need to grow and develop trough R&D that requires high volumes of capital that usually is not sufficient trough the self-financing. Indeed, is required an external investment from a venture capitalist that supplies both financial support and competences. In fact, family-based businesses are a primary target for private equity operators representing the 85% of their operations (Gervasoni & Sollazzi, 2008).

Indeed, in the United States the private equity was originated by a strong growth of the market; in Italy, on the other hand, it was developed as a consequence of measures taken by supervisory authorities. Thus, the origin of private equity in Italy is dated on 1986, when the Private Equity and Venture Capital Italian Association (AIFI) [37]was founded by private financial companies with the goal to develop, create and institutionally represent private equity investments in the country.

In conclusion, the Italian private equity market, as said, developed later than the North American market due to Italian peculiar context; it is possible to define four main causes of this delay. First, there has been a lack of portfolio management culture among institutional investors; this lack was not due to their inexperience but mostly because of the small dimension of the regulated markets and the weights of the asset managed that have not encouraged the creation of structures

[37] The AIFI is stable organization of financial institutions that , through the use of availability or by third parties, firmly and professionally investing in companies in the form of risk capital, through the recruitment, management, and dispose of equity investments predominantly in non-listed companies, with an active involvement in the development of investee companies

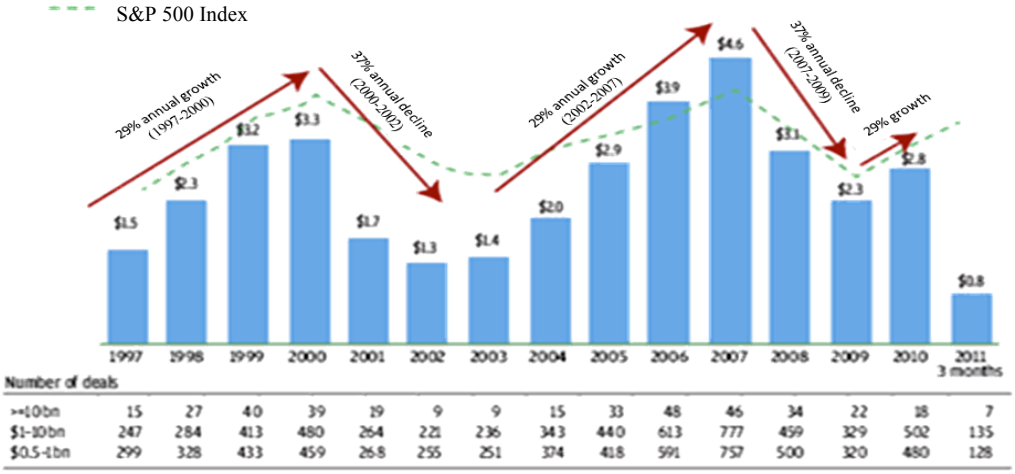
specialized in portfolio management. The second point is represented by the different regulatory and its development has lead to the creation of inhomogeneous professionalisms. Third, the lack of competences in the asset management has not been compensated by the adoption of external consultants. Fourth, there has been a lack of tax incentives in some categories that in other countries were considered strategic for an economic growth; these categories were supported directly or trough private equity funds.

2.4.2 Private equity in the XXI century

The tech boom and bubble

Mergers and acquisitions market includes the private equity sector, which historically has always been characterized by an alternation of both positive and negative trends. In fact, in some periods the market faced peaks in transactions and in others stagnation (Conca, 2010).

Figure 12 – Global M&A Volume ($ trn)



* Global M&A volume is poised for a rebound
** Rank eligible deals with value greater than $10mm. S&P 500 index represents average index value over each respective period.
Source: Dealogic

Figure 12 above describes the trends of global annual volumes of mergers and acquisitions. Thus, late 90's represented the highest peak of operations with a drastic downturn after 2000's tech bubble. Indeed, it took few years to get back to volumes prior year 2000. In 2007, M&A reached a new highest peak with a consequent downturn due to the economic crisis that hit North America in 2008 first and the rest of the world economies later. It is interesting to analyze that the annual growth from 1997 to 2000 is at 29%. During the downturn there is a 37% decline followed again by a 29% annual growth rate during 2002-2007. In addition, it is relevant to observe that S&P 500 index trend is highly correlated with the M&A trend.

Private equity market (figure 13) is an integral part of M&A market and, therefore, it has shared its trend with some differences considering the particular characteristics of the private equity market.

Figure 13 – Global M&A Volume

Source: Pitchbock

During early 00's private equity market increasingly took relevance in the international financial environment.

A study conducted by McKinsey Global Institute has shown how private equity is becoming protagonist of the financial markets; other main actors in this scenario are hedge funds, oil producers and Asian central banks.

Those four groups, called the new power brokers, have tripled their assets from 2000 to 2006 leading to own a value of $8,5 trillion which represents 5% of global financial assets in 2006 with a value of $167 trillion. Thus, in this context, the quota kept by private equity is of $0,7 trillion.

Table 4 - Asset Under Management (2006, $ trillion)

	Assets under management 2006	**Annual growth rate 2000-2006**
Pension funds	21.6	5
Mutual funds	19.3	8
Insurance companies	18.5	11
Petrodollars	3.4-3.8	19
Hedge funds	1.5 (6 with leverage)	20
Private Equity	0.7	14

Source: McKinsey (2007)

Table 4 shows how private equity has operated fewer deals than the other groups ($0,7 trillion) but, at the same time, enhances its growth rate.

According to British company Private Equity Intelligence[38], globally the amount

[38] Private Equity Intelligence is a financial information provider operating in the Private Equity industry

of investments made between 2004 and 2007 has almost tripled rising from $120 billion to over $300 billion. In particular, in Europe the European Investment Fund (EIF) observed that from 1997 to 2007 the amount of investment grew from 10 to 71 billion euros.

Moreover, lately the private equity sector has been characterized by a process of funds concentration due to investors' tendency to appoint their resources to mega-funds. Indeed, the dimension of funds and consequent deals are highly related; the bigger the fund gets, a higher value of deals will be executed.

McKinsey Global Institute's research has inquired about which main elements have influenced the development of private equity market. Indeed, the investigation pointed out these three aspects:

- Investors' demand
- Regulatory changes
- Low cost of venture capital

First of all, private equity's expansion has been supported by both increasingly high liquidity availability and by investor's inclination to make alternative investments. In particular, pension funds represent the main resources suppliers.

That has been possible trough pension funds' reforms that have contributed to a higher openness to alternative investments, private equity included.

Therefore, the high availability of liquidity in the global market has lead to a reduction of interest rates with the consequence of a strong push to private equity market development. In particular, liquidity in the market has encouraged

operations of leveraged buyout, which thanks to a low capital cost, have allowed taking full advantage of financial leverage.

During early 2000's, the world economy faced the tech bubble and the September 2001 terroristic attacks bringing a deep crisis into the American economy and limited credit availability on the financial markets due to increasingly costs of capital. Therefore, the financial markets faced an increasing number of financial expansion operations rather than buyout. Afterwards, Federal Reserve and European Central Bank adopted a several cuts on the interest rates in order to contrast the recession going on[39]. Indeed, the economy started to recover and buy out increased again overcoming expansion operations.

To better understand private equity operation trends, is important to analyze the interest rate fluctuations: when those are low, there is a high liquidity availability on the market which determines leveraged buy out operations; on the other hand, when interest rates are high, expansion operations become much more profitable since those are not directly linked to the debit market.

The intense usage of debt capital and consequent credit securitization by banks may let pubic opinion think that private equity has had a key role in term of risks of capital markets and that it has been one of the main causes of the crisis. However, McKinsey Global Institute's study has shown that in 2006 private

[39] The Federal Reserve , with expansionary monetary policy action to combat the recession , lowered the Federal Funds interest rate (from 6 % to 1.7 % between January 2001 and January 2002) . After this maneuver, the US GDP returned to grow and with it the M & A market . Similarly , also in Europe , the ECB lowered rates (from 4.75 % in June 2001 up to 2% of the June, 2003) , the effects were also positive in this case , even if more content than what has been the case In the USA.

equity operations produced only 11% of the total debt in the United States and Europe; this value is definitely not relevant in macroeconomic terms and is not able to justify such a catastrophic crisis that occurred in those years.

The financial crisis

The previous point 3.2.1 described and analyzed what happened during the early 2000's before the crisis that in 2007 caused a deep credit crunch.[40]

The so-called "housing bubble" that caused the economic and financial crisis occurred in the recent years is due to several factors. First, during the previous years, the United States faced a period of expansionary monetary policy characterized by low interest rates and high availability of foreign capital, in particular from Asia. Second, it has to be considered real estate development: the high availability of liquidity has lead banks to push privates and companies to buy houses through mortgages, which were usually not covered by sufficient guarantees and the debtor did not have enough income capacity able to ensure the payment of the installment. Indeed, banks were convinced about adopting a successful financial model where increasing real-estate prices would have

[40] The term " credit crunch" means credit rationing . You get to the "credit crunch " quan- do the banks lend less loans to businesses and households . This situation creates serious problems for business and, therefore , may cause the screwing of an economic crisis . The credit crunch may emerge from spontaneous economic trends or can be provoked by the authorities monetary assets . In the first case banks , worried about the solvency of their customers , grant loans to stricter conditions , by raising interest rates or asking for more guarantees . In the second case are the central banks involved when , usually at the end of the expansion phase will , raise interest rates in order to avoid the risk of inflation . The banks are , in second joke , induced to raise its interest rates . The form of the credit crunch that occurred in the current financial crisis is that of the first type

supported families and businesses in paying back their mortgages. Last, the main reason of the crisis was the credits securitization operated by banks with a creation of new stocks linked to those credits, in particular the Collateralized Debt Obligations (CDO). Yet, considering all the factors just described, the crisis most probably would not have happened whenever the securitization would have been healthy as usual; in this particular case the securitization adopted were toxic due to particularly risky operations.

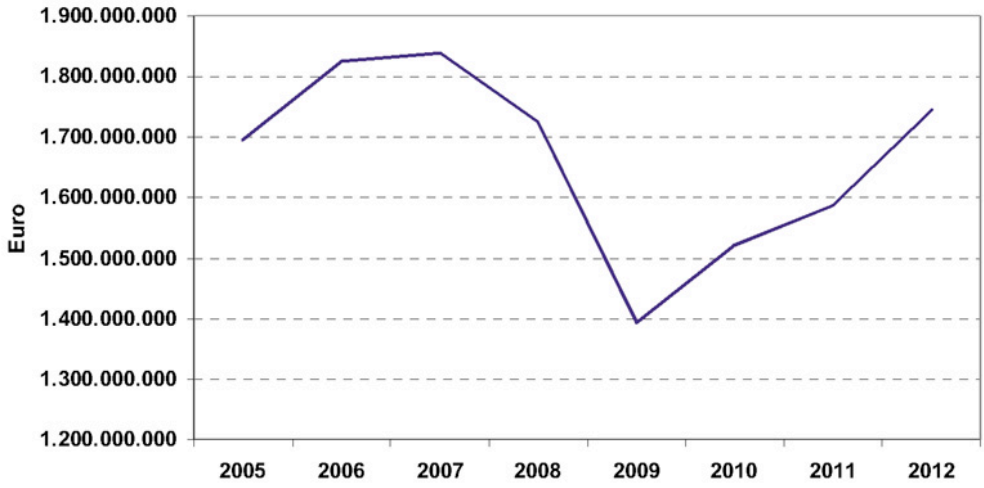
Crisis effects are visible through several channels:

- *Banks:* have registered substantial losses; those institutes have been supported by the Government with intervention programs with the goal to give to banks higher liquidity, or in case of much more severe situation, they were put on liquidation. However, every credit institute during this period faced a drastic reduction of their assets and stock value.
- *Stock market:* financial markets suffered everywhere in the world with huge losses with the consequent reduction of the asset values of large corporations being acquired by American and European funds. For example, S&P 500 index registered a 40% lost during 2008 that represent the worst performance since the Great Depression (paragraph 1.1). Indeed, after the 1929 crisis, the stock markets had never had (on average) losses higher than 30%, not even during the tech bubble. On the other hand, after some positive trends, in 2008 the stock market faced the deepest crisis ever occurred since 30's; this hit all major world economies.

- *Real economy:* the main indicators have suffered a deep contraction putting governments globally in the position of public intervention in order to sustain the real economy. Yet, Eurostat data (2010) show how growth rates in euro zone had been at 1% during 2008, half of the value compared to the previous year; in 2009 growth rate reached a record value of -4.2%. Moreover, globally the economy slows down as well: these effects are visible in both advanced and emerging economies.

Italian economy has been hit by the crisis as well. EUROSTAT[41] data shows that in 2009 the GDP has dropped by 5% compared to the previous year. Yet, the index of industrial production has had a negative trend during the whole period. So, in this context, the enterprises' international competitiveness is reduced.

Figure 14 - Italy all countries exports value



Source: personal elaboration of data

Furthermore, Italian economy faces also a drop of trades with extra European

[41] European Statistics Institute

union countries: in 2009 exports decrease by 21.4% compared to the previous year (figure 14) and imports drop by 22%[42].

As said, the crisis resulted by the difficulties occurred in the real estate sector, influencing the rest of the economy, including traditional sectors such as textile, automotive and footwear.

The crisis had a strong impact on private equity activities as well. In fact, starting from the second semester of 2007 there was a lack of those factors that had contributed to the development of the private equity market such as:

- Companies' growth predictions, that had lead to a strong rise of buy out operations, were totally disregarded due to their negative performances; moreover those companies were not able to have good cash flows in order to pay back the debt acquired.
- Companies faced their value being halved in a very short period of time bringing operators to apply high depreciations.
- There was no liquidity available anymore compared to the past where relevant deals were closed thanks also to low liquidity costs.

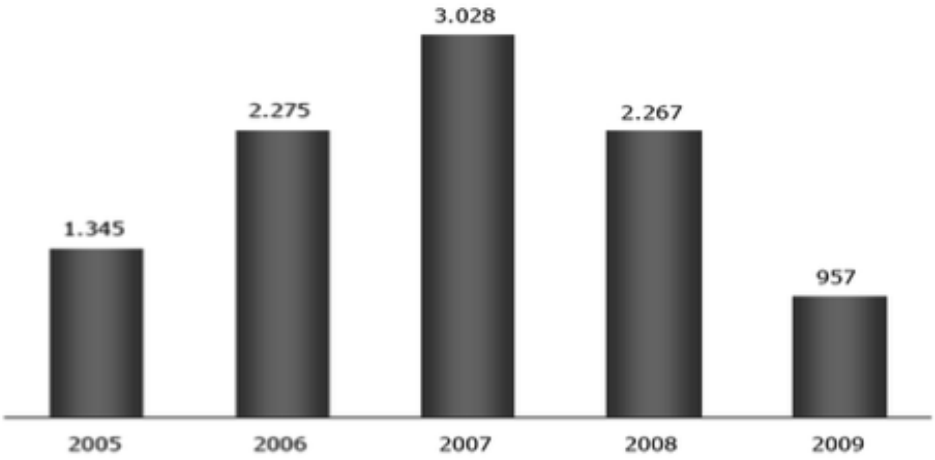
The main consequence of these factors was the stagnation of the private equity sector.

Concerning the fund raising is possible to observe a drop of resources available in the Italian market during the years following the crisis. Indeed, in 2008 there was raised 2.2B euro, 25% less compared to the previous year. Yet, during 2009 fund

[42] Eurostat, "Euro GDP stable and EU27 GDP up by 0.1%", April 2010.

raising faced the deepest low point in those years with 957M raised, which represented a 58% reduction compared to the previous year.

Figure 15 – The PE industry: investments, exits & fund-raising (in million euro)



Source: AIFI - PricewaterhouseCoopers

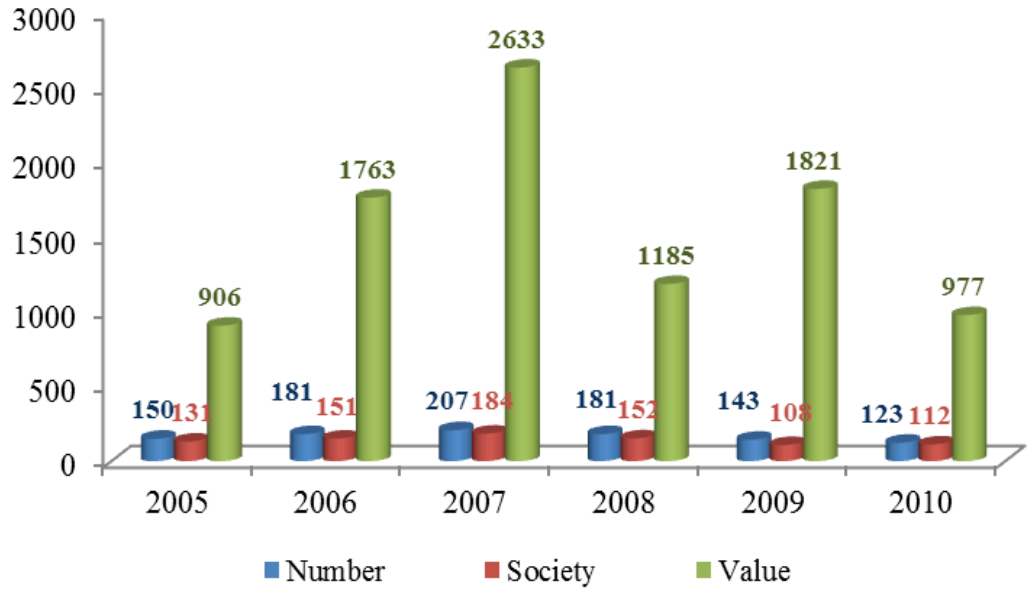
Considering that during those years exit operations were particular critic and inconvenient, investors had difficulties to recover funds paid and therefore they preferred to focus their efforts on existing investments.

In the following figures it is possible to observe how financial markets' turbulences had hit exits as well. In 2008, the amount disinvested was of 1,18B euro with a 55% reduction compared to the previous year. On the other hand, in 2009 there is an increase of disinvestments up to 1.8B euro. Indeed, even if it could be interpreted as a recover signal, in reality that was not the reality. In fact, it is necessary to underline that during the year there was 85% of the total amounts of disinvestments regarded write off operations. So, those disinvestments were a result of depreciations of companies in portfolio instead of monetization of

capital gains.

Therefore, the financial crisis during 2009 generated both difficulties in terms of disinvestments from the companies in portfolio and it had a deep impact on their value as well.

Figure 16 – Disinvestment activities in Italy 2005-2010



Source: AIFI - PricewaterhouseCoopers

On the other hand, investments had a different trend hitting in 2008 a record of 5.4B euro of investments with a 30% increase over the previous year. Also, the number of operations increased up to 372 involving a higher number of companies.

The increasing operations of expansion and buy out (Kaplan, Stromberg, 2009), brought to a positive trend in terms of number of deals while the large[43] and mega

[43] Large deal: operations higher than 150M euro

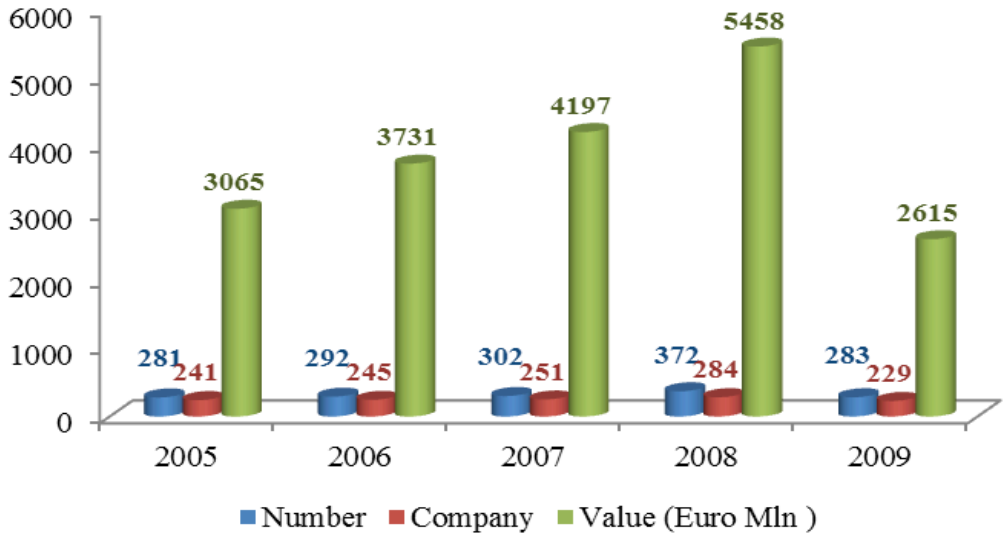
deals[44] during the year brought to positive trends in terms of volumes.

However, the crisis effects have hit also these activities. In fact, during 2009 investments were 2.6B euro with a 52% reduction compared to the previous year. The number of operations decreased around 24% as well. Indeed, it is possible to observe the discordance between the value and the number of operations, which is due to the fact that the crisis has lead to a reduction of large and/or mega deals.

Investments, that have represented one of the main engines of the previous phase, have been affected by the impact of the following factors:

- Impairment of demand
- Decline of investors' confidence
- Much more restricting financing conditions
- General contraction of credit availability

Figure 17 – Evolution of investment activities 2005-2010

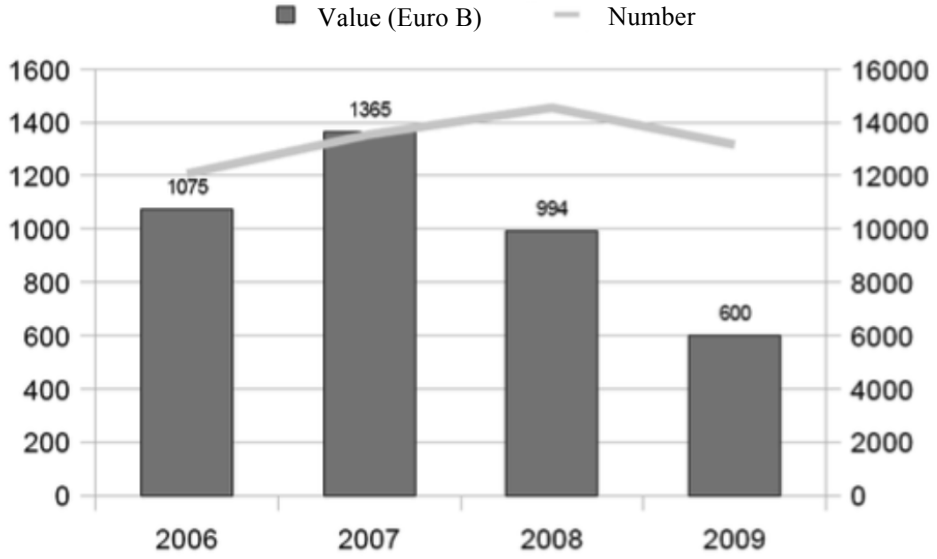


Source: AIFI - PricewaterhouseCoopers

[44] Mega deal: operations higher than 300M euro

For the last analysis it might be interesting to explore the M&A market in general. As said at the beginning of this paragraph, the M&A activities are strongly linked with those of private equity. Therefore, is not surprising that M&A operations have interrupted their ascending phase due to the crisis. Yet, a contraction in terms of the amount invested has been registered starting from 2008 and in terms of number of operations starting from 2009.

Figure 18 - Value and number of M&A operations in the European market 2006-2009



Source: AIFI - PricewaterhouseCoopers

After-crisis scenario: analysis of the Italian market

The global crisis started to slow down around the end of 2009 when a slow recovery started; it occurred mainly thanks to the expansionary economic policies internationally adopted by the leading economies. Yet, during the second trimester of the year most of global economies and emerging countries faced an increasing economic activity. Indeed, in the thirds trimester in various economies occurred

positive signals from the industrial production, retail sales and from the increasing confidence perceived by families & businesses[45].

Moreover, in the financial markets the situation improved as well. In fact, investors started progressively to have more confidence on institutions, which was translated in starting to invest back in risky activities; this lead to increased value of the shares both in advanced and emerging economies. Last but not least, in the interbank market there were again liquidity available thanks to positive economic trend with low tensions in the markets.

At the beginning of 2010 the economic recovery continues with different rates among countries: high rates in emerging markets, fast rates in the United States and Japan and still moderate in Europe.

Global G20 leaders [46]gathered together in Toronto summit in June and identified the following priorities:

- Ensure economic recovery and rebalance public finances
- Reform the global financial system
- Restrict and make more solid international financial institutions
- Allow more liberalization of trades and investments

The common goal is to promote a strong, balanced and sustainable growth. Moreover, it has been underlined the risks deriving from the widening of deficits

[45] Bank of Italy, Economic Bulletin Nr. 58, October 2009.

[46] A group of finance ministers and central bank governors from 19 of the world's largest economies, and the European Union. The G-20 was formed in 1999 as a forum for member nations to discuss key issues related to the global economy. The mandate of the G-20 is to promote growth and economic development across the globe.

and public debts. Thus, advanced economies have committed to halve deficits by the end of 2013 and to stabilize or reduce the debt/GDP by the end of 2016. Indeed, the world economic growth slows down during summer 2010. Yet, the during the second semester some economies faced tensions on the government bonds market, in particular in Greece, Ireland, Spain and Portugal. In fact, these countries are those who most suffered from the high levels of sovereign debt; but also Italy and Belgium faced a strong-increasing value of the spread between their bond yields and those of Germany, which are taken as benchmark.

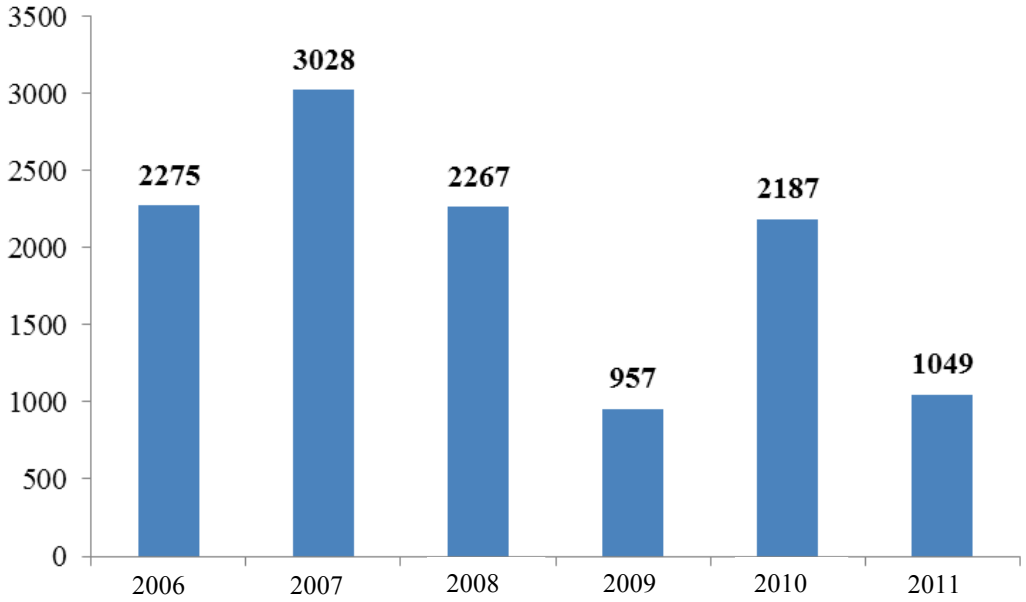
In Italy during those years the economy started to recover slowly. After a negative trend where the GDP started to be negative, it finally changed its trend becoming positive in 2010 with a plus 1.3% following the bad performance of minus 5.2% of the previous year.

