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TESI DI LAUREA

"THE ROLE OF DYNAMIC CAPABILITIES FOR INTERNATIONAL COMPANIES: EXPLOITING OPPORTUNITIES ORIGINATING FROM TURBULENT ENVIRONMENT. "

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EXECUTIVE SUMMARY

The evidence that the spread and the expansion that globalization has brought to the international economy and the influence that it had on enterprises both operating or not in the global market has increased the interest of scholars in dealing with the change in the dynamic environment. The increasing appeal in discovering which capabilities of an organization might be useful to build and develop a competitive advantage in markets characterized b fast change, uncertainty, and volatility has driven my thesis research. For years now literature has studied the bundle of Capabilities that would be useful for a company operating in a turbulent environment as the international one, deeply affected by the globalization processes. Therefore, based on what has been discovered and studied by economists and scholars, this dissertation wants to define which are those "Dynamic Capabilities" and uncover the specificity and features of these capabilities, that are sometimes considered as "black-box" of expertise, have. In detail, a focus on empirical analysis would be delivered on specific firms; we'll define how Italian SMEs operating in the construction sector might and benefit from their capabilities to face the opportunities arising from the global market.

Indeed, one of the main objectives of this thesis resides in the desire to understand if, in a situation of deep uncertainty present in a turbulent international environment where each country might react differently, there are the possibilities for enterprises (mainly SMEs) to acquire competitive advantage and grasp benefits from the chaotic context.

Personally, I believe that in a difficult situation like the one that we are currently living and despite the various difficulties that our society is experiencing, the role and the approach that my generation will have in facing the distress and crisis is crucial to define the future for the whole world. Indeed, due to the chaos brought by the Covid-19 pandemic (as experienced during the financial crisis of 2007/08), the categories that will suffer and will be affected most from the decisions and behavior held are the youngest ones. In order to create a brighter future, we need to endeavor in defining possibilities that the most important layer of the Italian economy can look at to successfully survive. As will be described in the following paragraphs, the SMEs in Itlay represent more than 80% of the companies operating and among the latter, a strong presence is derived b the family-owned firms, with individual specificities and characteristics. Additionally, we are proudly aware of the global possibilities that our “Italianess” have in the international market, and based on this, we believe that -together with other relevant governmental maneuvers- the recovery of the Italian economy might be driven by the export strategy carried out by SMEs. By leveraging on the Dynamic Capabilities, Italian firms might effectively look for international opportunities where to invests and efficiently relocate their resource base to fastly and smoothly adapt to the specificity of markets.

In practical terms, I divided my dissertation into four main chapters. The first one has the main objective to introduce the context of my research; namely, I’ll argue the importance that the globalization processes had in the social and economic context of nations. Thereafter, the second chapter will be characterized by technicality on the literature review and functionality of the core aspects of Dynamic Capabilities. The third chapter will develop the earlier concept but will be more focused on defining what is considered the most interested DCs for businesses operating in international markets. Finally, the posed research questions will be described, asked and answers will be interpreted.

Hope you’ll find my thesis work pleasing and satisfactory. Welcome.

CHAPTER 1

– Internationalization Process –

1.1 Introduction

In the introductory chapter of this thesis, we will try to define the scenario along which the work will take form. In particular, the first part is going to be an introduction and definition of what is considered to be the "International Business Environment", dealing with the ongoing changes of the global environment in which organizations operate and we'll analyze some basic data on the export influence of some key countries.

The second section will have the core focus in describing (using the well-known PESTEL framework) which factors are to be considered by firms that want internationalize their activities. We'll later analyze the literature, whose emphasis is on the different changes that might occur in the globalization; here, we are going to briefly describe the main economic shock that happened in the history of the world with its effects on the whole society. The possible consequences coming from a globalized world will try to be mentioned.

The third segment will try to define what we might expect from changes in the global economy; we can see how changes might occur and how companies and countries may suffer or take advantage (through fast adaptivity capabilities) of the shifted scenario. We'll be able to see how economic performances of countries were forecasted, using data coming from the valuable Goldman Sachs researches. The following part will be concentrated on defining why and how an economic crisis happens in the global economy. Specifically, we'll define how the transformation of the external environment will influence the activities of enterprises and we'll specify the different types of economic shock and their trigger signal. The possibilities to survive and, actually to gain opportunities, will be studied using specific methodologies; here the discussion is to understand if there are some kind of firms whose according to their life cycle stage and markets in which they operate are more likely to suffer from this crisis.

The last section of the introductory chapter will study the so-called shaped-recovery that tries to define the possibilities that companies/countries have in dealing with the period of recession and subsequent recovery. According to the different shapes, the "healing" period may increase or not. We'll see how an economic global shock may positively or negatively influence businesses' growth. It'll follow with a short description and identification of data on the Italian position in the global economy.

1.2 International Business Environment

With the growing globalization of the world, companies that deal with international markets may experience profound changes due to the dynamism of this market and needs to be prepared for it. In the first phase, understanding why an enterprise may decide to embark on international trade is necessary to later define what difficulties they may encounter and what are the triggering aspects that may lead to an economic crisis or change in the economic environment. Especially in the past decade, the global economic environment has acquired importance and it was the field of enormous changes; with the emergence of new developing countries such as China and India as well as Brazil and South Arabia.

Globalization can be described as the spread of technologies, products, jobs, and information across national borders, economies, and cultures to "compress" time, space, and distance (Labonté & Schrecker, 2006). The core aspect of globalization is connectivity. The major dimensions of cross-border integration are political, social, economic, and cultural. Nonetheless, few scholars argued different definitions for globalization and its role. Namely, Bauman (2003) sees globalization as the major shift for humankind, while according to Kellner (1998), this is an oversimplification of the phenomena.

Literature interprets globalization in three ways (Held et al, 1999); the hyper-globalized view sees globalization as the denationalization of strategic activities leading the economy to become borderless. A skeptical approach, on the opposite, deeply considers the role of national policies in affecting the trade of economic resources. Lastly, the transformationalist perspective interprets globalization as a set of processes and not an end-state. There is increased interconnectivity among countries thanks to the flow of trade and investments; economic activities blur the frontiers between national and international borders.

Companies that deal with international markets have activities including cross-border trade of products, services, or resources between two or more countries. These types of firms are referred to as multinational enterprises, performing a series of activities through branches located in different countries, and having individual strategies according to the different market characteristics.

Globalization processes suggest a positive impact on the overall growth of the economy; indeed countries (Gwartney & Lawson, 2001) with closed trade policy registered annual GDP per capita lower by 13% if compared with countries with a more open international trade policy.

With the globalization that brings countries close to each other's, nations have opened and are now interlinked thanks to a wide number of economic and non-economic mechanisms. A measure widely used to define the openness of a country is the ratio of export to GDP; the difference between country here is clear. Larger nations have a smaller export ratio. Indeed, by analyzing the export data provided by the World Bank data for merchandise trade, we can confirm how the US has an export share equal to 19.7%, Japan 28% while other smaller economies have a higher ratio, for example, Germany 70.8% and Belgium 164%. The EU, if considered as a whole, has a share close to the US one. The only exception to this data comes from China (excluding Hong Kong), which despite its wideness has a share of export equal to 32%.

Fig. 1: Merchandise trade (% of GDP) Source: World Bank

Both export and import influence international investments, employment, and GDP; the interconnectedness of countries means, for example, that every major change in the main nations (ie. China, US, EU) leads to a change in other related countries. In the global market, workers, technologies, natural resources, and capital are constantly exchanged among countries. To the former economic mechanism of interchange, the 21st century brings two additional factors that are the focus of international exchange/agreements; namely, information and environmental system (because pollution is easily transported from one country to another i.e. acid rain). To complete the affecting global factors, we cannot forget the political arena; the growing presence of multilateral agreements and regional integration have shown the importance of cooperation among nations.

1.2.1 Understanding Business Environment

The definition of the word "environment" in the International Business Environment is comprehensive of any external forces that affect the organizational activities. A famous framework that has been used in this situation to describe the possible external forces influencing the international business environment is the known PESTEL framework (an acronym for Political, Environmental, Social, Technological, Economic, and Legal). This analysis is often implemented by other features like the demographic and global variables.

Businesses operate in a dynamic environment that is deeply influenced by how enterprises operate and whether or not they are able to reach their objectives. Firms' performances are affected by the already mentioned external environment that we are going to briefly detail in the next paragraph; these factors generate unique sets of opportunities and threats for the enterprises. Many external factors are beyond managers' control, therefore, they need to carefully study the environment and continuously adapt their business strategy accordingly. Companies are rarely large or powerful enough to create a drastic change in the external environment although, noticeable is the effort coming from the five larger multinationals, according to the S&P Index 2020 (Google, Facebook, Amazon, Microsoft, and Apple), in investing around $50 million to affect how police makers deal with technology.

We are now starting to discuss the factors that impact and shape the conditions of the external environment for businesses:

Economic Influence is the major feature that influences the international market environment of organizations. The economic fluctuation creates a business cycle affecting enterprise and individuals. When the economy is growing, the unemployment rate is low while the income level increases. Here governments try, through policies like taxes and interest rates, to handle the level of economic activities. The political climate of a nation needs to be considered for the day-by-day activities that the organization needs to perform. The type of governments, the overall political stability of the country, together with the type of laws that are accepted shapes the general political and legal climate. Knowing if a particular country applies to restrict regulation for foreign business it is necessary to consider in the decision of entering a specific market or not. The presence of State and local governments in the marketplace must also be taken into account (nationalization).

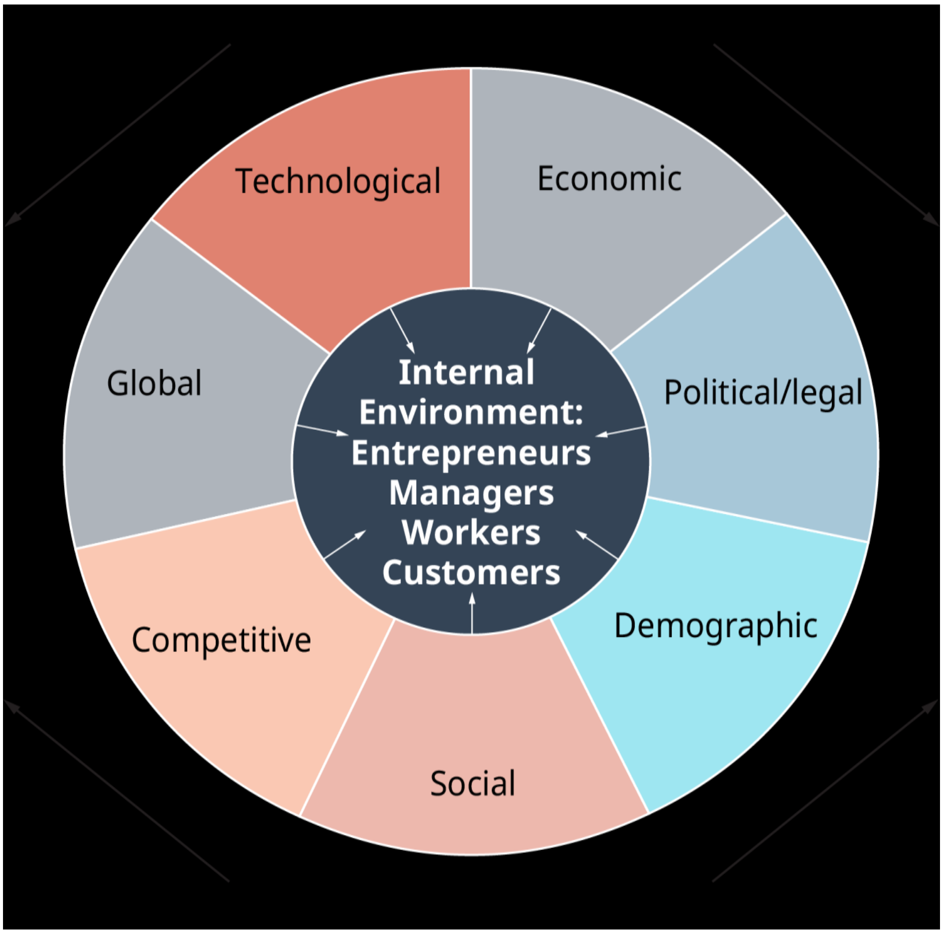


Fig. 2: The Dynamic Business Environment Source: OpenStax

Demographic (study of people vital's statistic) factors are uncontrollable but crucial because shape the character of the population living in a particular country. Businesses today, need to deal with shopping preferences of different generations; each of the latter requires different marketing strategies for goods and services targeted for their unique needs and desires. The marketing strategies needed for a given population are fundamental to define the possibilities of engaging these citizens. Social features include values, attitudes, ethics, and lifestyle influencing the purchasing path of customers; because subjective is very hard to identify and predict. They change across different life stages and time, an evident example is the increasing importance of the role of the women as shopping drivers in the household. The application of technology, as science and engineering skills to enhance and solve organizational problems, can stimulate the growth of the firms using them. New technologies or equipment may increase the effectiveness of productivity while reducing costs thus, they become an important asset for the enterprise. Environmental regulation affects the production and industrial activities of firms; in particular, as time passed, the interest in the ecological impact that production activities have is increasing. To face the multiple problems of the ecological environment, governments established policies to enforce and regulate the emission of pollutants from all types of activities. Therefore, when deciding the international market in which operate, managers need to consider all these possible aspects that affect the external environment of businesses.

Studying the business environment of a country allows managers to consciously choose the nation that might grant their companies the best opportunity for growth and revenues. The ties between the economic environment and organizations are not simple or static. The idea of "environmental determinism" describes activities of firms as only determined by the characterization of the environment itself, saying that companies can only adapt, and not be agents. Nonetheless, we cannot state that there is a one-way causal relationship between the previous two (Hamel & Prahalad, 1994); indeed, all organizations form and shape the business environment of other companies (suppliers, customers, allies, buyers, and so on). Firms are not isolated but are deeply linked, and thus influence the external environment in which it operates.

1.2.2 Globalisation, Changes and Challenges

The phenomena of globalization have taken the pace in the latest years due to the increase in the transnational trade among countries; the processes of interdependencies among the national market on a worldwide scale has grown.

Many theories try to explain the evolution of globalization over time, the same theme acquired more consensus than others from peers researcher; one of the former is the theory carried out by Theodore Levitt (1983) describing the globalization path as shaped by technological innovation and specific events. Therefore, four major phases of globalization can be found: the first one developed in the late 1800s for the enhancement in telecommunication (telegraph and telephone) and transportation, helping organizations structure the relationship with their value chain. The second phase reached its peak in the first decades of the 1900s in a scenario where European powers starting establishing multinational subsidiaries in their colonial territories. Here, American organizations' expansion in the old continent affected the scenario. This phase collapsed in 1929 due to the economic crash and the later Great Depression that lead many governments to adapt to inner-looking kinds of policies. The third phase started after World War II with the lowering of tariff barriers and the consequent increase of international trade bringing a raise in the customers' good demand. Because of the post-war damage, especially in the European continent, the USA becomes the world leader in globalization. Lastly, the fourth phase was defined by two major change in the international setting; change in the technology, just the availability of owning a PC with the related connection to the world wide web shorten all the distances in the trade, and changes in political and economic policies that pushed to take advantage of these technologies to benefit from globalization.

A different concept was carried out by other scholars, arguing that globalization was deeply affected by the types of products that are traded; indeed, some of them can be considered as “global” per se (Douglas & Wind, 1987, Ohmae,1989). Some products can be easily standardized across national barriers by applying minimal changes, gaining productivity benefit by suiting different markets with small differences. Using the standardization of some parts of the business, firms will be able to avoid duplication of effort and investment; just considering the possibility of not investing twice in R&D. ‘Think globally, act locally’ (Kenichi Ohmae). That is to say that firms should look at the global market as one market but, to better solve the local market, they should make changes to their products/services when requested by customers.

We can state, therefore, that with the arrival of the 21st century, globalization has been on the rise even if it suffered a profound crisis in 2008 for the credit crunch that we’re going to discuss later in this chapter. Nonetheless, there was no evidence of a turning trend for international trade; back to front, police makers asked for a global response to the financial crisis. What we’ll argue at a later time here, is if the same scenario is likely to happen to post the economic and social crisis that the whole world is suffering due to the effects of the Covid-19 pandemic.

At a political and legal level, the birth of world institutions like WTO (World Trade Organisation), World Bank, and IMF (International Monetary Fund), as well as the ICJ (International Court of Justice), have been established to smooth the globalization process. Technological innovation has been vital for the fastened pattern that globalization has obtained.

1.2.3 Consequences of Globalization

Imaginably, the consequences of globalization are not only positive; on the opposite, many worries have arisen due to the problematic situations that it may cause. The main discussion regarding the problem that globalization brings is the increase in the inequality distribution of wellness across the globe; the rich become richer and the poor become poorer. Moreover, nationalists are worried about the loss of power of their states and sovereignty.

One of the main concerns that both individuals and governments of the world claim are the one related to the threat that globalization might impose on the national sovereignty and the impossibility to make independent decisions. Indeed, the growing dimension of multinational companies might influence the choice of policymakers of the government; in addition, international competition will leave outside of the market in some countries.

Another widespread worry is the so-called "offshoring" activity. The offshoring practice is the transfer of part of the business activity abroad, which is not negative per se because it might also create the possibility for new employment. The relocation of part of organizational activities in a place where it can be performed cheaper will require the loss of a job in a more expensive country into an increase in the possibility of employment in a cheaper one. Nonetheless, this situation of creation of new jobs could only be temporary, until a cheaper country is found.

In this last argument, many international companies have been accused of taking advantage of the poorer salary that was offered at the employees in less developed countries, as well as their devastating working conditions. Noticeably, this "in-humanistic" trend is changing all over; in particular, the World Bank study in the population's wage found out that the faster-growing salary is happening in developing countries that are increasing their presence in the globalized world (i.e India, China, Vietnam and so on).

What makes the global economy so complex and dynamic are the many features that can create change in this environment and may cause, consequently, disruption for businesses and market sectors. Therefore, the global economic environment must be studied on an ongoing basis. As Johnson et al. (2008) stated, companies, before reviewing the single environmental factors, must understand the nature of their environment. This investigation is useful for organizations to be ready to respond to change.

The turbulence of the environment is caused by the pace of new technologies and globalization; in this dynamic environment, some factors can threaten the organizations working in an environment, that are more predictable than others like hostile company takeover, investigate journalism, or political upheaval. In the case of factors that shape the environment considered less predictable, firms' planning must be flexible and adaptive. In this dynamism of the globalized economic environment, organizations have the ability, through their strategic, tactical planning and activities, to have an impact on the environment itself. On this last point, we might refer to several academic models that might be useful to our study; we need to place some questions to define the nature of the businesses' environment (Miles, 1980). These analyses need to entail shock, crisis, and event management trying to look at the chaotic pattern in the environment.

Over the last decades, companies have changed because of turbulence in the global environment. When managers have to plan the future, they need to consider that their business will have to adapt to this change from both an operational and strategic point of view. While operational plan deals with a short period and is specific to a certain activity for the on-going concern of a firm. Strategic planning entails a period longer than 5 years and is focused on the company as a whole. For these reasons, in the case of a turbulent environment, the lack of stability and predictability makes hazardous strategic planning.

1.3 Change in the Global Environment

When international companies search for formulizing a global business strategy, being ready, and having the capabilities to understand the change in the global economic environment is crucial. One way to analyze this dynamism of the markets is to measure the change in the GDP of nations around the world. Moreover, because long-term investments (10 to 20 years) are required for companies that want to develop their international business, they need to be aware of the long-term economic trend of each country. Besides, forecasting of GDP per capita is necessary both to study the average income level and to define the income level. The latter information can help enterprises in deciding if a country may be seen as a market or just as a factory, due to the low labor costs.

1.3.1 Long-term economic growth for countries

The global economic business is characterized by enormous differences among the national GDP of countries. The following graph shows the change in per capita GDP of the region post-World War II. In particular, the first graph shows the developing nations having GDP per capita below \$10.000 while the second one represents countries having GDP per capita higher than \$20.000.

As notable, Japan was able to catch up and later surpass Western Europe in the late 1980s but its growth experienced a collapse later on. Visibly, after the collapse of the Soviet Union, the consequent economic and social chaos bought a collapse of the belonging countries (Russia and surrounding nations). Nonetheless, the latter countries experienced a recovery in the latest years while an entire continent like Africa has been left far behind.

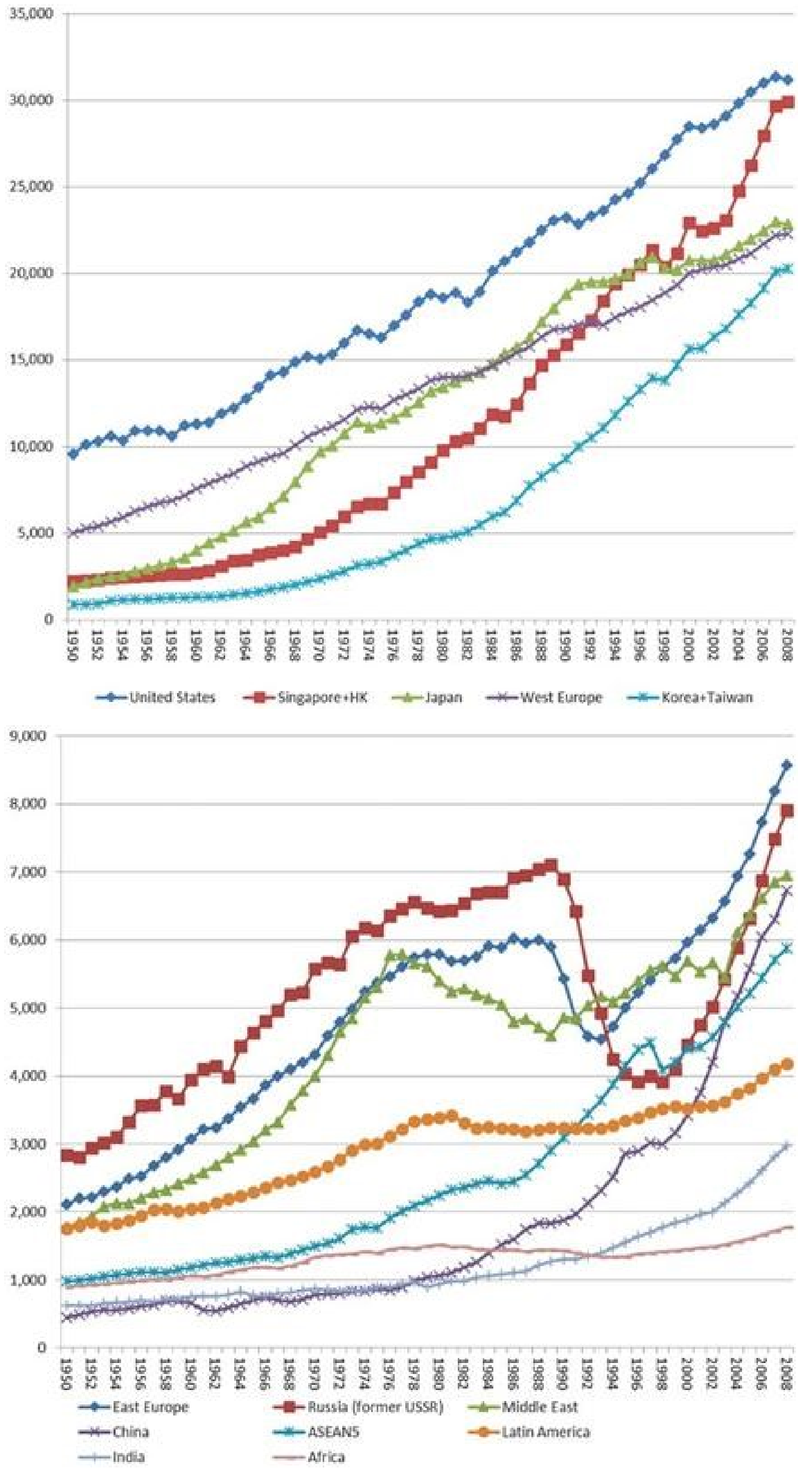


Fig. 3. Per capita GDP in U.S. dollars Source: Angus Maddison's longterm GDP growth statistics

Economic growth requires growth in population, accumulation of capital, and enhancement in technology as defining through Solow's Model, the MIT. The latter argues that the speed of capital accumulation will decrease below the population growth, therefore the economic growth rate will slow the enhancement of innovation technology.

Later, researchers focused on change in the economy caused by economic externalities (Grossman & Helpman, 1993) like knowledge accumulation and technological innovation (intangible assets). The latter will grant investments in infrastructure, education, and other human capital thus they will bring an enhancement in the society as a whole.

As differently stated by Robert Barrow and Xavier Sala-i-Martin, who by using data from 87 countries to conduct information on the long-term growth, used specific variables (variables related to human capital, macroeconomic environment, and socioeconomic system) to determine a correlation between these variables and the economic growth of a country (Barro & Sala-i-Martin, 2003).

1.3.2 Global economic forecast for 2030

In 2003, the American multinational investment bank and financial services company Goldman Sachs published an article named “Dreaming with BRICs: The Path to 2050.” Here, the so-called BRICs economies, acronyms for Brazil, Russia, India, and China, are the focus of the study as leaders of the growth of the global economy of the future. Indeed, the world economy and its panorama have changed over the past 50 years and are likely to do so along with the next 50. To summarize the forecasting of the report, it argues that China will overthrow the US as a larger economic power in the world. India will overtake Japan by 2030 and so on.

The following graphs represent the GDP shares forecasts by nations in 2030; here, we can observe how the shares of developed countries were around 85% by the end of 1990 and kept shrinking along the years reaching 40% by 2030 (as forecasted). We can see how Japan’s position in the global economy will become marginal while the presence of Great China and India will keep growing. GDP of developing countries is growing and the developed nation-centric global economic structure is changing while income in these countries is increasing.

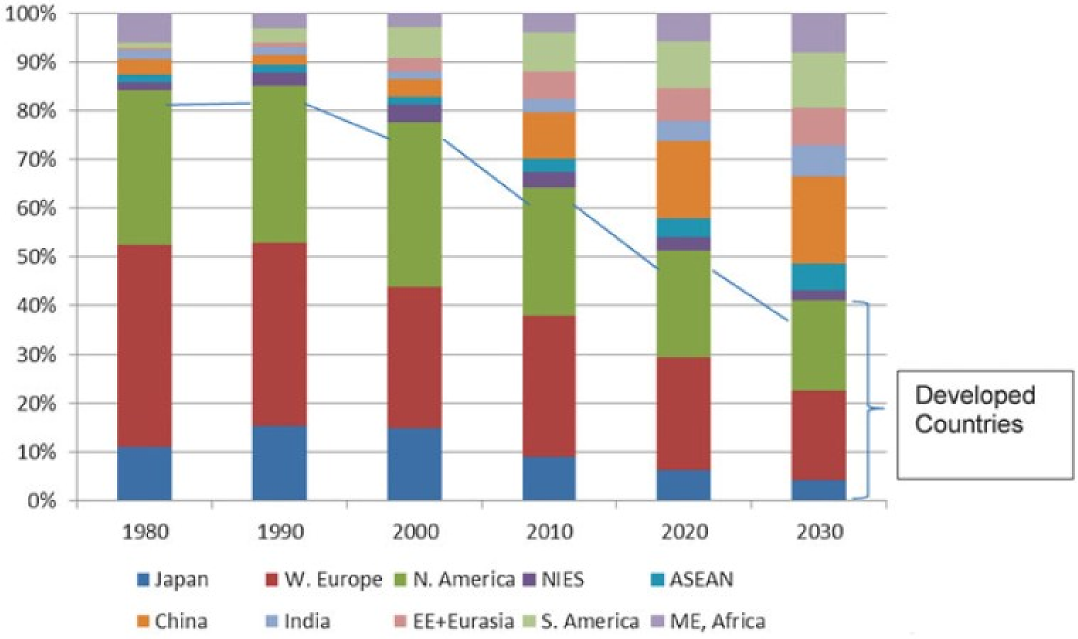


Fig 4: Changes in shares of GDP (in nominal U.S. dollars) Source: Academic Library

1.3.3 International Competitiveness

Factors such as innovation, demographic, economic infrastructure and capital stock, influence the economic growth of countries. Therefore, when business is deciding where to develop internationally, they need to consider both the actual and the future circumstances of the economic environment of a nation. A useful help to do this was provided by IMD (international management development center and business school in Switzerland), publishing since 1989 the World Competitiveness Yearbook. IMD index considers 248 factors in determining the international competitiveness of different nations, differently from the index calculated since 1995 by the World Economy Forum (WEF) whose only takes into account 111 factors. Both these reports acquired data regarding the global competitiveness of nations to later ranking them using weighted averages of these data.

The statistical data entails information on GDP, investments in R&D, workers' payroll, and other qualitative assessments provided by 4,200 managers all over the globe. Moreover, nations are classified in various hierarchical classes; these categories can be clustered in four factors, namely economic performance, government efficiency, business efficiency, and infrastructure. IMD world competitiveness index is very useful because allows comparisons among countries by supplying a comprehensive dataset. Some of the mentioned factors own more weight with respect to others; examples are the score for the domestic economy which represents the size of a country's domestic market. Here, the US and China are respectively first and third. The scientific infrastructure constitutes the ratio between R&D spending and GDP of the nations, together with the numbers of papers and publications created by a country; these factors can be seen as a depiction of the level of innovation. Another essential factor in international trade. The latter portrays the balance of trade between export and import of a country to GDP, nations characterized by huge economies are more willing to trade, therefore their position in the rank tends to fall. Again, we examine these factors, we can see how the US is ahead of the rank followed by Japan and China; the US is trained by business legislation, financial market, productivity, and efficiency. The IMD index considers factors that do not have a direct impact on economic activities such as environmental and public safety.

1.4 Global Economic Crisis

Economic Crisis can be described as "a low probability, high impact situation that is perceived by critical stakeholders to threaten the viability of the organization'' (Pearson & Clair, 1998, p. 66). These economic shock may assume different kind of form (Mattik, 1981); some of the most known ones (and ones that produced the most catastrophic effects on the global economy) are the Great Depression of the late 1930s, the Oil Shock in the 1990s, the global financial crisis of the 2000s, and the recent socio-economic crisis due to the Coronavirus pandemic. A global economic crisis, affects the entire international economy having an impact on both the external and internal environment of companies. This type of crisis is an example of a deep environmental transformation that does not affect just a single country or market but the whole world.

Those sudden and discontinuous transformations of the external environment led past strategies of organizations to be obsolete and not effective, therefore, they may bring the firms to a drastic decline of performance (Audia, Locke, & Smith, 2000; Ginsberg & Buchholtz, 1990; Lant & Mezias, 1990). The profound crisis in which the globe may found itself, due to the created interconnectedness, may have a double effect; disruptive for companies who are not able to adapt to the change or offer valuable opportunities for reshaping the competitive landscape (Haveman, 1992; Kraatz, 1998; Meyer, 1982).

Globalization provides organization benefits and competitive advantages allowing them to acquire raw materials at a cheaper price, taking advantage of inexpensive (compared to home country) labor force of developing countries, and so on. In presence of an economic shock in the global landscape, organizations, as well as countries, may suffer or benefit from the created changed situation. An economic shock is any change of fundamentals macroeconomic factors having effects on economic performance such as unemployment, consumption, and inflation. There is a non-linear U-shaped relationship between internationalization and the company's value during the global economic crisis.

Studies proved that this radical economic environmental transformation may create new opportunities in particular companies that generate more acquisition during economic crisis experienced higher performance due to deflated price, lower probability of overpayment, and the possibility of reallocating the new resources and capabilities according to the new environment (Wan & Yiu, 2009).

1.4.1 Understanding the Types of Economic Crisis

Economic shock may affect the economy in different ways; when the production of goods all over becomes more costly and difficult, is a colled supply shock. These kinds of crises are usually due to an increase in commodities costs like oil because of a natural disaster (hurricanes, earthquakes, or floods). When the private spending of customers, their taste, and investment from businesses suffer a major change, we refer it as demand shock. Financial shocks' importance is growing, due to the dependence of the modern economy from cash liquidity and the interconnectedness of the banking system. Therefore, a stock market shock, liquidity crisis of the banking sector as well as devaluation of a currency deeply alter the economic situation of the global economic environment (i.e 2007-08 financial crisis). Moreover, technological shock in the economy happens when development and innovation affect productivity. The ultimate cause of economic shock may be caused by governmental policy change whose effect deeply impact organizations operating in that market.

1.4.2 The Role of Strategic Flexibility during an Economic Crisis

The concept of strategic flexibility has been extended to the internationalization field, highlighting how by exploiting the global markets, companies may be able to benefit from greater opportunities due to the granted flexibility and competitive advantage over time (Hitt, 1998). Globalization can improve a company's strategic flexibility by commuting the home country's negative environmental aspects into international market opportunities. Particularly, in the case of the global economic crisis, the strategic flexibility developed thanks to the international experience, can bring benefits to firms (Chung, Lu, & Beamish, 2008; Lee & Makhija, 2009).

Internationalization allows companies to take advantage of the flexibility under environmental uncertainty (Kogut, 1985; Kogut & Kulatilaka, 1994) and to smoothly adapt to the changes in the market. Besides, this secured flexibility enables organizations to shift both productions and sales abroad to a geographical location with a more favorable situation. The latter possibility, allows firms to respond, in an anticipating way, to the change in both foreign and domestic markets by reorganizing the activities across the value-chain (Chen, 2003; Kogut & Kulatilaka, 1994; Kogut, 1985). The wider available portfolio of activities granted by the internationalization act as a bearing for the global environmental shock.

Moreover, the strategic flexibility can better seize the opportunities originated from the environmental change (Chung & Beamish, 2005); for example, during a global economic crisis, if the home-country currency is valued concerning a foreign one, an internationalized firms can transfer the production facilities in different locations having more beneficial costs structure (Tang & Tikoo, 1999). Thereby, companies having the flexibility to increase the foreign sales intensity, especially during an economic shock, can experience the opportunity to sell their products/services at lower production costs.

1.4.3 Likelihood of firms survival during global economic shock

Recalling the Schumpeterian theory (1934) of creative disruption where small and less efficient companies will be more likely to exit the market; we need to analyze the extreme situation of economic distress when firms are in danger for the uncertainty in doing businesses as usual. In the actual pandemic situation, for example, where the whole globe found itself in a deep socio-economic crisis, governments focused firstly on the health catastrophe. At the same moment, many enterprises are running out of cash.

By relying on the analysis made by World Bank's Enterprises Surveys in Colombia, Greece, Italy, Jordan, Kazakhstan, Kenya, Morocco, Peru, Portugal, the Russian Federation, Turkey, and Ukraine using a sample of 6,345 companies (around 600 firms in each country), we might study the economic response of a wide range of character. The final results were not in line with Schumpeter's view. Indeed, Firms that suffer from illiquidity are not affected by age, size, and productivity level. The mentioned used sample took into consideration small (5-19 employees), medium (20-99 employees), and large establishments (over 100 employees) of various markets. Available liquidity is calculated according to profits and external financing.

From the final results coming from this analysis, we can state that retailers have the shortest survival time (8 weeks of no revenues) while companies in manufacturing sectors have a higher survival time (between 13 and 19 weeks). The median survival time varies profoundly according to the considered country.

Brief linger on the used Methodology

To forecast the survival time of businesess due to economic crisis the World Bank considera the fixed weekly cost can be written as:

$$FC_i = TC_i - LC_i$$

Where TC_i is the total cost that a firms incurred into the last fiscal year and LC_i is the cost of labour. All of this need to be divided by the number of weeks.

Using the previous formula, we are able to calculate the survival time of a business being:

$$S_i = \frac{\pi_i + w_i}{FC_i}$$

Here *s* is the survival time, π is the net reteined earning from the previous year, *w* possibility of liquidity coming from external resources and *i* represents a company.

The empirical results showed that the creative disruption theory is weaker than assumed; in particular, Barlevy (2003), argues that during a period of economic shock, the quoted effect does not work in the presence of a credit constraint since every enterprise suffers disproportionally according to their financial needs. Ouyang (2009) shows how this phase of economic distress will deeply hurt high-productivity companies during their infancy.

Another stand of scholars refers to how the global economic crisis may generate a hostile environment for organizations (Cefis & Marsili, 2019). The decrease of customers' expenditure, create as a consequence an increase in the uncertainty; the latter influence the collapse of trust in the economic transaction (Bloom, 2014). Subsequently, the relationship is based on mutual loyalty, between buyers and suppliers becomes less reliable. Moreover, financial institutions suffer from the inability of obtaining valuable information on the creditworthiness, with the related increase of credit constraint (Djankov, 2007, Ivashina & Scharfstein 2010).

A third and last look at the concerning literature, let the focus move to systemic financial distress. When an economic crisis occurs, if the government does not actively participate and act to raise the economy, sections of the market may suffer financial distress for a longer time and will lead to socially unacceptable losses in output and employment. Therefore, the government's core role would have to be to establish new rules that lead to smoother private restructuring.

To sum up the previous literature, the period of the economic crisis may have two main hypotheses of consequences for firms' survival; global distress may lead to an exit from the market of inefficient enterprise, leading to an increase in productivity and economic growth in the long period. Alternatively, the exit of businesses from the market would be indiscriminate, caused by the collapse in demand and higher uncertainty coming from the main character of the scene.

1.5 Shaped of Economic Recovery

When an economy is in a recession or crisis, its future recovery is a business cycle characterized by a sustained period of improving activities where GDP grows, income increases as unemployment falls. Global economies have always up and down over the years for various reasons such as revolutions, financial crises, wars, and international influences. During a recession, many companies suffer, fail, and go out of business while several others, to survive, need to cut back activities to reduce costs and remain competitive in the market. The recovery period happens after a recession or economic crisis and it is a healing process for businesses where their failed activities or investments are relocated more profitably.

When facing a recession, two major questions arise are" When it will end" and "How fast it will recover?"; to answer this, we need to analyze the diverse shapes that recession may assume. Recession and the subsequent recovery may arise in different shapes and sizes but economists are used to following four major shapes that we are going to deeply analyze in the following subparagraph.

1.5.1 U-Shaped Recovery

A U-Shaped Recovery is characterized by a sharp downturn, followed by a period of stationary situation, which usually lasts from twelve to twenty-four months, followed by a slow and gradual rebound. The representation of this chart is characterized by certain metrics such as employment, industrial output, and GDP. Examples of this Shape have been numerous during the latest years, in particular in the US after the crisis of 1973-5 and the 1990-91 recession. In the USA, in 1973, the economy began to shrink and continued to fall in the following two years with the GDP reaching 3.2%. Major causes of this crisis can be found in the inflationary policies that needed to finance the Vietnamese War that leads to deep stagflation. The other Economic crisis that had a U-shaped recovery was due to the deregulation of savings and loans in the 1980s. This boom leads to commercial and real estate lending. Later on, the debt bubble breaks and it was translated (among other consequences) in job losses. For this reason, this recession was called Jobless Recovery.