Figure 19– Italian GDP 2006-2015

Source: World Bank

After the sharp fall of the previous year of the funds raised, they reached 2.1B euro with a plus 129%; almost the same level of 2008. Indeed, that's been favored by the establishment of the Italian Fund of Investment [47]funded by the main banking institutions, "Cassa Depositi e Prestiti" and promoted by the Ministry of economy.

Figure 20– Funds raised in Italy 2006-2011 (Euro Mln)



Source: AIFI - PricewaterhouseCoopers

Moreover, another important signal of improvement is given from the disinvestments side that equals to 977M euro[48], which represents a minus 46% compared to the previous year. If exit strategies adopted in those two year are analyzed, it is possible to observe the drastic reduction of write offs that are

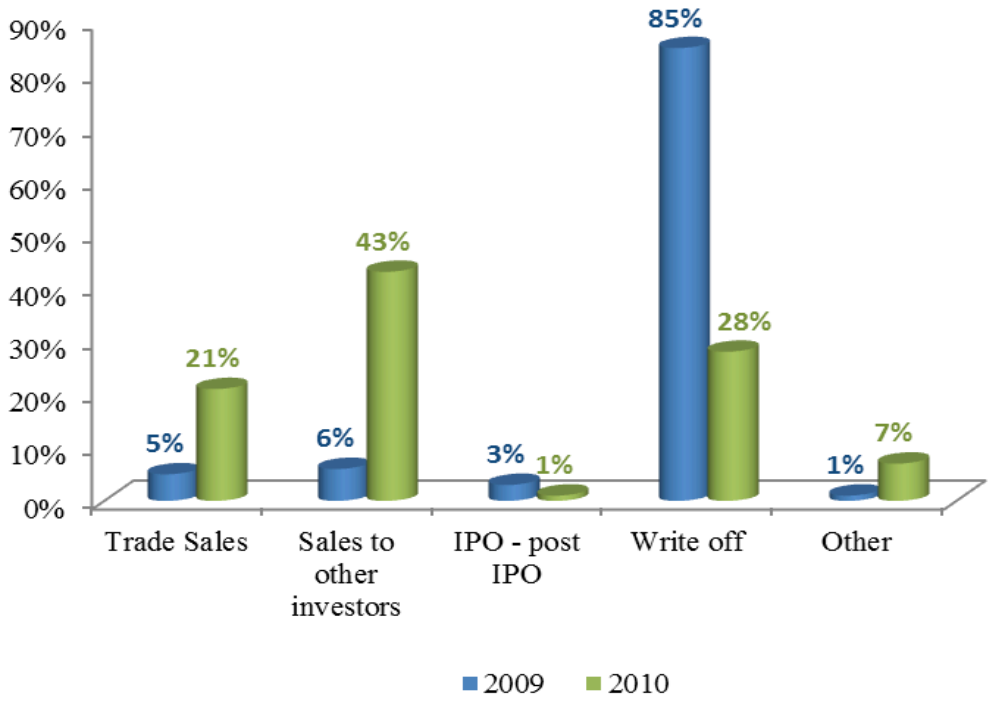
[47] The Italian Fund of Investment SGR S.p.A. it's a company funded by an initiative promoted by the Ministry of Economy and Finance, several sponsoring banking institutions and associations on March 18th 2010 with a capital of 4,000.000 euro. Www.fondoitaliano.it

[48] Calculated at cost of purchase

"only" the 28% in 2010 compared to the 85% in 2009.

Private equity operators made profits selling shares and only a few had to break down the value of their equity participations without obtaining a yield from their investment and loosing the value of the capital invested (Gervasoni, 2010).

Figure 21– Trend of the percentage distribution of the amount disinvested by type in Italy (2009-2010)



Source: AIFI - PricewaterhouseCoopers

In case the investments are taken in consideration, it is possible to observe an improvement of 3% in terms of the number of operations, which were 292 in 2010. However, their total value defines a reduction of 6% compared to the amount invested in the previous year.

In 2011 the global economy was still problematic due the sovereign debt crisis of the euro zone countries: throughout that period financial markets became highly

instable. Additionally, global economy was also afflicted by the persistent uncertainty of the consolidation process of the public finances in the United States. Therefore, considering this situation in Europe and US, the global economy growth expectations are strongly weakened.

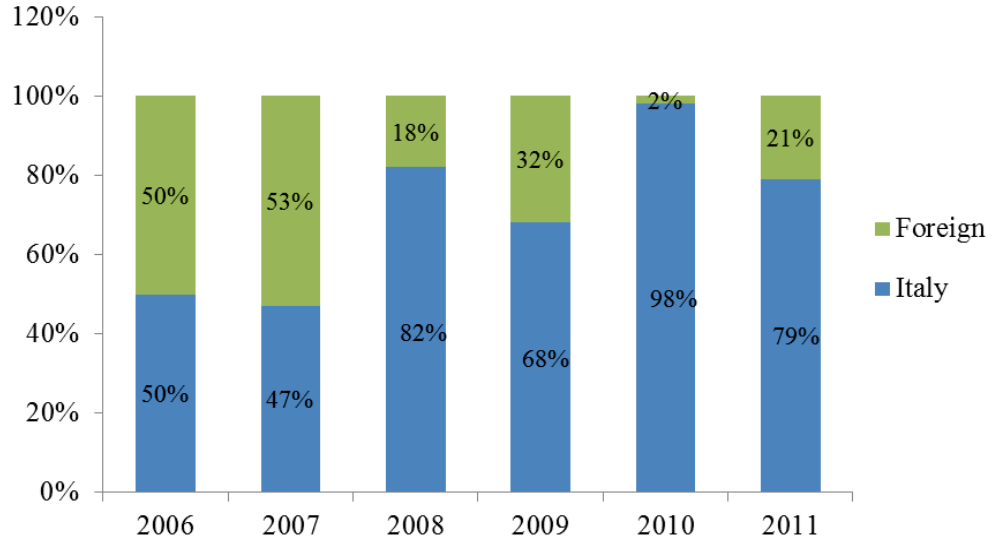
Although the international scenario raises concerns, the analysis of the private equity and venture capital market conducted by AIFI[49] in collaboration with Pricewaterhouse Coopers Transaction Services, shows positive results for both investments and disinvestments, whilst fundraising activities result still problematic. The analysis has been done trough online surveys and is aimed to analyze the new funds raised, investments and disinvestments activities during 2011 (Gervasoni, 2012):

1. *Fund raised:* the funds raised in 2011 were 1B euro that is the only negative data analyzed in the survey. In fact, after the recovery occurred in 2010, the fund raised started to slow down again with a downturn of 50% compared to the previous year. This was due to both the uncertainty of large international investors and to the lack of liquidity in the market.

Moreover, the analysis of the geographic area (figure 22) shows that 79% of the funds raised have domestic origin. On the other hand, it is important to enhance how the foreign funds raised have increased in 2011 compared to 2010 where those resources were almost inexistent.

[49] Italian Association of Private Equity, Venture Capital and Private Debt. http://www.aifi.it/

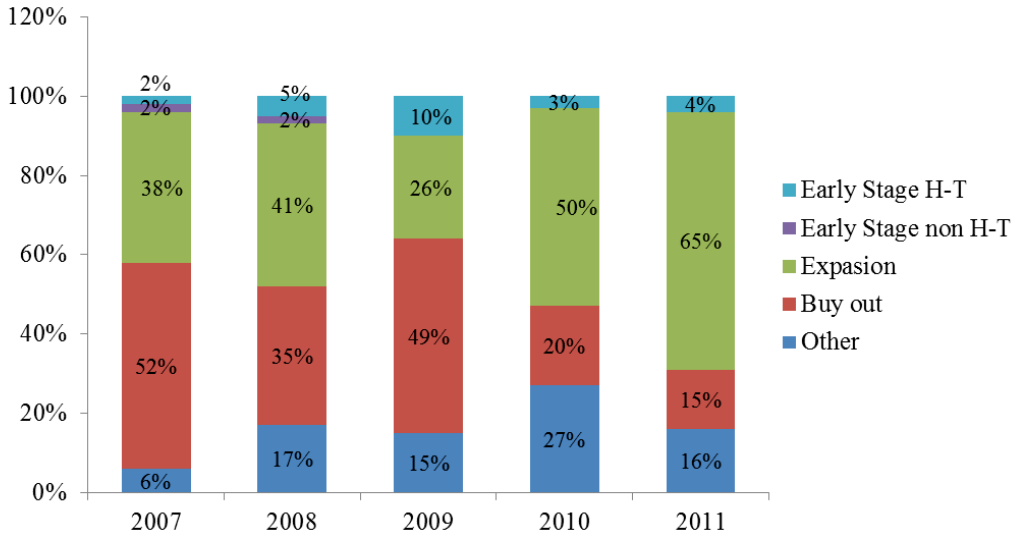
Figure 22– Geographic origin of the funds raised in the Italian market (%) 2006-2011



Source: AIFI - PricewaterhouseCoopers

In the figure 23, the survey analyzes also the distribution of the investments of the funds raised enhancing that most of the resources will be directed to expansion operations (65%) and buy out (15%).

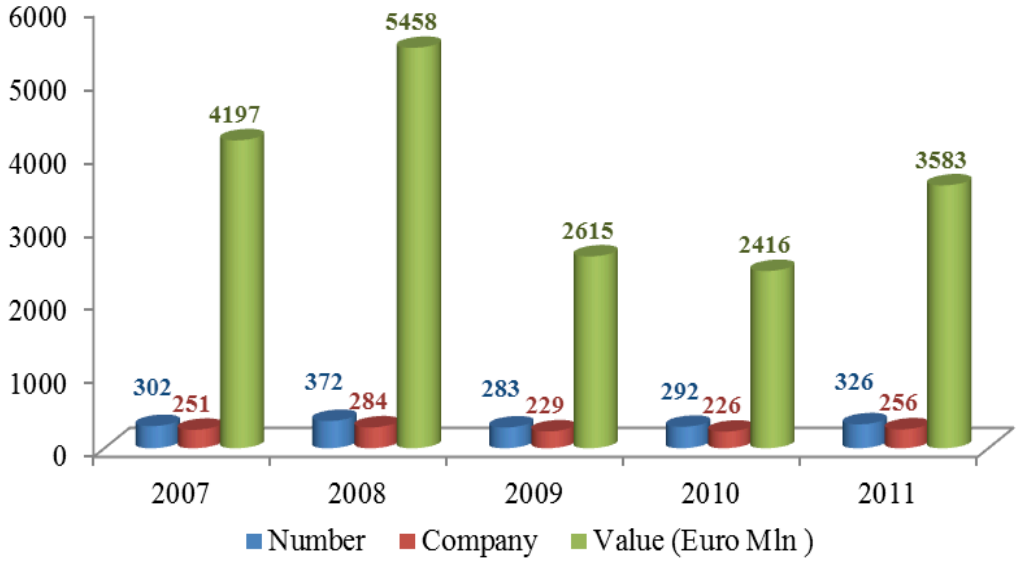
Figure 23– Investments distribution of the funds raised



Source: AIFI - PricewaterhouseCoopers

2. *Investments:* investments in 2011 reached the amount of 3.5B euro, which represents an increasing 46% compared to the previous year. Yet, the number of operations was 326, which represents an increasing 12% compared to the 2010 (Granturco, Miele 2010). Indeed, it is important to underline the recovery of private equity market in this particular segment reaching higher levels [50]than those occurred in 2009 due to the crisis.

Figure 24– Evolution of investments 2007-2011



* The value above the dashed line represents activities of operators who do not have formal advisory in Italy.
Source: AIFI - PricewaterhouseCoopers

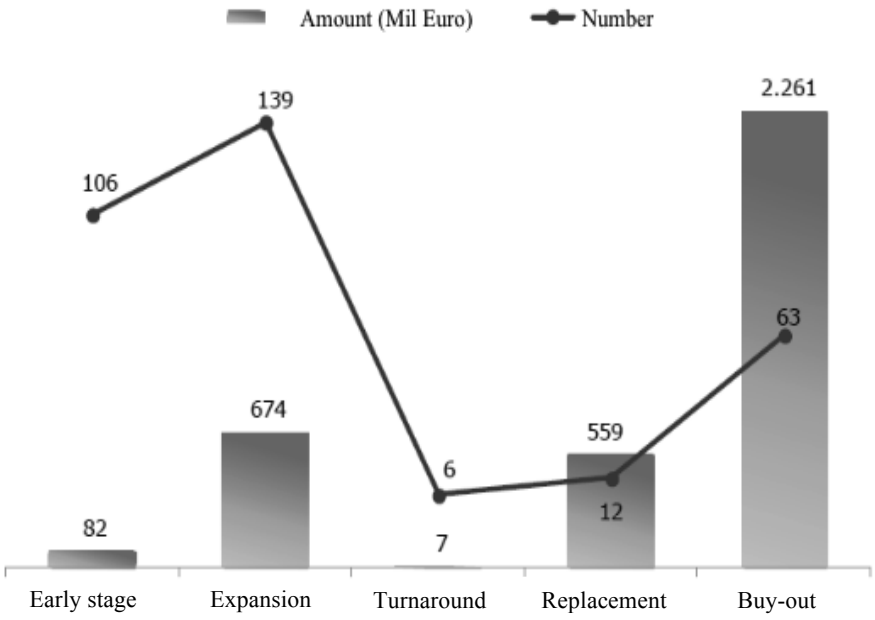
If the type of investments carried out is considered, it is possible to enhance a different classification whether it is considered the amount or the number of operations.

In fact, in terms of the amount of investments, it is clear the supremacy of buy-out operations with 2.2B euro of capitals invested. Thus, expansion and replacement

[50] In terms of both value and number of operations.

operations follow with 674M and 559M euro. On the other side, if the number of operations is considered, it is possible to observe that buyouts are not primarily important. In fact, those represent the third position with 63 operations; early stage operations are in second position with 106 operations and expansion operations take the lead with 139 operations.

Figure 25 - Distribution of investments by type in 2011



Source: AIFI - PricewaterhouseCoopers

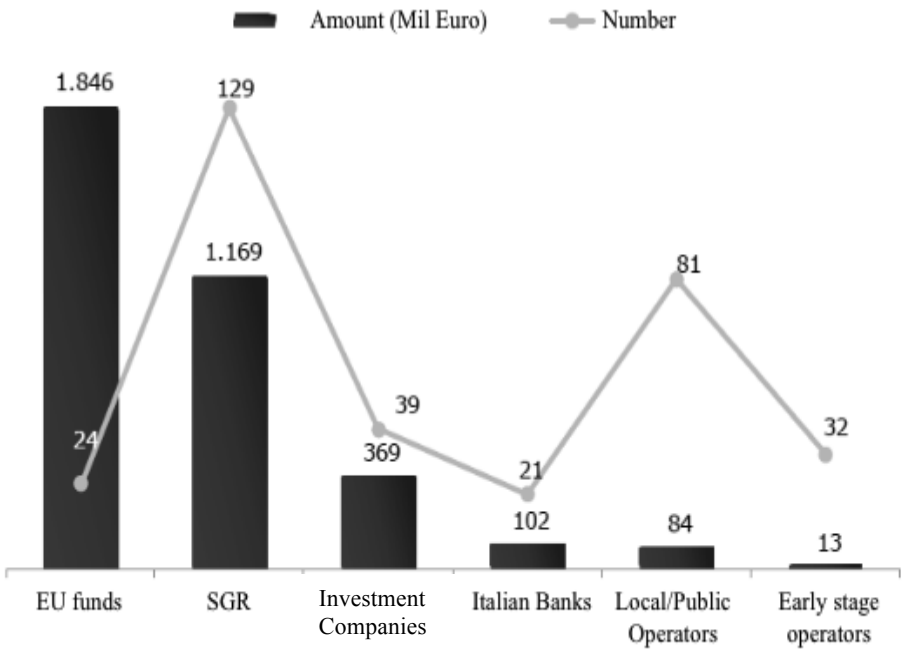
Going deeper in the analysis it is possible to valuate the distribution of investments considering the operators acting in private equity market: data shows how, in terms of value, the primary operations are made by European funds with 1.8B euro invested representing the 52% of the market. Following we find SGR[51] (33%) and investment companies (10%).

[51] SGR: Societa' Gestione Reddito (Capital Management Companies)

In terms of number of operations in first position there are SGRs (129) and public-local operators (81). Thus, almost in last position there are the European funds with just 24 operations.

Therefore, European funds have a different classification if we consider the value of investments or the amount of investment per operation that shows an upward trend in 2011, reaching 1.2 billion euro.

Figure 26 – Distribution of investments by operators in 2011

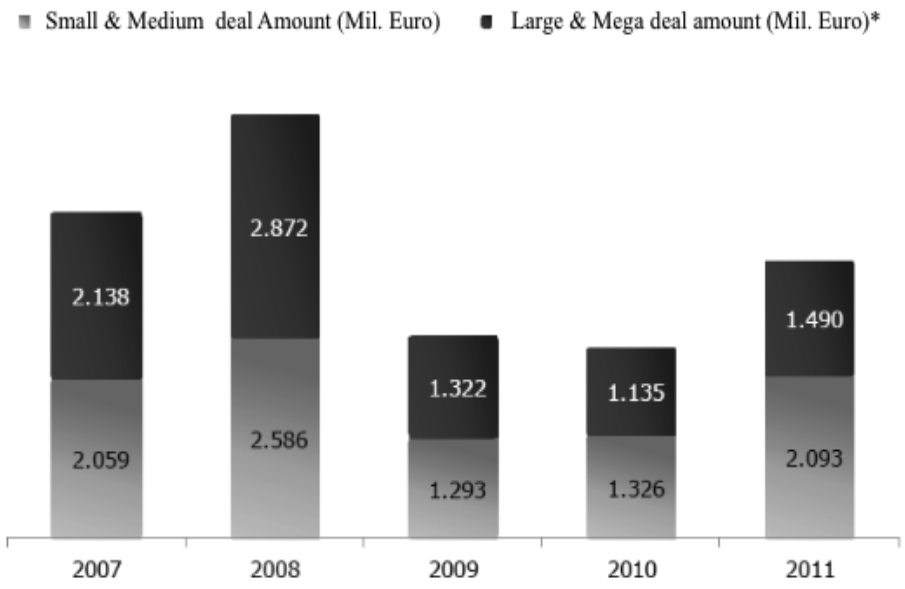


Source: AIFI - PricewaterhouseCoopers

With regard to the size of operations, in 2011 there are three mega deals and one large deal. These four high value operations have attracted capitals for EUR 1.4B, which represents the 42% of the total amount invested during the year.

In addition, it is possible to observe that large & mega deals increased by 31% compared to 2010; small & medium deals have increased by 58%.

Figure 27 – Evolution of the amount invested by dimension 2007-2011

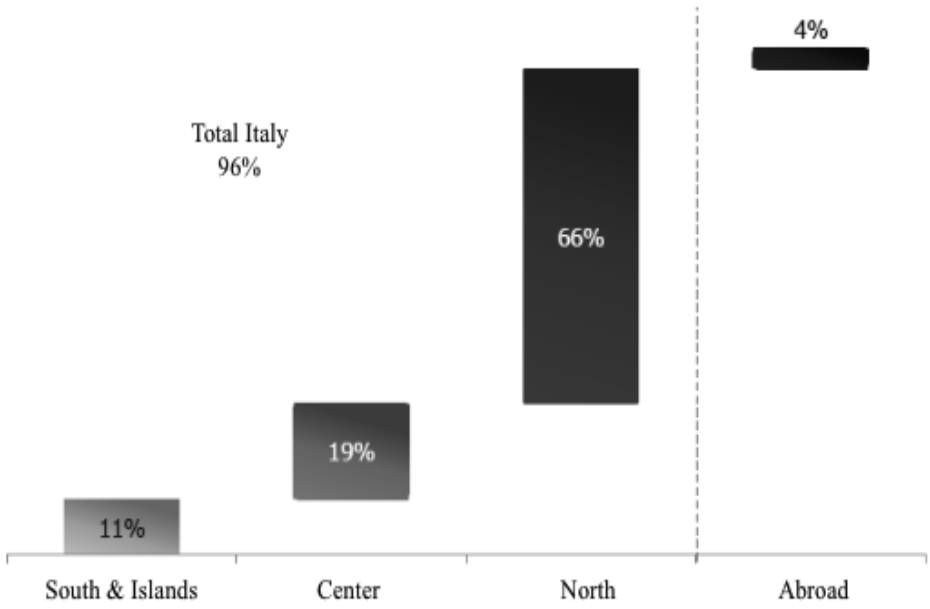


* Investments between 150 and 300 million Euro (large deal) or higher than 300 million Euro (mega deal)
Source: AIFI - PricewaterhouseCoopers

Considering investments by geographical area, it is possible to state that the majority of investments are granted to Italian companies. In fact, the 96% of investment operations are distributed in Italy to a total of 98% of investment value. The next two figures display that operations are mainly concentrated in northern Italy with 66% of the number of investments representing the 82% of the total value. Therefore, those are operations of high value. The most active regions in the market are Lombardia, Veneto, Friuli Venezia Giulia and Piemonte. In center of Italy there are still active regions such as Emilia Romagna and Toscana. Finally, in southern Italy the number of operations has increased by 3% compared to 2010 reaching to 11%; however the amount is still limited, which is an important signal of the low profile operations made in this part of the country. It is

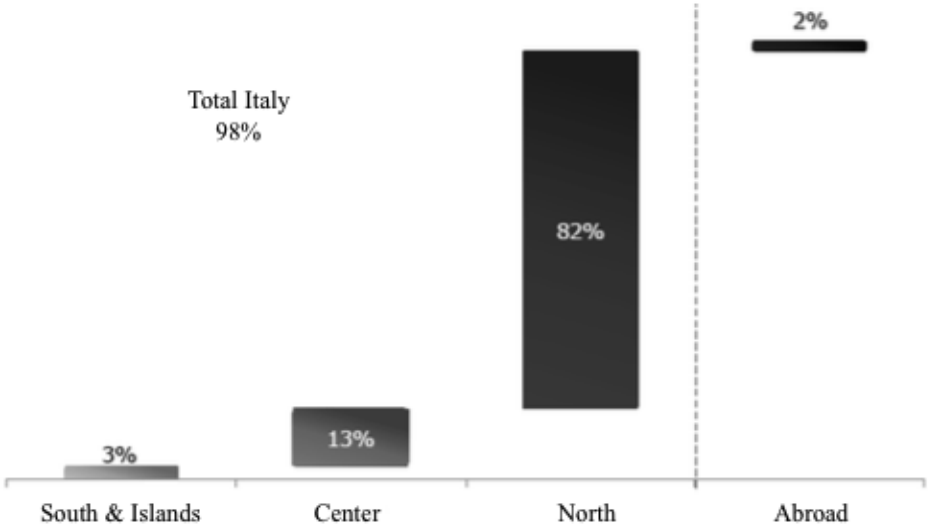
relevant to consider that in regions such as Valle d'Aosta and Basilicata there were no private equity operations.

Figure 28 - Geographic distribution of number of investments in 2011



Source: AIFI - PricewaterhouseCoopers

Figure 29 - Geographic distribution of the amount of investments in 2011



Source: AIFI - PricewaterhouseCoopers

From a sectorial analysis of the investments it is possible to enhance that the majority of those had targeted companies operating in the energy & utilities field (14%). Furthermore, in second position there are companies operating in industrial products and services (11%).

Comparing these data with the previous year it is possible to enhance how some sectors have increased their relevance: telecommunication (+167%), industrial automation (+150%) and electronics (+100%). On the other hand, other sectors faced a strong drop: automotive (-80%), consumer goods (-41%) and biotechnologies (-41%).

However, if we consider the amount of investments, the retail sector has received the biggest value (25%).

3. *Disinvestments.* In 2011 the disinvestment activities show important improvements. First of all, the number of disposals has become 139 with a partial recover from the previous year. Secondly, disinvestments have involved a higher number of companies amounting to a total of EUR 3.1 billion, which is 225% increase.

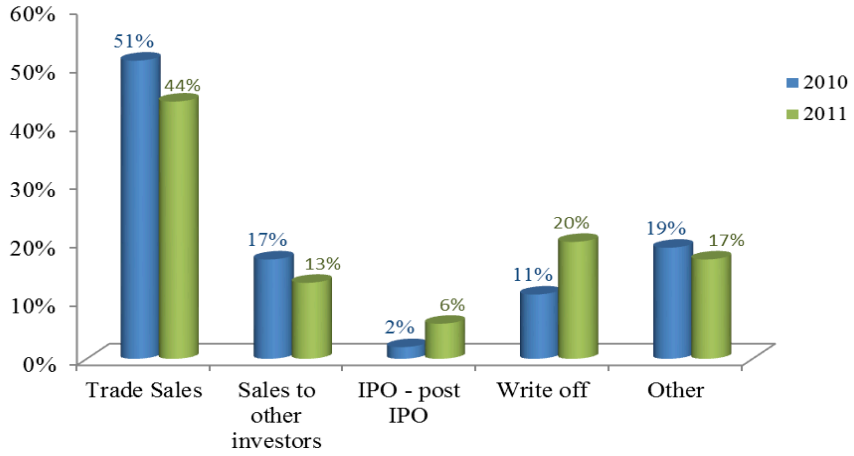
In the following two figures it is possible to observe which has been the most recurring disinvestment in 2011 compared to 2010. The percentage distribution of the exit channels is analyzed from two different points of view: the number and amount of operations.

Considering the number of operations it is possible to observe how the modality of disposal most utilized in 2011 was the trade sale (44%), which is less than the

previous year. In second position there are write off operations, which weight has increased. On the other hand, there is a decrease of disinvestments trough the selling to other investors. In last position there are the IPOs[52], which are somehow more frequent compared to the previous years.

Considering the analysis of the amount disinvested, the most utilized methodology it is the trade sale. However, in this case, sales to industrial investors it is still predominant compared to the other disinvestment options; in fact, in 2011these kind of operations were 64%, which is three times higher than 2010. Investors have decided to dispose their shares through trade sale operations. A strong reduction has been registered for operations of selling to other investors, which lead to only 16%. Indeed, in third and fourth position there are IPOs (increasing) and write offs (decreasing). Write-off operations have a high number of operations with a low value.