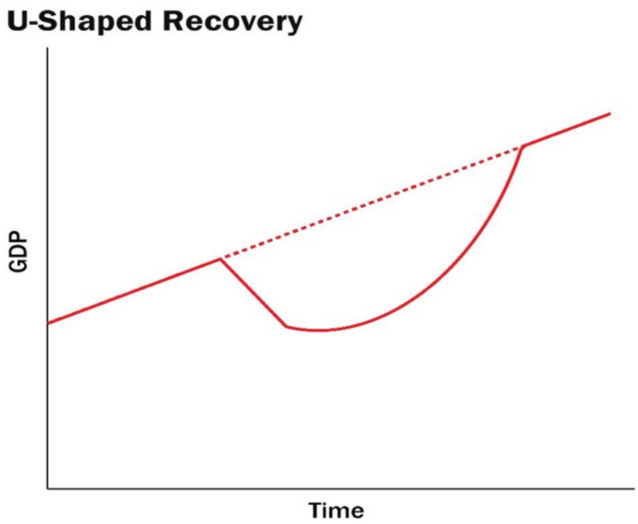


Fig. 5: U-shaped Recovery Source: Forbes.com

1.5.2 V-Shaped Recovery

A V-shaped recovery is determined by an economy that suffers from a sharp economic decline to later fast and strong recovery. This recovery is usually caused by a quick change in economic activities due to the rapid readjustment of customers' demand and companies' investment spending. Therefore, the V-shape recovery after a crisis can be considered as the best-case scenario once the economy reaches its bottom because it is said that the downturn did not cause any long-term damage to the economy. Also in this scenario, there is some example that we can use to define the historical economic crisis that was characterized by a type of recovery compared with a V-Shape one. In particular, the Depression of 1920-21 developed after the First World War where the US GNP dropped by 6,9% and deflation over 18%. A great response to this crisis was given thanks to both monetary and fiscal policy started by the Federal Reserve.

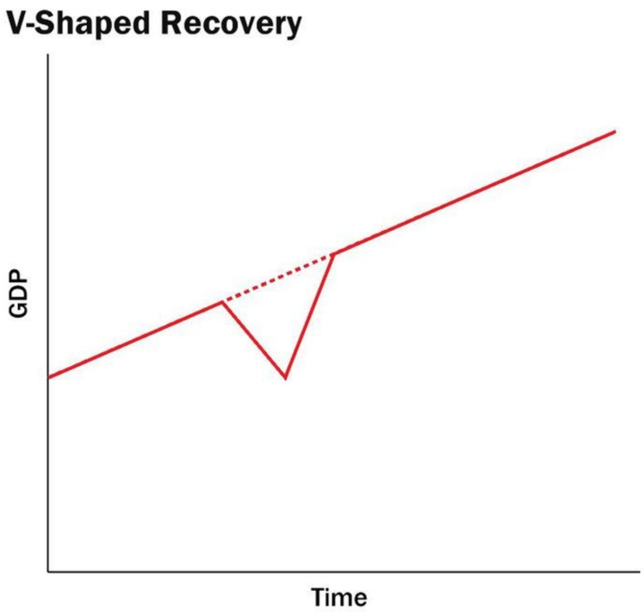


Fig. 6: V-shaped Recovery Source: Forbes.com

1.5.3 L-Shaped Recovery

An L-shaped recovery is characterized by a steep recession with stagnant economic growth and ongoing unemployment, the later recover rate of the economy slowly increases. During the recovery period, the graph of the economic performance may resemble the letter L. Opposite to the V-shape, the L-Shape is the most dangerous type of recession and consequent recovery for the economy because of its drastic drop of growth with the difficulties in the recovery over time and it is often called "depression". Major harm for this type of recovery is the fiscal and monetary policy response that characterizes the preceding crisis, which slows the economy's recovery. This dark scenario is associated with the worst economic crisis in history such as the sadly known Great Depression of 1929 in the USA that reached an unemployment rate of 23%; the fiscal and monetary policy was pursued by President Hoover. More recently, the financial crisis of 2008 due to the break of the housing bubble that started in the US and spread around the developed part of the world, is now the well known Great Recession. Despite the strong efforts provided by the Bush administration, entailing strong investment and expansionary monetary policy, only in 2016, the GDP of the leading country was recovering.

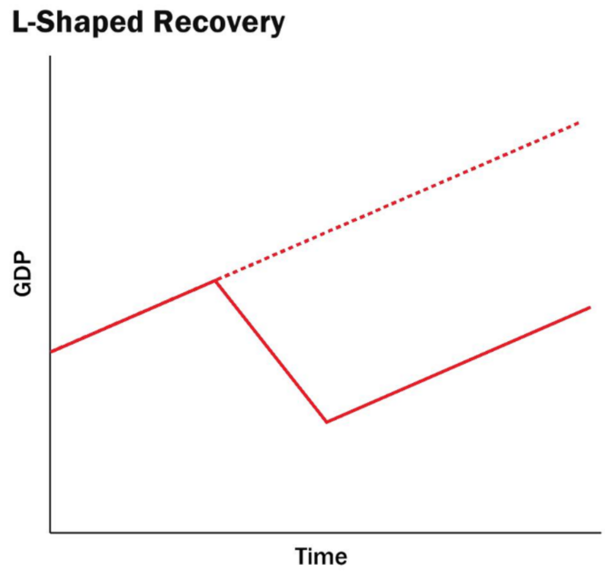


Fig. 7: L-shaped Recovery Source: Forbes.com

1.5.4 W-Shaped Recovery

The W-shaped recovery starts similar to the V-shaped recovery to later suffer a similar decline after showing a false sign of recovery; this is why it is also called a double-dip recession. For the already quoted issue, this scenario can be very harmful to investors who once they jumped back in the market, they experienced the bottom end up again. A W-shaped recovery has been experienced in the US in 1980 to a later double-dip in 1981 and 1982.

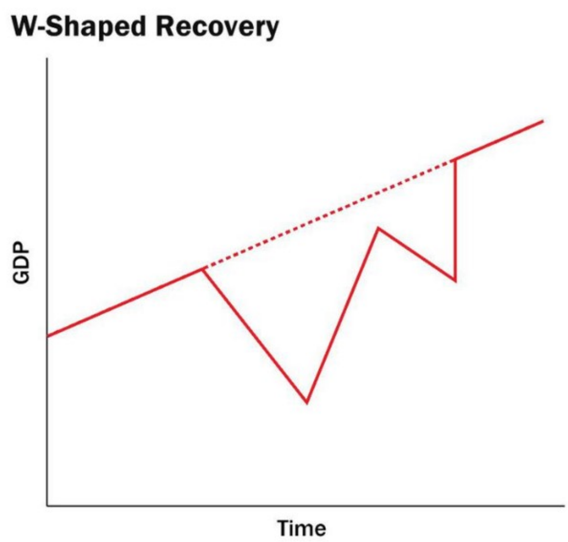


Fig 8: W-shaped Recovery Source: Forbes.com

1.5.5 Impact of the economic crisis on firms' growth

In a recession period, there are always companies that can grow and others that experience period of downturn. Growth is essential to understand the value of an enterprise; it can be estimated using different variables such as the number of employees, assets, equity, and so on (Weinzimmer 1998; Davidsson & Wiklund2000; Wiklund 2009; Gupta 2013). If in normal economic conditions, it is usual to see companies growing, during a period of crisis the expectation may be different. In markets dealing with an economic shock, ''economic downturn and unfavorable financial market conditions affect the operation and survival of firms'' (Cowling, 2014, p. 7). What we are going to study here is how an economic crisis might impact the growth perspective of different organizations present in different markets.

Conclusions from scholars did not provide a distinctive and clear statement, indeed some economists argue that SMEs are more sensitive to market fluctuation and change (Gertler & Gilchrist 1994; Kangasharju 2000; Hardwick and Adams 2002; Bugamelli et al. 2009; Fort 2013; Siemer 2014) while others believe the exact opposite (Contini & Revelli 1989; Davidsson 1999; Reid 2007; Smallbone 2012). Firm growth is affected by many firm-specific features and contextual factors such as R&D investment ((Del Monte & Papagni 2003; Lee 2010; Garcia-Manjon & Romero-Merino 2012), technological innovation (Goedhuys & Veugelers 2012; Uhlaner 2012), types of adapted strategy, and so on.

The economic crisis may deeply negatively affect production, sales, employment, performance, and risk tolerance but a global shock is able to generate new opportunities for firms (Bartlett, 2008). The latter possibility is particularly true for companies that can seize the change (Hodorogel, 2009) ahead in respect to the competitors; in a moment of profundal crisis, organizations that are able to grow, are crucial for the recovery of the economy itself.

Referring to Gibrati's Law (Gibrati, 1931), which predicts that companies' growth is purely random, we might state that their growth does not depend on firms' size; namely big and small organization growth potentially at the same rate, we might expect that during a period of crisis the size of the companies does not affect the potential growth or decline. Moreover, other scholars studied whether the global economic crisis affects companies' growth equally across firms size and different sectors. Indeed, Gertler and Gilchrist (1994) by analyzing US manufacturing enterprises during recession time, found out that a much sharper decline in both sales and inventories was linked to SMEs than to larger ones. In addition to this thesis, Fort (2013) argued that small and young firms are more sensitive to, therefore, their relative decline is higher than for larger businesses. On the other hand, small and old companies, according to Burger et al. (2014), react more smoothly to the crisis period.

1.6 An Outlook on Italy

Foreign Direct Investment (FDI), together with the export position and import, represents the international position of a country; the latter might vary according to different factors, especially in the presence of global economic shock.

1.6.1 Foreign Direct Investment

Italy is considered an open economy for FDI, thanks to its commitment to increasing the investors' trust and confidence. After 2011, due to internal reform, the position of the country changed significantly gaining two positions in the rank of "2019 FDI Confidenx Index" now being at the 8th place globally and 4th in the European Union.

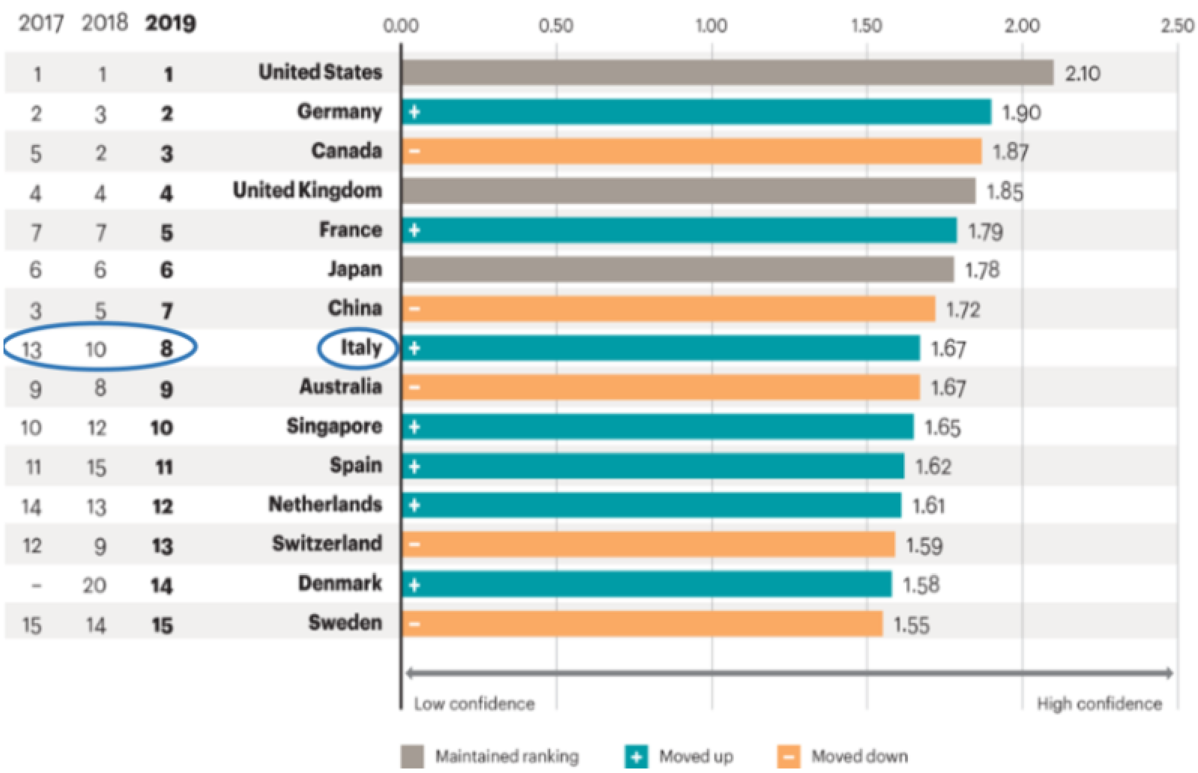


Fig 9: 2019 FDI Confidex Index (2017,2018,2019) Source: A.T. Kearney

Businesses in Italy enjoy duty-free access to over 30 national markets in EU Area and more than 500 mn high-earning consumers. Global direct investment has increased more the

GDP and Export in the country becoming one of the core drivers for the growth of the nation. At the world level, in 2017 the leader in the ranking as the first investing country was the USA (34bln $) followed by Japan (160 bln $) and China (125 bln $). Regarding the countries in which Italy is investing more, there is the USA with ($ 275 bn), China ($ 136 bn), Hong Kong ($104 bn), Brazil ($ 63 bn), and Singapore ($ 62 bn).

Foreign Direct Investment	2017	2018	2019
FDI Inward Flow *(million USD)*	24,047	32,886	26,570
FDI Stock *(million USD)*	424,733	428,272	445,741
Number of Greenfield Investments*	201	170	222
Value of Greenfield Investments (million USD)	5,889	5,514	6,951

[1] Fig 10: FDI Soruce: UNCTAD

1.6.2 Export Position

In 2019, the Italian position regarding the export values was flourishing, closing the year with an overall increase of 2,6% for a total value of 476 bln €. This data is particularly important because stated the strength of its position despite the turbulence of the global environment, especially for the European countries, due to commercial war between the US and China together with the uncertainty created by Brexit. In 2019, values for exportation of products and services have been 585 bln €; this value weights the 31,7% on the Italian GDP.

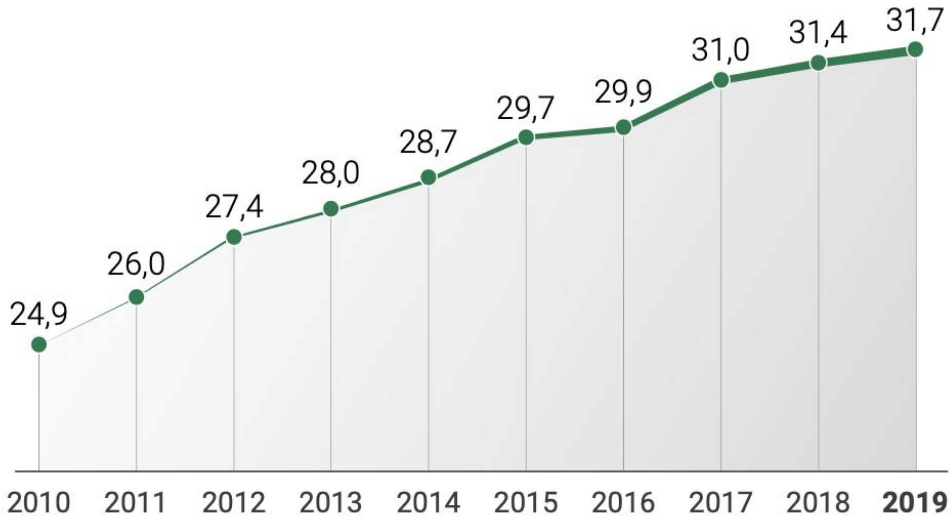


Fig 11: Weight of goods and services export on Italian GDP over time Source: ITA and Italian Central Bank

[1] Greenfield Investments are a form of Foreign Direct Investment where a parent company starts a new venture in a foreign country by constructing new operational facilities from the ground up.

There have been 10 years of the ongoing growth of Italian exportation. Particularly, the increase in the exportation of the goods has been +2,3% while the one related to products has been equal to +4,1%.

Fig 12: GDP and main components Source: ITA elaboration on ISTAT data

From 2010 to 2019, export contribution on GDP growth has always been positive, and in 2019, it generated a major increase in the GDP. The Italian share on world exportation is stable at 2,84%. Projections for the future 3 years, also considering the Covid-19 pandemic, it forecasted to be similar.

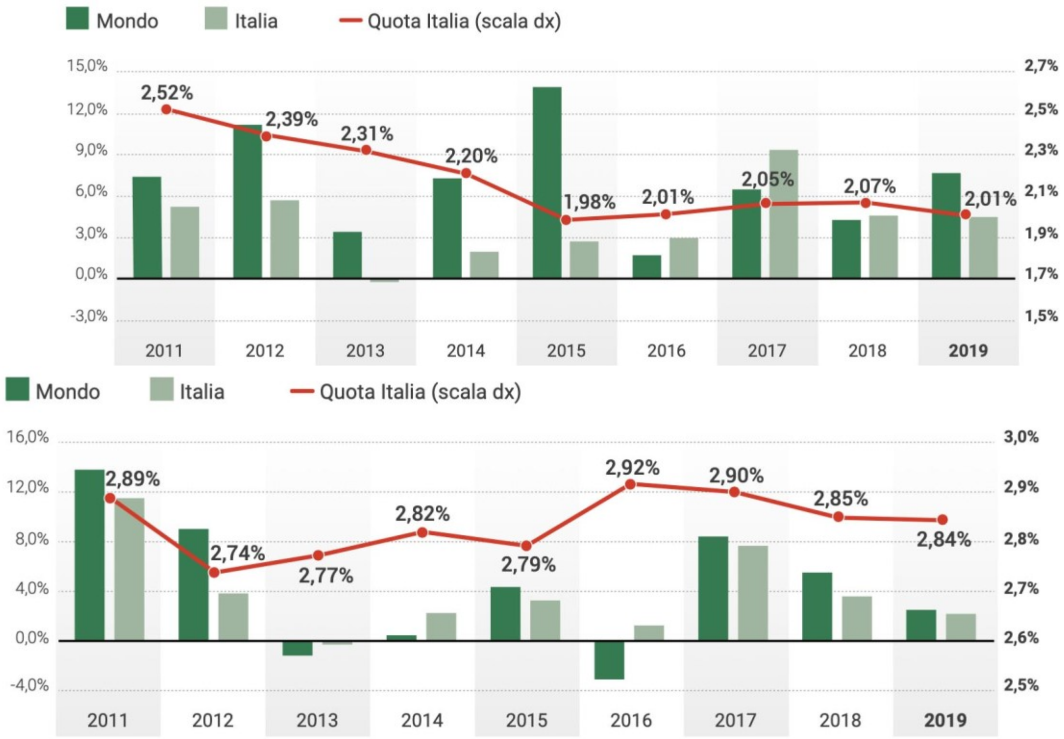
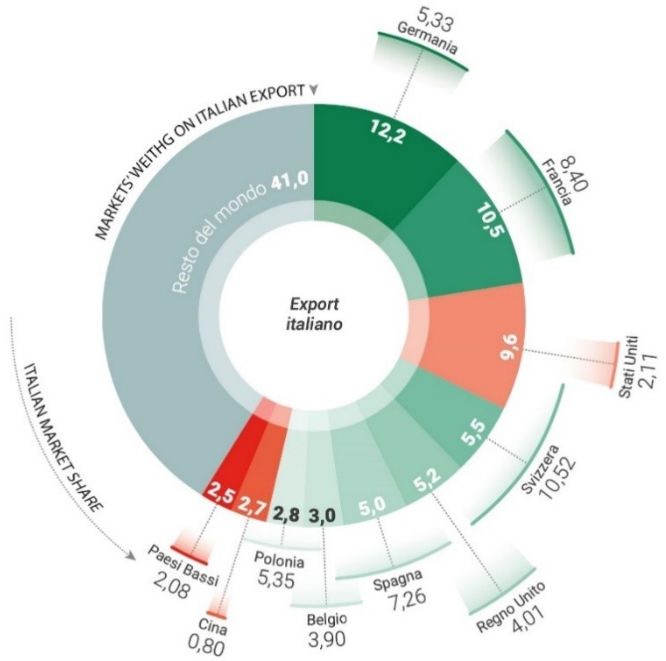


Fig 13: Variation of goods (1st graph) and services (2nd graphs) and Italian market share Source: IMF data

1.6.3 Italian Position in the World

China, USA, and Germany are the main exporter and importer in the world; Italy found itself in the 9th place of the ranking as a global exporter and 13th for the importer side.



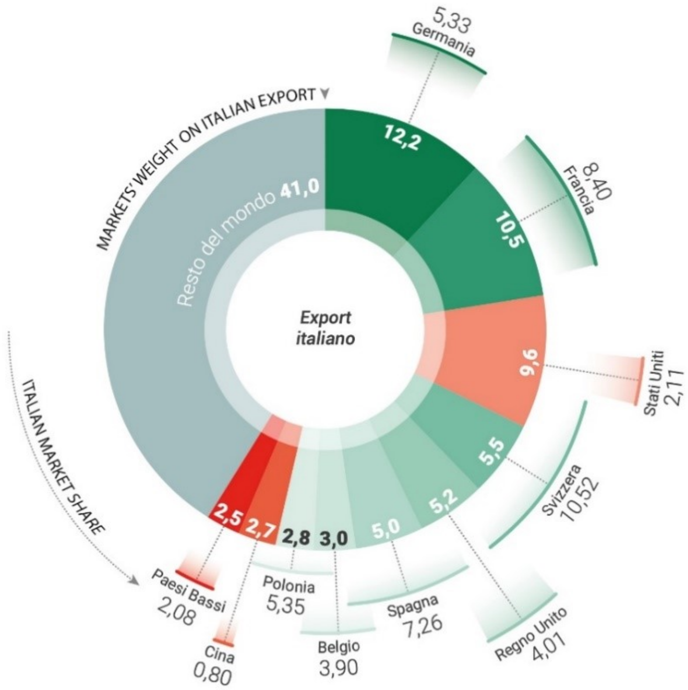


Fig 14: Major importer (1st graph) and exporter (2nd graph) countries and Italian presence in 2019 Source: ITA on INSTAT data

In both graphs, the greener area represents the countries in which the Italian market share is higher than average, on the opposite the red area represents nations in which the Italian presence is lower than average. As possible to notice, 59% of Italian export share is concentrated in the first ten countries, 56% of Italian export is focused on the European Union. Other important data to be mentioned are Italian export in Japan (+19,7%), Switzerland (+16,6%), and the USA (+7,5%). Noticeable is the enhancement of the relationship between Italy and China.

If considering the sectors focus of Italian export we can see how the pharmaceutical industry has experienced a variation from 2018 of a +25,6% becoming the 6th export sector in 2019. Listing the ranking regarding the major export industry in Italy, we can identify as main drivers in machinery and equipment (17,2%), textile industry (11,9%), and transportation (10,5%).

1.6.4 Covid-19 effects and opportunities

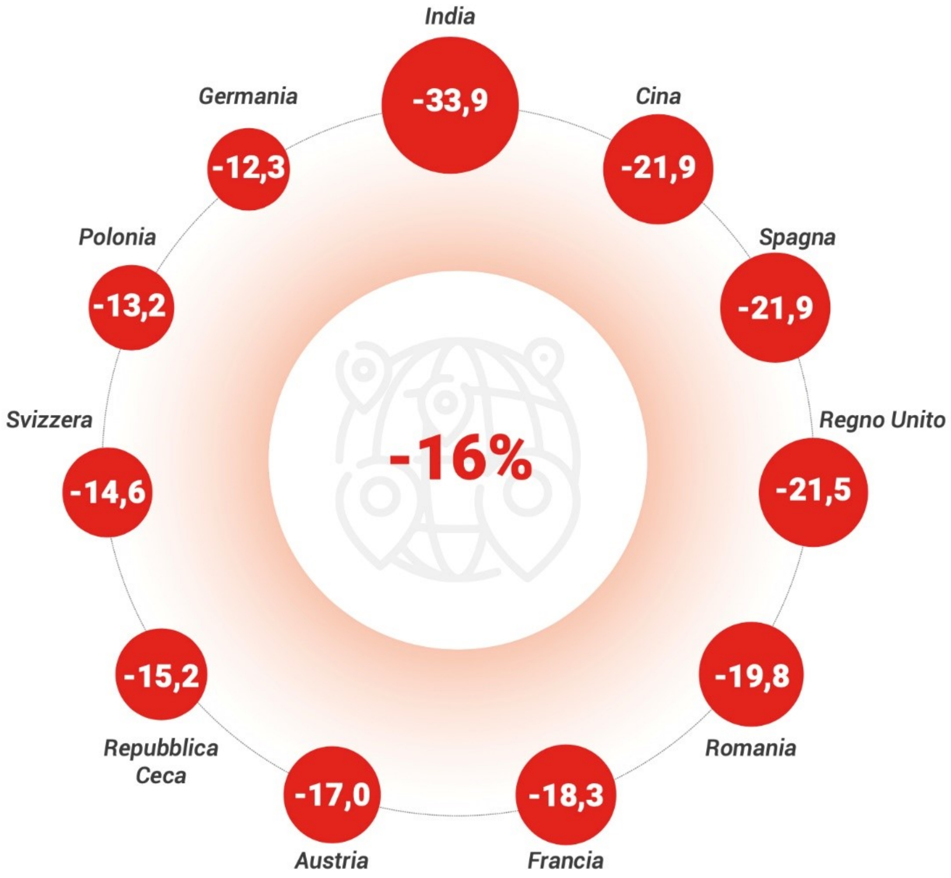


Fig 15: Italian export in the first five moths of 2020 Source: ITA

A positive effect during the pandemic was registered for the pharmaceutical industry (+16%) and the food and beverage industry (+4,3). It is projected that to go back to 2019 data, at least two years are needed.

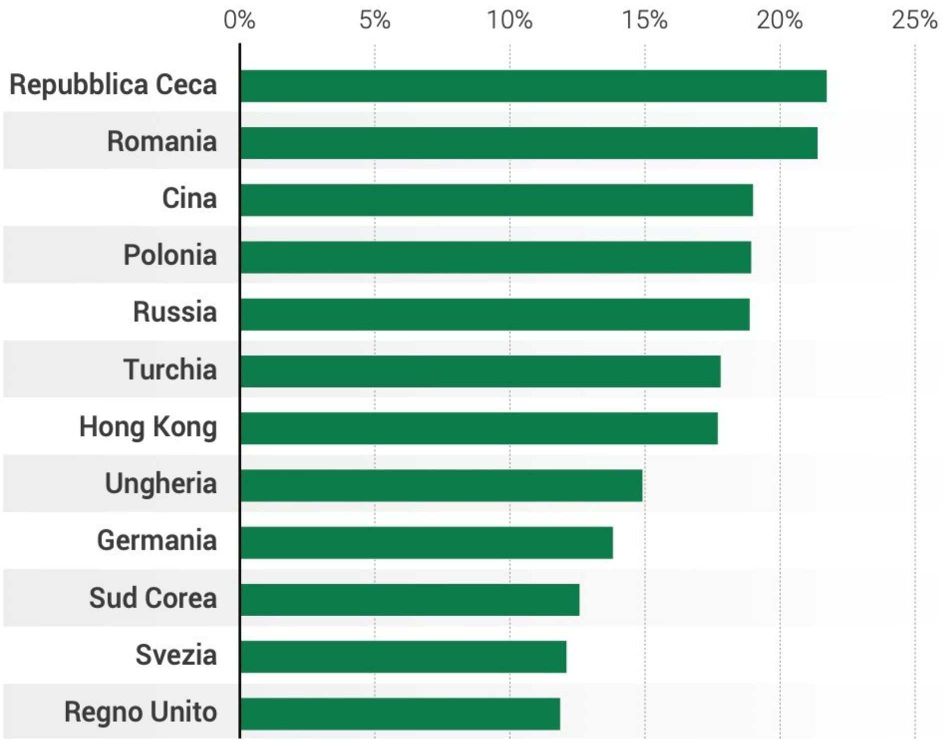


Fig 16: Estimate for Italian exportation growth Source: ITA

As possible to notice by looking at the previous graphs and recalling the flexibility strategies that enterprises as well as governments need to have to cope with a turbulent environment, we can state that Italian companies might have the possibility to grow if rapidly act do deal with changes in the market. The main opportunities are arising from the Chinese market.

1.7 To Sum Up

Globalization moved close together countries and the entire regions, with the interdependency of national markets that keep increases. Because of its dynamism, the global economy is characterized by the ongoing changes and transformation of the environment in which companies operate. For this reason, businesses, before becoming international and also once they develop in the global markets, need to carefully and constantly look for the possible alteration of the environment. Fast adaptation and responsiveness to these adjustments are the key components for firms' to survive.

Over the years, the global economic environment has been marked by a profound crisis of the markets; we selected the most important shock that shaped the international field as we know it nowadays. As it is possible to see, taking the example of the actual socio-economic downturn of the global pandemic of Covid-19, due to the interconnectedness of countries, phenomena that influence a key character in the world (in this case China) will deeply affect all the globalized countries (and non).

In case of an economic period, subsequent recovery time is expected and the way in which this recovery is shaped may vary according to various factors. We studied which are the best-case scenario (V-Shaped Recovery) and the worst-case scenario (W-Shaped Recovery). In a situation characterized by deep economic shock, companies may experience two completely separate paths. One option is to take advantage of the new opportunities raised by the transformation of the external environment, the second is to collapse due to the illiquidity of the market.

Looking at the given data on the Italian position in the global market as importer and exporter as well as a nation that actively invests through FDI in foreign countries, we should look at the future by searching for new opportunities in the international environment. A particular interest is present for the BRICs countries (Brazil, Russia, India, and China); in my thesis, I'll focus on China and Italian chances in that "great" nation.

In the second chapter of this thesis, we are going to try to explain which are the capabilities that organizations need to develop to be able to enjoy and benefit from changes in the environment. Being able to actively search for new chances in the market use the resources to enhance the performance, continuously innovate and adapt to the transformation of the markets is necessary for businesses to evolve and not perish

CHAPTER 2

- The Role of Dynamic Capabilities -

2.1 Introduction

The objective of this chapter is to define the role that the Dynamic Capabilities have; in particular, we are going to discuss different theories that leading up and helped in shaping the DCs Framework; namely the Resources-Based view, Porter's Five forces framework, and Strategic Forces Approach.

We are going to analyze how, in a changing and dynamic environment, companies may create, sustain, and safeguarding the competitive advantage, granting superior revenues. Here, the role of Dynamic Capabilities will be deeply explained and sustained by many researchers. The effects of owning DCs will be unfolded by explaining how their characterization may allow companies to be ready and reactive in compliance with the bouncy environment in which they operate. Particularly, we are going to categorize DCs into 3 main classes: organizational processes for the going concern activities of the company, the strategic position of firms affecting their specific assets, and lastly, possible paths for both opportunities and threats. In addition, in this scenario, we'll discuss how organizational structure is shaped in an enterprise, will deeply affect the possibility of benefit from DCs.

We’re also going to define how DCs affects/are affected by firm performance, market intensity/competition, and organizational structure. Later, in this vibrant environment, we’re going to unfold the crucial role of strategic management and their responsibilities to make DCs effective. Their ability to effectively and efficiently generate an asset orchestration with the reorganization of the resources needed for adapting to the new, changed environment. Moreover, we’ll clarify the features that have an impact on determining the market performance. Lastly, we’ll briefly discuss the limits that Dynamic Capabilities have.

2.2 Dynamic Capabilities of Firms

A business organization's main objective is to ensure long-term profitability; the latter, in a hypercompetitive world, requires the outclassing of all possible competitors in a durable maintainable way.

When discussing on strategic management, the common goal that firms in the marketplace have is to create and sustain a competitive advantage. Especially in the nowadays market that can be defined as Schumpeterian (1976) being distinguished by innovation-based competition, price/performance returns, and the *creative disruption* of already existing capabilities. It is very important to study the phenomena that bring the environment to be dynamic and helping organizations dealing with technological changes affecting their performances in a highly turbulent environment.

Dealing with the ongoing changing environment is a fundamental aspect of strategic management and, as such, needs to be studied and detected as the *Holy Grail* (Helfat & Peteraf, 2009).

To better understand the reasoning behind this work and analysis, is firstly crucial to emphasize the previously existing and profoundly accepted approaches on strategic management for companies, to later make a comparison with our framework which we are focusing on. Three major approaches will be now briefly discussed to set the roots for our “new” framework. Numerous theories have been pre-empting debating on the different sources of competitive advantage, the ones we decided to analyze here are the one that focuses both on the descriptive and normative theory of competitive strategy. Needless to say, a comprehensive study of these and additional approaches and theories should be examined to understand the sources of competitive advantage.

The Competitive Force Approach designed by Micheal Porter (1980) is based on the idea of reaching a competitive advantage by relating the firm to the environment in which it operates. The latter is merely defined as the industries where the company competes.

Here, the 5 forces model (namely entry barriers, the threat of substitution bargaining power of buyers, bargaining power of suppliers, and rivalry among industry incumbents) deeply affect the profit performance of the organization. Porter's framework can help the firm to find its place in the industry where it can enjoy more advantages.

Let us now highlight some unique characteristics of this framework:

i. Economic rents[2] are monopoly rents.

ii. The firms' competitive strategies are aimed to change its position in the industry against competitors and suppliers.

iii. Some industries are more attractive than others due to entry barriers.

The five forces framework has inherent weaknesses in the case of a dynamic environment; it treats the market structure as exogenous, while we'll see how it is contrarily an endogenous process given by innovation and learning. Moreover, it does not consider the possibility of imitation and replication as well as the growing blurred barriers, due to innovation technology) of the market. The main break that exists between the 5-forces framework and the DC Framework is the configuration of the "environment" seen by the latter not as the industry one but as the business ecosystem (organizations, institutions, and individual that affect the enterprise).

A second relevant approach to strategic management is provided by Shapiro (1989) as Strategic Conflict Approach. Shapiro argued that to study the interaction between competitor firms, a game theory approach can be used; revealing how actions taken by one company will influence others' behaviors and, thus the environment itself.

It is important to notice how to be rub off on, firms need to make specific investments in advertising, R&D, and capacity. If the actions done by one firm are costless, this last one will not affect others'; strategic moves need to be irreversible (Ghemawat, 1991). Here, the importance of *Sunk Cost.* Other significant triggering aspects are strategic signaling (predatory pricing and limit pricing), commitment, and reputation.

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[2] Amount of money earned that exceeds that which is economically or socially necessary. Monopoly rent refers to the situation wherein a monopoly producer lacks competition

The third and last approach that cleared the way of our analysis is the Resource-based View (RBV) studied respectively by Penrose, (1959), Rumelt, (1984), Teece (1984), and Wernerfelt, (1984)[3] **.** This approach considers firms having exceeding systems and structure, to be successful mainly because they can reduce costs and/or granted higher quality or product performances. In this view, the competitive advantage lies in the upper part of the value chain and processes so that it stays as difficult to imitate and reproduce kind of resources. The RBV highlights how the competitive advantage is obtained by owning valuable, rare, inimitable, non-substitutable resources and organization (VRINO) (Barney, 1997); in this and later paragraphs, we'll argue how the "O" is represented by the DCs. Accordingly, being "O" the DCs, companies need to have VRIN capabilities

The resource-based perspective pushes for managerial focus on the development of new capabilities. Indeed, having control over scarce resources is key to obtain economic profits. In this situation, skills acquisition (management of knowledge and know-how), learning, and accumulation of intangible/invisible assets are the successful aspects to be accomplished as the main goals. In a changing environment, organizations need to generate, develop, and implement specific capabilities to face the ongoing challenges of *adapting to the new*.

Winners in the marketplace have some characteristics in common; namely, they can demonstrate rapid and flexible innovation on products, timely responsiveness to the amendment of the market, and skilled management in allocating and coordinate both internal and external resources[4] (Teece, Pisano 1994). Especially if taking into consideration high-technological industries, an organization that uses a resource-based view (entailing the accumulation of valuable technological assets) are not able to sustain a competitive advantage with rivals. Instead, what is necessary for companies to strongly compete in the market are the ability of rapidly answer to change, adapting to the dynamism in which they are involved, enhance their learning capabilities and their absorption data/information ability together with their skill of re-allocate resources according to the environment need.

These sources that successful firms use to maintain their competitive advantage in the marketplace are Dynamic Capabilities[5]. Let us just analyze the two components of this term

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[3] Rumelt was the first to apply a resource perspective to the field of strategy; noticing that the strategic firm is notable because boundle of linked and iyiosincratic resources. Teece argued that successful companies have diverse type of intangible assets. The latter might, at certain point, become non-profitable if not re-deployed in different geoghraphical area or distincitve products.

[4] Firm-specific assets that are difficult, if not impossible to imitate. Difficult to transfer and trade assets because of transaction costs and the frequent presence of tacit knowledge

that will be later re-discussed in this thesis. *Dynamic* represents the dynamism of the environment in which the company operates; being in time with strategic responses when needed is crucial for staying at the pace with the competitors. *Capabilities* focus on the importance and the role of having functioning strategic management for adapting, integrating, and reconfiguring internal and external resources when needed. DCs are about identifying the roots that undergird long-run enterprise growth and prosperity.

DCs was born because of the investigation of the researcher on the reasoning behind the fact that in the same industry, stricken by a change, some firms shown superior performances. One of the notions of Dynamic Capabilities is "[the] need [of] much better models of heterogeneous capability –its evolution and its role in competition – [....] to fully understand the competitive implications of change" (Henderson, 1993, p. 268). Indeed, strategies that are revealed as successful in the past are less likely to be working the same in a dynamic environment characterized by drastic and fast changes.

We are going now describe some of the various possible definitions that suit the DCs;

1. DCs is the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece, Pisano, & Shuen, 1997). Following this definition, organizational competencies are characterized by the roots of current patter and learning ability using firm-specific assets allowing the company to follow new opportunities and alternative path.
2. A dynamic capability is the capacity of an organization to purposefully create, extend, or modify its resource base. The "*resource base*" terms include tangible, intangible, and human assets that the firms own, control, or have preferential access to. The wording *capacity* has to do with the ability of a firm to perform an activity effectively. The expression *purposefully* represents the concept that DCs has some sort of intent, distinguish them from routines or luck. To be qualified as "Capabilities", not merely problem solving, it should imply some patterned elements; therefore we need to distinguished DCs from a one-time idiosyncratic change of the resource of an organization.

Dynamic Capabilities assumes various forms; some of them provide, through internal growth, mergers, acquisition, or alliances, the firm to enter a new business or enlarge the old one, another hep the company to design new products/services or production processes, and so forth.

It is commonly recognized by Penrose (1959), Teece (1982), and Wernerfelt (1984). that to obtain the Competitive Advantage, companies need to focus on two main aspects; exploit internal and external firm-specific capabilities while developing a new one to keep up with innovation.

What is still discussed (Iansiti and Clark 1994 and Henderson 1994) is how in the first phase, firms are able to develop those firm-specific capabilities and if they are able to capitalize on them in the presence of a fast-changing environment.