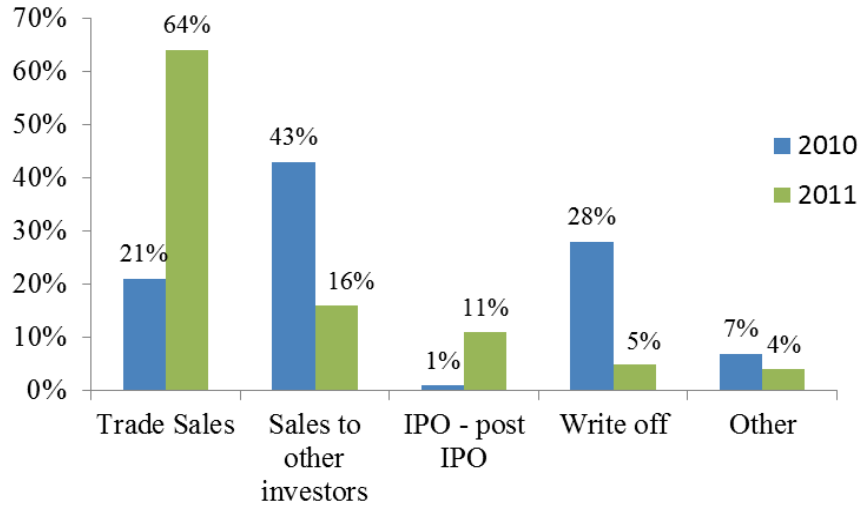
Figure 30 - Evolution of the % distribution of the number of disinvested by typology, 2010-2011



Source: AIFI - PricewaterhouseCoopers

[52] Initial Public Offer

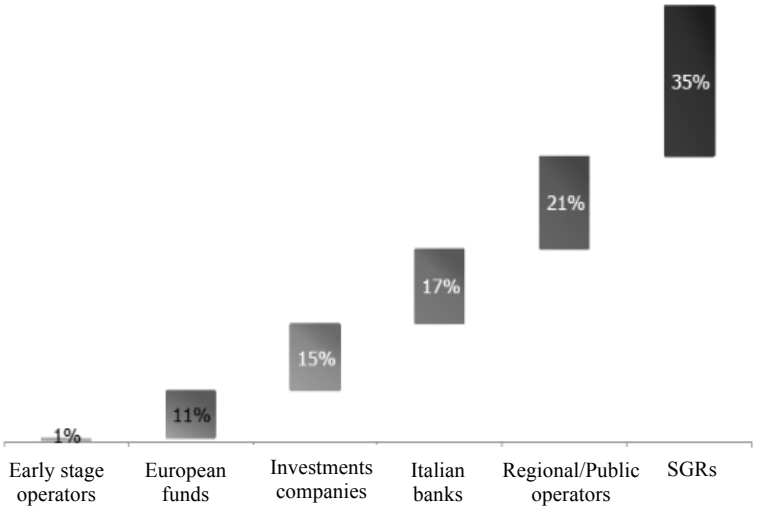
Figure 31 - Evolution of the % distribution of the amount disinvested by typology, 2010-2011



Source: AIFI - PricewaterhouseCoopers

Considering the analysis of disinvestments classified by type of operators, it is possible to enhance that that the majority of disposals was made by SGRs (35%) and public/regional operators (21%), which were the operators that made the higher number of investments.

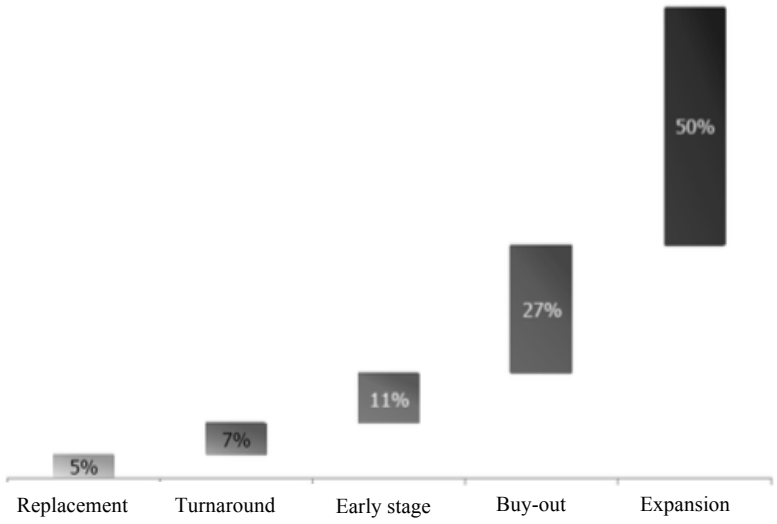
Figure 32 - Percentage distribution of the number of disinvestments by typology of operators



Source: AIFI - PricewaterhouseCoopers

In conclusion, in the last figure it is shown how in the majority of cases the private equity operators dispose their shares as a consequence of expansion operations (50%). Relevant is also the weight of disinvestments as a consequence of buy-out operations. Last, less important are disposals in cases where the investor was in touch with the company since the early stage, turnaround or replacement.

Figure 33 - Percentage distribution of the number of disinvestments by typology of original investments



Source: AIFI - PricewaterhouseCoopers

2.4.3 The role of venture capital

In this paragraph will be analyzed the type of investments in venture capital.

The allocation of venture capital is linked to the stage of development of the company. So, the funds necessary to this companies are classified in three macro areas:

- Start-up

- Development (growth) of the company
- Change

Investments in risk capital

Investment in risk capital means the investment of financial resources into unlisted companies made by specialized operators by acquiring equity or convertible notes for a medium-long term. These companies have usually high potential of growth of their value able to pay back investors' money. In addition, the venture capitalists give make available their managerial experiences and networking opportunities with other investors and financial institutions (PricewaterhourseCoopers-AIFI, 2006).

Usually private equity operators can invest in different stages of growth of companies with different goals. In fact, for every different stage the company has different needs in terms of resources, capital and know-how.

Traditionally, different types of investments are listed by the stage of development of the company (Pratt, 1980).

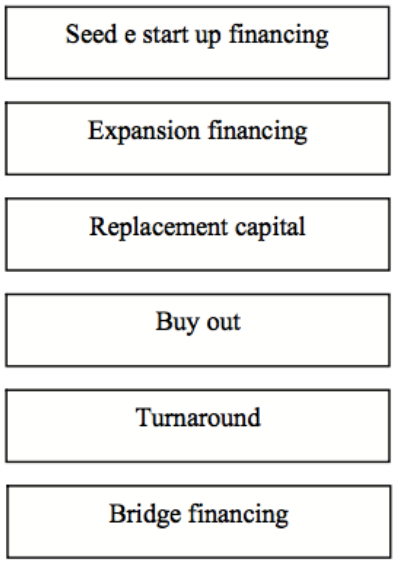
Considering the classical classification is possible to identify the following operations (Gervasoni & Sattin, 2008):

- Seed and start up financing: also so called early stage investments;
- Expansion financing or development capital: investments finalized to support the growth and development of existing companies;
- Replacement capital: it represents an investment where the shares are re-distributed. The new investors takes equity steaks from another investor,

who is not interested anymore in that investment;

- Buy Out: operation where there is a total change of ownership and assets;
- Turnaround: investments on companies in crisis;
- Bridge financing: investments with the primary goal to create conditions for an IPO53.

Figure 34 - Classification of equity operations made by institutional operators – classical classification



Source: personal elaboration of data

However, recently emerged some problems in the classical classification; in fact, companies operate in new competitive scenarios and technological innovations.

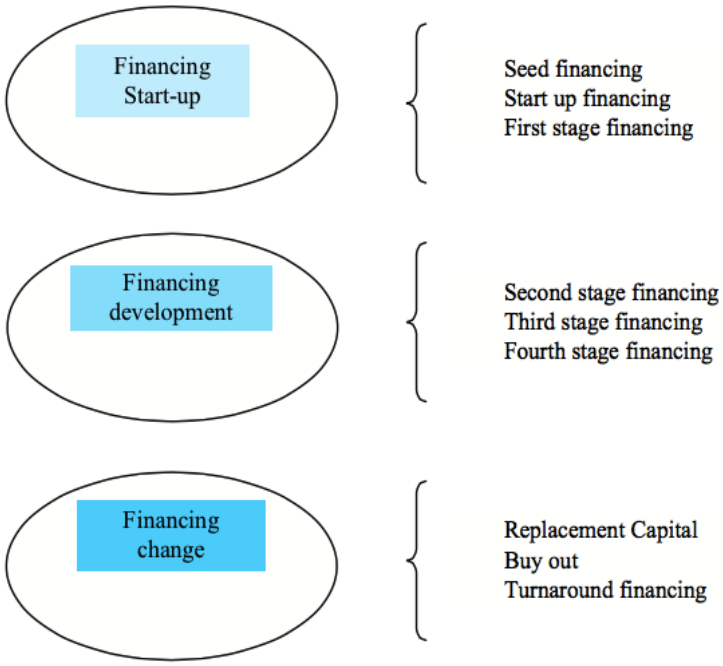
For example, in the past the turnaround operations were made when the company was in the maturity stage and could not adapt to the market's needs. On the other hand, nowadays turnaround operations could be established in earlier stages as well, considering the difficulties new businesses are facing to effort the crisis.

[53] Initial Public Offer

So, there is the necessity to define a new classification that is based on the financial needs of the company rather than the development stage (Caselli, 2011). Considering this modern classification, it is possible to distinguish three different macro-areas:

- Financing start-ups
- Financing development
- Financing change

Figure 35 - Classification of equity operations made by institutional operators – modern classification



Source: personal elaboration of data

Financing start-ups

Private equity operators could invest since the earliest days of a company, so called early stage financing; its goal is to support new ventures giving to the

founders the help needed during the process of value creation.

Investments are pointed to entrepreneurs that want to develop a new technology or improve an existent product or process (Gervasoni & Sattin, 2008). Thus, these entrepreneurs are, quite often, not serial entrepreneurs with a validated track record; more frequently they are in their first entrepreneurial experience facing management problems for example. So, they need more market analysis hints, support in developing entrepreneurial skills, managerial competences, support in developing their business model and valuation of their competitive positioning rather than exclusively financial resources.

A private equity operator has to establish a trusty relationship with the founders, which is more significant than the business idea itself. Thus, it is clear that founders with previous experiences have a favorable access to this financing channel.

If we consider a short-term period, starting up a new business is not particularly hard. But, once the corporate structure is established it becomes necessary its success. In order to have a successful business it is crucial to create from the early days the conditions for the business to stay into the market the longest period possible. Indeed, that is the reason why market analysis are crucial for a business survival in order to avoid that even good ideas would become a failure in the long-run. So, the venture capitalist has the primary task to help start-ups survive and grow in the long period. Financial contributions from the venture capital it is necessary in the early stage of a company but not sufficient; it will become more

useful in the next stages of the company. However, it is important to underline how capitals are provided mostly by the venture capital while the entrepreneur invest in the project providing the business idea and his or her competences to develop it.

While developing a new business the entrepreneur has to pass trough three stages:

- *Seed financing*: in this stage the investor intervene when the product does not exist yet or it is in the developing stage. The entrepreneur has a business idea and requires a support to develop it. Also, it is necessary to test the technical validity and the strength of the business model. After this stage, when those criteria are satisfied by the test of goodness of the product and the business model, the management team has to be created with the task to create and present a structured business model in order to obtain financing.

  Usually, who proposes the project is a single person or a group of friends that are not trained serial entrepreneurs.

  Therefore, the investor would have to include, above the capital, management and technical competences. Thus, the initial capital provided is limited with high risks.

- *Start-up financing*: it is the second stage where the institutional invest could intervene; it consists in the actual start of the production activity where capital is crucial. Also in this stage are important the technical and scientific abilities of the investors. On the other hand, at this stage the product is

already developed with a Minimum Viable Product (MVP)54 or a prototype and the patent is already been filed. This stage is particularly critic since from this point it becomes strategic for the company's growth.

- *First stage financing*: this stage has a production ongoing; the entrepreneurs is looking for new funds to promote his or her project. At this point it becomes crucial to evaluate the product/market fit in order to correctly launch the product into the market. Indeed, investors with market analysis competences are the best suitable at this point.

Financing development

The second macro area of investments consists in the growth of the business. In this case interventions are toward companies already started and developed where the entrepreneur wants to expand his or her business, consolidate its brand reputation by acquiring additional market shares and competitiveness internationally or have access to the stock market trough an IPO. So, in order to execute these activities it becomes necessary a financial support of a venture capitalist.

In contrast with the previous macro area, in this area the venture capitalist invests in businesses where there are interesting possibilities of growth. Thus, the VC will invest in those companies that he or she considers able to increase their value through additional financing (Giorgino, 2006).

[54] A Minimum Viable Product is that version of a new product, which allows a team to collect the maximum amount of validated learning about customers with the least effort.

From a technical point of view, investments at this stage are quite complex due to the fact that the venture capitalist would have to deal with a high number of shareholders, which interest might not all converge.

The development financing, also called expansion financing, includes three stages:

- *Second stage financing:* the company is relatively young and has small-medium dimension with a consolidated management. Yet, company's organization is still provisional and it has the necessity of funds to reinforce its structure and develop its activities.
- *Third stage financing:* when the company wants to consolidate its growth trough internal (product portfolio diversification, production diversification) or external channels (company or branch take-over). In the internal way it is, first of all, required to the venture capital a financial support. On the other hand, if the external solution is chosen, it becomes crucial the venture capitalist's network. Indeed, are suggested those investors that have a strong international network. In addition, an alternative to the internal and external development is the possibility the network development. In this case the venture capital's goal is to cluster several independent companies vertically or horizontally (cluster venture operations). Yet, these companies will have a holding company that has a strategic coordination role where the majority of shares is hold by one or more investment companies (Gervasoni & Sattin, 2008). The main advantage of this type of investment is that it allows to take

advantage of the synergies between the companies that are part of the cluster from the financial, technological, commercial and managerial side without limiting the independency of each company.

- *Fourth stage financing:* it represents the financing of the most advanced stage of development. It is necessary when the entrepreneur wants to refine his or her business or whenever the company has an IPO goal in the short period; in that case it is called Bridge Financing and resources are mostly provided by large investment banks.

  Financing development is typical of small-medium sized companies that in order to keep growing need new capital from private equity operators. In fact, thanks to those operators the company has the possibility to achieve an important position in the international competitive scenario.

Financing change

The third macro area includes interventions of financing where it becomes necessary to re-project the company structure independently from the development stage; it could be in the early days or later. These are internal changes that could lead to a radical change of the management and, indeed, require the intervention of a specialized operator (Carlotti, 2012).

There are several reasons that could drive a company to a radical change; for each of those reasons there is a specific type of operation. In particular, there are the following categories:

- *Replacement capital:* whenever a private equity operator acquires shares of

another shareholder that has no interest anymore in that company; it could be for a lack of strategic orientation or because he or she would invest those capital in other companies. So, the new shareholder acquires the same amount of equity of the old investor with no consequences in terms of corporate strategy. Indeed, these operations allow shareholders with no interest in long-term projects to exit and obtain a profit. On the other hand, other shareholders prefer to keep their equity stake and continue the long-term project with the new shareholders following common goals for the company's growth.

- *Buy out:* in this operation the company's structure is strongly modified. Yet, the reasons could be the entrepreneur wish to capitalize its company or a branch, the impossibility to find a successor in case of generational change or to privatize a public company (Kaplan & Stromberg, 2006; Clementi & Luschi, 2006; Daimond, 1985; Baker & Smith, 1998; Tartaglia, 2009).

  The private equity operator intervenes with a strong financial support and usually takes the company's control becoming the principal shareholder; it is this characteristic that makes buy out operations different from a replacement capital operation.

  Buy out operations could be deeply classified in:

  - *Management Buy out (MBO)*: the company is partially or completely acquired by the internal company's management.
  - *Management Buy in (MBI)*: the company is partially or completely

acquired by an external management team.

- *Worker buy out (WBO)*: the company is acquired by its workers. This is a positive scenario since workers are motived to obtain company's performance goals.

- *Turnaround financing:* it is a financing operation that becomes necessary whenever the company is in loss. In fact, in case of business crisis, it becomes crucial the intervention of a specialized operator to avoid company's bankruptcy and, hopefully, bring it back to the value creation track. Yet, in this scenario, are required institutional investors with a strong financial basis, consolidated managerial competences and high legal knowledge (in case they have to handle company's bankruptcy).

3. INNOVATION'S ROLE IN INTERNATIONALIZATION PROCESSES

3.1 FROM OPEN INNOVATION TO INTERNATIONALIZATION

In the previous chapter has been analyzed the origins and characteristics of open innovation and the relevance of relations in that paradigm. In addition, it has been analyzed the most dynamic and innovative environment: startups ecosystems and the private equity & venture capital market.

The following chapter will discuss how open innovation tools and, in particular, corporate venture capital programs could be adopted as an internationalization strategy trough investments and partnerships with foreign startups in order to get a market share in a new area. So, the investments in startups becomes not only for technological purposes, but also for getting into a new market.

Organizations, throughout partnerships with startups, obtain flexibility, less risky conditions and new economies of scale in the international environment. These convergences are even more significant if the organizational development is analyzed; in fact, it generally has a reticular structure.

Therefore, it is important to analyze the quality of relations between several people internal and external of the organization; both in closed and open innovation environment.

Literatures defines several theoretical models that represents the organizational development (internally) in internationalization processes for medium-large corporations; for smaller organizations it becomes crucial to analyze which

reasons lead those to go international (internal analysis), while the organizational aspects are developed and analyzed throughout its networks of relations (external analysis in an open innovation paradigm) with other subjects in the local and international environment (suppliers, clients-distributors, institutions, etc.).

In a long initial theoretical elaboration phase, organizational models of international companies have followed classic patterns. In fact, the process went from adoption of functional (first), divisional, and mixed to matrix structures. However, in the recent years, there are several different models with the same pattern: reticular structure. Indeed, several authors (March & Simon, 1958; Lawrence & Lorsch, 1967; Child, 1972; Kimberly, 1980) underline how the organizational figure is also the reflection of environmental conditions where the company operates, in particular the presence of bonds & uncertainty and supports & boost to external development.

However, still during 90's in authors with the most diffusion and influence internationally (Bartlett & Ghoshal, 1989,1997) we find statements such as: "Employees not only want to work for a company, but they want to belong to it. " "We must give meaning to the work of employees" ....spread the empowerment concept ..".

Organizational models historically follow specific economic and environmental conditions. There are four types of internationalized companies (Bartlett & Ghoshal 1989, 1997):

1. *Multinational companies:* are characterized by a divisional structure for each

country, highly decentralized due to different markets configurations that lead local structures to high levels of autonomy. The relations between headquarters and branches are limited; also relations between local managers and main company managers are not highly formalized. This situation is clearly visible in European multinationals' experience, in particular those who are operating in former XX century colonial territories.

2. *International companies:* these companies have a higher connection rate between the headquarters (more advanced) and local branches (less advanced) with a know-how transfer (mainly technological and marketing) able to adapt to local conditions. This model has developed in the first decades after the Second World War with the expansion of large American corporations. International companies have a stricter control and a more relevant hierarchical structure; yet this part is mitigated by a higher shared knowledge.
3. *Global companies*: the core business of the company is induced to global economies of scale; it has characteristics of standardized products, which leads to production systems of huge dimension localized in areas globally where there is more convenience in terms of costs and environment. The system is managed with specific instructions from the headquarters to its branches, which are limited to product and sell; strategic functions are kept at headquarters level.

Said that, it seems appropriate quote Chandler's interview in 1995 where he simply and provocatively presents the situation: "The key thing is to know what

you are doing ... The company's activities are quite different, which implies different decision points ... This need is not new, but the relationship between these levels of decision making have very changed in these last years. The recent technological development makes it possible to optimize this type of coordination and the relationships that are created."

Therefore, change is not in the structural model but into relations. Yet, the shape remains essentially divisional while the actual novelty is in the capacity to take advantage of the new possibilities of communication within the structure; this implies a new style of work and a new philosophy leading to, perhaps, new structures as well.

If the new working style is considered, there are, for example, several evidences of a higher level of human resources international transfer, from middle to top management. Yet, these flows are due to the necessity to cover the leak of competences at the international branches (moving human resources from headquarters to local offices) and in order to encourage the switch from decentralized multinational structures to global structures. So, this implies the centralization of people and competences in case there are new factories or center of research been built in order to exploit possible economies of scale on products or components, internationally (this process has been described by W.J. Fish, executive director of human resources at Ford Motor Company in 1998).

Moreover, another important aspects of innovation in the internationalization process, concerns the efficiency and efficacy of the transfer of knowledge at the

globalized structure, also trough international teams. Yet, innovations that flow in the system could be jointly created in the centralized units or could be created in the decentralized units thanks to their capacity to absorb know-how from the relations with local partners (Zanfei, 2000).

3.2 METHODOLOGY

This research has adopted a positive/interpretative approach including the inductive method as well (Silvestrelli, 1994).

The methodology adopted in this research is the analysis of case studies, conduction of peer-to-peer interview with experts in the innovation industry and analysis of qualitative and quantitative data.

The case study analysis is crucial since it allows describing the complexity and relationships of social structures (Metsamuuronen, 2008). Yet, the case study is an important tool for the analysis of ongoing processes or practical applications. In addition, since it represents a reflection of reality, it allows the reader to ponder and identify its own conclusions.

In fact, case study method is based on crossing several sources of information (Bonoma, 1985), promoting the development of descriptive and inferential analysis concerning phenomena that are explainable trough recourse to numerous factors interacting each other (Yin, 1981).

The attempts to reconcile the proofs that emerge among the different case studies and the literature support those reflections that are useful to create a new theoretical vision (Eisanhardt, 1989). In fact, this method "It tends to clear thoughts, so the process has the potential to generate new theory with less influence of the researcher compared to the theory constructed by incremental studies or by axiomatic deduction made on the couch" (Eisanhardt, 1989).

Yet, when a deductive approach is combined with results obtained on field it is

possible to understand how corporate venture capital, private equity funds, lean startup methodologies could define new organizational models for internationalization for small medium enterprises. In addition, it is important also to analyze how a collaborative approach is the key factor forward the success of a project and the basis for long-term relationships creation.

3.3 CORPORATE VENTURING PROGRAMS: AN OPEN INNOVATION STRATEGY IN THE INTERNATIONALIZATION PROCESS

Open innovation (Chesbrough, 2003) is an approach to innovation where companies rely also on ideas, resources and technological competences coming from the external environment, in particular form start ups, universities, research centers, suppliers and consultants.

According to Chesbrough the "closed innovation" paradigm, which is the innovation internally developed, was no longer sufficient despite the companies could loose the property of their inventions and legitimately attempted to protect their intellectual properties.

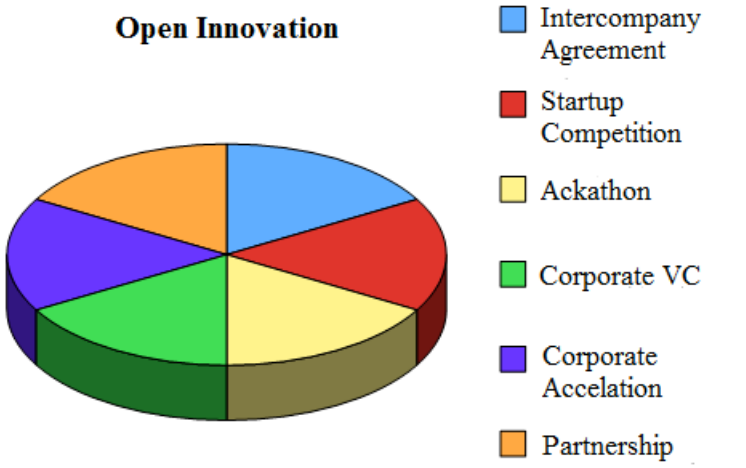
Indeed, with the introduction of modern knowledge and new business models adopted by startups, it becomes crucial and strategic to collaborate with new companies that are more advanced in the digital environment; not collaborating with these new realities may lead to a strong digital deficit compared to competition.

There are several methods of conducting open innovation strategies (Fig.35):

- Intercompany agreements
- Funding startup competitions
- Sponsoring and/or organizing hackathon
- Acquisition of tech startups
- Creation of corporate acceleration programs

- Partnerships with universities, research centers and incubators

Figure 36 - Open innovation opportunities



Source: personal elaboration

Corporate venture capital is a type of venture capital where a company invests in startups or small-medium enterprises for equity (usually minority quotes).

It has a financial origin, as traditional venture capital, but could also be considered as a tool of strategic development of new technologies and business models. In fact, trough the investment in startup's equity, the company has access to new technologies and companies that potentially could become partner.

3.3.1 Record of investments globally in 2015

There is an increasingly number of corporations' departments that are mainly focused on venture capital activities, which keep increasing the value of the venture capital ecosystem; in fact, the number of Corporate Venture Capital (Cvc) has doubled from 2011 to 2015. Yet, the corporate venture capital invests in "traditional" VC sectors such as high-tech and health and lately are investing in

less technologic based sectors as well. Indeed, large groups such as JetBlue[55], General Mills[56] and Campbell's Soup Company[57] have created "venture" departments in order to penetrate in some markets. In general, during 2015 funding activities trough corporate venture capital has raised internationally by 70% compared to 2014. However, at the end of 2015 it has been registered a deceleration of this trend, which it seems due to a different attitude toward the venture capital in general.

In total, during 2015, the corporate venture capital has done 1301 operations of investments globally for an equivalent value of $28.4B. As said, it represents an increase of 70% compared to the previous year that had 1245 deals for an equivalent value of $16.7B. In particular, the third trimester of 2015 has represented a record in terms of number of deals and value of investments (Figure 36). Indeed, this has been possible trough the support provided by corporate venture capital in financing several mega-deals of 100+M dollars to unicorns[58] such as Didi Kuaidi[59], SoFi[60] (Social Finance), Jet[61] and others.

[55] An American low-cost airline and the 5th largest airline in the United States,

[56] An American multinational manufacturer and marketer of branded consumer foods sold through retail stores.

[57] An American producer of canned soups and related products.