2.2.1 Dynamic Capabilities Framework

To be considered as "strategic", capabilities must be refined to a user need, unique and difficult to replicate (so that competitors cannot copy them). Here we recall the VRIN test for stating the "strategicness" of specific assets/capabilities (Value, Rareness, Imitability, Non-substitutable). According to this definition, capabilities don't need to be considered in terms of the balance sheet but of organizational structure and managerial processes. Indeed, in this regard, in the DCs perspective, opposite to the RBV one, there is a clear difference between resources and capabilities; because the value of the resources varies according to the context of dynamic markets, it tends to quickly depreciate itself (Collis & Montgomery, 2008). On the contrary, capabilities are to be valued according to the firm's ability to combine and coordinate these resources with internal knowledge to achieve strategic and operational goals. (Kay, 2010).

In the DCs framework, three main themes are discussed;

1) The strategic importance of organizational structure, leadership, and management in the performance of the firm.
2) The crucial role of entrepreneurs also in the economic system, in particular, their importance is in:
   a) Identifying and capturing new strategic opportunities,
   b) Orchestrating/Allocating the organizational assets,
   c) Create business models and new organizational forms.
3) Organizational structure needs to be modified to be more flexible and faster in the decision-making process

2.2.2 Strategic Dynamic Capabilities framework

One way to organize factors that authors (Teece, Pisano, & Shuen, 1997) consider as helpful to determine strategic dynamic capabilities, is by dividing them into three categories; processes, position, and path. Organizational processes are modeled according to the company's assets positioning that is shaped by its evolutionary and non-paths to explain the firm's DCs and competitive advantage.

2.2.2.1 Managerial and Organizational Processes

2.2.2.1.a. Integration

As for external coordination (Amy Shuen 1994), also internal coordination and integration among these two are needed as well argued by Ronald Coase, author of the 1937 article "The Nature of the Firm," which focused on the costs of organizational coordination inside the firm as compared to across the market; half a century later he has identified as critical the understanding of "why the costs of organizing particular activities differ among firms" (Coase 1988: 47). Management's capabilities of integrating technologies and external activities are becoming more and more part of the already mentioned competitive advantage.

The way in which activities are organized is considered a source of internal competencies (here the difficulties in being copied) (Garvin D. 1988). The latter researcher, during his studies, found out that organizational routine had brought an increase in the quality performance (on 18 air conditioning plants) due to the way in which information was collected and processed, how customer experience was translated into the project of product engineering and so on.

The role of coordinative routines, meaning the way in which firm-specific assets are assembled in integrated clusters spanning individuals and groups so that they enable distinctive activities to be performed, is increasing, especially considering the effect on performance variables such as quality, development costs and enhancement of lead time. Furthermore, according to Clark, K., and T. Fujimoto (1991), the differences that are built-in competitors firm due to these routines find firm-level differences that persist in the long-term. Here why routines and their coordination are firm-specific as they exists.

The notion given to the competencies/capabilities of being different according to how they are coordinated defines the reasoning behind the fact that minor changes are able to devastate incumbent firms' positioning in the market. Henderson and Clark (1990) studied incumbents in the photolithographic equipment industry suggesting that productive systems display high interdependency in “Lean Production” - Taylor or Ford model of manufacturing organization in the automobile industry. Fujimoto (1994, pp. 18-20)

The above mentioned is fundamental, operating as a representation of the idea that organizational processes show high coherence; in this situation, replication is difficult because it would need both systemic changes within the company and among inter-organizational linkages.

The mere replication or imitation of a successful incumbent can easily bring to zero results. On the other hand, the common failure of the incumbent in introducing new technologies and- in general changes- can be explained by the mismatch between the organizational processes in dealing with the traditional product/service and the new one.

2.2.2.1.b. Learning

Learning is a process through which repetition, experimentation, and also failure of activities can lead to being performed better and quicker (Levitt and March. 1988). Characteristics to be recognized in the learning process are first, the fact that learning involves both individual and organizational skills. Indeed, these processes are collective, coming from the joint effort and contribution to solving a complex issue. This last statement will be deeply discussed in the subsequent chapter of this work of the thesis. Lastly, the acquired knowledge is then translated into new patterns, activities, routines, and organizational logic. Doz and Shuen (1989) shown that possible pattern for the company's learning comes from collaboration and partnerships- i.e. synergies-by helping firns to individualize dysfunctional routine as well as catching opportunities when present.

2.2.2.1.c. Reconfiguration and Transformation

In an environment characterized by ongoing changes, the ability of a company to sense the impelling urgency of reconfiguring and adapt its structure is a *must-have* (Amit and Schoemaker, 1992) To adopt the best practice, constant and careful surveillance of the market change is needed. The capacity to re-configure the organizational processes and transform the company activity is itself a form of learning.

Besides, because of the expensive cost of change, the firm’s ability to minimize the payoff for scanning the market and take fast action to adapt is ahead of competitors is defined as “high flex” capabilities.

2.2.2.2 Current Position

In a dynamic environment, companies can use their DCs to alter their starting position and proceed along a different strategic path; to move from one "road" to another, firms need organizational and managerial processes. The strategic position of a company in the market is to be discussed under different aspects. Besides the already mentioned learning and coherence among both internal end external processes; its ongoing location concerning its business assets is vital. The latter are to be considered not only as mere physical assets, rather as tacit, difficult-to-replicate, and implicit assets. Among them, we can find reputational and relational ones; here below we identify some cases.

A firm's technological assets can be or not protected by IP Law[6]. In general, the market for know-how is still uncertain because of the unwillingness of many managers to sell it – evoking the "crown jewels" metaphor; if the technology is released, the kingdom will be lost – or because of the difficulty in the trade. The above discussed technological innovation, to be effectively functioning require related and complement assets to deliver and produce new assets/services. A positive cash position with a good degree of leverage in the short term is crucial. It is often true that raise cash through the financial market can be risky because of the need for disclosure of information and data; therefore, in the short-run, the firm should focus on its balance sheet.

Certain types of businesses particularly benefit from the geography in which they are present. This non-tradable asset can be a source of advantage due to its hard to replicate advantages (i.e. lower transportation costs, superior convenience...)

2.2.2.3. Available Path

By applying Dynamic Capabilities and the related managerial and organizational processes, organizations can follow several different paths; examples are alliances (through which firms can learn from their partners), a formal joint venture (to enter with a partner directly into new markets) and so on. The main curtain to overcome here for being able to use the learning and experience taken by the strategic partners is the resource-based of the organization in question. Resources do give constraints in the possible paths, thus opportunities, that firms might enjoy.

[6] Intellectual Property Law; category of property that includes tangible and intangible creations of the human intellect

The possible path a firm can engage does depend also on its path behind. The notion of path dependencies states that history does matter; thus, firm past investments and routines have an impact on the actual and future possibilities.

This, because learning is inclined to be local. The different opportunities that might arise from the learning process are usually close to previous activities (Teece, 1988), meaning that learning is a process of trial, experiment, failure, and evaluation. Here, any major changes in the parameters will be a symptom of the inability of the company of producing quasi-experiment.

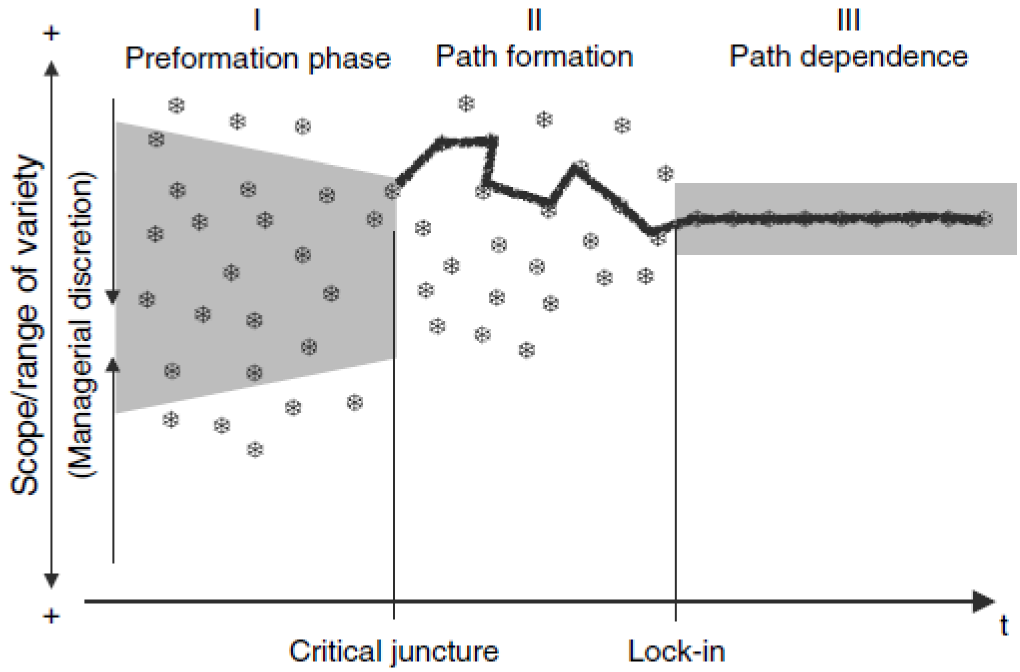


Fig. 17: Constitution of an organizational path Source: Schreyögg& Koch (2005), and Schreyögg et al. (2003, p. 272).

Therefore, overcome the inertia and the path dependence is a crucial responsibility of DCs; considering them as rigidity in the capacity of the organization to build something new.

On the contrary, what companies should aim at is *strategic flexibility* as: “The ability of the organization to adapt to substantial, uncertain and fast-occurring (relative to required reaction time) environmental changes that have a meaningful impact on the organization’s performance” (Aaker & Mascarenhas, 1984)

It is the possibility of opening boundaries in a way through which firms may absorb information and capabilities from the complex changing environment to be more responsive.

2.2.3. Replicability and Imitatability of Organizational Processes and Positions

Organizational capabilities bring perks and competitive advantage if based on routines, skills, and complementary assets difficult to replicate and imitate (Dierickx & Cool, 1989). Replication is the transferred and redeployed of acquired competencies. A transferring of information itself cannot be defined as "replication"; only when all relevant knowledge is fully codified and understood we can define it as a case of organization replication. Nonetheless, there are specific types of capabilities and thus, sources of competitive advantages, being so complex that is hard to be replicated. Organizational routines are tacit (Nelson, Winter, 1982, & Teece, 1982).

If a company can replicate another firm's processes and routines, it has the potential for learning and improvement. Understanding a process s the foundation for enhancement. Firms cannot improve what they do not understand. Indeed, the presence of tacit knowledge indicates that the underlying structure is not completely clear and understood, thus it limits the learning processes. Nevertheless, generally, the opposite is true; the learning proceedings are acquired through trial and error.

Imitation is the replication conducted by competitors. Here, the same reasoning that we followed for the replication is used; the more tacit the firm's knowledge, the harder to imitate. Moreover, in advanced countries, additional barriers come from IP Rights[7]

2.3 Strategy, Organizational Structure, and Environment

This section of the thesis aims to study how the competitiveness and the intensity in the market and how organizational structure is built, affects dynamic capabilities and therefore, firm performance. We're going to discuss the possible fit between the internal organizational structure and the external environment. Indeed, very often, the watershed between success or failure in the market is determined by how well the organizational structure of the company can adapt to a fast-changing environment. Namely, its ability in the maintenance of the so-called system-environment fit (Miles & Snow 1984, pp. 10, Klimecki & Lassleben 1998, pp. 407). As discussed by Teece, Pisano, and Shuen, the long-term prosperity of a company is achievable only if it is proactively able to adapt to the changing environment by exploiting both internal and external company-specific capabilities aka Dynamic Capabilities.

[7] Copyright, Trademark, Patent

2.3.1 Dynamic Capabilities as Measurement of Firm Performance

DCs are substantially different in respect to the Operational Capabilities; the latter, are used by the firm for the day-by-day activities (Winter, 2003) on existing products/services, for the same customer base and with navigated techniques (Helfat and Winter, 2011, p. 1244).

The former, on the opposite, are concentrated on adapting and performing strategic strategy following the modification of the environment (Zahra et al., 2006).

Helfat et. al (2007:4) gives a (in my opinion) complete definition of Dynamic Capabilities, quoting: "the capacity of an organization to purposefully create, extend and modify its resource base".

Dynamic capabilities might be explained as the ability of a company (Teece, 2007).:

1. **Sense and shape opportunities and threats**; seeking, researching, and scanning across markets to be ready to deal with opportunities and/or threats. To do so, firms need to maintain a constant and close relationship with their stockholders to be constantly aware of any possible change. Besides, to develop these competencies, companies must invest in R&D.

2. **Seize opportunities** are used to invest in the development of products/services once new opportunities are sensed; evaluate new capabilities and decide where to invest and how the market will embrace these. In this situation, multiple investment opportunities are possible. The best strategic choice, in this situation of various investment paths, Teece (1986) finds it as a flexible investment while waiting for the predominant design to emerge and later heavily invest in this winning one.

Timing along which re-allocate resources, as argued by Mitchell (1991) is also important and is affected by the company's existing position; companies that are pretty well positioned in the market can wait to see the best design, the others must fastening in the choice.

3. **Reallocate and reconfigure the resource-base of the enterprise** is the proficiency of the company of reallocating resources and capabilities to the new needs. "as the enterprise grows, and as markets and technologies change, as they surely will" (Teece, 2007, p. 1335). Thanks to the seizing ability, the performance of the firms might increase and the organization could grow therefore, it will be necessary to successfully re-allocate the newly formed resources as well as reconfigure the organization structure to deal with the change in technologies and markets.

The way in which DCs increment and affects a firm's performance is diverse. They improve speed and efficiency to the firm's responsiveness to environment alteration. Providing companies with wider possibilities and options in taking actions (Chmielewski & Paladino, 2007).

2.3.1.a Technical and Evolutionary Fitness

To measure the performance of DCs, Helfat et. al (2007. p.7) uses the term *technical fitness* in defining how effectively specific capabilities perform when divided by its costs: moreover, he relies on the so-called *evolutionary fitness,* which constitutes the good match between a DC and the context in which the firm operates.

With the term evolutionary fitness, Helfat measures how effectively DCs allow the company to sustain and create value by modifying its resource-based. As explained earlier, evolutionary fitness deals with the external environment and how the firm may grow and prosper in the marketplace. When a good fit between the external environment and dynamic capabilities of the organization exists, we can consider evolutionary fitness. Because technical fitness defines the performance of DCs accordingly to its costs, they have 2 major dimensions; firstly the quality of the capabilities – independently from their costs- and secondly, the costs of the creation and utilization of those capabilities.

Comparing the technical fitness of DCs of a company to its competitors'once is necessary to determine the evolutionary fitness of a firm's capabilities; if the technical fitness of a competitive enterprise is higher, it would be translated into stronger competitive pressure that limits the development and profit of the firms' capabilities (Helfat, & Margaret. 2009).

2.3.1.b Measurement Scale for Fitness

Technical fitness can never take value non-positive; it can be described as an absolute measurement of capability, the ability to perform an activity must exceed zero. Nonetheless, with the previous statement, we cannot argue that there is no possibility of having a capability that has a non-positive "transfer effect" on the technical fitness of other capabilities[8]. Indeed, it is commonly possible to observe a negative interaction between capabilities.

[8] Here we can describe the used example of trying to walk while chewing; if the chewing will negative affect the walkins action than the two should not be performed simultaneously. Still, individually, they can never be negative.

Evolutionary fitness, on the opposite, can assume negative value; to understand if a specific capability might take a non-positive value in the future, companies need to consider if they will encounter a cost if getting rid of it would become necessary. In a changing environment, there might be the need to eliminate an un-useful and expensive to maintain capabilities, if this action will provide a cash-out it will be defined as negative evolutionary fitness (Mansfield, 1971). To analyze if an organization might be able to get rid of a capability costless, two major problems need to be discussed:

- ✓ Can the firm own capabilities at zero cost without using them? Often, capabilities might decrease their value of function less if not used for a long period. To maintain the knowledge that individuals and teams have, the organization need to use it; using capabilities requires costs.
- ✓ Bundled nature of the capabilities. To be effective, a capability needs to be bundled with tangible assets, skills, and knowledge. The latter are costly. Considering a scenario where, due to the changing environment, the company would like to eliminate the capability while keeping the bundled parts; the organization might be willing to pay something to untangle them. In this situation, we are in the presence of a negative evolutionary fitness.

DCs must effectively perform both on technical than at the evolutionary fitness perspective.

2.3.1.c Evolutionary Fitness and Market Performance

As discussed earlier, Dynamic Capabilities are an integral part of the resource base of an organization; therefore, using a resource-based view, we can analyze how DCs can be a source of value for creating and sustaining competitive advantage.

Firstly, we need to estimate how much value a DCs can create (willingness-to-pay minus costs), and later, we need to compare this value with the one obtained by competitors' companies.

Dynamic Capabilities generate value by providing a firm with the ability to perform a particular function- a set of actions- for a specific goal. The value of this function is always *context-dependent* therefore, it can increase or decrease according to the changes in the environment. To be noticed, DCs may create high values, but it does not directly translate in real advantage if this value does not exceed other firms.

We can now state that Dynamic Capabilities do not necessarily reflect the creation of competitive advantage; many conditions need to be present:

- ➢ There needs to be present heterogeneity in the technical fitness of the DCs of the same sort;
- ➢ There need to be demand for the products/services because capabilities have values only if used;
- ➢ Lastly, DCs must be rare, differently competitors might be able to replicate, thus as earlier explained, they would not create competitive advantages.

2.3.2 Growth as Measure of Firm Performance

Growth in the firm's size is a good way to study the degree of performance. Without growth, companies can enhance their performance only by cutting costs or increase prices (Winter, 1995). Studies and empirical research used three-parameter to describe firm size: number of employees, the value of assets, and sales revenue. The latter is the most used, allowing the comparison with other firms and because they reflect current rather than the past dollar value.

An evolution in yardstick to define the performance of the company through growth is the so colled *Growth Persistence* (Sutton, 1997). To expect the persistency in the growth of an organization, and not randomness in it, two empirical assiduities sustain this growth over time:

- ❖ The industry life cycle is commonly recognized as a pattern in the industry life as emergence, growth, stability, and, decline (Klepper, 1997). When in the growth stage, several companies enter the market looking for new opportunities, here, unsuccessful firm exit. In the maturity/stability stage, many of the participating companies decide to exit the market and few larger firms dominate the industry. This common pattern exists due to the innovation in the technologies that will bring successful firms to have lower costs and higher quality, pushing the other out. The illustrated different pattern of growth implies that growth should not be random; indeed, successful firms continue to grow while others decline. The stage in which the industry finds itself deeply affects the future possibilities of growth.
- ❖ The experience curves partially explain the discussed costs reduction that happens during industry life. Experience economies are characterized by an exponential curve in which the log of costs per unit declines at a constant rate with respect to the log of the cumulative volume. This decrease in cost associated with the increase of the combined volume can be explained by several factors such as the *learning-by-doing* (Argote, 1999), exogenous technological processes, or learning from other companies.

In the industry in which the experience economies are significant – manufacturing especially (Ghemawat, 1985) - the cost reduction over time implies the growth along the industry life-cycle. During the growth phase, companies gain experience in technologies, demand to enhance, and product improves. Because of the demand increase, the production will meet the latter while decreasing the costs due to learning and experience. This trend is likely to continue until the market reaches the stability phase becoming saturated with competitors Winter (1984).

Firms that are able to survive long enough and thus, will benefit from the acquired experience, can enjoy persistence growth, namely the growth that will lead to more growth.

It is important to recall that, despite these examples of how DCs can forward the growth of companies, we also mentioned that not always Dynamic Capabilities leads to an enhancement of the performance; it deeply depends on different conditions. In an unstable environment, Dynamic Capabilities allows the company to survive because of the granted fitness with the environment.

2.3.3 Dynamic capabilities and organizational structure

Organizational structures are systems that outlines how certain activities are directed in order to achieve the goals of an organization; defining how labor is divided into tasks and how to coordinate them. can be classified with a mechanistic-to-organic dimension. The mechanistic one is characterized by a centralized decision-making process, thigh reporting structure, and a generally low level of flexibility. Opposite to it, we have an organic structure with less emphasis on procedures and rules (Burns & Stalker, 1961; Lawrence & Lorsch, 1967).

As possible to imagine, the ability of a company to adapt to change is deeply influenced by its internal structure. The different researcher tried to define which of the previous structure is the most likely to positively be ready to react to market changes. Findings from Zollo and Winter (2002) focusing on the learning mechanism of firms, claimed that larger, multidivisional, and diversified companies have a higher probability of benefiting from learning mechanisms.

To enjoy the benefits coming from DCs, companies should be characterized by local autonomy and decentralized structure to be faster in the adaptation to the changing market (Rindova & Kotha, 2001). An organic and reactive organizational structure featuring non-bureaucratic decision making is the key to have a more effective and efficient structure to respond to changes.

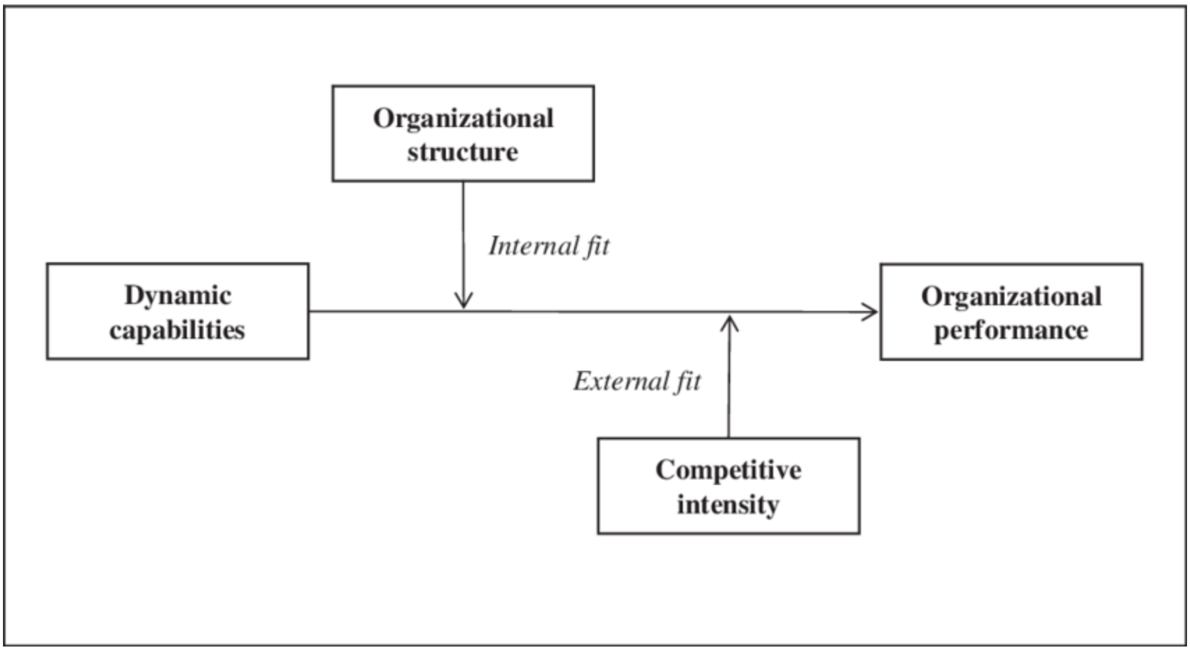


Fig. 18: Dynamic capabilities and performance: A contingency framework   Source: Researchgate

Indeed, to be able to enjoy the response to change, organizational structure should adapt according to the needs. This would only be possible in a scenario where the firm adjusts according to exogenous context variables.

Organizational structure may influence the effectiveness and evolvement of DCs. Indeed, in exchange for a highly responsive and organic structure, the organizational structure asks for a non-bureaucratic decision-making process to facilitate both the flow of information and quick and responsive decision-making (Teece, 2000, p. 41).

2.3.4 Dynamic capabilities and competitive intensity

Researchers (Eisenhardt & Martin, 2000; Protogerou, 2012; Teece, 1997) commonly agree that the level of intensity in the market in which the company operates deeply affects the positive relationship between performance and DCs.

Thanks to scholars like M. Porter (1980) we might define competitive intensity as the scenario in which in the market numerous companies openly can be considered as competitors, we stress the idea that this might limit the possibility to grow considering a world with limited resources and the related struggle for firms to survive in case of high intensity.

It is also noticeable how, in the utmost case of monopoly, an organization probably will not need to reconfigure its resource-based due to changing competitive environment, therefore, it will not need to develop Dynamic Capabilities (Kohli and Jaworski, 1990). In this scenario, the development costs of the DCs might exceed the benefits coming from them.

On the opposite side, the fearful presence of competition might have a two-fold effect on the firm's performance; on one hand, it will put the company in a riskier position of losing its market position, its customers, and, thus, decrease its performance. The other -positive here- aspects are the need to innovate to differentiate from competitors (Berghman, 2013). Innovation might bring new customers, the development of new products or to exploit opportunities for entering a new market. The firm's ability of sensing new markets and seizing new opportunities can grants it the first-mover advantage (Makadok, 2001; Porter, 1980).

The former concept is well explained by Zahra (1993, p. 324) arguing that "when rivalry is fierce, companies must innovate in both products and processes, explore new markets, find novel ways to compete and examine how they will differentiate themselves from competitors", thus companies that develop DCs to identify opportunities in a competitive market, will have higher benefits.

2.3.5 Avoiding the Zero-Profit condition

When dealing with a market dominated by numerous participants/competitors, often the "equilibrium" in place is reached when firms are only able to make enough returns to cover their costs. A situation known as "Zero-Profit condition". The latter is pretty common when companies are homogeneous and when there is no space or capability to differentiate. One of the first economic analyses attempting to avoid this scenario is the already mentioned Porter's (1980) Five-Forces framework, arguing, though that one of the principal ways to differentiate was based on the product choice.

Following the researcher found in the backbone of the differentiation, the upstream part of its activities. In particular, Penrose's view of the business enterprise as the owner of resources- that can be deployed in several ways- coming from action previously realized. With this resource-approach, firms will be able to realize a profit by only owning scarce and difficult to replicate resources and assets/services desired by customers. Nonetheless, this approach is static because do not consider the learning effect.

For this reason, a more robust framework as the Dynamic Capabilities one is in place; defining how a company will be able to sustain its competitive advantage in a dynamic environment subject to continuous change and with strong competition. Penrose recognized the essential presence of know-how, learning process, and path dependence of routines and capabilities given by acquired knowledge. Learning grats the firm to use its resources more efficiently thus, also a company characterized by a poor balance sheet has the opportunity to grow thanks to its learning mechanism.

2.4 The role of the Strategic Management

In this part of the work, we are going to focus on the key role that strategic management has. In particular, we are going to overcome the operational involvement it has in the company and we're going to focus more on how, by orchestrating strategic assets to conform to market dynamics, it can create value.

More Information:

Penrose's ([1959] 1995). Her work is recognized as one of the main intellectual foundations for modern resource-based theories of business strategy and theories of organizational routines and capabilities. Underlying the role of the manager and the entrepreneur; having the major role of interpreting through different lens technologies, markets and business model and providing benefits for her organization.

The concept of DCs is deeply linked with managerial and organizational capabilities. Not only because, as previously discussed, the organizational structure has an impact on how the Dynamic Capabilities can perform; also because of the presence of learning and innovation.

The way in which, strategic assets are orchestrated and newly combined when dealing with a dynamic market, is focal in the DCs framework. Let us shortly list the main economic function a manager perform in the business organizations helping to solve specific problems that would otherwise bring to market failure:

i. Orchestrate specialized and strategic assets;
ii. Choose the organizational models to follow with a coherence incentive system;
iii. Design Business Model;
iv. Design control and basic operations;
v. Encourage innovation;
vi. Make investment choices;
vii. Provide vision, mission, and motivation to workers;

Managers are a valuable source for the market to correctly work and for the organization to be effective in that market.

2.4.1 Asset Orchestration

Although the operational functions that managers need to perform (control, supervision, and administration) are valuable, often, the strategic activities are very often underestimated (Barnard, 1938). When dealing with coordination in the market we may encounter two major scenarios (Hayek, 1945):

a) Resource allocation through *market mechanism*, possible only in well-organized and developed markets; the price system serves as a way to smoother the coordination and is used as a measurement of scarcity or abundance. Consumers automatically adjust to a price increase by reducing consumption and simultaneously producers increase production. This is a mechanism that is typical of commodity-like goods.

b) Resource allocation in case of *thin market;* here assets are not automatically allocated by the market. Often, in this market, transactions do not occur at all because assets are idiosyncratic, thus beneficial only if used coordinated in a specific manner (i.e. if considering competence as the asset in question and if its value varies according to the complementarity of the bundle of assets owned by the seller, the valuation of the former become very difficult).

A common example of the latter market is the know-how or intangible assets one. In this situation as the author Teece (1981b) argued, resource allocation within the organization will substitute market allocation. Accordingly, because most of the intangible assets are idiosyncratic, they might be more valuable when they complementary work with other assets.

Therefore, the ability of managers to create a unique bundle of assets can enhance the asset's value. A quoted example of asset orchestration is the *Systemic Innovation*[9]- in contrast with autonomous innovation – where innovation cannot be carried out just by using a contractual mechanism.

[9] Specialization between different part of a system needs strong coordination among subsystem for innovation to happen.

Thin markets →
Need for internal resource allocation →
Strategic managers required
Thin markets in the presence of change →
Need for internal resource *reconfiguration* →
Strategic managers who build, align, and adapt cospecialized assets

Fig. 19: Thin markets and strategic managers Source: Oxford University Press

Important to further underlying how coordination can be considered an economic problem only relative to environmental change; here the struck term Dynamic Managerial Capabilities take importance (Adner and Helfat 2003).

2.4.2 Dynamic Managerial Capabilities

Dynamic Managerial Capabilities which is the capacity of managers to purposefully create, extend, or modify the resource base of an organization, it does not solely include adaptation and coordination of resources (Barnard, 1938 and Williamson, 1995). Indeed, executives have deeper responsibilities such as invent and implement new business models, orchestrate assets, and make a smart investment in a critical situation.

As well as Dynamic Capabilities, Dynamic Managerial Capabilities comes from prior learning and experience. Managers, acting as decision-makers, are in charge of analyzing the change in customers' needs/desires, competitions, and technology and being able to rapidly act within the firm.

As resource allocation performed by executives shapes the markets, the latter does mold the business (Katz and Shelanski, 2007). They co-evolve thanks to the manager. Indeed, by being able to orchestrate assets, managers may shape the external dynamic at the company's benefit reaching evolutionary fitness.

2.5 Dynamic Capabilities Limits

From the discussion that we encountered this far, it might look like DCs grants the ability to always have a competitive advantage in the industry, hence delivering a positive financial performance. Notwithstanding, making this kind of conclusion is to be considered as deeply misleading; indeed, while owning and developing such capabilities is always desirable, their effectiveness has some limits and implications.

About this, either if a specific DCs does pass the VRIN test (Valuable, Rare, Inimitable, Non-transferable) because involving "organizational ambiguity" and because coming from specific choices of internal activities, there are no limits to the number of competitors that can replicate a slightly different or new version of those capabilities.

Moreover, Dynamic Capabilities open new opportunities and new markets to the organization but at the same time, the number of possible competitors increases too. The concept is that is not only necessary to own DCs but to perform them better than any other possible competitor. We can state that, like any market strategy, a firm that chose to heavily rely on DCs has to deal with tradeoffs. The classic tradeoff "exploration/exploitation dichotomy" (Ghemawat and, Ricart, 1993, O'Reilly and Tushman, 2004) will be considered and discussed as the relationship between higher and lower-level capabilities. Reorganize the resources of an organization to achieve a new and desirable position in the market, deals with a tradeoff with creating the lower-level capabilities needed to deliver the static efficiency necessary to execute any product/service market position.

DCs do not have the only responsibility of repositioning a company in a new market but additionally, they need to perform better than competitors that have the same goal of pursuing that successful position. Also considering the first-mover advantage in the new environment, later entrants might have superior lower-level capabilities and overthrown the incumbent.

Lastly, there is the presence of an additional trade-off; organizations that want to have a smoother reorganization and reconfiguration process must apply investments that provide flexibility to the company. Examples of such costly investments are: a) investing in assets that have extraterritorial value, b) invest in the brand name so that it can be easily transported in a different position if needed, c) investment in the skilled salesperson, and so on. However, investing in activities or resources that enable us to be flexible involves a compromise with current efficiency.

Therefore, it is true that Dynamic Capabilities are valuable, nevertheless, they are characterized by the same limitations of traditional market strategy: not being able to create and sustain all kinds of competitive advantage at the same time (Anand & Collis, 2008).

There are no DCs that enable an organization to reinvent itself without changing its processes and routines that characterized it until there; this means that companies need to chose which kind of Dynamic Capabilities they want to focus on being conscious of the presence of the previously discussed trade-offs.

2.6 To sum up

At some point, during their lifetime, companies will have an urgent need to alter their resource base. Because dropping all the existing resources to enhance the evolutionary fitness bear high sunk costs and because trading the resources is not an easy task in the market, often organizations will choose to enhance the evolutionary fitness of their already existing capabilities. Nonetheless, the latter will decrease the possible opportunities but will improve the profits.

Dynamic Capabilities deals with strategic change, particularly with the change concerning the resource-base of an organization, hence our main subject links with many areas of empirical research.

To conclude this chapter, let us just summarize some basic concepts that we might use for future arguments; companies in changing environments may benefit from DCs, particularly they might establish the so-called “second-order capabilities” to upgrade the processes of improvement to push the enhancement threshold always further. Nonetheless, to build effective Dynamic Capabilities, it is required more than a naive application of tools, rather, it asks for a rebuilding of the organization; especially because of the presence of limits along which they can be employed.

DCs are fundamental for companies that operate in a dynamic environment, characterized by fast-changing situations. The former grants enterprise alternative to the “ad hoc problem solving” (Winter, 2003). What firms must be able to do is understanding and identify the associated mechanism that can help managerial future decisions.

In the following chapter, we’re going to discuss and uncover the “black box” of DCs by describing the ones that are more useful for companies working in international dynamic markets.

CHAPTER 3

– Capabilities as Firms' Opportunities –

3.1 Introduction

The presence of Dynamic Capabilities is imperative when discussing the challenges that an international (dynamic) competitive market and the increase of economic turbulence brings to global enterprises. In this scenario, organizations continuously need to create, expand, and sustain their core resources. The development of DCs for a business that is affected by the ongoing changes in the environment in which it operates, favor the implementation of learning management whose enhances the absorption capacity to be later deployed in the reorganization of the processes and activities.

Therefore, in this chapter of the thesis, we are going first to defining how organizations should engage a turbulent environment, how to cope with the uncertainty, and the vagueness brought by the ongoing changes of the markets in which they operate. In dealing with this environment, organizations will rely on the already discussed Dynamic Capabilities, what we are going to analyze here is how companies using DCs can obtain a competitive advantage in a fast-changing context.

When dealing with DCs, often enterprise does not exactly what are the capabilities that are necessary to own in order to be competitive in the market, for this reason, we're going to detail which are the capabilities that businesses should develop and maintain. Namely, the possibility of having an organization with a strategic foresight allowing them to acquire and exploit information obtained from the external environment. The absorptive capacity together with the learning ability of the organization enables them to obtain knowledge from the external environment to later enhance them and use it in the operation activities.

Lastly, in identifying the necessary speed for enterprise to deal with the ongoing change environment, we have defined how technological capabilities, marketing capabilities, and market-linking capabilities enable the businesses to quickly react and generate strategic changes to cope and sustain the competitive advantage.

3.2 Engaging Turbulent environment

The environment of businesses from a global perspective is becoming more and more complex (McKenna, 1991; Chattell, 1995; Ahmed et al., 1996; Narus and Anderson, 1996; Gilmore and Pine, 1997), dealing with rapid and continuous change with subsequent difficulties in coping with it. The traditional mindset that saw the world as "a giant machine, generated by cause and effect - envisioned as being assembled by interlocking gears." (Kelly and Allison, 1999) is to be considered inappropriate. On the opposite, by relying on the Peters' (1999) description of possible types of the market world, we are nowadays in a global market that can be seen as his type 2 - non-linear dynamics (chaos), whereby there is high short-term and low long term predictability; alternatively his type 4 system – complex, wherein there is high long term and low short term predictability. This last theory, look at the world as "a web of 'living', interconnected, self-organizing parts that form a constantly co-evolving, morphing, and evermore- the complex whole" (Kelly and Allison, 1999: 35).

There is not a widespread definition for the identification of the turbulent environment; some authors consider it as synonymous for environmental uncertainty (Downey, Hellriegel and Slocum Jr 1975, Miles 1978, Jauch and Kraft 1986 and Milliken 1987) mining, the difficulty in anticipating the changes that will affect companies operating in the global market (Thompson, 1967; Milliken, 1987). The operating environment (Certo and Peter, 1993) are external factors that have a potential influence on firms' operations. Analyzing the environment can be critical to identify the core points of environmental pressure and predict the change bias. More recently, environmental turbulence has been likened to technological changes as well as changes in customers' preferences and demand fluctuation (Jansen and Van Den Bosch and Volberda (2005). In accordance with Zhao, Zuo, and Zillante (1985) "Environmental turbulence is used to describe temporary disruptions in the organization caused by environmental factors, such disruptions often have devastating and harmful effects on organizations."

Environmental turbulence deeply affects the organizations and how they operate; because of the uncertainty, companies need to be careful in adapting to new requirements and act fast in an uncertain environment (we're going to specify later what we detect as "fast" response to changes).

Therefore, one of the main organizational challenges that companies have to face is how to maintain their competitive advantages in a competitive arena becoming more and more volatile and uncertain. The dynamism of the market deals with the changeability of the competitive forces during the time; in particular, the level of this dynamism depends on the frequency and intensity of these changes. Under turbulent circumstances, mapping the possible competitive chances is not straightforward but firms need to play an active interpretation role (Daft & Weick, 1984).

With the "hypercompetitive behavior" D'Aveni (1994) defines the "process of continuously generating new competitive advantages and destroying, obsoleting, or neutralizing the opponent's competitive advantage thereby creating disequilibrium, destroying perfect competition, and disrupting the status quo of the marketplace". Here companies need to proactive look for and challenge the status quo of their competitive arena aiming to acquire an advantage (D'Aveni, 1994; Sanchez, 1995; Teece, Pisano, & Shuen, 1997; Tushman & O'Reilly, 1996).

Organizational learning is often seen as the best response to deal with environmental changes and hyper-competition; through ongoing learning, companies will be able to keep up with change and innovation and therefore, continue to be competitive. Organizational learning can be related to specific managerial capabilities such as external knowledge integration (Tripsas, 1997), strategic decision-making (Adner & Helfat, 2003), strategic resource utilization and coordination (Majumdar, 1999), market orientation (Menguc & Auh, 2006), and strategic political management (Oliver & Holzinger, 2008).