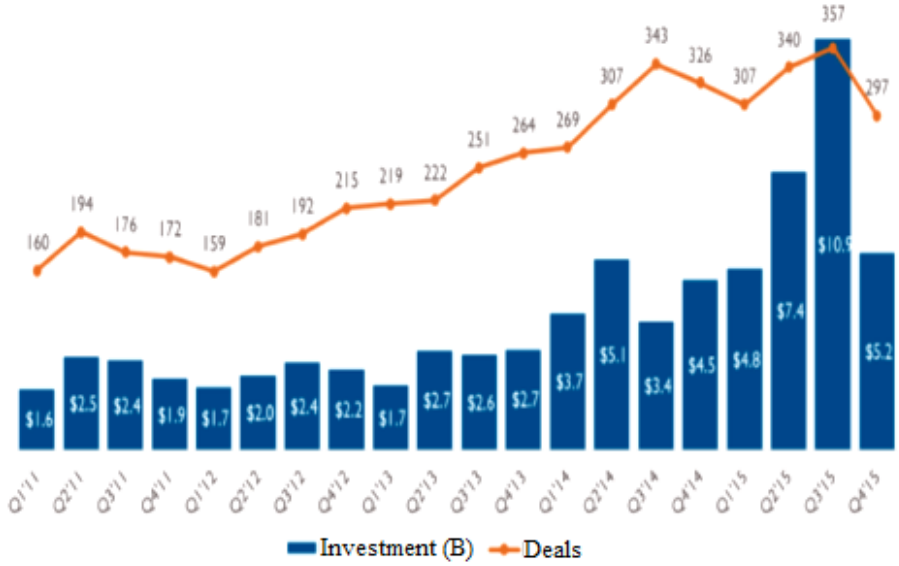
[58] A unicorn, in the world of business, is a company, usually a start-up that does not have an established performance record, with a stock market valuation or estimated valuation of more than $1 billion.

[59] A Chinese transportation network company headquartered in Beijing.It provides vehicles and taxis for hire in China via smartphone applications.

[60] A marketplace lender that provides student loan refinancing, mortgages and other types of loans, such as parent and personal loans.

[61] An American e-commerce company headquartered in Hoboken, New Jersey.

Figure 37 - Global Quarterly CVC Financing History Q1'11Q-4'15

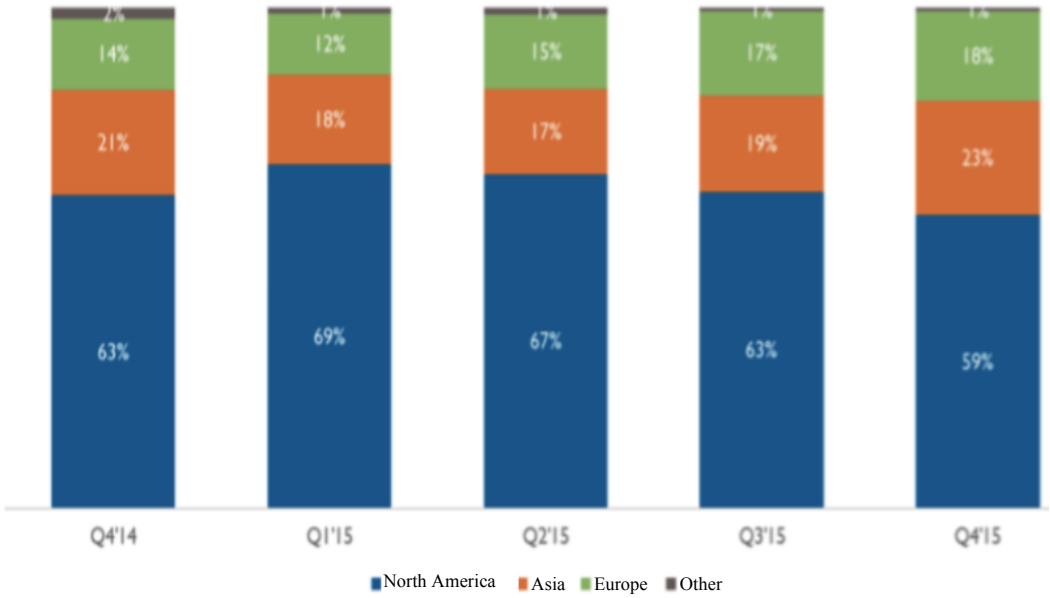


Source: Cb Insights

However, if just the number of deals is considered, the corporate venture capital has increased only by 4% annually. Yet, the peak has been reached in 2015 where there is the highest number of global corporate venture capital both new and already active. The previous year, 85 new corporate venture capital had realized their first investment. In 2015 it has increased corporate venture capital that invests both in seed and later rounds.

Considering the geographical area of the investments it is possible to analyze how the north American startup took the 69% of funds from global corporate venture in the first trimester of 2015, with a decrease of 10% in the third semester. Yet, in second position there are Asian startups followed by European ones (Figure 38).

Figure 38 - Global CVC Deal Share by continent



Source: Cb Insights

The most active corporate venture capital has been Intel Capital, which is Intel Corporation's division created to manage venture capital, international investments, mergers and acquisitions. In fact, during 2015 Intel Capital invested 18% more than GV[62] (formerly Google Ventures), which is in second position. Intel Capital has strongly invested abroad with 32% of companies backed outside the American market (Figure 39).

[62] GV is the venture capital investment arm of Alphabet Inc. and provides seed, venture, and growth stage funding to technology companies

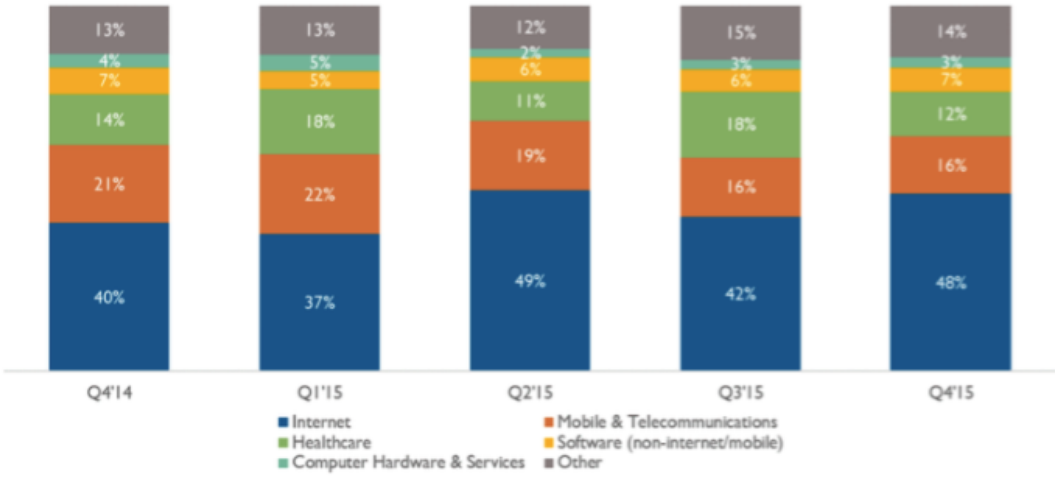
Figure 39 – 2015 Most Active CVCs (by # of unique global company investments)

Rank	CVC Investor	Recent* New Investments
1	intel capital	DataRobot, savioke, chargifi, LISNR
2	GV	ARMO BIOSCIENCES, pindrop, toast, UDACITY
3	QUALCOMM VENTURES	Housejoy, MindTickle, ATTUNE, CLOUDFLARE
4	salesforce ventures	bloomreach, FinanceFox, MapAnything, CARTODB
5	GE VENTURES	APX, Omni-ID, MORPHISEC, omada

Source: Cb Insights

Considering the sectors of investment, it is possible to analyze how US corporate venture capital have decreased their investments in Internet sector by 34% during the first trimester of 2015 followed by a recovery up to 49% by the end of the year. Moreover, investment in healthcare and in mobile & telecommunications were close in terms of percentage, respectively 17,2% and 16,5% (Figure 40).

Figure 40 - Global CVC Deal Share by sector

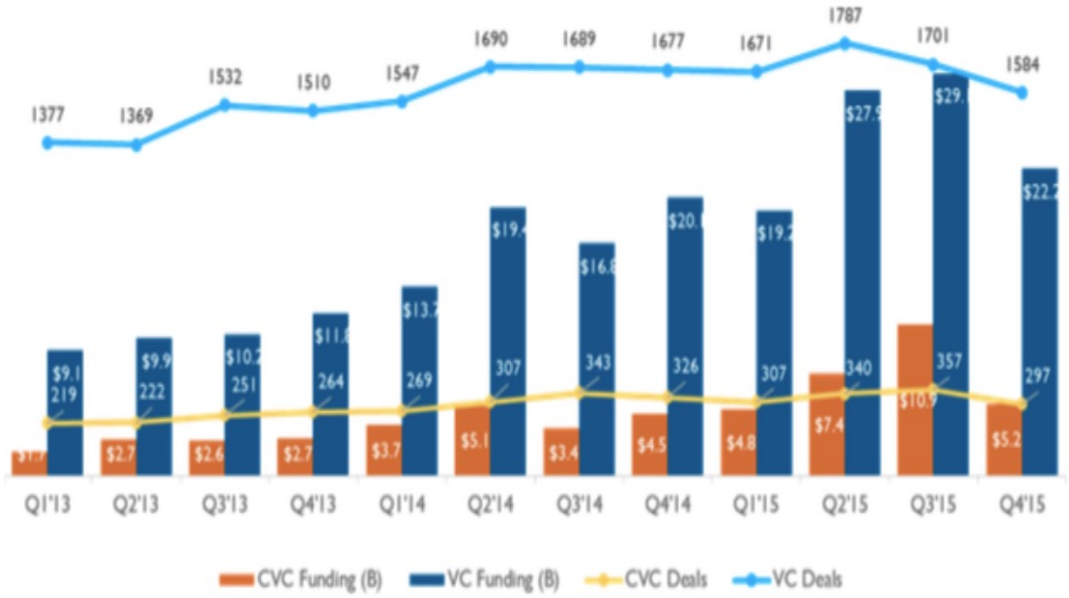


Source: Cb Insights

Moreover, it is interesting also to consider the weight the corporate venture capital

weight into the total venture capital market. In fact, as the following figure 41 shows, the corporate venture capital participated in 19,3% of the 6743 venture-backed financing rounds in 2015, compared to a participation rate of just 16,5% in 2013.

Figure 41 - Global CVC vs. Overall VC Financing Activity

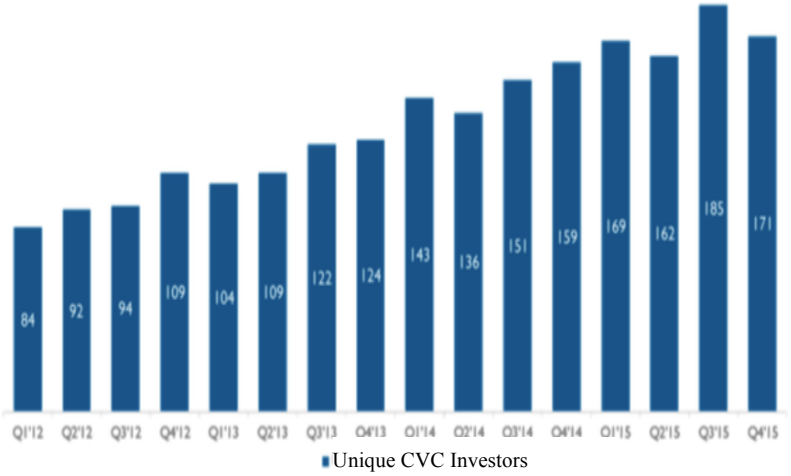


Source: Cb Insights

As said previously, the in the recent years the number of active corporate venture capital firms increased up to 185 in Q3'15, which represented a 31% year-on-year increase and a jump of 97% from the 94 firms making an investment in Q3'12 (Figure 42).

This gives an important signal about how the corporate venture capital market is dynamic and an increasing number of corporations are adopting this open innovation strategy to increase their competitiveness throughout investments in startups with high technologic and innovative potential.

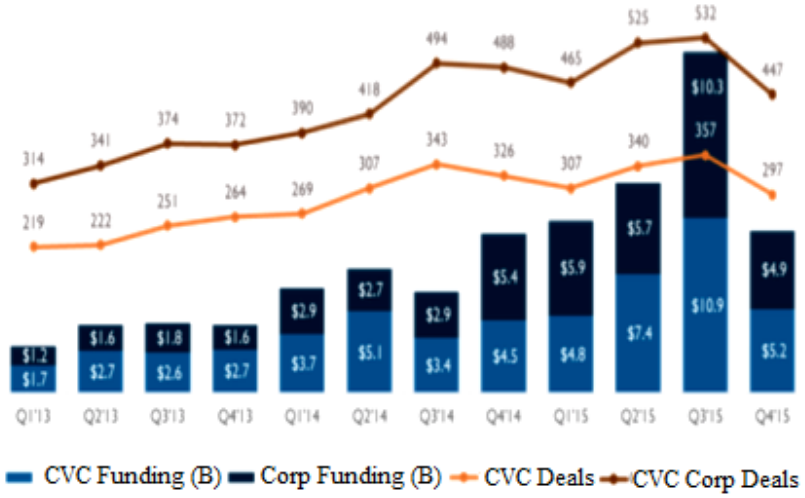
Figure 42 - Global Quarterly Active Corporate Venture Capital Investors



Source: Cb Insights

Additional interesting information is given by the direct investments data; in this case investments are not made trough corporate venture capital firms (owned by larger corporations), but directly by the company financing. Yet, in 2015 corporates have made 668 direct investments for an equivalent value of $26,9B (Figure 43).

Figure 43 - Global Corporate VC vs. Corporation Financing Activity



Source: Cb Insights

3.3.2 Main channel to step into open innovation

Nowadays, the competitive scenario is characterized by an increasing speed and scope of innovation processes; companies are bounded to adopt an open approach to innovation. Corporate Venturing programs such as corporate accelerators/incubators, corporate venture capital or direct investments in startup are among the most effective initiatives that companies could implement.

Data analyzed in 3.3.1 confirm the increasing interest of companies in adopting corporate venturing programs. In fact, in 2015 there were 85 new companies operating their first investment, which is a created a positive trend compared to 2010 where only 23 funds were launched. Yet, not surprisingly investments operated in 2015 by corporate venture capital reached $28.4B trough 1.301 deals, which is a 70% improvement compared to the previous year. So, these corporate venture capital investments are not marginal in the system anymore since their weight represents almost the 20% of the global startup financing during 2015.

However, considering this positive scenario just mentioned, it is appropriate for companies, that want to adopt corporate venture capital initiatives, to understand how to concretely approach the startup ecosystem and have a benefit from their innovations.

There are several definitions of corporate venture capital; the most common definition introduces the corporate venture capital as a special form of venture capital where a company invests in startups and external companies for equity. Yet, the most actives corporations operating in this market there are Intel (Intel

Capital[63]), Google (trough GV[64]) and Salesforce (Salesforce ventures[65]). In addition, above these high tech corporations, there are also more traditional business investing in corporate venture capital such as Johnson & Johnson, General Electric, AXA and 3M.

Unlike classic venture capital funds, investments trough corporate venture capita have both financial and strategic goals of development of new technologies or business models.

These startups have the opportunity to become strategic partners of large corporations. In addition, the investment in corporate venture capital could lead to introduction of new ideas, study deeper new technologies and business trends, identification of new business opportunities above the corporate's core business, acceleration of own platforms, development of networking, getting closer to competences of the entrepreneurial community and consideration of strategic options on new technologies and business models to test.

Acceleration and incubation activities are complementary and synergic to the financing activity. In fact, trough corporate acceleration programs, corporates support startups via mentorship and coaching services, spaces (offices and laboratories), support to business development and usually supporting a new product or service launch trough seed investments. Thanks to these acceleration/incubation programs corporations are able to watch closer the innovative startups and analyze emerging trends; the accelerator becomes as an

[63] http://www.intelcapital.com/
[64] https://www.gv.com/
[65] http://www.salesforce.com/company/ventures/

independent source of R&D. Yet, it is possible to integrate in the corporation's organization the successful innovations that are consistent with the core business; it allows also diversifying and reducing the risk of research and development activities. Last but not least, the incubation or acceleration could be used as a starting point of the deal flow of corporate venture capital activities.

3.3.3 Case study: French corporations investing in Cvc

Allowing SME and large corporations to collaborate with startups is not an easy task since these two entities are still too far from each other. In fact, today's innovative entrepreneurs have a different cultural approach compared to traditional entrepreneurs and managers. However, these two separated worlds have to get closer in order to generate new opportunities for both the innovation makers (startups) and those looking for new business models or technologies (traditional businesses).

So, there are different ways of getting closer to each other; one solution is adopting open innovation trough the corporate venture capital. In fact, it is a recent phenomenon that is not common in countries such as Italy but quite well developing in other countries such as France. In fact, there are large corporations that operate as limited partner (investor) in venture capital funds. So, this demonstrates how large corporations want to approach startups' world trough venture capitalists, which know better this reality and could operate as a cultural broker between large corporations and startups.

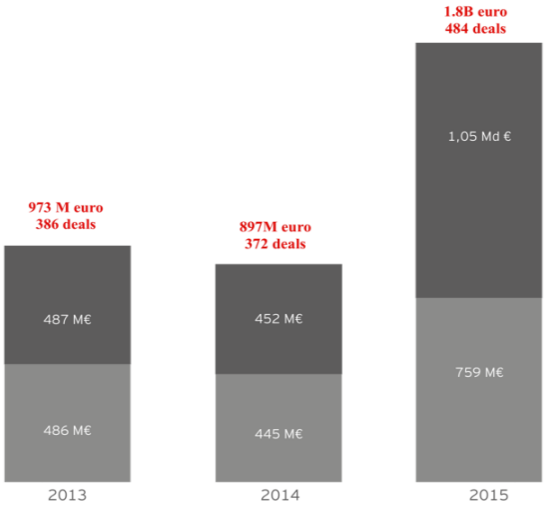
Indeed, this operational strategy seems to be successful because, from the other

point of view, startups prefer to have a venture capital fund as interlocutor rather than directly the large corporations.

The corporate venture capital phenomenon has been developing in the last couple of years and is already giving positive results to the ecosystem. "In 2015 we faced a high growth for the French startup ecosystem with 1.8B+ euro of investments in 484 deals", Emanuele Levi, partner of 360 Capital Partners[66] (Figure 43).

With nearly 2 billion euros raised in France in 2015, investment in the French startups have reached a new milestone and exploded counters of the most optimistic forecasts, reaching € 1.809 billion in 484 operations. In the first half 2015, the funds raised (€ 759 million in 244 transactions) reached almost the level of the amounts levied on the full year 2014 (€ 897 million in 372 transactions). France thus retains its 3 e podium European countries, behind the United Kingdom and Germany, in terms of amounts raised.

Figure 44 - French startup ecosystem investments and deals



Source: personal elaboration of data

[66] Venture capital investing mainly in Italy and France.

Indeed, these investments lead to the creation of several French unicorns such as BlaBlaCar[67], SigFox[68] and Withings[69]" (Figure 45).

In fact, there is an increase in the average ticket with € 3.7 million against € 3.1 million in 2014 and a large number of transactions exceeding € 10 million. These big tickets were concentrated mainly in the Internet services sector. BlaBlaCar, who had already distinguished last year by raising $ 100 million record funds (€ 73 million), dominates again palmares in 2015 with a spectacular lifting of € 177 million. Valued at $ 1.6 billion, the start-up joined popular club 147 "unicorns" of the world. Raising funds of € 100 million made by the start-up Toulouse SigFox, telecom operator specializing in the connected objects, may predict a future entry into the elite club of French unicorns.

The digital and technological maturity opens users to start-up "born global" immediate access to a global market to critical size. The 2015 figures reflect a profound transformation at a time when we change cycle and economic models. The ecosystem of the funding is there, and has proven effective, as evidence the unprecedented dynamism of French entrepreneurship, but it is urgent to step up a gear. For if the Paris area is home to 12,000 seedlings, including 4000 in Paris intramural, more than London or Berlin, France, with one unicorn still happens in 5 th position in the ranking of 39 unicorns, behind the United Kingdom, Sweden,

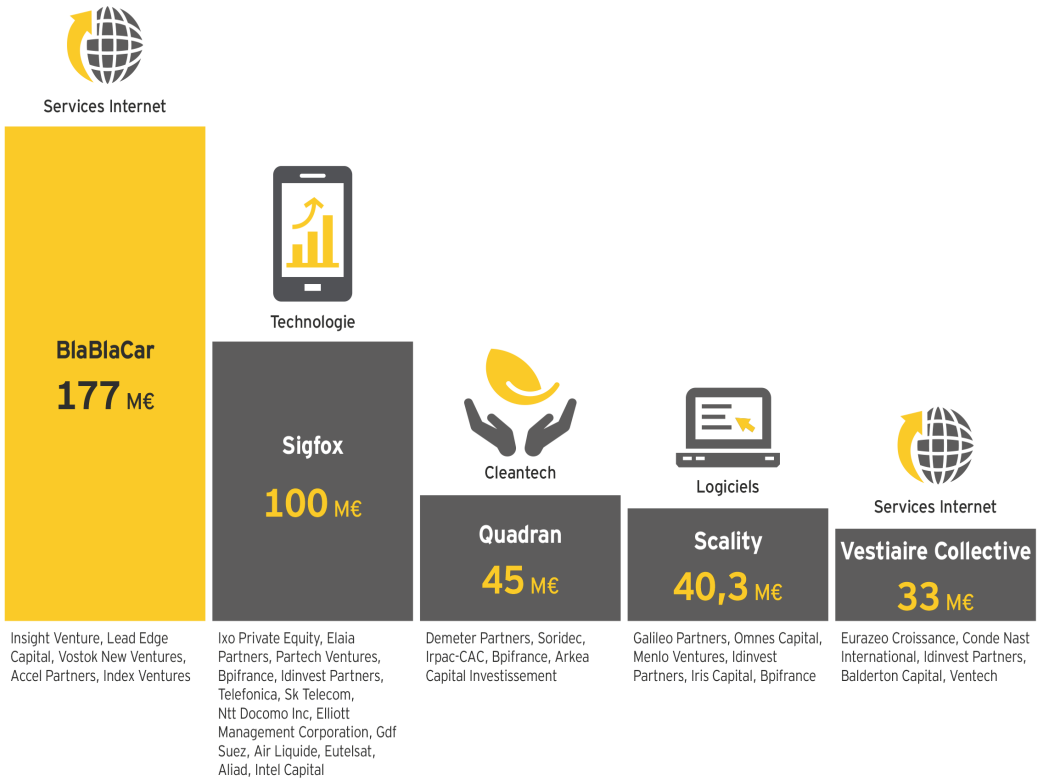
[67] BlaBlaCar is the world's largest long-distance ridesharing community.

[68] Sigfox is a French company that builds wireless networks to connect low-energy objects such as electricity meters, smart watches, and washing machines, which need to be continuously on and emitting small amounts of data.

[69] Withings is a French consumer electronics company headquartered in Issy-les-Moulineaux, France, distributing products worldwide.

Germany and Russia. Beyond this European benchmark is across the Atlantic that it can grasp the urgency of mobilizing in France the strike force of the financing to grow the French unicorns. The exponential and continued vitality for 3 years of venture capital in France will boost the economic lift to propel young shoots in the footsteps of giants as young Alphabet, now the largest market capitalization in the world.

Figure 46 - Top 5 investments in French startups



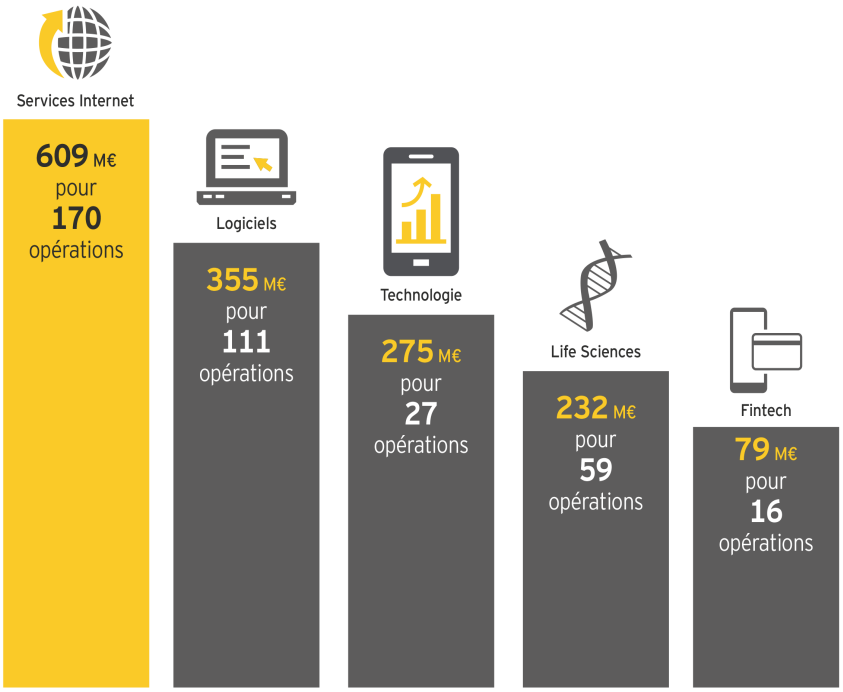
Source: EY

If sectors are taken in consideration, it is possible to analyze how in

In 2015 the big tickets were concentrated mainly in the Internet services sector, which found its first place in the top 5 Sector, assigned temporarily in the first half in the technology sector by attracting third investment this year is nearly twice

capital than last year (€ 609 million in 2015 against € 347 million in 2014). Note that the FinTech, who made a very grand entrance in the first half 2015 in the top 5, maintains its 5th place with € 79 million raised in 16 operations.

Figure 47 - Investments in France by sector



Source: EY

"In the last 18 months there are substantial new venture capital funds that have been raised trough the active participation of large corporations; this phenomenon seems to be cross-sectorial covering insurance (MAIF[70], Allianz[71]), automotive & transportation (Renault[72], SNCF[73]), banks (Société Générale[74], BNP Paribas[75]),

[70] MAIF is a French company of mutual insurance whose office is located in Niort , in the Deux-Sèvres

[71] Allianz is a European financial services company headquartered in Munich, Germany. Its core businesses are insurance and asset management.

[72] Group Renault is a French multinational automobile manufacturer established in 1899.

[73] SNCF is France's national state-owned railway company and manages the rail traffic in France and the Principality of Monaco

media & retail (Publicis[76], Carrefour[77]), ICT (Cisco[78], Orange[79]) and other sectors, that have invested in funds, such as Partech, Idinvest, Iris Capital and 360 square", said Emanuele Levi.

Therefore, large corporations mentioned above make investments in order to acquire a better understanding of economy's digitalization will impact their business models and, if possible, trying to anticipate the consequences; indeed, corporations have also the goal to develop internally new competences able to discuss with startups environment for operating new business development and supporting open innovation programs. Yet, the final goal is to anticipate new trends in the market regarding consumers' behavior in different sectors.

"The SNCF case it is has become a model; in fact, the corporation faced a new competitor entry in the market, BlaBlaCar, which had the most of its success in the 250-500km range trips; indeed, these trips were historically dominated by SNCF's high speed trains. This phenomenon is the first step toward a revolution in the French startup ecosystem because it could finally lead larger European corporations to easily integrate the innovation naturally present in startups. Yet,

---

[74] Société Générale S.A. is a French multinational banking and financial services company headquartered in Paris.

[75] BPB Paribas is a French multinational bank and financial services company with global headquarters in Paris. BNP Paribas is one of the largest banks in the world.

[76] Publicis Groupe is a French multinational advertising and public relations company, and is one of the largest marketing and communications company in the world, by revenue, headquartered in Paris.