Market environment turbulence is due to the techno-socio-economic factors such as enhancement of technological sophistication, globalization, economic shock, and complicated form of relationship and related network (Ford & Mouzas, 2010; Gebauer, 2011; Mattsson, Corsaro, & Ramos, 2015; Möller, 2010). Until now, a prevalent marketing reaction that companies had to face turbulent environments is refined the current products or develop a new one to increase the performance (Cronin, Smith, Gleim, Ramirez, & Martinez, 2011; Hakonsson et al., 2016). Therefore, businesses dealing with a dynamic environment should not only rationalize the external environment but also the internal processes to adapt companies' activities with the new opportunities.

Especially in the global market, where companies need constantly to adapt, change, innovate and reinvent due to the dynamism of the environment, firms' sensemaking is a factor that might help managers in dealing with the complex networks (Cederlund, 2015; Green & Cluley, 2014; Perks & Roberts, 2013). If enterprises can make sense in the changing environment, they will be able to figure their position in the market and be ready to react in case of turbulence. Indeed, as argued by Henneberg, Naudé, and Mouzas (2010), the sensemaking ability of businesses improve their possibility of engaging new business idea ahead of competitors. Nevertheless, organizations need to own internal processes to benefits from sensemaking.

3.3 The role of Dynamic Capabilities

Due to the already mentioned ambiguity and turbulence of the environment, companies need to cope with an increasing level of uncertainty to succeed (Vecchiato, 2015). In this dynamic context, DCs have the main role in dealing with the generated uncertainty (Teece & Leih, 2016; Vecchiato, 2015). Recalling the main characteristic of Dynamic Capabilities as the ability to sense, seize, and transforming firms' resources to adapt to changes to take advantage of the created opportunities; through them, organizations could proactively respond to and shape the unknown future (Teece & Leih, 2016). DCs are the possibilities of an enterprise of modifying their core competencies to approach strategic change in response to environmental change (Schilke, 2018; Dixon, 2014).

Studying SMEs competing in a dynamic European audiovisual production environment, Naldi et al. (2014), discovered that both sense-making and seizing ability could deeply enhance the innovative organizations' performance. Nonetheless, to be used for this purpose, these capabilities need to overcome a specific threshold (Naldi, 2014). In a dynamic business environment, the ability of sense-making and a seizing ability as an early warning signal, enable enterprises to identify new market opportunities and/or imminent threats (Li & Liu, 2014; Zahra & George, 2002). Later, firms must reconfigure resources and capabilities allowing them to foster a flexible adaptation along with the ongoing evolvement of the market (Teece, 2007).

DCs perspective has been criticized, in particular, "the role of perception of early signals of emerging trends, the organizational interpretation capability, and the ability to trigger organizational responses ahead of the competition" is not studied adequately (Rohrbeck, 2015, p. 7). On this limitation, the latter author suggested to integrate DCs perspective with strategic foresight; by linking the two studies, "knowledge creation about how organizations can strive in our uncertain and hypercompetitive environments" can be boosted.

Central attention has been put into the DCs regarding strategic flexibility (Grant 1996, Sanchez 1995), organizational learning (Cohen & Levinthal 1990, Helfat and Raubitschek 2000) and managerial capabilities (Adner & Helfat 2003, Mahoney 1995) because these Dynamic Capabilities are crucial for the strategic adaptation of companies (Levinthal 1991, Miller 2003) and dynamic strategic fit (Itami & Roehl 1987). Managerial capabilities are those dynamic factors that help firms in achieving congruence between the turbulent changing environment and the company's reorganization of resources (Teece, Pisano & Shuen 1997). Managing the firms' growth opportunities by selecting new product applications in businesses existing and new segments where enterprises can effectively use its resources and knowledge is the key role for these capabilities (Tripsas, 1997). Managers play a proactive role in dealing with change by identifying new technological opportunities thanks to environmental scanning and improve the integrating ability. The figure of the managers is important for competitive repositioning in a turbulent environment.

Organizational Learning is a DCs used to create economic value through the development of new activities and ideas and renewal of existing capabilities (Kogut & Zander 1992). Without these capabilities, organizations can not use the productive capacity of their resources (Kor & Mahoney, 2000) or foster the accumulation, deployment, and renovation of capabilities that can fuel innovation and growth (Mathews, 2003).

Businesses need strategic flexibility to adapt the allocation of resources to the changing of a dynamic environment (Smith & Grimm 1987). Turbulence in the environment not only requires the enterprise to effectively manage its current resources but it is necessary to own flexibility to rapidly respond to dynamic market conditions.

3.3.1 Strategic Foresight

Companies have to deal with a high level of uncertainty in the economic environment and to face this situation they need to enhance the development of future-oriented practices and techniques to help the decision-making process (Porter, 2004; Vecchiato, 2015). The forecasting method of future development is necessary along with the increase in the turbulence of the environment (Rohrbeck, 2015). Two major techniques are been developed by managers, namely scenario programming and environmental scanning. These latter foresight methods are grouped under the name of "strategic foresight" (Rohrbeck & Schwarz, 2013; Vecchiato, 2012).

Environmental scanning is the "acquisition and use of information about events, trends, and relationships in an organization's external environment, the knowledge of which would assist management in planning the organization's future course of action" (Choo, 2001, p. 72). It is mainly used by enterprises to analyze the external factors driving the change in the environment and be able to effectively react and grants future competitiveness (Sutton, 1988). In the other method, scenario planning has been defining as "that part of strategic planning which relates to the tools and technologies for managing uncertainties of the future" (Ringland, 1998, p. 2). The previous concept contains the main assumption viz that future changes are not predictable but some events are predetermined (Varum & Melo, 2010). The identification of strategic risks in a changing and dynamic environment, testing the strategic sturdiness against unforeseen events (Schwarz, 2006) as well as shaping the strategy of development and planning (Wilson, 1998) are considered the core of these methods.

Conceptually, strategic foresight is deemed in two different ways; as a processor and as a business's ability (Rohrbeck & Gemunden, 2011). Moreover, Daft and Weick (1984, p. 294) argued that "interpretation is the process through which information in giving meaning and actions are chosen". Organizations will use strategic foresight as an ongoing set of practices, not as a process with a beginning and an end (Rohrbeck, 2015). Therefore, Slaughter (1997, p. 287) sees foresight as an "ability to create and maintain a high-quality, coherent and functional forward view and to use the insights arising in organizationally useful ways; for example: to detect adverse conditions, guide policy, shape strategy and to explore new markets, products and services". Indeed, strategic foresight is a practice that develops and enhances the DCs of companies, helping to survive in a changing and dynamic market.

Being able to use and imagine the possible future according to a different scenario, instead of being only limited to definite predictions, grants managers"to discern system boundaries, relationships, and emergence; to invent and detect changes in the conditions of change; to rethink the assumptions we use to understand the present" Miller (2011, p. 28). Providing a good interpretation of the future development and threats could be the core opportunity for dealing with a fast-changing environment (Becker, 2002; Vecchiato & Roveda, 2010; von der Gracht, 2010; Teece, 2014). Strategic foresight can be seen as the foundation for the capabilities of sense emerging opportunities and threats (Vecchiato, 2015, p. 34).

3.3.2 Strategic Flexibility

Strategic flexibility can be defined as "an organization's capability to identify major changes in the external environment (e.g., the introduction of disruptive technologies), to quickly commit resources to new courses of action in response to change, and to recognize and act promptly when it is time to halt or reverse such resource commitments" (Shimizu & Hitt, 2004, p. 45). It allows organizations to react and be proactive to act in the situation of change in the competitive arena to sustain or enhance the competitive advantage. Core elements of strategic flexibility are to be detected in the sharing of investments across different business areas, in the presence of liquid resources to be easily allocated in case of a dynamic environment, and in the approach to new opportunities that might emerge (Grewal & Tansuhaj, 2001).

The increasing importance of the globalization arena has opened a new competitive landscape for firms that have to deal with various and fast changes such as the blurring of industry barriers or variation in the international activities bringing, therefore, to the need for ongoing investments and innovations (Hitt, 1998). To succeed in this uncertain and dynamic environment, companies need a certain level of flexibility and openness allowing fast responsiveness and improvisation (Wulf, 2010).

The set of activities carried out by firms in the turbulent environment are systematic variations in processes, products, and structure; the power and diversity of these changes are necessary to determine the agility of enterprises working in an international context (Weber and Tarba, 2014). According to the latter authors, strategic agility is a meta-capability involving the balance of capabilities over time. Indeed, strategic flexibility enables a company to change its strategic path without losing momentum; authors selected three main capacities that international companies must develop to create agile organizational structure:

a) Making-sense quickly
b) Making decision nimbly;
c) Rapidly reallocation of resources.

The main goal of strategic agility is to "prevent stagnation and painful transformation so that companies do not become elephants that need to learn to dance" (Doz & Kosonen 2008,

p. 96). In particular, being flexible to avoid global company to face a "rigidity trap" (Meyer, 2011; Ferraris, 2014; Bresciani & Ferraris, 2016).

In a new and dynamic competitive landscape, shaped by the change in the environment, cannot be faced through formal strategic planning, on the opposite, managers must find "a balance between the stability necessary to allow the development of strategic planning and decision processes and instability that allows continuous change and adaptation to a dynamic environment" (Hitt, 1998, p. 25). Indeed, many authors see strategic flexibility as a core Dynamic Capability because it allows fast recognition and response to the new-born problem (Teece, 1997; Zhou & Wu, 2010). In addition, strategic agility is recognized to be a DCs by meeting all the "formal" requirement (i.e., to sense and seize opportunities, as well as being able to reconfigure the company's assets to deal with environmental changes. Teece et al., 1997).

Achieving strategic flexibility can be done through both structural and renewal change; by developing human capital, enhancement of new technologies, build dynamic core competencies, and produce a new comprehensive organizational structure. Moreover, to strengthen the agility of the business at an international level, the enterprise should generate a long-term vision while using foresight to balance short-term needs with the long-period performances (Hitt, 1998). Speed and adaptation to the new environment represent the core of strategic flexibility (Lenglik-Hall & Wolf, 1999).

3.3.2.1 Strategic Agility Gap

Once organizations have been able to be flexible enough in adapting to the new changes in the environment, a second shock in the market might follow; in this situation, it is important to understand the ability of the business to keep pace with the trajectory of change. Here we define the so-called "strategic Agility Gap" as the difference between the rate at which a firm adapts to change and the rise of the new unexpected challenges. The figure shows how the gap increases according to the increase in the pace of the change; the acceleration of it will result in a reshaping of the risks and opportunities available. Usually, organizations are slow to respond to challenge events while they should be ready to adapt as challenges changes.

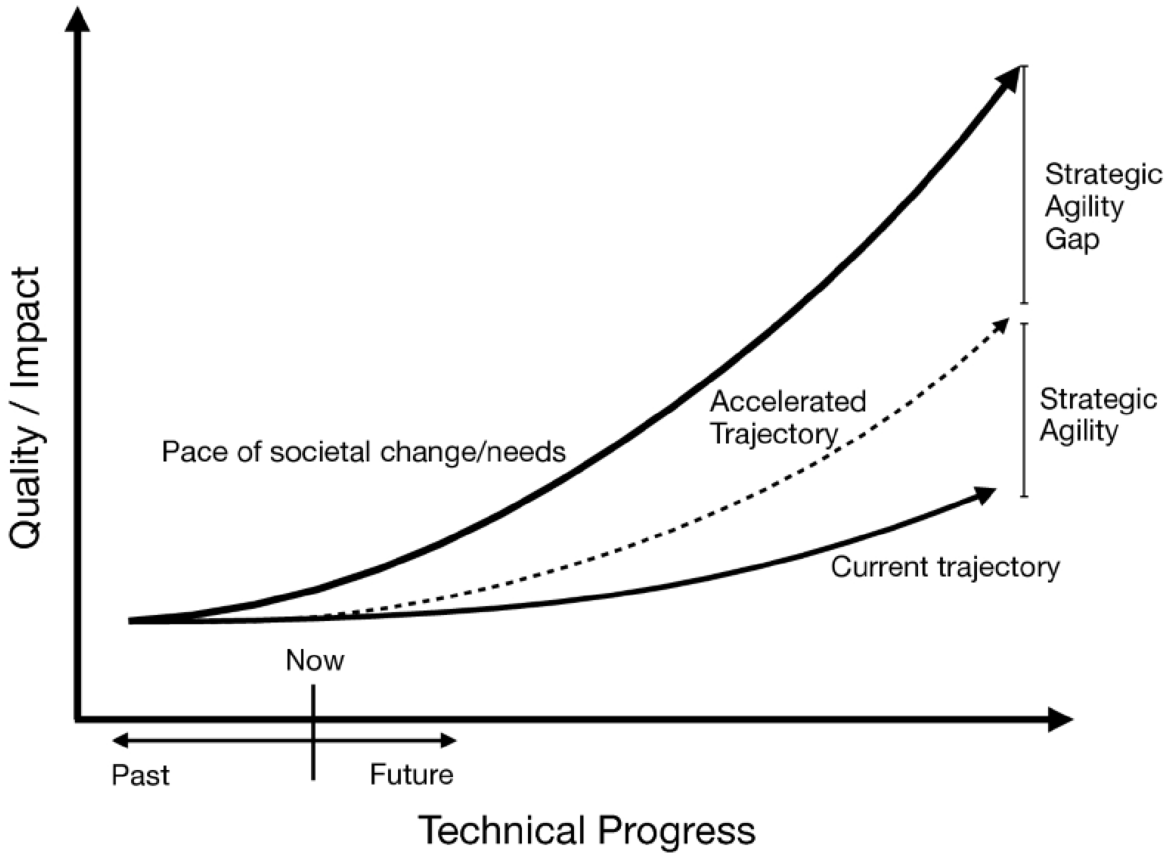


Fig. 20: The strategic Agility gap Source: Reserchgate

The trajectory of growth might harm the firms, whose performance and solutions might decline before they are able to produce a positive effect. To avoid this possible risk, companies need to improve the ability to anticipate and re-align resources in advance. Failing in anticipating the negative downturn, will increase the risk of fail in keeping up with the tempo. Indeed organizations need to "coordinate and synchronize activities over changing tempos, otherwise, decisions will end up slow and stale" (Woods, 2020). For companies surviving in a turbulent environment need to create and sustain the ability to continuously adapt.

3.4 Absorption and Learning capability

For companies' innovation results, performance, and survival in the period of market turbulence, the learning ability is crucial; as we have seen, the need for organizations to continuously re-define their business model and create new customer value is growing due to the environmental dynamics of the globalized world. Companies' successful growth strategies in changing markets have been linked with the "disruptive innovation" (Christensen, 1997; Yu and Hang, 2010); disruptiveness has been considering related to the creation of a new business model (Markides, 2006; Chesbrough, 2010) to be later defined in terms of strategic innovation (SI) in the strategic management area and value innovation in the strategic market (Matthyssens, 2008; Midgley, 2009; Sosna, 2010).

SI is related to the activities of the company with the aim to deviate from the market's rule (Baden- Fuller, 1995; Govindarajan & Euchner, 2010; Govindarajan & Trimble, 2004; Markides, 1999; Miller & Chen, 1996). Nonetheless, this deviation does not produce economic rents if not substituted with a new and superior value proposition (Jaworski, 2000; Slater & Narver, 2000; Sirmon, 2007). We, therefore, define strategic innovation as a deviation of the industry rules of the game in order to offer new and substantially superior customer value.

3.4.1 Learning structure

The core aspect of absorptive capacity relies on the fact that enterprises need to possess prior related knowledge to be able to assimilate and use the newly created knowledge. Owning accumulated knowledge enhances the ability to use new knowledge into memory – acquisition of knowledge (Bower & Hilgard, 1981) is a concept argued to be self-reinforcing – and the capacity to recall it and use it when needed. Prior knowledge increases learning because memory is built through associative learning, meaning that events are recorder thanks to the creation of linkage with pre-existing information. Indeed, as psychologists affirmed that in the issue of learning the word is not a merely lack of exposure to them but that "to understand complex phrases, much more is needed than exposure to the words: a large body of knowledge must first be accumulated. After all, a word is simply a label for a set of structures within the memory system, so the structures must exist before the word can be considered learned." (Lindsay & Norman, 1977).

Authors further suggest the possibility that knowledge itself might be a set of learned skills, therefore the performance of a learned activity might positively influence and improve performance on subsequently learned skills (Ellis, 1965). Scholars refer to it as "learning to learn" (Ellis, 1965; Estes, 1970). Being careful in saying that in any situation prior knowledge enhances the performance of the subsequent action, we can state the presence of a relationship between early learning and subsequent experience. Similarly, the problem-solving skills develop; prior experience in problem-solving help individuals in acquiring related skills.

Indeed, learning capabilities and problem-solving skills are fairly similar; the core difference is what they permit to learn; in the first case, there is the ability to assimilate the already existing knowledge while in the second case, we represent the capacity of creating new knowledge (Langley & Simon 1983, Simon, 1985). The latter mentioned authors additionally suggest that the preconditions to be successful in the learning ability are the same as for the problem-solving. Learning is cumulative and the subject to the learning performance will be more effective if related to something which is already known.

Generally, learning has to be divided into two ways in which firms might acquire it, namely, there is a quasi-automatic and unconscious way of experience accumulation or in a deliberate way (Arthur & Huntley, 2005). The former possibility of knowledge acquisition is necessary but insufficient for DCs creation (Romme, 2010); in an environment characterized by high ambiguity and uncertainty, the needed intervention has to be deliberate. The value of the latter, in a complex and strategic context (i.e. Mergers & Acquisition, industrial plan) is especially high. The "deliberate learning" (Zollo & Winter, 2002) aka "Induced learning" (Nembhard & Tucker, 2011) or "planned learning" (Levy, 1965), has the aim of understanding the dynamic between practices and their performance implications. This is particularly true when managers foster the learning process to enhance the motivation, agility, and experience-based learning of her employees through experiments or training (Nembhard & Tucker, 2011)

3.4.2 Absorptive capacity

Absorptive capacity (AC) is the "ability to acquire, assimilate, and then exploit external information for commercial ends" (Cohen & Levinthal, 1990). This concept is fascinating if used to define how organizations develop to capture both internal and external knowledge, retain it, and use it to enhance organizational performance. The multidimensional construct can be described as "a set of organizational routines and processes by which firms recognize, assimilate, and exploit new external knowledge to create new knowledge and/or commercial outputs" (Lane, 2006; Zahra & George, 2002).

According to this last definition, the first dimension is the recognition capability meaning the firm activities focused on firstly identify to later acquire new external knowledge (Zahra & George, 2002). The way in which new information is filtered, meaning the scanning of a company's external environment, represent a starting point for the sense-making (Daft & Weick, 1984; Narayanan, 2011). For example, being able to scan remote environmental areas grant the possibility to find new market opportunities, new strategies, and discover new business models (McGrath, 2010). Proactively searching for information in the external environment, stimulates the acquisition of insight into features such as future customers' needs other industries, industry tendencies, and general environmental information.

The second aspect is the assimilation capability which is characterized by the firm effort in interpreting and understanding the previously acquired knowledge; the sharing between internal and external knowledge is a valuable aspect to be considered (Lane, 2006). The learning mechanism of assimilation can be seen as the "lens" along which interpretation can be decided (Prahalad & Bettis, 1995). It allows the deliberate learning stimulation for critical reflection on markets, customers and marketing approaches; these will positively influence the enterprise's ability to foster innovation.