[77] Carrefour S.A. is a French multinational retailer headquartered in Boulogne Billancourt, France, in the Hauts-de-Seine Department near Paris.

[78] Cisco Systems, Inc. is an American multinational corporation technology company headquartered in San Jose, California, that designs, manufactures and sells networking equipment worldwide.

[79] Orange is a French multinational telecommunications corporation.

360 Capital Partners recently created a seed fund called 360square that includes capital of four main corporations: Societe Generale, MAIF, Yves Rocher Group [80]and Thuasne[81]; this represents our bet for this phenomenon, which we hope it could be repeated in Italy", said Emanuele Levi.

In addition, large corporations verge to choose funds with international operations because they do not want to be limited geographically; so, a corporation funds the private European venture capital system, which increase their investment capacity.

[80] Yves Rocher is a worldwide cosmetic and beauty brand, founded in 1959 by the French entrepreneur Yves Rocher (1930–2009) in La Gacilly.

[81] Thuasne Group, a globally recognized creator, manufacturer and distributor of wearable medical devices, including braces, supports and medical garments.

3.4 OPPORTUNITIES FOR ITALIAN CORPORATIONS

The best cases initiatives of Cvc and accelerators concern a few large international corporations; however, this research aims to demonstrate how these tools could represent an important opportunity for Italian enterprises as well.

In fact, in Italy there are several companies from different sectors that have the characteristics required to launch a corporate venture capital initiative. However, in order to create successful initiatives it becomes necessary to define an organizational model characterized by roles, competences and processes aimed to guarantee the key activities governance.

The main processes that have a crucial impact on corporate venture capital and accelerator performances are the creation and management of ideas and projects deal flow, valuation and selection of candidatures, management of exits from portfolio companies. In addition, the mechanisms of integration with the main company are important; in fact, the main company is important as a supplier of support services (mentorship, coaching, access to networking, clients and suppliers access, sales support, distribution channels, brand awareness) and has to guarantee to pursue common strategic priorities and maximize efficiency by the resources provided.

Nowadays, in Italy there are optimal conditions for starting corporate venture capital initiatives: recovering the innovation gap has become a priority and recent

regulatory interventions, such as the Patent Box[82], enhances how important it is this situation for the public stakeholder as well. During the recent years, startups have collected a lot of attention encouraging the development of a strong ecosystem made of new innovative companies that are looking for new funds to scale their ventures. In 2015 venture capital funds raised 300M euros and the transformation actually happening in the venture capital sector and incubators/accelerators enables the access to professional competences highly qualified available on the market. In addition, traditional companies have skills in excess that could be better "used" involving people on new entrepreneurial activities.

There are many Italian companies that have the characteristics to launch a corporate venture capital initiative in different sectors: each company is part of a network and could potentially be able to obtain an additive value from its relationship trough new digital technologies.

However, the creation and development of a corporate venture capital initiative requires a medium-long term commitment (5-10 depending on the sector) and a significant capital investment (at least 20-30M euros); it is important to leverage people with high competences and a top niche entrepreneurial mindset (ability to think outside of the box, risk takers and being able to pivot non profitable projects), but at the same time enhancing the main company's human capital

[82] The "Patent Box" act introduces an optional system of taxation for income derived from the use of intellectual property, industrial patents, trademarks, designs and models, as well as processes, formulas and information relating to experience acquired in the field industrial, commercial or scientific legally protectable.

trough a contamination process able to stimulate everyone (for example throughout mentorship programs where company's people help startups).

Moreover, it is necessary to develop an operative model that includes the typical venture capital processes:

- *Deal flow:* it requires high commitment in order to be connected with the innovation ecosystem
- *Due diligence*
- *Closing:* compared to traditional business' standards has to be much more lighter and faster.
- *Integration:* clear mechanisms of integration with the main company in order to constantly synchronize its strategic goals and valorize its resources (technology, competences, market access).

3.4.1 Case study: Telecom Italia spa

The innovation process of Telecom Italia SPA

In this paragraph will be analyzed the Telecom Italia [83]case study. In particular, it will be analyzed the company's approach to Open Innovation, the internal team developing relationships with startups and the decision making process among buying products or services from startups or M&A operations.

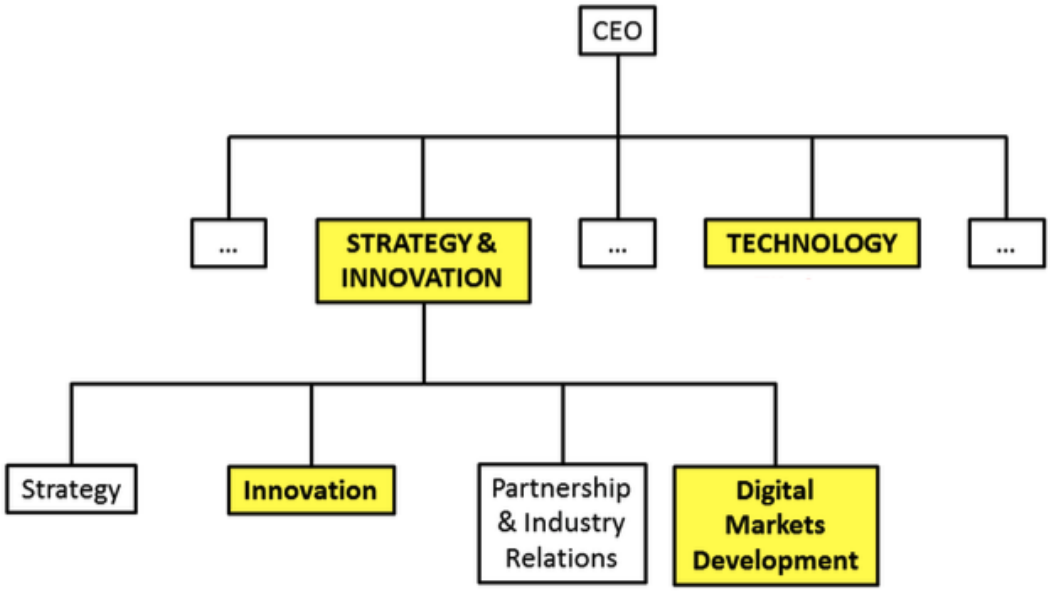
Telecom Italia is a multinational company operating in information, communication & technology sector. Therefore, it is evident that the company has

[83] Telecom Italia is an Italian telecommunications company headquartered in Rome, which provides telephony services, mobile services, and DSL data services.

the primary necessity to invest in technology and innovation. However, this research aims to focus exclusively on open innovation strategies and on relationship between startups and larger corporations, such as Telecom Italia.

So, will be only considered divisions inside the open innovation field, without including those actors that are involved in internal innovation or external innovation but in conducting relationships with other large corporations. In particular, the case study is focused in the following divisions (Figure 48):

Figure 48 - Telecom Italia open innovation divisions



Source: personal elaboration of data

1. *Strategy & Innovation:* this division includes four functions: strategy, innovation, partnership & industry relations and digital markets development.

So, in this research becomes crucial the innovation and digital markets development functions. In fact, the innovation function includes several sub-

functions where some of them are actually managing the relationships processes with startups; for an easier understanding these sub-functions will all be considered under the *innovation function*. Moreover, the digital markets development functions includes the *Working Capital*, which is the entity of Telecom Italia that is in strict contact with startups; throughout working capital, Telecom Italia group adopts corporate venture capital investments in seed financing.

2. *Technology:* this division is interesting in the research as well due to the importance of the R&D laboratory that has internally, called TILab.

Innovation sector

The *innovation function* deals mainly with advanced products/services that integrates with Telecom Italia core products. Yet, the innovation function develops innovation trough an incremental process, which is translated in several new processes that are adopted between the acquisition of a new product/service and its launch on the market with Telecom Italia branding.

In the innovation sector there are several teams where each of them works on a specific stage of the innovation process starting from the first touching point with the new product to the signature of the contract with the new supplier. Yet, the division is structured as the following:

- Research and photocopying
    1. Start-up Labs
    2. Joint Open Labs

- Business Modeling
- Project Development
- Application Development

TILab

The *TILab* is the development laboratory of Telecom Italia focused mainly on core products of the company. TILab represents very well the concept of open innovation since it could be defined as a company department that typically does internal R&D and is also focused on looking externally for innovation to bring inside the company. This laboratory operates close with the *innovation sector*, in particular with the *startup lab.* These two departments do a complementary job since the TILab is focused on network engineering products and its platforms, while the *innovation sector* is focused on activities and related services of those products.

Therefore, TILab is seeking for external innovation from its relationship with startups and the consequent scouting activities. This activity is focused on products that are consistent with the *technology plan* of Telecom Italia. So, the scouting process made by TILab is continuous and has several sources:

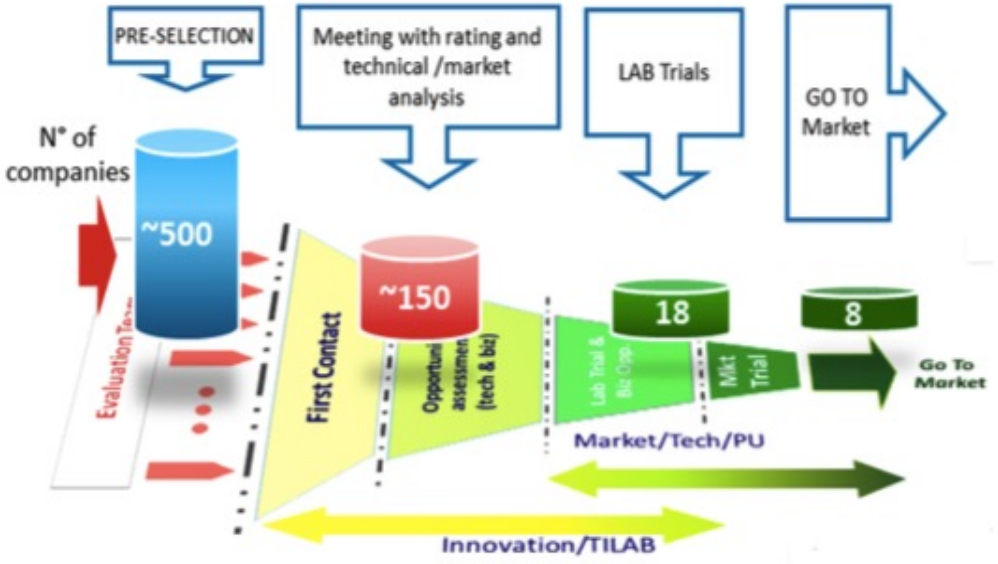
- Venture capital companies;
- Government-sponsored entities (Italian and international);
- Universities and incubators

This allows to the TILab to have a supply of new ideas from several sources.

Figure 49 shows the collaborative relationship between the *innovation* department

and *TILab;* it shows the new technologies brought in.

Figure 49 -Innovation and TILab relationship



Source: Telecom Italia SPA

Figure 49 shows the funnel adopted to incorporate a startup's product or service internally.

Working Capital

Working Capital (WCap) it is a program created by Telecom Italia in 2009 with the intent to facilitate the external development of new technologies by encouraging the implementation of new business ideas; the final goal is the possibility to take relationships with new born startups. Working Capital's concept is a project aimed to stimulate and finance innovative business ideas or startups trough research grants. Meanwhile, Telecom Italia creates strong relationships with universities aimed to promote entrepreneurial initiatives by college students. However, it is only in 2012 when WCap becomes officially an

accelerator extending its operations nationally with the goal to collect widely business ideas and potentially execute those. Yet, one of the main tasks of WCap is to create a bridge able to link the startup environment and Telecom Italia Group. In order to have a wide operational presence in the country, WCap has created four physical accelerators covering every macro region (Milan, Rome, Catania and Bologna). These accelerators represent a place where those with a business idea can share and implement their projects with sector experts such as consultancy companies or venture capital. Moreover, in these places are constantly activated networking events, workshops, and everything that might be useful to promote entrepreneurship and open innovation.

The key tools of *WCap* are grants, economic incentives given to startups with the highest potential of growth and synergy with Telecom Italia. In 2014 WCap provided 40 grants of 25.000 euro each to startups with a defined business idea and a valid business model in digital life, Internet, mobile evolution and green sectors.

The next step for the accepted startups would be to actually have a commercial relationship with Telecom Italia. So, WCap utilizes two tools in order to include startups in Telecom Italia's supplier list: the fast register "WCAP Verified" and the *innovation basket*.

M&A process

In the previous paragraph has been analyzed how Telecom Italia departments bring in new technologies trough commercial relations; in this paragraph it will

described the methodologies adopted for acquiring equity shares of target companies. First, it will be analyzed the typical process adopted by M&A function to acquire a company, with a focus on startups specifically; Second it will be described the new process of seed financing adopted by WCap (working capital).

M&A Telecom

The M&A function reports directly to the CFO[84] and deals with all equity investments and disinvestments. The function takes care of every phase of the process operating transversely in order to coordinate the other functions involved into the process.

The acquisition process can be divided in four macro-areas:

1. *Origination:* in this phase there is an opportunity to acquire equity participation of a company. However, considering the focus of this research, it is important to enhance that so far has not been acquired any startup; The TILab, for example, when doing business with startups, does not even consider the convenience of an acquisition. So, startups' acquisition operated in the classical way by the M&A function are not into the company's culture yet.
2. *Preliminary study:* it considers the convenience and the strategic & financial feasibility of the operation. The preliminary study becomes very effective in case a public company is evaluated; on the other hand, this phase is quite imprecise in case of a startup.

   In case the top management decides to move forward, there is the assessment

[84] CFO:Chief Financial Officer

phase.

3. *Assessment:* it consists in a deeper evaluation. Yet, in this phase there is a first touching point with the potential company to be acquired. At the end of this process there is a non-binding offer made by Telecom Italia. The next phase is the execution.
4. *Execution:* it includes the due diligence process and a deeper negotiation of the agreement. In case of a startup to be acquired, it becomes crucial the second part considering that the due diligence is basically useless considering the short time of its track record; in that case, the focus is on company's potential rather than its history.

At the end of these processes, the analysis is completed. Yet, in case of a positive feedback from the process the M&A function, or the CFO, starts seeking for board of directors' commitment, which has the decisional responsibility. Once the commitment is obtained, the M&A function proceeds to provide binding offer. If the target company accepts the offer there is the last step: final negotiation between counterparts in order to define the final contract and complete the acquisition operation.

Seed Financing Working Capital

After discussing the theoretical and traditional process of investments on equity that could be made by Telecom Italia, it is possible to define an actual project of corporate venture capital developed by the corporation in the last years. In fact, Telecom Italia has launched a seed investment project of 4.5M euro for 3 years

duration; this amount has doubled since then. Indeed, each year the fund would invest 1.5M euro in startups; each investment could start from a minimum of 100K to 500K. However, the particularity of Telecom Italia seed investments is the fact that each investment is also open to potential other external co-investors, leading to a specific partnership for the case. In regard of the equity stake to take, the general rule says to stay below 30%, as the literature suggest for these kind of operations (seed financing).

In addition, it is important to analyze the fact that WCap could do startup-scouting activities everywhere in the market; it is not mandatory that the startups has had previous relationships with Telecom Group. Indeed, WCap has basically two tasks: run the acceleration program and seed investment activities. Yet, it is important to define that these activities are separated with no obligation for startups participating in the seed project to have previous relations with Telecom Italia throughout the acceleration program or the fast register.

As said, Telecom selects startups to invest trough several channels; for example, Telecom it is the only Italian corporation registered to SEP (Startup Europe Partnership), an European platform that puts in contact innovative startups and corporates interested in corporate venture capital activities.

The process of investments adopted by Working Capital:

1. Startups selection
2. Meeting interesting startups
3. Startup evaluation and due diligence

- Equity investments is decided in terms of amount and mode
- Inquiry for potential investors

4. Non binding term sheet verbalization
5. Investment contract signature

The acquisition process of equity stakes starts with scouting activities where the corporation looks for target startups that have a business related to Telecom's necessities. Once an interesting startup is found, a meeting with its board is organized. After touching base, if the interest persists, there is an evaluation process aimed to define startup's value; so, several resources and time are involved in this due diligence process with the final result of defining the convenience and price of the operation. Later, WCap finally decides to invest on startup's equity defining operation's details. Yet, in case the 500K-euro investable are not sufficient to take a relevant share of the startup, WCap starts looking for other external investors interested in the operation. Once the operation's formalities are defined, (investment type, any rights involved in decision-making processes, method of payment and any respite, distribution of shares among investors) a non-binding term shit is draught and offered to the startup. Once the agreement between investors and startup is achieved, there is the contract endorsement with Telecom and external investors acquire startup's equity shares.

3.5 EMPIRICAL RESEARCH RESULTS

From the analysis of Telecom Italia case study it is possible to enhance how Telecom Italia is focusing its attention to open innovation; in fact, Telecom Italia is also looking for new technologies from the startup environment trough the implementation of WCap's activities.

The formality how Telecom Italia has conceived the seed financing represents an important evolution in the Italian corporate venture capital scenario; in fact, Telecom Italia allows other co-investors to work with startups of different dimensions.

On the other hand, the M&A function it seems still far from the startup environment: long and complex processes, which are not conceived for startups. Yet, earlier in this chapter has been discussed a theoretical project conceived by M&A department to specifically better involve larger startups, which is harder to manage by the WCap; however, this project seems to be hard to actually be implemented.

Considering the supplying contract, do not exist specific processes for startups that consider startups as any other company. In fact, both *innovation sector* and *TILab* have a standard process, which could make harder the process for startups. There is no collaboration ongoing between WCap and the rest centers of interest involved in including startups into the fast register, unless startups came trough the WCap process.

Nowadays, there is no company culture able to analyze ex ante the choice

between supply contract or equity participation; in fact, as a matter of fact, there is a priori the consideration of the supply contract more convenient than equity participation. On the other hand, the only exception of this attitude is represented by WCap, which has been specially created for acquiring startup's equity participation. In conclusion, there is no complete cooperation between departments analyzed in this research.

If the intracompany comparison is analyzed, it is clear that Telecom Italia does not have a centralized department aimed to manage the supply contracts for startups; it is a single business unit task based on their interests.

4. OPEN INNOVATION STRATEGIES FOR INTERNATIONALIZATION PROCESS: LOCCIONI GROUP CASE

Loccioni Group is a family company established in 1968 by Enrico Loccioni with the aim of creating in his territory - and delivering to the world - an entrepreneurial model for the work and knowledge development.

Loccioni's mission is to integrate ideas, people and technologies to develop measure and test solutions to improve the quality of products and processes for the manufacturing and service industry.

"We integrate ideas, people, technologies to give soul and values to companies"

Enrico Loccioni

The corporation is characterized by a very high level of technological innovation and thanks to the focus on research, it has developed expertise in the Automotive, Environment, Industry, Humancar and Energy sectors with recent development of new expertises such as in the Transportation sectors. The Group is based in Italy, in the Marche region with 400+ employees distributed between HQ and three international offices in Germany, United States and China located in strategic areas for Loccioni's business activities. The strength of the Group is the high technology provided in its tailored solutions.

In fact, the Group identifies itself as a technologica tailor's shop, which designs and manufactures turn-key solutions for the measurement and quality control of its customers' products and processes. Yet, each project is customized on customer's requirements integrating the best internal & external competences and

technologies; the Group is focused on building lon-term relations (see Chapter 1, Chapter 2) with its steakholders for mutual benefits and development. Loccioni Group is a knowledge company[85].

Thus, this enables the company to work in a poorly competitive environment. A small number of clients, but "best in the world"; this is the philosophy of Loccioni that, despite the economic crisis, presented - in 2015 - a consolidated financial statements which reached 135 million Euros.

The success of the company is also due to a strong technical and innovative know-how; its business model is based on open innovation's vision of Open Company: a company open to both young and experienced people, customers, suppliers, competitors, scientific and pubblic community. As said previously in this research, openess enhances the creation of new businesses, development of new technologies facilitating relations and the creation of international networks with the final goal to design future markets and technology applications.

The founder, Mr. Enrico Loccioni, stresses the idea of the client as "the real boss of the company: clients are decision makers in the long term period, thus shaping the future of the business" (Varvelli, 2014)

Here hence the choice to work only with the best companies across the world. Yet, a further winning strategy - according to Mr. Loccioni - is investing in young talents, as they would prevent the company from falling behind and keep up with time. In doing so, it is crucial to make them fully responsible of a project since the beginning, same as they would run their own business. In fact, the organization is

[85] Loccioni: our knowledge company

horizontal in order to develop responsibility and entrepreneurial attitude among the team members, whose average age is 33 years old. People and its knowledge represent the real capital, allowing for growth and innovation. Knowledge and competencies are continuously crossed and increased when implementing processes in each operating areas, which are: Industry, Automotive, Environment, Energy and Human Care. Within each "technological atelier", specialist and researches deploy effectively the core competences representing Loccioni's strengths. Finally, all efforts are driven by four values that are the cornerstones of the corporation's culture:

- *Imagination:* to be able to imagine is to be able to create.
- *Energy:* you need to dream and fulfill your dreams.
- *Responsibility:* for the air we breathe, the soil we step on, the resources we use, the trust we build.
- *"Tradinnovation":* it is a neologism that means "learning from the past to shape the future".

4.1 THE COMPANY

It is important, at this stage, to better describe the social-economic context of the company's origins. The Group was founded at the end of sixties in Marche Region, (Angeli di Rosora) a center area of Italy.

In spite of the economic boom occurring in Italy after World War II, Marche's territories have remained mainly agricultural. However, when the industrialization process started in this area, there was a development of small enterprises run by families (Fua'& Zacchia 1983). This is thanks to the "continuity between the pre-existing agricultural community and subsequent industrialization of the territory, which is the salient character of the so called Marche model" (Bonti & Cori, 2006). In fact, farmers well accepted the challenge due also to the larger amount of family members at that time; they were provided an alternative to agricultural activities, which became residual compared to the factory. So, workers and farmers entering into new factories did not suffer from the creation of possible social distances among them. There was no fracture (Fua', 1983), which implied, consequently a low level of geographical mobility and the absence of episodes of social and cultural uprooting. In addition, the local industry acquired a peculiar character of sharecropping: share of entrepreneurial risk. In fact, in agriculture the sharecropper and the fund's owner brought in respectively the work and the capital; in the industrial situation, sometimes collaborators (as Loccioni does not call them workers) usually share equity quotas with the founders.

In 1968, Enrico Loccioni was working as an electrician but, eager to start his own

business, he decided to open with two other partners, I.C.I.E., a small company engaged in the installation of electrical systems. His family had sharecropper traditions; the young man, however, decided to give his life a different course; he was very keen to be independent.

The first orders came from Merloni (today Indesit Company), a giant in manufacturing and distributing major domestic appliances (washing machines, dryers, dishwashers, fridges, freezers, cookers, hoods, ovens and hobs) that is based next-door in Fabriano.

Although was a business focused on crafts solutions, its founder was characterized by his care on relations and innovative solutions, tailor made; clients were not merely buyers. He immediately understood the importance of customer's royalty in a organizational model based on trust, transparency and know-how sharing (Bonti & Cori, 2006).

The I.C.I.E. experience lasted until 1971 when General Impianti S.r.l. was born; it was a more structured organization with the same core business (installation of electrical systems), but with a specific target client: large industrial groups. Yet, Merloni, as market leader, was still the main customer, which since then it has always been Loccioni's strategy. From dimension, turnover and many other indicators point of view, there has always been a high disproportion between General Impianti and the client. In fact, General Impianti was definitely smaller than its clients; however, it was much more appealable because of the high level of technology of its solutions. Loccioni had "learned by doing" without

overlooking, however, “learning by interacting”. In fact, he was constantly looking to activate a knowledge flow with the counterpart; at the beginning the contribute of sharing knowledge was more substantial from the client’s side, but afterwards it would be stabilized in both sides giving mutual opportunities to enterprises to the Group. In 1980, Loccioni founded AEA (Advanced Electronics Application) S.r.l [86]with the idea of producing domestic appliances control & test systems and automotive components. Yet, he kept the focus on working with the best partners in the world; since the early days AEA extended its test activities in the automotive sector while continuing its activities in the home appliances sector. Independently among General Impianti or AEA activities, the founder always adopted a comprehensive communication such as “technological tailoring”, “tailor made solutions”; yet, high-tech characteristics and R&D had a much more relevance in AEA, which was not focused merely on production. In addition, General Impianti had a predominance of blue-collars, while in AEA most of human capital was graduated with a lower average age.

In 1992, another important piece of the puzzle was added with the founding of Summa S.r.l., which was conceived mainly as an internal service enterprise; there was any service provided outside the company. Its mission is to “think and design” the development of Group’s companies in the medium-long period with a 5-10 years vision. Summa S.r.l. included those collaborators of Loccioni that already were working in his companies and that had a track record of successful

[86] The main customer was again Merloni, whose washing machines, at the time, reached high levels of quality thanks to the implementation of production control systems

technical and managerial competences. The newborn was working for building the future, without focusing on short-term (strictly commercial) activities. In fact, Summa had its focus on research activities, strategic planning, audit, IT area, HR management, and later administration, logistic, marketing & communication. It is clear its independence from production and market dynamics.

Starting from nineties, these three entities of the Group (General Impianti, AEA, Summa) get increasingly "closer" by having common activities, which is translated in a much more technologic focus for each company in the Group. As a consequence, blue-collars decreased from 100 to 20 units[87].

Yet, considering the integration and independence of the tree companies, it has been decided to put these entities under the same brand as it is known today: Loccioni Group – Integrated Companies. Thus, legally there are still three different enterprises but from the communication point of view (internally and externally) there was only one entity: The Loccioni Group – Integrated Companies. Starting from 2005 the Group introduced its final brand's name: Loccioni[88].

Regarding the business units, a lot has changed during the years as well. As said, Loccioni's model is to keep looking for new business models and opportunities. From the origins the *Home* business units has switched to *Industry.* At the same time in the last ten years new business units have been created. Thus, *Energy &*

[87] This occurred without resorting to layoffs or drastic measures. Who was "uncomfortable" in General Impianti has mostly chosen to change employers or start their own business (Bonti & Cori, 2006)

[88] Of course, when the Group need to participate in a tender or to formalize a request, on the documents appear the names of the individual companies.

Environment was introduced as a "spin-off" of the R&D department with the *Leaf Community*[89] project. In addition, with its *Humancare* business unit has created the first machine in the world, *Apoteca chemo*, capable of preparing drugs for chemotherapy in an automated way. In very last years, new business units are planned to be introduced such as *Train and Transport*, as a direct consequence of *Felix* project[90].

Figure 50 – Loccioni business units

Source: Loccioni

[89] It is based on the idea of building a real community, whose lifestyle is inspired by respect for the environment; to reduce waste, increase energy efficiency and use of renewable sources.
[90] http://research.loccioni.com/2013/11/felix-railroad-switch-inspection-robot/

4.1.1 Organization

From the organizational point of view Loccioni's companies had a functional model until the end of nineties. In fact, the structure was vertically developed with a very low differentiation in terms of collaborators' competences. On the other hand, there has always been a high level of informality over the years.

In the last twenty years, a new organizational structure process began toward a matrix structure. In fact, a matrix structure valorizes the existence of flexible, aggregated competences in function of upcoming needs throughout an articulated network of relations.

Maria Paola Palermi, head of corporate communication, said that "an important breakthrough occurred when the company put the client in the center. In fact, the client gives us work and we all have to meet its needs. In the matrix organizational structure there are visible signs of Loccioni's rural tradition. The differentiation, in business unit terms, is substantial. Likewise, the sharecropper cultivated fields by devoting to different crops without limiting himself to a single product. If he had problems with the grain, he would have earned money from potatoes or something else".

Each business unit has a MD and a commercial referent. The staff's functions are: *communication, research for innovation, HR, audit, logistic and systems management.* Also there is a person dedicated to *marketing, R&D, production* for each business unit. The rest of the functions are transversal, supporting everyone. The *general management* is hold by Loccioni's family and Renzo Libenzi, GM.

4.1.2 People

One of the main recruitment channels of the Group is the *Bluzone* project, which represents the junction between university and company's world. The goal is to provide integration between school and work in order to plan together the future. Indeed, the *Bluzone* project is included in a wider project of continuous training that Mr. Loccioni has been developing since 70's to stimulate positive synergies between people, companies and actors of the economic and social system. Currently, 1000+ students visit Loccioni HQ every year from elementary school kids to universities students. Thirty out of these students (from high school and university) are selected to start a journey with the Group; technically they are not hired, but they are involved in company's projects at they were; this phase for them is called *"before"* (Bluzone). Yet, these students also attend internally a training program (managerial master), no matter what their position within the company would be. In fact, the student has the possibility to understand how the company works at every level from the logistic to orders management. In addition, each business unit manager introduces their selves and explains their activities. Last but not least, there are training sessions with people outside the company.

The next stage for the students is called "*during*" (Redzone) where they actually become Loccioni's employees. The training continues in different ways with several side projects that allow them to improve their skills; for example, there are continuously training talks throughout the year for a total of 8.000+ hours. It is

important to consider that these training programs are free and not mandatory.

In terms of employees' origins, in the early days most of the new collaborators were selected from the Marche Region with the goal to exploit the Region's resources. In the last decade, after the re-organization and the internationalization process, the areas involved in the selection process are much more wider involving human resources from national and international borders.

The last stage of relations with the company is called the "*after"* (Silver zone) period, which represents whenever a collaborator does not work for the Group anymore. The Group has created several initiatives to stay connected with former Loccioni people. For example, in case a person has started a new business the Group supports the ex collaborator by: becoming his/her first client or supplier, allowing the startup to work with Loccioni's industrial clients for specific orders or providing access to Loccioni's structures if needed

4.1.3 Territory & Environment

As previously introduced, the Loccioni Group is highly involved in its territory and environment. There are several new projects being developed every year. One of the most interesting projects is called *Land of Values*: Loccioni's clients and visitor have the chance to live a full hospitality experience. In fact, Loccioni has established several partnerships with local restaurants, stores, and hotels and so on to valorize the local culinary culture. There is one person dedicated to establish and maintain those partnerships; also, clients are more than satisfied whenever they visit the company because they "touch" with their hands the corporate

dedication to its territory. Last but not least, these represents a huge value in terms of corporate responsibility and communication.

The U-Net network that connects several universities with the Group gives another good example of valorization of the territory; this allows the company to have a direct point of contact with students and professors bringing on the main stage the focus on research and innovation.

Moreover, the *Business Marketing Laboratory* is a project established in 2005 as a consequence of an agreement established with the faculty of economics of the Marche Polytechnic University with the goal to valorize the scientific know-how sharing, develop an university network and increase the industrial marketing culture.

Loccioni gives to the environment a tremendous value as well; in fact, the Group has started energy saving activities more than ten years ago. Indeed, Loccioni's collaborators do not need to turn on/off lights since it is done automatically by software allowing an optimization of energy consumptions and costs. Also, there are solar panels and geothermal pumps that are in charge of heating/cooling the offices.

Considering the environmental sustainability, there are two main projects that better explain how relevant is Loccioni's commitment for its territory and environment: the *Leaf Community* and *2km of Future.*

The *Leaf Community* was first established in 2008 and it is the first Italian integrated community completely eco-friendly that has involved exceptional

partners such as Enel and Whirlpool. The community is not an experiment, but an existing reality that includes a *carbon neutral*[91] house, electric vehicles that allow to move around, a solar powered school, workplaces that use renewable energy sources, to name a few. The *Leaf Community* gave the boost to the creation of the *Energy* business unit, which has been established in 2010 afterwards.

From the *Leaf Community* project the company has continuously evolved and included more partners and activities.

The *2km of Future* project is a direct implementation of the *Leaf Community* project. The new project takes his name from the actual adoption of 2km of the Esino's river, which is next to Loccioni HQ. In fact, the Group invested its resources privately to secure the area and to valorize the river as energetic and cultural resource. Yet, along these 2km there is the original *Leaf Community* project and the new *Leaf Lab* that is the first industrial building of class A+ able to manage energy flows and to reach energy independence. In addition, the *Leaf Lab* could also store energy and use it when needed thanks to electric and thermic storage technology. The excess energy could be shared with the other buildings of the *Leaf Community*. Over the 2km of the river there are five hydroelectric micro-power plants with a total production of 1GWh/year. The *Leaf Community* is 55% energetically self-sufficient compared to 22% of the early days.

The *microgrid* represents a peer-to-peer energetic network that stores and distributes energy among the company's buildings and the *Leaf Community (*all connected within the *2km of future*). The main tool that allows the microgrid to

[91] Zero carbon dioxide emission.

work is the IT infrastructure on fiber optic connection. Indeed, thanks to *MyLeaf*, a tool development internally by Loccioni Group is possible to manage and monitor in real time the network status. Therefore, the *microgrid* becomes *smartgrid* by coordinating and putting in contact different components of the network. So, the end user plays a key role in the energy market since he or she is able to actively interact with the national grid as he or she buys or sell energy.

Figure 51 – 2km of future

Source: Loccioni

4.2 MARKETING AND RESEARCH FOR INNOVATION DEPARTMENTS

4.2.1 Marketing

Loccioni Group, at its origins, did not have a specific marketing department because there was no necessity in the 60's structure and in the following years. As said in the previous paragraphs, at the early days, Loccioni handled marketing with a top-bottom approach; top management directly handled new market opportunity scouting and defined corporate's strategies to increase its competitiveness. Essentially, there was a direct involvement by the entrepreneur into defining and realizing marketing activities trough his personal and professional experience (Guercini, 2005).

So, for the reasons explained above, marketing department was established only in 1996 as support to Governance. It became necessary in 1996 due to increasing turnovers year after year and to the higher complexity of competitive environment, which defined a necessary specific investment in marketing. From the organizational-strategic point of view it meant defining a match between marketing and sales goals, customer oriented.

The approach adopted by the Group has been the relationship marketing (as previously said, relations have always had a core function in Loccioni's mindset from the origins), which included also customer relationship management practices. The goal of CRM activities is to better understand customer's needs,

personalize relations and develop a mutual learning.

Before 1996, the marketing activities were merely focused on simply market researches on home appliances, automotive, automation and telecommunication sectors.

In addition, marketing activities were introduced for internationalization purposes as well due to the increasingly competitive and global scenario in the market.

Today Loccioni's marketing activities are focused on customer relationship management activities with key clients. The modus operandi is based on creating conditions of technical collaboration with key customers for developing new solutions for complex problems; also establishing partnerships is important for components subcontracting. On the other hand, the Group is in a critical situation due to the increasing number of orders coming in.

In fact, it became necessary to reorganize roles and competences of business development, sales and marketing people. Thus, in this new situation the Group adopted a customer management strategy focused on Key Account Management [92]assumptions, which is an approach adopted by corporations that leads to the creation of a key-customers portfolio to be managed trough the supply of products/services specific for each customer's need (Mc Donald et al., 1997). So, the key account manager position becomes necessary in order to have the customer orientation approach.

In the very last years marketing division had several different phases; for

[92] a customer-oriented coordination unit within a company, in which activities associated with very important customers are consolidated.

example, in 2005 there was a critic situation where activities needed to be reorganized and competences strengthen.

Therefore, the increasing relevance of strategic role of marketing activities for Loccioni's organization leads to the creation of the "business marketing laboratory[93]". The laboratory has the following main goals:

- Focus on internal and external communication activities in order to direct collaborators in reaching goals
- Development of a project for applying customer relationship management tools within the organization
- Strategic collaboration with sales and R&D departments for actual & potential clients management
- Understanding new scenarios trough market analysis

4.2.2 Research for innovation

Since day one, Loccioni has always been focused on R&D activities with relevant investments. However, each company of the Group has a different situation. In fact, AEA has a specific R&D department while General Impianti has only R&D positions inside business units. Summa's case is interesting as well because it includes the R&D general manager of the Group who is in charge to coordinate and manage all R&D activities. In parallel with R&D activities there is *Research*

[93] The idea of developing a business-marketing laboratory arises from an agreement between the Faculty of Economics of the Polytechnic University of Marche and Loccioni group in October 2005. The basis of the agreement regards providing academic human resources for the company; this scientific knowledge would be useful in dealing with business marketing issues. For example, sponsoring scholarships for PhD students it is one of the first mechanisms of collaboration started.

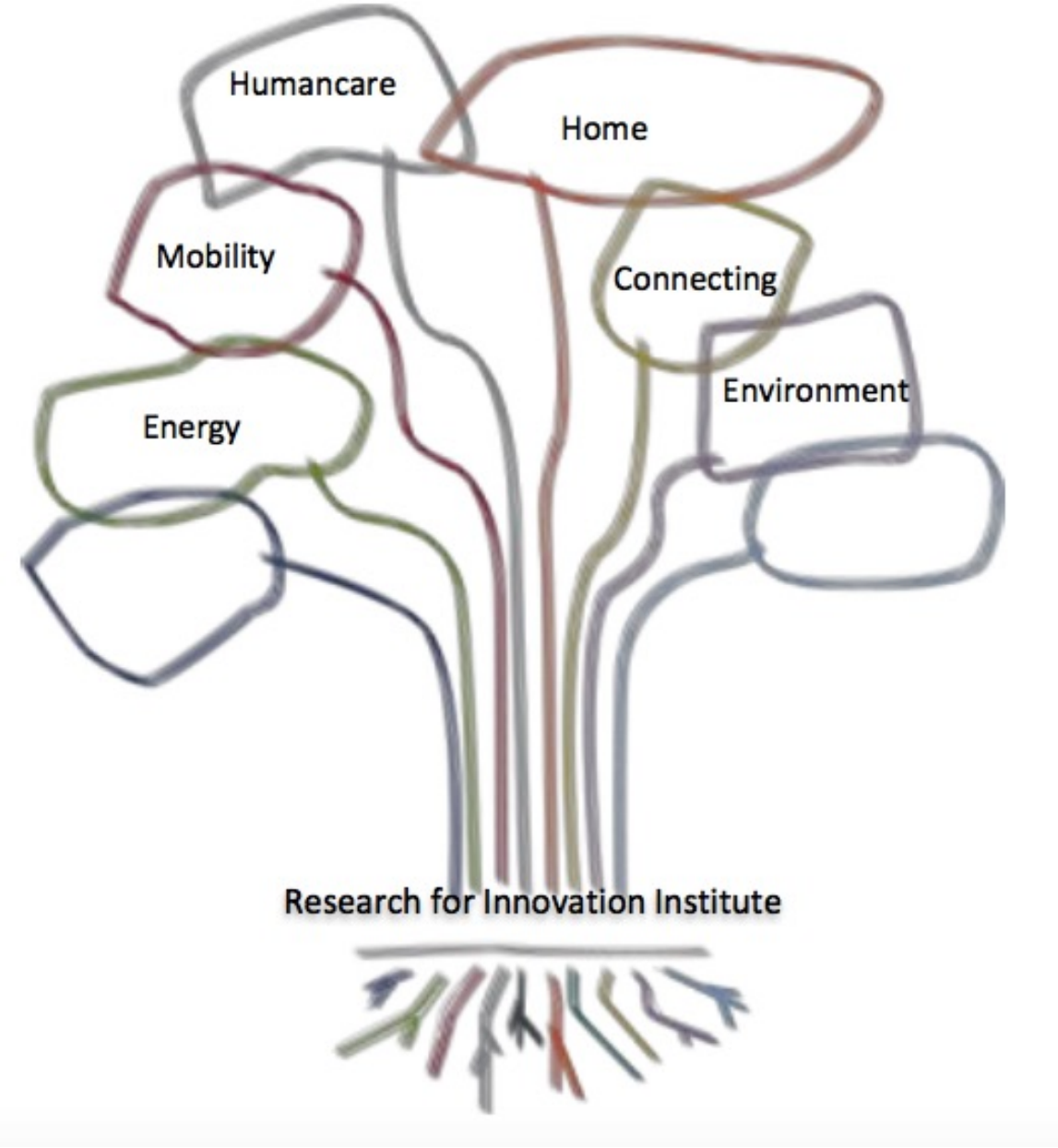
for Innovation, which is not strictly related with ordinary R&D activities for Loccioni's business units. Research for innovation has a longer period timeframe, studying and researching possible solutions & markets of the future (10yrs+). In fact, at this its operations involve:

- Evaluating technological innovation proposed by suppliers
- Analyzing external ideas and proposals (universities, research centers, industrial partners and so on)
- Finding financial coverage to sponsor research activities and innovative projects

Therefore, research for innovation activities are transversal compared to AEA and General Impianti R&D activities, which are focused on specific business line projects. On the other hand, research for innovation does not operate independently; it is always networked to the Group and external subjects: temporary teams are built that include clients, suppliers, universities, research centers in order to discuss possible ideas and projects that could be developed.

On the other hand, R&S activities within AEA and General Impianti are more pragmatic. The timeframe is much more reduced with the evaluation the feasibility of general ideas and following specific projects, which have the final goal to provide new solutions for actual business units.

Figure 52 – Research for Innovation



Source: Loccioni

4.3 OPEN INNOVATION: NETWORKS AND RELATIONS

The analysis run in the previous chapters allows defining the innovative process as a result of knowledge creation and utilization trough a learning process that involves complementary competences highly integrated into a network.

As said, literature in the last years enhances the importance of network in the innovation process. Indeed, at Loccioni Group relations between people (internal network) are considered essential in order to obtain at the same time innovation, rapidity to launch new products and high quality standards. At Loccioni Group innovation is managed trough relationships and networks approaches (open innovation, see chapter 2); its implementation could change depending on different projects that are developed.

Literature and Loccioni's experience demonstrate that network approach becomes relevant in case some conditions occur; some of these conditions are exogenous[94], which limits company's direct intervention power, and others are endogenous where the company can take actions.

So, considering only the conditions that can be influenced by company's actions, it is possible to define three variables that are relevant in the network approach:

1) The organizational configuration of the company: this is an influential factor within the R&D as well. In fact, literature says that in order to support the network approach, it is necessary a new configuration of the organizational

[94] Among the exogenous factors literature has often discussed, coming to conclusions sometimes conflicting, on the influence exerted by the business sector and the level of turbulence / environmental dynamism

concept, inspired to networks and concept of “open” company (Chesbrough, 2005). In fact, the innovative process includes internal and external resources, which need to have an organizational support able to integrate different competences and contribution in the above-mentioned process. Functional structures are typically conceived to support a bureaucratic and procedural vision of the innovation process; in this case flexible structures become more effective because are oriented to achieve goals that are constantly changing and, these structures, are able to collect several new challenges both internally and externally. In other words, a much more flexible organization means: free and easy communication among members, democratic and liberal management that empowers people’s participation and activities development, frequent management turnover and a constant integration between each area.

As previously said, Loccioni’s case shows that the characteristics just mentioned above are noticeable in matrix structures, which allow disaggregating, discussing & approving economic-financial goals of each project. There are frequent interactions between team members of a project and the approach of team members consists in discussing different suggestions by creating a collaborative and challenging environment where everyone has the possibility to express his or her own ideas and opinions. Yet, interaction between people internally and externally is quite informal throughout meeting, discussions and calls.

Besides formal tools such as planned period meetings and creation of updated reports, Loccioni Group gives important value to interpersonal communication; in

fact, trough a simple call it is possible to get in touch with the most competent person of a specific project in order to obtain information about a problem to be solved. Yet, Summa's activities are relevant to spread existing knowledge among collaborators and, more important, to develop new knowledge trough training activities and R&D. Indeed, when a new collaborator arrives inside the company, the Group organizes tours and meetings in order to better involve the new HR into the company's activities; there are monthly meetings among all the collaborators in order to promote information, opinion and idea sharing; there are other events organized such as informal dinners to promote conversations and trust building among each other. Throughout these initiatives the goal is to actually realize social networks able to create that feeling among people, trust to share information, help each other in ordinary activities, cooperate for reaching common goals.

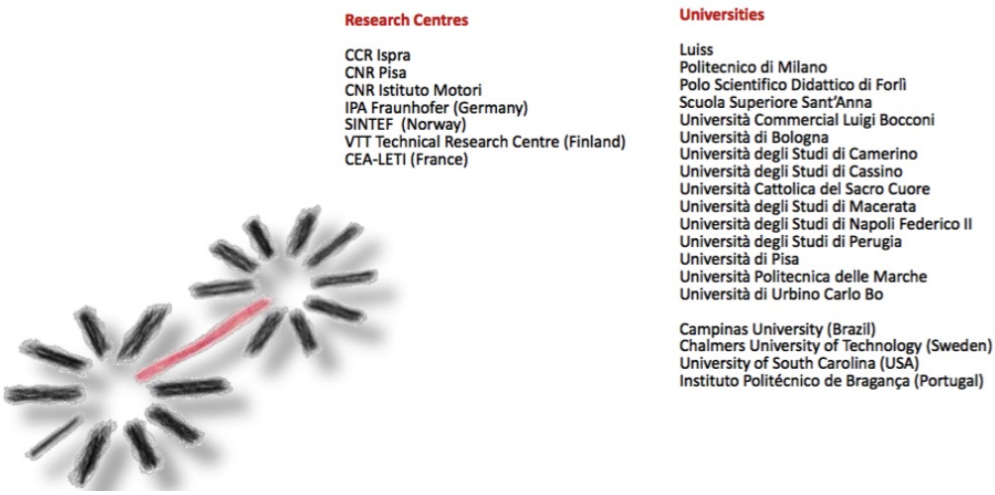
These considerations lead to the conclusion that the most suitable organizational model has soft characteristics in terms of processes, operations and culture of the organization itself; as said the most appropriate organizational model identified is a matrix organization, which Loccioni has adopted. However, a functional structure could still adopt a flexible and open innovative process involving internal and external actors (open innovation, networks & relations).

2) The communication distance between network's entities: the Loccioni case underlines the critical variable related to the communication distance, which influences the network implementation in the innovation process. The

communication distance is in terms of separation of the company from the other subjects in the network, which is measurable trough four-linked dimension: *language, technological, strategic* and *cultural distance* (Micelli & Prandelli, 2000). There is no learning process without a shared language; in fact there will be a higher involvement by the network in the innovative process whenever a homogeneous communication code would exist, which would reduce the asymmetry of information between people involved in the network. Another important condition for a positive interaction among subjects in a network is represented by homogeneous technological infrastructures and applications (Micelli & Prandelli, 2000). In fact, with a higher adoption of homogenous technologic infrastructures and application there is a higher possibility of a collaborative network in the most critic phases of the innovation process as well. Finally the implementation of the network approach depends by the strategic-cultural distance that separates each subject of the network; these subjects are strictly linked to the convergence of interests and the level of mutual trust (Micelli & Prandelli, 2000). In fact, in order to accept to participate to the process of sharing knowledge for a client, supplier or competitor and justify for Loccioni Group an investment in relations building, it becomes necessary a good level of mutual trust and convergence of interests. In particular, the subjects involved in the network have to be motivated (also trough incentive mechanisms) to share their know-how in order to perceive the value of their participation in the innovation process in a defined context (Kotler & Sawhney, 1999; Prandelli &

Van Krogh, 2000). Indeed, in relation of the strategic-cultural aspect, Loccioni case confirms what in literature is studied. In fact, during the years, the company has formalized two different networks of companies in order to reduce the communication distance that separates the Group from its competitors, suppliers, clients and centers of research: Nexus and U-Net. The common goal of the two networks is the extension of competences rather than their standardization and homogenization. In fact, these networks are not conceived to catch competitor's secrets, but to exploit different competences. Last, an efficient network management depends by the sharing culture, in terms of interests and common business vision by each subject of the network. Therefore, this aspect is very important since it suggests that the actual possibility to apply a network/open innovation approach to innovation depends by the capacity to create a common identity & culture, which makes convenient the collaboration among every subject.

Figure 53 - U-NET – The network with Universities and Research Centers



Source: Loccioni

3) Company's ability to establish and keep relations: this is the last factor that influences the network approach implementation; it defines the ability of the company to create and manage relations, which does not exclusively depends on its internal culture focused on relations but also by the development of specific knowledge on the market and its subjects; also important is the use of adequate strategic/operational tools able to concretely activate and manage relations. Yet, this underlines an important reflection about the critic role that has the marketing function to promote the application and success of network approach both strategically and operatively. On the strategic side, it is important to have a marketing orientation in each level of the organization and to create a marketing culture careful about relations in terms of management and development of medium-long time relations based on collaboration, trust, mutual problem solving. In fact, the Loccioni Group adopts both a network approach to innovation and to internationalization (market analysis) as well. The internationalization process trough relations and open innovation strategies will be further analyzed in the next paragraph. In literature, an effective implementation of network models is linked to a marketing culture coherent with inter-organizational network relations' school (Hakansson, 1987). From the operational point of view, the Loccioni Group case shows that the effectiveness of network approach to innovation depends both by marketing ability to promote the relations & network culture throughout a constant conversation with internal and external subjects and by its power to support every single relation, constantly monitor the market in order to

choose the right partners, develop specific communication campaigns and manage databases of relations. In Loccioni's case is clear the commitment of the company into clients, competitors and other technologic and scientific partners analysis that collaborates with the Group[95].

[95] Customer Relationship Manager (CRM) is considered an essential tool to know the customers, classify and select those with whom tighten the most interesting partnerships in order to develop new products; the employment of college interns, the opening of its facilities to groups of students from high schools demonstrates the Group's commitment to developing long-term relationships with scientific institutions; the establishment of Nexus and U-Net finally represents the will to institutionalize relations with the competing companies that also operate in different sectors.

4.4 LOCCIONI INTERNATIONAL: STAYING LOCAL WHILE GOING GLOBAL

In this chapter the author focuses on internationalization process and how open innovation strategies could positively improve the process. In the previous paragraph, has been described the relevance of openness of Loccioni Group in handling its relations and networks. In this paragraph will be analyzed, and compared with the existing literature, further "open" strategies adopted by The Group in the internationalization process.

Companies obtain good international competitive performances whenever they have heterogeneous resources (Peteraf, 1993) and if they have the ability to organize those resources (Barney, 1991). These researchers says that is not sufficient to have better resources than competitors, but what matters in order to generate good productive performances is the best adoption of resources possible (Alchian & Demsetz, 1972). Companies have heterogeneous technological knowledge (intra-organizational knowledge) (Kraaijenbrink & Wijnhoven, 2008). Companies, from small to larger, need to adopt different and sophisticated organizational modalities at the same time (Grant & Baden-Fuller, 2004).

On the other hand, for small medium enterprises external technological knowledge (companies Universities, research centers) is important as well: this knowledge becomes essential to SMEs that constantly pursue technological improvement and a modern management culture focused to knowledge management.

The ability to acquire knowledge externally and efficiently adopt it into the competitive dynamics defines the phases involved in the process of expanding the knowledge base of an industrial company, taking it to higher functional levels (Leonard & Barton, 1995; Nonaka & Takeuchi, 1995).

Therefore it is enhanced the importance for companies to have organizational competences able to allow the integration of external technological knowledge in order to competitively acquire and employ the knowledge produced in external structures.

Therefore, companies that have better absorptive capacities are much more able to acquire external knowledge and to implement it within the organization and its dynamic competitive operating scenarios (Cohen & Levinthal, 1990).

Therefore, acquisition and adoption of external knowledge produce several advantages, such as:

- Increase of knowledge in organizational systems and production processes
- Acquisition of innovative ideas that could generate new products or process
- Acquisition of economic yield

Loccioni internationalization process has included these strategies, such as acquiring external knowledge from research center and universities globally.

Indeed, as deeply argued in the previous paragraphs, the Loccioni Group strongly adopts network marketing & open innovation strategies; so, the Group has approached its internationalization process as an incremental process based on pushes of globalization and localization (Varaldo, 2004; Silvestrelli, 2005). Thus,

influences from globalization define the progressive extension of foreign markets, while influences from localization define the active leading actor role of the economic and social development of the territories where the Group operates. Loccioni's internationalization process could be defined as the development of its established relations locally and globally, which supply resources to compete in international markets.

In fact, as for the development of business units (i.e. from *home* to *industry*) there has not been a defined strategy that has influenced Loccioni's development in international markets, but only an emerging strategy (Mintzberg, 1985) deriving from each opportunity that collaborators (in particular of AEA) have found and perceived in concrete projects and orders commissioned by clients worldwide. On top of those internal *best practices*, there is always been Mr. Loccioni's support in developing new projects in potential new markets.

The internationalization visibility for Loccioni Group has its origins (marginally) since 1986 when a German company in the home appliances sector shows in a fair trade a testing system made by Loccioni. However, it took almost ten years for the Group to establish its presence in international markets. In fact, in 1996, at the same fair trade in Germany, Loccioni (AEA) participates with its own stand as Leader Company for the NetPeople network.

As previously said, the internationalization process of the Group did not follow a defined strategy; it followed a reactive attitude into approaching international markets where the Group wanted to satisfy specific client's requests: in fact, there

is no premeditated choice about focusing on specific new markets.

On the other hand, in addition to external opportunities throughout new projects with international clients, there are also internal suggestions for the internationalization process that follow the *entrepreneurial formula* (Coda, 1988).

In fact, Loccioni's entrepreneurial formula has its core in the network and in progressive expansion of interpersonal relations, which reinforce the incremental and reactive modality of the internationalization process; part of the formula includes also the constant seek for integration between Loccioni's culture and its clients' culture and context.

Therefore, in Loccioni's model an efficient international development strategy has to be based on a cultural integration between the Group and its clients; yet, this has to allow each side to maintain its identity and at the same time both side have to reciprocally understand each other's needs and peculiarities.

4.4.1 USA, Germany and China

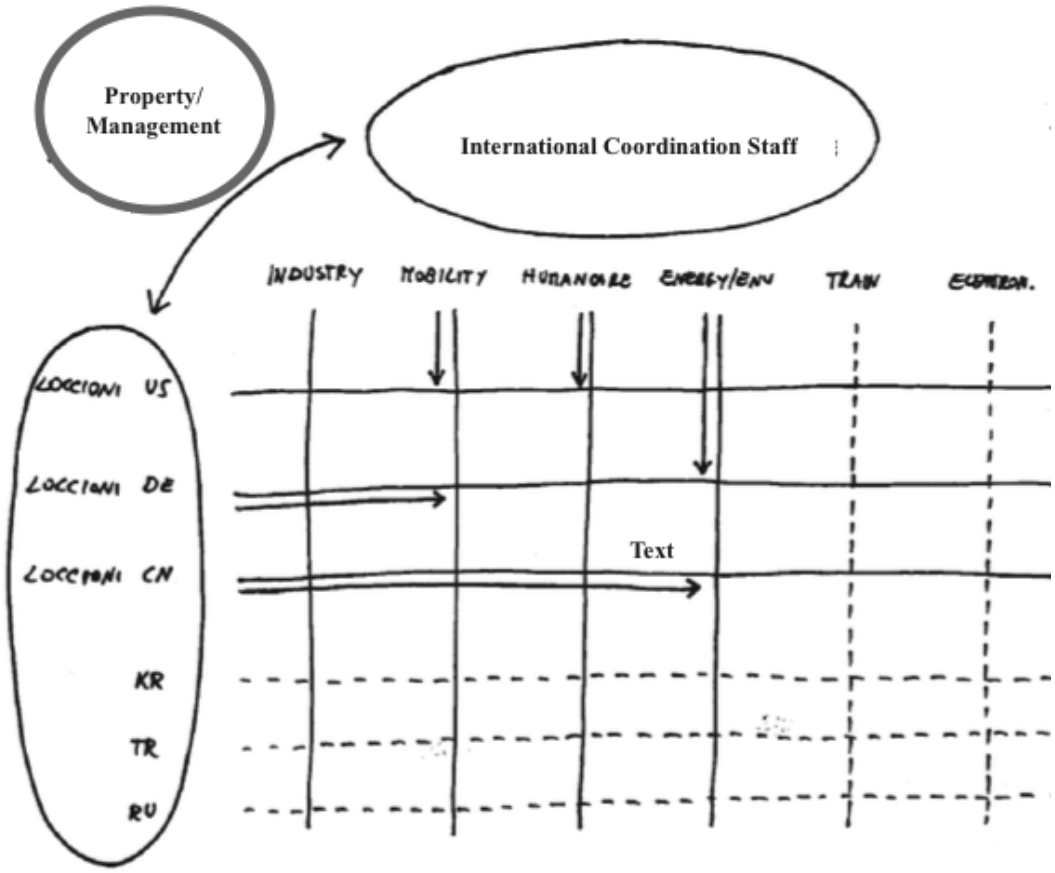
As previously said, Loccioni's process of internationalization has adopted strategic decisions, staying as closer as possible to its relations (clients) and empowering business and people. At the center of the model there is the client that is "followed" by Loccioni wherever he is.

The international mission of the Group is to guarantee jobs in the Marche region (HQ) importing it from where the job is abroad; the model is focused on the research of technology market niches.

The international organizational model is a replica of Loccioni corporate business

model (clients, people, suppliers) where *network companies* (international branches) exchange information, people and business with the corporate in Marche region. Indeed, these network companies have the main focus on business development activities and customer care. The network contributes to reach industrial goals of the Group and its organization is composed by a mix of local and Italian people in favor to cross-culture and human resources development. The figure 54 shows the matrix structure of the international organization model:

Figure 54–Matrix international organizational structure



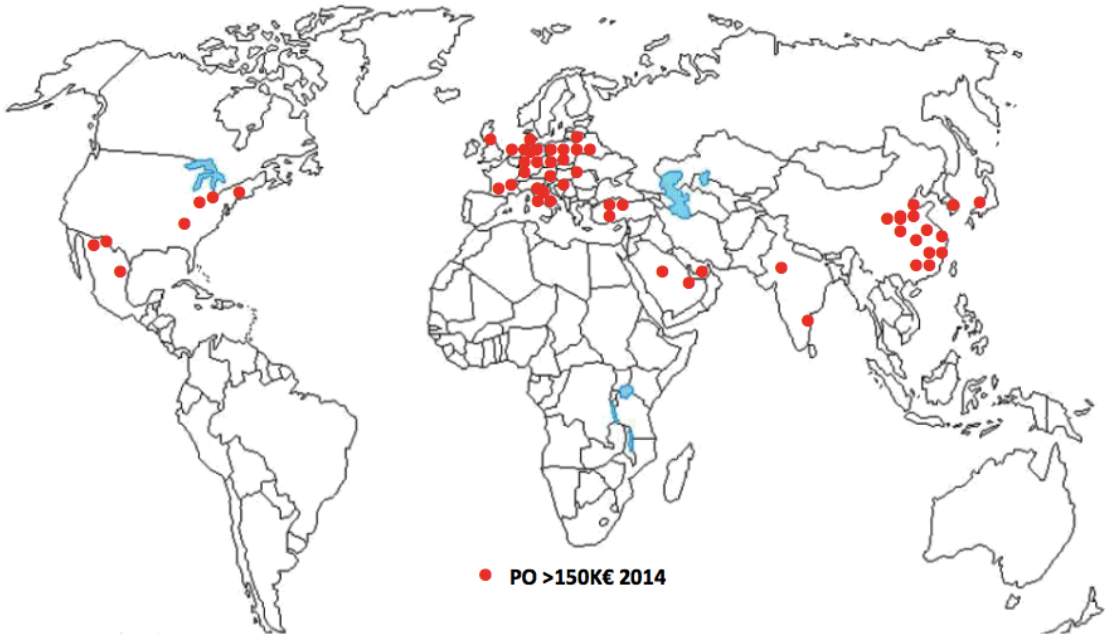
Source: Loccioni

As figure above shows, the organizational model for the international process is

the same as in Marche region: a matrix where each network company (USA, Germany, China) collaborates for every business unit following HQ business goals.

Over the years the group has collected clients worldwide with three offices abroad: Washington, DC (USA), Calw (Germany), Shanghai (China). In addition there are strategic markets where the Group is particularly focused such as: Turkey, Korea, Russia. The goal is to have a closer presence to customers' plants.

Figure 55–Loccioni Global Presence



Source: Loccioni

Germany

Loccioni Deutschland GmbH is based in Calw a town with 20.000 inhabitants in the middle of the black forest, 46km from Stuttgart. The network company was

established in 2012 by one of Group's intrapreneurs: Luca Lazzari.

The position is strategic for the Group since Stuttgart is one of the most innovative areas in the automotive sector and the long-lasting relations with *Bosch, Daimler, VW, B/S/H* represents an important asset for the company.

United States

Loccioni USA Inc. was established in 2008 but the Group's activities in North America started from 80's with the first solutions provided in the home appliances, automotive (90's) and health care (2000's) sector. Loccioni USA represents the first *network company* of the Group and was founded by Ignazio Droghini, an intrapreneur of the Group. Since 2008 LUSA has changed two different locations and today is in the DMV (DC, Maryland, Virginia) area. Its activities, as for others network companies, are focused on business development, service, administration, buying, and customer care activities.

China

Loccioni China Co. Ltd. is the most recent *network company* of the Group that has been founded at the end of 2013 by Andrea Alcini, intrapreneur of the Group. The location chosen is coherent with the previous experiences; in fact, Loccioni China is based in Shanghai, main automotive hub and the largest city in China. At the end of 2014 the company had 7 collaborators: 2 Italians, 4 Chinese, 1 Korean.

4.5 IMPLEMENTATION OF OPEN INNOVATION STRATEGIES: NEW MARKET OPPORTUNITIES

As widely discussed in the previous paragraphs, Loccioni Group is highly investing in its networks & relations maintenance and development towards the internationalization process. This concept of openness represents a radical shift compared to the typical method to innovate and internationalize into new markets. In fact, traditionally, this process is closed within the company organization in order to protect the intellectual property and the competitive advantage.

However, the global economy has changed drastically in the last decades leading to this new paradigm of openness. Thus, the introduction and diffusion of the Internet has democratized the innovation context bringing the information available to a widely larger population.

Therefore, there has been a drastic reduction of entrance barriers in several markets; the entrance does not depend on large capital or technological availability anymore. The result is a tightened competition among several actors in the market.

Indeed, doing innovation closed in Loccioni's labs was not convenient anymore because there would always be another company somewhere in the world that has access to higher level of human capital, financial resources or better circumstances. So, these reasons have been for Loccioni a stimulus to open to external resources rather than interrupt its innovation process.

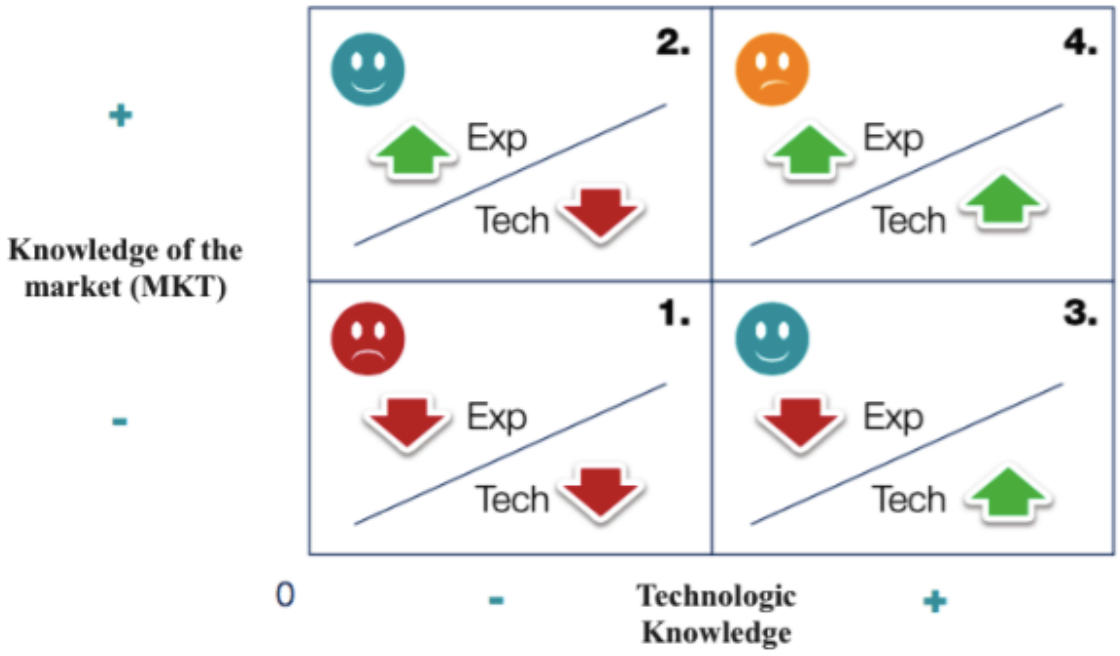
However, the author of this research believes that the Group could still do more in

terms of open innovation strategies in the internationalization process.

Change is always challenging and scary but with the right tools and knowledge it is possible to define a convenient path for the organization.

The entrance in a new international market could be a tough process. The following figure shows the positioning matrix, which becomes crucial in defining whether adopting open innovation strategies or not in the internationalization process.

Figure 56 - Positioning matrix



Source: Personal elaboration of data

The first quadrant defines the most risky situation because there is the lowest knowledge of entrance market and the lowest amount of technological tools available. This path is very risky in the innovation scope because the company is

completely dependent on external resources. On the other hand, this situation has a potential for innovation, but it is important to understand that there are several difficulties.

The opposite situation is defined by the fourth quadrant, which is the most confortable situation. In fact, there is the higher level of knowledge of the market and there are abundant technological tools available. However, this situation has the lowest margin in terms of business innovation.

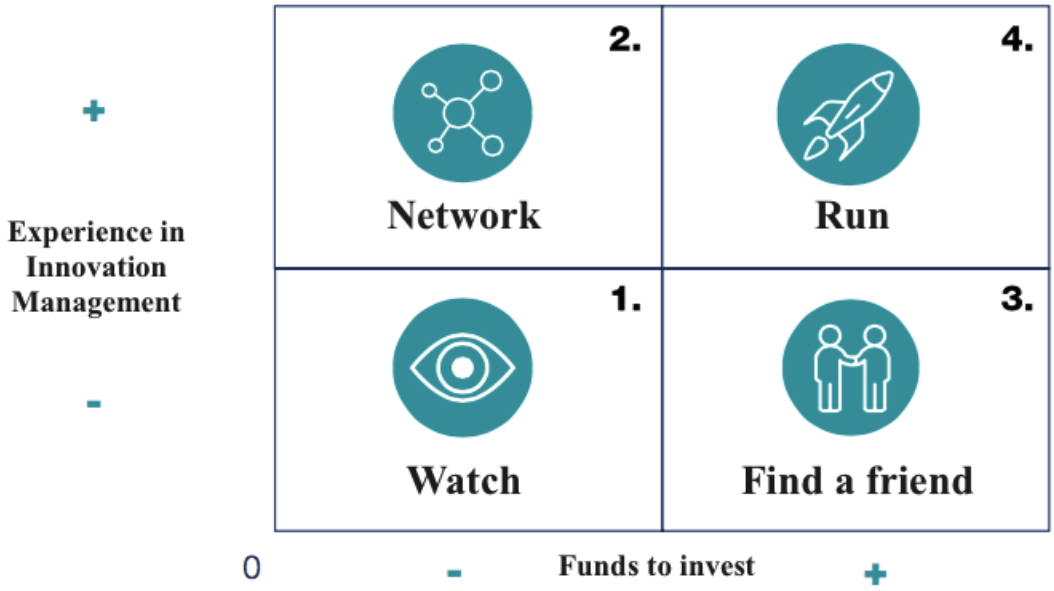
In the second quadrant the company has high target market knowledge but low technical knowledge. Consequently, it has necessarily to use external ideas (innovation partners, startups, patents, etc.).

In the third quadrant the situation is similar but opposite; in this case the company has a low understanding of the new market, but it has technical knowledge. Indeed, in this case the ideal situation would be to make available its technical knowledge to external entities throughout tools such as licensing; the goal is to open its own branch also thanks to revenues from the new market.

In conclusion, the ideal positions to enter a new market trough innovation processes are defined into the second and third quadrant: high knowledge of the market and low technical skills or vice versa.

Once the positioning of the company has been established in the internationalization process, it becomes important to define the best strategy to reach company's goals. The following figure shows the strategy matrix.

Figure 57 - Strategy matrix



Source: Personal elaboration of data

As said, the strategy matrix is helpful to define how to pursue company's goals, suggesting the most suitable approach and operating tools.

The vertical axe measures the *company's experience in innovation management*, which could be measured by:

- Innovative partnership ongoing or activated in the past
- Human capital expert in innovation
- Collaboration with startups
- Participation in innovation events
- Partnership with specific associations
- Long-term collaboration with universities
- Innovation labs within the organization
- Recently adopted technologic or process changes

- Positioning inside innovation networks in Italy and Internationally

Therefore, it is noticeable how the Loccioni Group has a high experience in innovation management; yet, a lot could still be done such as establishing more collaborations with startups, acquiring more innovations experts (such as creating the startup scout manager position, etc.).

On the other hand, the horizontal axe *funds to invest* define the financial potential investment of the company in open innovation for the internationalization process. The investments in R&D are the main parameter to consider in terms of funds to invest; thus, Italian companies have lower investments in R&D compared to European average (1,29% of GDP compared to 2,03% in EU). On the other hand, it is interesting to notice that the lower investments in R&D are not related to companies' size. In fact, small enterprises are much more oriented to innovation compared to European competitors[96].

In fact, Italian companies up to 50 employees have a 53,4% of innovation processes, which is 8,3% higher than the European average. Yet, better than Italy there is Germany with 63,3%.

The following figure shows the amount of investments required for each company size in order to be significant and efficient in terms of open innovation (right side of the strategy matrix above).

[96] Source: Eurostat

Figure 58 - Investments in open innovation by turnover dimension

Dimension (Turnover euro M)	**<50M**	**<150M**	**<300M**	**<1B**
Investments in Open Innovation (% of turnover)	**0,5% - 1%**	**1% - 1,5%**	**1,5% - 2%**	**2% - 2,5%**

Source: Personal elaboration of data

1) Watch

This quadrant defines the situation of a company that wants to start open innovation but does not know how to move into the market and has little capital available. So, in this scenario a company should observe first and collect ideas with low-budget expenditures. The most open innovation tools in this case are: call for ideas, hackathons and ideas scouting.

- *Call for ideas:* are very versatile tools to gather external ideas and insert those into an innovation process within the organization. There are several types of call for ideas such as: online channels (surveys, polls), events (conferences, hackathons). Events' pros are the quantity of new ideas, the high quality, marketing & communication exposure, while cons are the high costs, complex organization and long timing. On the other hand, online channels have low costs and rapidity (pros) and low detailed outputs (cons).
- *Scouting:* this activity seeks for innovation and innovators externally with the goal to take those resources internally. The most common way to do scouting is to empower internal employees giving them the task to look for

new ideas or technologies by participating to conferences & events and getting in touch with the local innovative ecosystem (new target market). Thus, a second stage of the scouting process consists in implementing internally the information collected trough other tools such as joint ventures or acquisitions in order to internally integrate external technologies and people, which expands organization's know how and international presence (market expansion). Pros of the scouting process are the specific researches and lean teams; cons are medium-long timing and a risk of lack of results.

- *Crowdsourcing:* it is a tool that utilizes external people (crowd) to solve internal problems or to create innovation within the company. There are 4 types of crowdsourcing: *crowd contest* (competitions where are used several skills and competences because it gives multi-disciplinary results), *crowd collaborative communities* (it has an open source nature where participants can elaborate and shake ideas, sharing those free among each other; it is risky in terms of intellectual property protection), *crowd complementors (*people external to the company are provided a basic version of a technology or product and work on those in order to create new innovation), *crowd labor markets* (online marketplaces). Pros of crowdsourcing are the decentralized process, variety of inputs and outputs, high number of participants, more economic than traditional processes; cons are the necessity to follow the projects by internal team and the canalization of creativity.

2) Network:

As said, this approach is in case the company has not sufficient funds to adopt open innovation strategies for the internationalization process but has good innovation management knowledge.

- *Innovation networks:* building a network is the best solution in case there is a lot of experience in innovation management but there are no sufficient funds to invest in technology development. In fact, building bridges with companies, institutions, universities, and centers of research allows creating the basis to plan new innovations with the counterpart. Pros are the low costs and huge potential, while cons are represented by the difficulty to create contacts and manage networks.

  Loccioni Group, as seen in the previous paragraphs, is positioned in this stage when it comes to internationalization processes. The author wants to emphasize the opportunity for the Group to take a further step towards open innovation strategies for the internationalization process. It will be better described later in this paragraph (*Run*).

- *Innovation procurements:* in this scenario whenever a supplier is contacted, it is not only for the supply of a component but for the proposal of a collaboration for the design of new solutions as well; in this way a strong relation client-supplier is created for innovation purposes. These relations with suppliers define a win-win situation; companies can study new strategies to create innovation with its suppliers (for example, by enabling

them to develop new competences). On the other hand, suppliers can adopt the new solutions created to open new business units. Pros are advantages for the company & supplier, creation of business partnerships and new business opportunities.

Indeed, as for innovation networks, Loccioni Group has been creating these long-term relationships in the last years. The author supports in this research, also throughout case studies, the necessity for the Group to take a step forward in adopting open innovation strategies for internationalization purposes. This will be discussed in point 4 *run* where will be defined new potential implementations by the Group (corporate venture capital programs, corporate accelerator/incubator, mergers & acquisitions) as highly documented throughout this research in the previous chapters.

3) Find a friend:

As said, this approach is in case the company has sufficient funds to adopt open innovation strategies for the internationalization process but does not have enough innovation management knowledge.

- *Venture capital:* this is the case whenever there are funds to invest available but little experience into the innovation management; in that scenario it is better to delegate innovative operations to an expert, who is external of the organization. In fact, venture capital funds (as seen in the previous chapters) are companies that invest financial funds in high-risk companies. They invest on the innovation or startup that are highly scalable and replicable with huge

returns of investment (and lots of losses as well).

A company that has sufficient funds to invest could innovate and enter new international markets by delegating one or more venture capital companies to bring in new ideas, technologies, talents and financial yields as well. Venture capitalists are by nature oriented to high-risk investments; in fact, most of their investments will not be successful. However, the successful investments allow an exponential return on investments (5 to 10 times the capital invested). Consequently, it is clear the benefit to diversify the company's investment in open innovation on wide portfolio initiatives. There are many benefits of entering into investors network: it could be founded new partners to innovate with, new technologies to integrate into the business, new talents to hire and startup to acquire. In conclusion, pros of partnering with VCs are: no experience required, possible financial paybacks, exposure to most innovative technologies; cons are: medium-high level of capital required, long term returns of investments (8-10 years).

- *Startup adoption:* there are several modality of startup adoption. The main modalities are: sharing of service and assistance, business and production partnership, financial partnership.

  The first scenario includes the sharing of services and assistance at a convenient cost; this includes the use of companies' spaces or its equipment. Yet, the adoption could include a free support for developing contacts and business networks.

Business and production partnership happens when a company such as Loccioni Group includes a startup among its suppliers of clients giving it a special treatment with the opportunity to convert business payables into future equity participations.

Financial partnership for the innovation is a method similar to a corporate venture program (will be described in the next point), but in lower scale. The small medium enterprise invests capital on a startup project in exchange of equity or royalties.

Startup's adoption has several pros such as the exposure to innovative startups & agile processes and sharing of possible startup's successes; cons are the scouting of valid startups and the spaces or capital required for these operations.

4) Run

As said, this approach is in case the company has everything in order to operate efficiently. Indeed, it has sufficient funds to adopt open innovation strategies for the internationalization process and enough innovation management knowledge.

This defines the situation where, according to the author of this research, the Loccioni Group should position itself in the future in order to widely implement open innovation strategies into the internationalizing process.

- *Corporate Venture Capital:* in chapter 3 the author has widely discussed the mechanisms behind corporate venture programs. Indeed, in this paragraph it is important to get deeper into the analysis and see why this open innovation

strategy could become the next step for Loccioni Group's internationalization process.

Therefore, through corporate venture capital, Loccioni Group could directly invest on startups without delegating the process to other companies (VCs). Throughout this process the Group could both define a financial and strategic operation in order to obtain a return of investment in financial or competitive advantage terms (optimistically both). In fact, this potential new competitive advantage represents the main difference with the venture capital approach. Yet, the classical VC is driven by financial motivations and its main goal is the return of investment throughout an exit or initial public offer. On the other hand, a corporate venture capital (Loccioni Group) would be driven also by strategic motivations because the CVs wants primarily to increase (directly or non directly) its business sales and profits. Pros of corporate venture capital are the access to latest technologies, new market opportunities, access to most talented people and in-house innovation; cons are high risks investments, large capital required and long-period return of investments.

In 2015 the corporate venture capital has globally financed 1301 projects for $28.4B, which represents an increase of 70% compared to the previous year where the investments were of $16.7B in 1245 deals. The top 10 corporations in the corporate venture capital market starting from 2010 are: Intel Capital (395 operations), GV (314), Qualcomm Ventures (189),

Salesforce Ventures (141), SoftBank Capital (115), Caixa Capital Risc (109), GE Ventures (95), Comcast Ventures (95), Cisco Investments (94), Samsung Venture Investment (93).

Loccioni Group could potentially follow the steps of other important groups in Italy that are strongly adopting corporate venture capital programs such as Chiesi Ventures, CLN Group, Euroventures, Galalab, Intesa Sanpaolo & Quadrivio (Neva Finventures), RCS Digital Ventures, REInventures, Tim Ventures (see case study in chapter 3), Unicredit Evo, ZCube.

- *Corporate accelerator/incubator:* incubators and accelerators are frequently used as synonymous to indicate those organizations that help startups in their launching stage to grow and create a successful business model in exchange for equity. In reality accelerators and incubators are two separate entities; accelerators actually invest capital on startups, incubators do not. Also, usually accelerator programs are divided in specific batches during the year while incubators help single startups on-demand.

  Creating a corporate incubator or accelerator gives several benefits to the organizer:

  - Access to early days innovations (new in-house technologies)
  - Management exposure to startups' mentality and lean methodology approaches
  - Attraction of entrepreneurial talents

- Chance to integrate successful projects in corporate's business units
- Find problems' solutions taking advantage of ideas developed externally
- Creation of an innovative organization culture

Cons of creating a corporate accelerator or incubator are the big capital investments required, long-term return of capital and the difficulty to select the right talents or ideas.

- *Mergers and acquisitions:* M&A are the most quick tool for corporations to exploit ideas and technologies externally developed; these operations require big capital resources. Nowadays, Loccioni Group is not ready and the organization is not structured to adopt successful mergers and acquisitions. However, in the future it could be a possible way to internationalize for the company. In fact, it is important to consider the fact that the M&A process is the first step forward a master action plan rather than the last point. In fact, in order to maximize the investment of the innovation brought in from the outside, it is important to efficiently integrate teams and technologies with the existing corporate structure.

  Therefore, before doing any M&A operation, it is important to consider whether the new team or technology would be a good fit for the corporation and how to facilitate the entrance of the new company into the existing Group. Yet, this implies also a high level management expertise required to Loccioni Group with a specific division for M&A operations.

Pros are the fast process and the complete integration of teams & technologies; cons are the wide necessity of financial resources and the complex negotiations required for acquisitions.

In author's point of view, Loccioni Group is ready to "run" even if it becomes important that top management and the property valuate which of the strategies (corporate venture capital, corporate acceleration/incubation, M&A) better suits with actual and future Group's situation. Yet, trough these research it is possible to analyze that the Group has been obtaining great results trough its network approach for the internationalization process; however initiatives such as corporate venture capital and running corporate acceleration/incubation programs could be adopted in the short term, while M&A could be a possible exploration territory for the next stage of growth.

CONCLUSIONS

The analysis of the scientific contributions enhances the increasingly relevance of relationship marketing approach, which redefines marketing as an activity aimed to establish, keep and potentiate relations with clients and company's partners in order to reach the goals of parts involved in the relation (Gronroos, 1994)

The relationship approach results applicable for any type of client; however, the frequency and modality of relationships changes over time, which implies the necessity of different management criteria and specific investments depending on their evolution.

During this research it has been enhanced the existing link between relations & network approaches with innovation management. In fact, in recent years the scientific contributions about innovation and innovation management has drastically shifted from technology to strategy driven innovation. Indeed, for a long time innovation has been considered in terms of new products or processes. In Schumpeter's theory there is an invention-innovation-diffusion cycle, which places at the origin of the process new inventions: this perspective has developed a tangible (technological and material) vision of innovations.

The evolution of innovation studies defines a firm shift towards an intangible vision of it. Abell (1980) describes a "pioneering" company as a company that introduces innovation at a business level, which is a combination of product/market. Hamel (1996) sees the innovative company as a rule breaker identifying innovation as the capacity to change the rules of competitive game. On

the contrary of Schumpeter's vision, Christensen (1997) introduces at the center of the innovation concept the element of value creation for the client. This new concept of innovation, as a value proposition for the market, confirms this new widely vision of innovation, which is not merely defined by new products or processes anymore. In this new definition innovation acquires tangibles (products or services) and intangibles (new approaches to customers) elements, which in general is defined by new innovative business models.

Therefore, as seen in the first chapter regarding the marketing's swift from production to relations, in the second chapter the author supported the shift from tangible & closed innovation to modern business models and open innovations where relations and networks have a crucial role. Modern companies in order to innovate have to restructure their organization toward an "open" approach.

Today's forms of strategic and organizational innovation defines an autonomous modality of innovation rather than just accompanied of product/process innovations. Yet, in the second chapter the author claimed how these two separated paradigms in the past could currently be studied under the same point of view; as said, there is no more drastic separation between technologic variables on tangible (product orientation) and intangible (relationship company-market) elements.

The author, after defining how innovation development is leveraged thanks to company's openness among its relations & networks, studies deeper the startups environment where innovation is fast and disruptive; small organization have a

competitive advantage in terms of speed to innovate, which does not mean that larger corporations are less innovative. For example, empirical studies of US Small Business Administration estimate that small companies have produced 2,4 times more innovation per dependent compared to larger corporations (Stringer, 2000). Indeed, a survey conducted on twenty sectors from 1965-92 has enhanced how venture backed startups have produced 6 times more patents compared to R&D of larger corporations equally founded (Kortum & Lemer, 1998). In addition, higher investments in R&D of larger corporations do not convert in a higher rate of innovation due to the inefficient environment (Schmookler, 1965).

Consequently, the research defines the relevance of startups in the innovation context and how important are those for larger corporations. Yet, the author, trough case studies analysis such as Telecom Italia and French corporations, defines the importance of innovation openness of larger corporations. It becomes crucial for larger corporations to collaborate with startups trough several programs of open innovation, also for internationalization purposes that is the last topic of this research. So, it is strategically relevant for larger corporations to adapt and "innovate" their organizational structure in order to get closer to startups' environment and culture. This operation has to be conducted both sides internally and externally. From the internal point of view modern organizations have to: provide incentives to innovative ideas, introduce specific programs of internal entrepreneurship, create innovation teams (above R&D department, promote intrapreneurship and spin-offs). However, this process of internalization of

innovative startups advantages is necessary but not sufficient condition. In fact, it is crucial for corporation's success, in particular in international markets, to seek for innovation outside the company. This includes adopting several open innovation strategies depending on corporation's experience in innovation management and capital available (chapter 3 and 4). Throughout the case studies of open innovation strategies, the author's has put particular attention on venture capital and corporate venture capital initiatives. The adoption of venture capital/CVc gives several benefits such as the possibility to control potential disruptive innovations introduced by startups that have attacker's advantage and to invest more efficiently financial resources on innovative projects rather than distributing most of those to the internal R&D department.

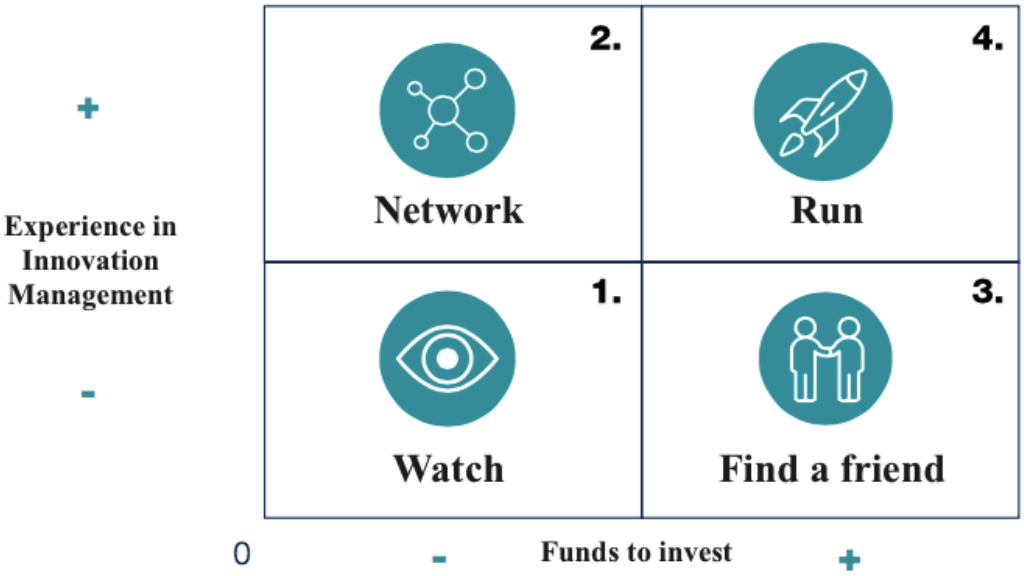
However, as said, it is strategically relevant for the innovation team to identify which are the most suitable open innovation strategies for the corporation depending on the company's situation in terms of experience on innovation management and funds available; indeed, once the most suitable open innovation strategies are identified, those could be a significant leverage tool for the internationalization process as well.

Trough the Loccioni Group case study the author deeply analyzes its marketing and innovation departments, how the company has been adopting open innovation strategies and their congruency with the literature previously described. From this research emerges how the company has recently started to implement open innovation strategies (network leverage), but it could potentially take more out of

its openness by the adoption of further programs such as corporate venture capital, corporate acceleration/incubation (at the beginning of the process) and merger and acquisitions (on the long-period). On the other hand, the author also notices that it would become necessary that the innovation team analyzes accurately which strategy is the most accurate for the internationalization process depending on the new market characteristics and knowledge.

In synthesis, the strategy that Loccioni's innovators should work on, when planning to implement open innovation strategies for the internationalization process, is (see paragraph 4.5):

Figure 59 - Strategy matrix



Source: Personal elaboration of data

1) Watch: defines the situation of a company that wants to start open innovation but does not know how to move into the market and has little capital available. So, in this scenario a company should observe first and collect ideas

with low-budget expenditures. The most open innovation tools in this case are: call for ideas, hackathons and ideas scouting.

- *Call for ideas:*
- *Scouting*
- *Crowdsourcing*

2) Network: As explained throughout the chapter 4, this approach recurs whether a company has not sufficient funds to adopt open innovation strategies for the internationalization process but has good innovation management knowledge.

- *Innovation networks*
- *Innovation procurements*

3) Find a friend*:* This approach is in case the company has sufficient funds to adopt open innovation strategies for the internationalization process but does not have enough innovation management knowledge.

- *Venture capital*
- *Startup adoption*

4) Run*:* As said, this approach is applied in case the company has all it needs to operate efficiently. Indeed, it has sufficient funds to adopt open innovation strategies for the internationalization process and enough innovation management knowledge.

This defines the situation where, according to the author of this research, the

Loccioni Group should position itself in the future in order to widely implement open innovation strategies into the internationalizing process.

- *Corporate Venture Capital*
- *Corporate accelerator/incubator*
- *Mergers and acquisitions*

In conclusion, this research defined the current evolution of international organization models, which is pivotal for innovation management theme. In fact, this analysis allows to introduce a decisive element to better define a model of innovative corporation in the current context.

Despite many corporates' models and approaches, this research aims to identify a thread able to join several different innovative organizations.

This thread is the sum of factors referable to two main categories: factors of interaction with the external environment and internal organizational factors. These internal factors have been described in terms of organizational and financial balance. On the other hand, factors of interaction with the external environment include those described in the open innovation paradigm (clients, suppliers, startups, universities, research centers). Therefore, the "innovation problem" of the company is shifted from the *innovation management* to *innovation governance.*

This research enhances the necessity to join fields of corporate study that has been separated: *international management* and *innovation management* (it has to be extended to the emerging frontier of *innovation governance*). Future researches

can emerge from the integration of these fields in order to better understand the behavior of innovative corporations.

REFERENCES

Abell D.F., (1980), "Defining the Business: The Starting Point of Strategic Planning", Prentice Hall, Englewood Cliffs.

Alchian A.A., Demsetz H., (1972), "Production, Information Costs and Economic Organization", *American Economic Review*, pp. 777-795.

Arndt J., (1983), "The Political Economy Paradigm: Foundation for Theory Building in Marketing", *Journal of Marketing*, vol. 47, pp. 44-54.

Bacon G., Beckam S., Mowery D., Wilson E., (1994), "Managing Product Definition in High-Technology Industries: a Pilot Study" *California Management Review*, vol. 36, n.3, pp32-56.

Baker G., Smith G.D., (1998), "The New Financial Capitalists: Kohlber Kravis Roberts and the Creation of Corporate Value", *Cambridge University Press*, Cambridge.

Bank of Italy, Economic Bulletin Nr. 58, October 2009.

Barney J.B., (1991), "Firm Resources and Sustained Competitive Advantage", *Journal of Management*, pp. 99-120.

Bartlett C., Ghosal S., (1989), "Managing Across Border. The Transnational Solution", *Harvard Business Press*, Boston.

Bartlett C., Ghosal S., (1994), "Changing the Role of Top Management: Beyond Strategy to Purpose", *Harvard Business Review*, vol. 72, n.6, pp. 79-88, Boston.

Bartlett C., Ghosal S., (1997), "Managing Across Border. The Transnational Solution", 2nd ed., Random House, London.

Bauman Z., (2007), "Homo Consumens", Erickson, Roma.

Bendapudi N., Berry L.L., (1997), "Customers' Motivation for Maintaining Relationship with Service Providers*", Journal of Retailing*, Vol.73, pp. 20, Spring.

Bhattacharya S., Krishnan V., Mahajan V., (1998), "Managing New Product Definition in Highly Dynamic Environments", *Management Science*, vol. 44, n.11, pp. 550-554.

Bonoma T., (1985), "Case Research in Marketing: Opportunities, Problems and a Process", *Journal of Marketing Research*, 22, 199-208.

Bonti M., Cori E., (2006), "Competenze Organizzative nella Media Impresa: il Caso Loccioni, pp. 16, Franco Angeli, Milano.

Bröring S., (2005), "The front End of Innovation in Converging Industries – the Case of Nutraceuticals and Functional Foods ", DUV, Wiesbaden.

Brown S., (1995), "Postmodern Marketing", Routledge, London.

Buttle F., (1997), "ISO 9000: Marketing Motivations and Benefits", *International Journal of Quality & Reliability Management*, Vol. 14, Iss: 9, pp.936-947.

Cafferata R., (1983), "Pubblico e Privato nel Sistema delle Imprese", Franco Angeli, Milano.

Carlotti M., (2012),"Tecniche di Private Equity – Il fondo, le SPAC, l'origination, l'investimento, la gestione e il disinvestimento", Egea, Milano.

Caselli L., (1970), "L'Impresa Pubblica nell'Economia di Mercato", Giuffrè, Milano.

Caselli L., (1995), "Una Buona Societa' in cui Vivere", Stadium, Roma.

Caselli S., (2011), "Il Private Equity e lo Sviluppo delle Imprese", *Economia & Management*, n.6, pp.60, Milano.

Chan Kim W., Mauborgne R., (2005), "Blue Ocean Stategy", *Harvard Business School Press.*

Chesbrough H. W., (2003a), "The Era of Open Innovation", *MITSloan Management Review*, Boston.

Chesbrough H., (2004), "Managing Open Innovation"*, Research-Technology Management*, 47, 23-26.

Chesbrough H., Crowther A., (2006), "Beyond High Tech: Early Adopters of Open Innovation in other Industries", *R&D Management*.

Chesbrough H.W., (2005), "Open Innovation", *Harvard Business School Press*, Boston.

Christensen *C., (*1997), "The Innovator's Dilemma" *Harvard Business School Press*, Boston.

Clementi M., Luschi G., Tron A., (2006), "Le Operazioni di Leveraged Buy Out", Ipsoa, Torino.

Coda V., (1988), "L'Orientamento Strategico dell'Impresa", UTET, Torino.

Cohen W. M., Levinthal D.A., (1990), "Absorptive Capacity: a New Perspective on Learning and Innovation", *Administrative Science Quarterly*, pp.128-152.

Conca V., (2010), "Le Acquisizioni. Valutare e Gestire i Processi di Crescita", Egea, Milano.

Cooper R., (1986), "Winning at New Products", Addison-Wesley.

Costabile M., (2001), "Il Capitale Relazionale", McGraw-Hill, Milano.

Daimond S.C., (1985), "Lever-aged Buy Outs", Down Jones-Irvin, Homewood.

Docherty M., (2006), “Primer on Open Innovation: Principles and Practice”, *Visions Magazine*, April.

Drucker P., (1989), “Economia, Politica e Management. Nuove Tendenze nello Sviluppo Economico, Imprenditoriale e Sociale”, Etas, Milano.

Dyer J.H., Nobeoka K., (2000), “Creating and Managing a High-Performance Knowledge Sharing Network. The Toyota Case”, *Strategic Management Journal*, pp. 345-367.

Eisanhardt K. ,(1989), “Building Theories from Case Study Research. *Academy of Management Review* , 14 (4).

Eurostat, (2010), “Euro GDP stable and EU27 GDP up by 0.1%”, April, 2010.

Eurostat, (2010), “Real GDP Growh Rate”, Eurostat, June, 2010.

Fabbri G., (2004), “Il Nuovo Consumatore: Verso il Postmoderno”, Angeli, Milano.

Fua’ G. , Zacchia C. (1983), “L’Indistrulizzazione Senza Fratture”, pp. 7-46, Il Mulino, Bologna.

Gervasoni A., (2010), “Capitali per lo Sviluppo: Nuovi Equilibri Pubblico-Privati nelle Esperienze Internazionali e in Italia”, vol. 12, Bancaria.

Gervasoni A., (2012), “Il mercato Italiano del Private Equity e Venture Capital nel 2011”, *AIFI*, Convegno Annuale.

Gervasoni A., Sattin F.L, (2008), “Private Equity e Venture Capital. Manuale di Investimento nel Capitale di Rischio”, Guerini e Associati, Milano.

Gervasoni A., Sollazzi F., (2008), “L’impatto Economico del Private Equity nel Processo di Sviluppo delle Aziende Familiari” , Il Mulino, Bologna.

Giorgino M.,(2006), “Private Equity e Sviluppo Imprenditoriale”,Argos, Milano.

Gottardi G., (2006), “Gestione dell’Innovazione e dei Progetti”, CEDAM.

Grant R.M., (1996), “Prospering in Dynamically-Competitive Environments: Organizational Capabilities as Knowledge Integartion”, *Organization Science*, pp. 375-387.

Grant R.M., Baden-Fuller C., (2004), “A Knowledge Accessing Theory of Strategic Alliances”, *Journal of Management Studies*, pp.61-84.

Granturco M., Miele M.G, (2010), “Il Private Equity in Italia: una analisi sulle imprese target”, *Questioni di Economia e Finanza*.

Grönroos C., (1994), “From Marketing Mix to Relationship Marketing: Towards a Paradigm Shift in Marketing", *Management Decision*, Vol. 32 Iss: 2, pp.4 - 20

Guercini S., (2005), “Marketing Imprenditoriale, Marketing Manageriale e Conoscenza di Mercato del Vertice dell’Impresa”, *Mercati e Competivita’*, n. 1, pp. 143-164.

Gummerson E., (2006), “Marketing Relazionale”, ed. It., Hoepli, Milano.

Gummesson E., (1997), “Relationship Marketing as a Paradigm Shift: Some Conclusions from the 30R Approach”, *Management Decision*, Vol. 35, Iss. 4, pp.267-272

Gummesson E., (1999), “Total Relationship Marketing”, *Australasian Marketing Journal* (AMJ), Vol. 7, Issue 1, pp. 72-85.

Hakansson H., (1982), “International Marketing and Purchasing of Industrial goods” ,John Wiley & Sons, Chichester, U.K.

Hakansson H., (1987), “Industrial Technological Development: a Network Approach”, Croom Helm, London.

Hakansson H., (1990), “Technological Collaboration in Industrial Network”, *European Journal of Marketing*, September.

Hakansson H., Wootz B.,(1979), "A Framework of Industrial Buying and Selling", Industrial *Marketing Management*, pp. 23-29

Hamel G., (1996), "Strategy as Revolution", *Harvard Business Review*, July-August, pp.69-82.

Hauschildt J., Salomo S., (2007), "Innovationsmanagement", Munchen.

Hepner H. W., (1955), "Modern Marketing. Dynamics and Management", McGraw Hill, New York.

Iansiti M., (1995), "Shooting the Rapids Managing Product Development in Turbulent Environments", *California Management Review*, n. 38 (1).

Iansiti M., MacKormack A., (1997), "Developing Products on Internet Time", *Harvard* Business Review, n.5, pp. 108-117

Kaplan S.N., Stromberg P.,(2009), "Leveraged Buyouts and Private Equity", *Journal of Economic Perspective,* vol. 23, n. 1, pp. 121-146.

Keith R.J., (1960), "The Marketing revolution", *Journal of Marketing*, vol 24, n.2, pp. 35-38.

Kimberly J.R., Miles R.H. (1980), "The Organizational Life Cycle", Jossey-Bass, San Francisco.

Kortum S., Lerner J., (1998), "Does Venture Capital Spur Innovation?", *National Bureau of Economic Research*, Working Paper, Cambridge, MA.

Kotler P., (1986), "Megamarketing", *Journal of Marketing*, vol. 47, pp. 44-54.

Kotler P., (1992), "Marketing's New Paradigms: What's Really Happening Out There", *Planning Review*, Vol.20, pp.50-52.

Kotler P., Sawhney M., (1999), "Marketing in the Age of Information Democracy", *Working Paper*, Northwestern University, Illinois.

Kraaijenbrink J., Wijnhoven F., (2008), "Managing Heterogeneous Knowledge: a Theory of External Knowledge Integration", *Knowledge Management Research & Practice*, pp. 275-286.

Kuhn T. ,(1977), "La Struttura delle Rivoluzioni Scientifiche, Einaurdi, Torino.

Lawrence P.R., Lorsch J.W., (1967), "Organization and Environment", *Division of Research Harvard Business School*, Boston.

Lazzarotti V., Manzini R., (2009), "Different Modes of Open innovation: a Theoretical Framework and an Empirical Study", *International Journal of Innovation Management* 13(04):615-636.

Leonard-Barton D., (1995), "Wellsprings of Knowledge", *Harvard Business School Press*, Boston.

Leuchtenburg W.E., (1963), "F.D. Roosevelt and the New Deal", Haper&Row, New York.

Levin J. S., (1994), "Structuring Venture Capital, Private Equity and Entrepreneurial Transactions", IL, CCH Inc.

Levitt T., (1960), "Marketing Myopia", *Harvard Business Review*, vol. 38, n.3, July-August.

Liaw K. T., (1999), "The Businss of Investment Banking", J. Wiley and Sons, New York.

Lichtenthaler U., Ernst H., (2009), "Opening Up the Innovation Process: the Role of Technology Aggressiveness", *R&D Management.*

MacKormack A., Verganti R., (2003), "Managing the Sources of Uncertainty: Matching Process and Context in Software Development", *Journal of Product Innovation Management,* n.3, pp. 217-232

March J.G., (1991), "Exploration and Exploitation in Organizational Learning", *Organization Science*.

March J.G., Simon H.A., (1958), "Organizations", Wiley, New York.

Marris R., (1972), "La Teoria del Capitalismo Manageriale", Einaudi, Torino.

Martellini M. (2005), "Business and Society", *The European Union Review*, Vol X, pp. 87-97.

Martini B., (2005), "Risorse Interne ed Esterne, Network ed Innovazione: Uno Studio sull'Industria Manifatturiera Italiana*", Il risparmio*, n.2, pp. 99-135

Mc Donald M., Millman T., Rogers B.m., (1997), "Key Account Management: Theory, Practice and Challenges", *Journal of Marketing Management*, n.13, p. 737-757

Melucci A., (1998), "Passaggio d'Epoca. Il Futuro è Adesso", Feltrinelli, Milano.

Metsamuuronen J., (2008), "The Next Wave in the Educational Research? Some Decreasing and Rising Trends in Themes of Educational Research on the Basis of ERIC Database", *Esitys OECD in Grasping The Future seminaarissa*.

Micelli S., Prandelli E., (2000), "Net Marketing. Ripensare il Consumatore nel Mondo della Rete", *Economia & Management*, n.4, pp. 57-70.

Mintzberg H., "Of Strategies, Deliberate and Emergent", *Strategic Management Journal*, n.3, 1985

Morgan R., Hunt S., (1994), "The Commitment-Trust Theory and Relationship Marketing", *Journal of Marketing*, vol. 58, pp. 20-38.

Morgan, R., Hunt, S. (1999) "Relationship-Based Competitive Advantage: The Role of Relationship Marketing in Marketing Strategy", *Journal of Business Research*, 46 (3), pp. 281-90

Mowery D., Rosenberg N., (1989), "Technology and the Pursuit of Economic Growth", , *Cambridge University Press*, pp. 22, Cambridge.

Nasar S., (1992), "Employment in Service Industry", Engine for Boom of 80's, *Ney York Times.*

Nobelius D., (2004), "Linking the Product Development to Applied Research: Transfer Experiences from an Automotive Company, *Technovation*, 24: 321-334.

Nonaka I., Takeuchi H., (1995), "The Knowledge Creation Company", *Oxford University Press*, New York.

Perkmann M., Walsh K., (2007), "University-Industry Relationships and Open Innovation: Towards a Research Agenda", *Journal of Management reviews*, pp.259-280

Peteraf M.A., (1993), "The Cornerstones of Competitive Advantage: a Resource-Based View", *Strategic Management Journal*, 14 (3), pp. 179-191

Petroni G., Verbano C., (2007), "L'Evoluzione della Ricerca Industriale in Italia: Caratteri Peculiari e Prospettive", F. Angeli, Milano.

Powell W. W., Koput K.W., Smith-Doerr L., (1996), "Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in the Biotechnology", *Admistrative Science Quarterly*, n.41, pp. 116

Powell, W. W., Grodal, S., (2005), "Networks of Innovators", *The Oxford handbook of innovation*, pp. 56-85, Oxford

Prahalad C.K., Krishnan M.S., (2008), "The New Age of Innovation". McGrawHill.

Prandelli E., Von Krogh G., (2000), "Fare Leverage sulla Conoscenza Tacita dei Consumatori: Verso una Nuova Economia Cognitiva", *Sinergie*.

Pratt S.E., (1980), "How to Rise Venture Capital", Charles Scribner's Sons, NY.

PricewaterhouseCoopers-AIFI (2006), "The Economic Impact of Private Equity and Venture Capital in Italy", *Research Paper*.

Pyka, A., Scharnhorst A., (2009), "Innovation Networks. New Approaches in Modeling and Analyzing", Springer, Berlin/New York.

Reichheld F., Sasser E., (1990), "Zero Defections: Quality Comes to Services", *Harvard Business Review,* Boston.

Roberts E., (1988), "What we've learned: Managing invention and innovation", *Research Technology Management.*

Roosevelt F.D., (1933), "Looking Forward", Heinemann, London.

Rosenman S., (1938), "The Public Papers of Franklin D. Roosevelt, Volume Two: The Year of Crisis, 1933", *Random House*, pp. 11-16, New York.

Sandstorm M., (1990), "Atmosphere in International Business Relationship", *Licentiate Thesis at Uppsala University*, pp. 121.

Saraceno P., (1959), "Iniziativa Privata e Azione Pubblica nei Piani di Sviluppo Economico", Giuffre', Milano.

Schilling M., (2009), "Strategic Management of Technological Innovation", McGraw, Hill Higher Education.

Schlesinger A.M., (1959), "The Coming of New Deal", Haughton Mifflin, Boston.

Schmookler J., (1965), "Technical Change and Economic Theory," *The American Economic Review*, vol. 55(2).

Sheth N.J., Parvatiyar A., (1993), "The Evolution of Relationship Marketing", *Goizueta Business School*, Emory University, Altanta, GA, USA.

Shonfield A., (1967), “Il Capitalismo Moderno. Mutamenti nei rapporti tra potere pubblico e privato”, EtasKompass, ”, Milano.

Silvestrelli S., (1994), “Note Metodologiche per una Nuova Configurazione Teorica dell'Economia d'Impresa” *Finanza, Marketing & Produzione* , 4.

Silvestrelli S., (2005), “La Globalizzazione tra Esigenze Economiche ed Aspettative Etico-Sociali: Alcuni Elementi di Riflessione per il Manager”, *Sinergie*, n. 67, pp.179-206.

Sousa M., (2008), “Open Innovation Models and the role of Knowledge Brokers”, *Inside Knowledge.*

Stringer R., (2000), “How to Manage Radical Innovation”, *California Management Review*, vol. 42, n.4, Summer, pp. 70-88.

Sviluppo Economico, Imprenditoriale e Sociale, ETAS, Milano.

Tartaglie E., (2009), “Leveraged Buy Out: Rischi e Opportunita’”, Maggioli, Rimini.

Thomke S.H., (1997), “The Role of Flexibility in the Development of New Products: an Empirical Study”, *Research Policy*, n.1, pp. 105-119.

Thomke S.H., Reinertsen D., (1998), “Agile Product Development: Managing Flexibility in Uncertain Environments”, *California Management Review*, n.1, pp. 8-30.

Van de Ven A., Poole S., (1989), "Towards a General Theory of Innovation Processes," *Academy of Management Best Paper Proceedings.*

Van der Meer, H., (2007), “Open Innovation – The Dutch Treat: Challenges in Thinking in Business Models”, *Creativity & Innovation Management.*

Varaldo R., (2004), "Competitività, Economie Locali e Mercati Globali: Alle Radici del Declino Industriale e Delle Vie per Contrastarlo", *Economa e Politica Industriale*, n. 121, pp. 43-66.

Velo D., (2004), "L'Impresa Federale Europea. Per una Teoria Cosmopolitica dell'Impresa", Giuffre', Milano.

Velo D., (2002), "La Comunicazione per l'Economia e Gestione delle Imprese", *Sinergie*, n.59, pp. 7-9.

Velo D., (2007), "L'Europa dei Progetti. Imprese, Innovazione, Sviluppo", Giuffre', pp. 337-389

Verona G., Prandelli E., (2006), "Collaborative Innovation. Marketing e Organizzazione per i Nuovi Prodotti", Carocci, Roma.

Von Hippel E., (1988), "The Sources of Innovation", *Oxford University Press.*

Von Hippel E., (2005), "Democratizing Innovation", *The MIT Press, MIT*, Cambridge.

Wolpert JD., (2002), "Breaking out the innovation box", *Harvard Business Review*.

Zanfei A., (2000), "Transnational Firms and the Changing organization of Innovative Activities", *Cambridge Journal of Marketing*, vol. 24, pp. 515-542.

Zorino M.R., (2006), "Il ConsumAttore", CLEUP, Padova.