Finally, the exploitation capability is the possibility that businesses have to transform the assimilated knowledge in operations, routines, and capabilities; it represents the ability to "create something new" (Flatten, 2011). The exploitation mechanism aims to effectively harvest and incorporate newly assimilate knowledge in business operations (Zahra & George, 2002). Particularly, they stimulate the adaptation of organizational structure and procedures, support new initiatives, and replace organizational's skills.

The absorption capacity is a DC affecting the core nature of the company by creating new capabilities to sustain and enhance the competitive advantage in an ongoing changing environment (Barney, 1991). The acquisition of external knowledge varies according to the absorption potential of the company including the acquisition of capabilities and assimilation. Absorptive capacity gives businesses the chance to capitalize on the new knowledge (Zahara & George, 2002). Especially for companies operating in a turbulent and fast-changing environment, the capacity to reconfigure and transform knowledge is fundamental; combine and redefining routines is necessary to incorporate new information with internal knowledge.

3.4.2.1 From individual to Organizational Absorption capacity

The firms' ability to develop the absorptive capacity is deeply affected by its members; indeed, the investment built on its employees works as the basis for its performance. As already mentioned, the absorptive capacity of a business does not solely depend on its ability to acquire and assimilate information; it is also necessary to exploit and translate them into organizational activities and procedures. On this, enterprises' ability to absorb knowledge is not limited to the obtainment of external information but it requires the transfer of learning within and across internal sub-units. Therefore, to better understand the sources of the company's absorptive capacity we need to analyze the internal communication system together with the relationship with the external environment.

Businesses' capacity to absorb knowledge is influenced by individual actors that compose it; the problem may arise when the expertise of individual employees within the company fairly differ from the expertise of external actors. In this scenario, some members might assume a centralized role, known as "gatekeeping" or "boundary-spanning" roles (Allen, 1977; Tushman, 1977). Gatekeeper has the double role of monitoring and acquiring technical external information and translating them into a valuable source for the enterprise. The presence of a boundary-spanning is particularly dangerous in the presence of a dynamic and uncertain environment; when information flow is random and characterized by high fluctuation, a centralized figure might not represent the link with the environment. In this situation, the best option for the firm s to expose to the external market various prospective “receptors” and exhibit an organic and adaptive structure as argued by Burns and Stalker (1961).

Nonetheless, even when the figure of gatekeeping is crucial, her absorptive capacity does not represent one of her units but is a function of the expertise of those individuals to which the gatekeeper transmits the information. The organization’s sub-unit must have some background knowledge to benefit from the acquired information. When discussing the absorptive capacity of the organization as a whole, it might encounter the presence of a trade-off between the efficiency of collecting external information with the ability to assimilate and exploit that information in the firm’s sub-units. Both inward-looking and outward-looking components are necessary and need to be balanced; a predominance of one of the two might be dysfunctional for the company’s learning ability. When all actors in the business share a common specialized language, they are able to effectively communicate with one another but, at the same time, they might impede the incorporation of external knowledge and subsequently suffer from the (NIH) Non Invented Here syndrome (Katz & Allen's 1982).

This trade-off between knowledge sharing and knowledge diversity gives the rise to an important discussion on how they can affect the enterprise’s absorptive capacity. If some sharing and overlapping knowledge in the sub-units are necessary for efficient internal communication, the presence of knowledge diversity within individuals is crucial (Simon, 1985). Indeed, diversity in the work setting generates new ideas (Utterback, 1971) “an or-organization's absorptive capacity is not resident in any single individual but depends on the links across a mosaic of individual capabilities” (Nelson & Winter's, 1982). Common knowledge indeed enhances internal communication but the presence of these commonalities should not be brought so far that diversity among individuals diminish.

The same reasoning can be done for discussing the division of labor promotion and its extremism in overspecialization that might undermine the communication. The over-presence of specialization reduces the possibility for the company of “learning by doing” especially in the occurrence of a fast-changing environment. In "learning by doing" the organizations are more capable of learning from activities in which it is already engaged.

Also, the type of knowledge that individuals in the company should own to improve the organization's absorptive capacity is to be analyzed; critical knowledge includes, together with substantive and technical knowledge, awareness too. The latter represents the ability of the enterprise in deciding who does what, who can help with a problem according to who knows what (Hippel, 1988).

3.4.2.2 The role of Absorptive Capacity in the Innovation process

Technical changes in an industry are often closely related to a company's R&D activities and investments. Businesses' R&D does not solely create new knowledge but participate in the organizations' absorptive capacity (Cohen & Levinthal, 1989); thus, if the goal of a firm is to enhance the absorptive capacity, it should consequently invest in R&D. We might define the response of R&D activities as an indicator of importance for the learning interest of the company.

To analyze the firm's R&D intensity, we can rely on a simple static model which defines it as R&D divided by sales; controlling in this way the effects of innovation related to the firm's size that might affect return per unit of R&D spending. Using this simplified model, economists divided R&D intensity into three determinants: demand, appropriability, and technological opportunity conditions (Cohen & Levin, 1989). Demand is characterized by the price elasticity of demand, representing how much the company's revenue will increase because of the reduction in price. If innovation will reduce the cost of production with a subsequent reduction in the price, the price elasticity of demand represents the associated difference in total revenue influencing the economic return to innovation investment. Appropriability determinant refers to the ability of the firm to capture the profit associated with the R&D investments; it is often associated with the effect of valuable knowledge into the public domain. Technological opportunities represent how costly will be for an organization to reach some normalized unit of technical advance.

The following figure represents how absorptive capacity influence R&D spending; particularly, learning incentive will positively affect R&D investment.

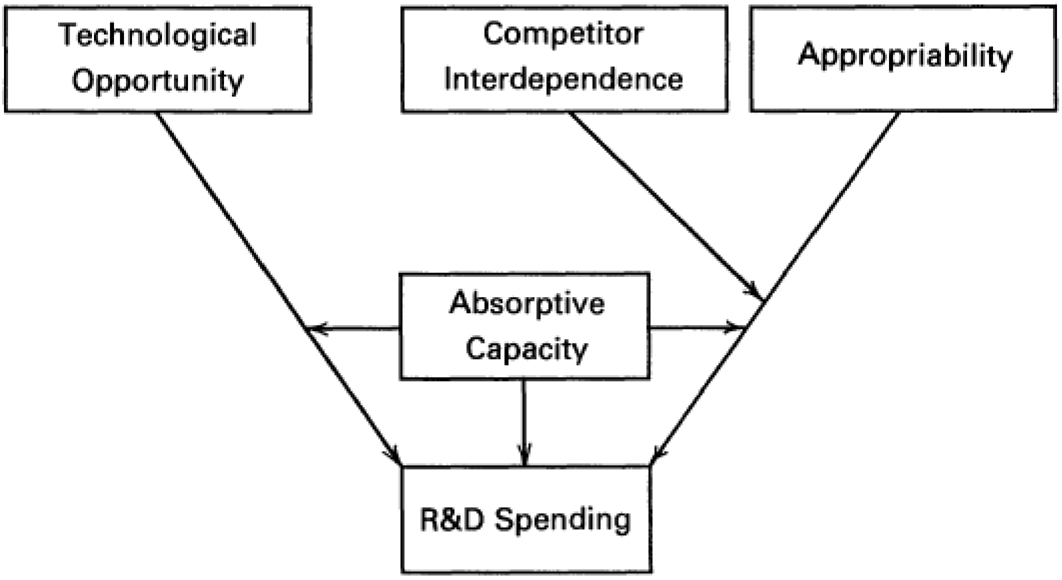


Fig 21: Model of absorptive capacity and R&D incentives. Source: Sage Publication

The incentive to learn, to enhance the absorptive capacity through R&D expenses depends1 on two main factors; the quantity of knowledge to be acquired and exploited, the more there is, the higher the incentive in investing. Secondly, the difficulties/ease in learning calculated based on the costs per unit of knowledge; influencing the willingness of companies to invest. Indeed, when learning is more difficult, higher prior knowledge is needed to be accumulated through R&D; consequently, the learning environment will be more costly. Thus, according to the level of R&D owned by an organization, the absorptive capacity is decreased in the environment in which is more difficult to learn. Moreover, the greater the difficulties for learning, the more the marginal effect on R&D on absorptive capacity is increased. On the opposite, in an environment in which the learning process is less demanding, the quantity of a business's R&D has little impact on the firm's absorptive capacity.

The simplicity in learning depends on a different characteristic of knowledge itself. Notably, when external knowledge is generic and not targeted to the company's needs and concerns (i.e. university lab), the organization's R&D is important in identifying the value of the possible knowledge to be later assimilated and exploited.

Being in a collaborative society means that relying just on internal innovation cannot be sufficient to create that necessary competitive advantage; this is why companies need to push for the acquisition and assimilation of external knowledge. In particular, acquiring data from suppliers and customers permits organizations to formulate ideas on product designs (Stock, 2001) while identifying new technological opportunities (Nieto & Quevedo, 2005). The main role of absorptive capacity is to promote firms' speed in response to environmental changes, frequency, and magnitude of innovation. Because innovation positively affects the performance of a company, and because absorptive capacity does enhance the innovation process and investments, we can state that owning absorptive capacity might strengthen the organization's performance.

3.4.2.3 Absorptive capacity over time

With the Open Innovation (OI) model defined as the use of "purposeful inflows and outflows of knowledge to accelerate innovation internally while also expanding the markets for the external use of innovation" (Chesbrough 2006), there is a strategic exchange of information between actors operating externally and the internal organization of an enterprise to integrate resources and knowledge into the company's innovative process. Using this model, firms do not generate the "best idea" by themselves but try to use internal and external knowledge to be more effective at managing costs and risks.

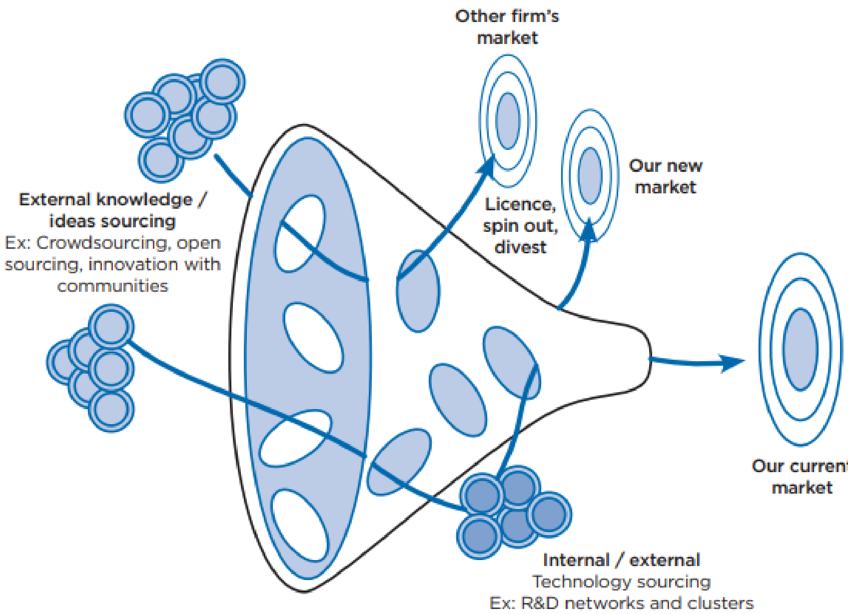


Fig. 22: The Innovation Funnel Source: Wheelwright & Clark (1992) and Chesbrough (2003)

The three forms of OI are Inbound (use within a company of external resources of innovation), Outbound (use of external ways for developing and internalize innovations), and the "coupled innovation process" (collaboration among companies to develop new knowledge and solutions). Traditionally, R&D investments are considered as a proxy for absorptive capacity; nonetheless, in the case of OI, it is problematic because of the uncertainty on how the benefits coming from the acquisition of external knowledge evolve over time.

Literature states that the acquisition of external knowledge can help to establish DCs, particularly in a changing environment (Escribano, 2009). Others seen in the external acquisition of assets a complex phenomenon and for this reason, understanding in some areas can happen only in case of a reduction of information in another one (Levitt & March 1988). The idea that an increase in the level of expenditure of R&D will positively affect the absorption of external knowledge is still to be confirmed. On this, Denicolai (2014), argued that in the case of firms with a low level of knowledge intensity benefits from an "optimal" expenditure in external information while knowledge-intensity companies are more flexible in defining their knowledge sourcing strategy.

Alignment between external and internal knowledge is necessary to reach a fit with a dynamic environment over time Ben-Menahem (2013); external knowledge inflows are directly related to absorptive capacity while indirectly related to innovation, in a diverse period (Kostopoulos, 2011). In particular, Schildt (2012) argues that the initial capability of sourcing and partnership is determined by the ability of absorption, while later-stage learning factors are determined by exploitation ability.

With an OI approach, because innovation is characterized by a complex eco-system of inbound and outbound knowledge relationships and flow, the make or buy R&D decision is not sufficient to capture the features of DCs and absorptive capacity (Bianchi, 2014). The internally generated knowledge is more difficult to be absorbed and exploited than the external one in the short-term but in a longer period of time, because internally generated R&D is more consolidated in the company, we can expect a positive effect of internal R&D on organizations' performance. The uncertainty and complexity of R&D limit the speed and exploitation of the related generated knowledge therefore, it might generate a negative effect on the company's performance in the shore-periods (up to 2 years). On the opposite, investment in external knowledge has a positive immediate effect on the development of an enterprise's assets in the short-term. This latter effect is due to the high maturity and codification of innovation available in the external environment, thanks to patents and licenses (Hakanson, 2007; Kostoff, 2004).

To conclude this explanation on the evolvement of absorptive capacity we can conclude that externally acquired knowledge is less efficient tho more expensive than internally-generated R&D. Even if the latter needs more time, it is more efficient, in a longer period, to develop R&D internally than acquiring it from the external market.

3.5 Speed of strategic Change

We're going now to analyze a specific characteristic for the strategic change, namely the speed. Strategic management is busy in dealing with environmental change and adaptation of enterprises to it; due to the turbulence in the markets, strategic change is necessary and particularly the ability to perform it quickly can be a source of competitive advantages. Strategic change is defined as "a difference in the form, quality, or state overtime" (Van de Ven & Poole, 1995). In this definition, three main components of changes need to be addressed, namely, type of change, the magnitude of change (quality and form), and the speed of change over time. In this part of the thesis, we are going to focus specifically on the latter dimension of change. Because the speed of strategic change influences the company's performance, notably in a globalized world where the environment is characterized by fast and continuous dynamism, taking rapid action is necessary (Baum & Wally, 2003).

The speed at which strategic changes are taken represents both the urgency of the change and the capabilities that organizations need to own. Indeed, the company's ability to make fast and relevant changes needs to possess specific resources and capabilities; in particular Awareness (need for change), Motivation (the reason for change), and Capabilities (options for a future change) (AMC). Besides, managers' risk orientation is a variable that will affect the ability of companies of fast and proactive react to a turbulent environment.

The rate of strategic change is defined as the time needed by an enterprise to change its core strategy, meaning the decision-making speed (time length between initiating and formulating a different strategic change) and the speed for implementing (time span between the promise of implementation and the actual integration of the new strategy with the day-by-day activities) the new strategies (Dooley, Fryxell, & Judge, 2000).

DCs not solely grant strategic flexibility to organizations that own them but also allow a fast reconfiguration of resources and organizational routines and the subsequent speed for strategic change. For explaining this purpose we are going to link 3 major DCs to the speed of strategic change:

1. **Technological Capabilities**

Technological capabilities are the company's ability to use different technologies and enclose production-skills and know-how. Scholars give two potentially competing effects of these capabilities on strategic speed; because of their characterization of following pathdependency, technological capabilities hide the quick strategic change. When large expenditures are made for technology, then might easily become sunk costs. This irreversibility of investments, in case of a fast-changing environment, increase the costs to redeploy or give them up (Zhang & Rajagopalan, 2010). The ensuing rigidity in a specific committed strategy, lead to what is called the "competency trap" (Levitt & March, 1988).

On the opposite, technological capabilities might give a company the absorptive capacity needed to understand and respond to changes in the market and thus to ease the strategic change. A wide span of technological innovation, enable an organization to implement a vast variety of actions to quickly react to environmental dynamic. In a context characterized by uncertainty and quick change of scenario, to avoid myopic tendencies and bring inertia, firms should fast and proactively respond to changes. Here, the more technological capabilities a company has, the more its absorptive capacity and its ability in dealing with external knowledge, grants it a fast strategic change.

2. Marketing Capabilities

These capabilities are needed for a fast adaptation to a changing market, including "knowledge of the competition and of customers and skill in segmenting and targeting markets, in advertising and pricing, and in integrating marketing activity" (Kogut & Zander, 1992). The role of marketing capabilities is to ease a quick strategic change because helps companies in adapting to environmental change where the valuable knowledge comes from both competitors and customers. Indeed, when information oh the latter changes, organizations can identify them and implement a strategic change like adjustment in pricing and advertisement. In addition, they enable firms to transfer marketing resources to services and products to ease the strategic change. Finally, marketing capabilities highlight action to engage customers in new markets enabling proactive strategic adjustment (Weerawardena, 2003). Using marketing capabilities, organizations will be able to make a fast strategic change.

3. Market-Linking Capabilities

Market-linking capabilities allow firms to sense market change, maintain customers' relations, and sustain a close relationship with channel members (i.e. retailers and wholesalers). Market-sensing capabilities are used by companies to observe market trends, sense changes, and match owned capabilities with the external environment; the latter enables firms to fastly determine the need for strategic change and avoid market threats. Customer-lining capabilities enhance the ability to acquire information from the eternal environment, explore new markets, and link the company to the new potential customers (Yli-Renko, 2001). Finally, channel integration capabilities enable the firm to integrate activities along the supply chain. Creating a strong relationship with channel members create high consistency in the deployment of strategic change.

The market-linking capabilities, therefore, are located at the endpoint of the company and in this way can achieve strategic support from actors operating in the external environment to fast respond to strategic change (Lenz, 1980).

In addition, the risk orientation of the managers influences the strategic decision taken by an organization, their implementation, and the fastness to which it responds to environmental change. The risk orientation regards the attitude of decision-makers concerning their attitude towards the riks; managers' behaviors might fall into three categories, risk-taking, risk-averse, and risk-neutral.

In a turbulent environment, organizations experience continuous change, thus they need to adapt their strategies to be competitive in a dynamic market. In a fast-changing environment, quick decision-making together with the speed at which this decision is implemented affects companies’ performance. The first-mover advantages go to those businesses that can judge quickly the changes in the environment (Lieberman and Montgomery, 1985). For this reason, companies should proactively and aggressively start competitive actions and fast respond to better performance.

While it is true that fast strategic change can enhance performance, making changes in the strategy of an enterprise too quickly may threaten the acquired comprehensive information and bring negative repercussions to the performance (Baum & Wally, 2003). Because fast change is needed but too quick a response might bring a reverse effect, we can state that the relationship between the speed of strategic change and firm performance has the shape of an inverted-U.

3.6 To sum up

What we understood from the study of the different dynamic capabilities that organizations may rely on to deal with turbulent and ongoing changing environments, is that also in the situation of a dynamic market, organizations if in possession of specific capabilities can obtain competitive advantages and look for new opportunities in the market. If companies can acquire external information, exploit them, and use it in the operating activities, they might benefit from the changes in the environment. The timing in taking specific actions and in pursuing a strategic change is fundamental for businesses too.

In the long-period, businesses should not only focus on acquiring external knowledge but should invest in the enhancement and development of internal investments in R&D and usage of the information retained in the sub-unit of the enterprise. In addition, to identify and de-codify external knowledge to later assimilate them, firms need to own seize-capabilities that may be developed thanks to past-experience. It is important to define how organizations might foster these DCs to gain and being able to face opportunities that changed markets provide; we'll see how competitors companies, operating in a similar environment, react differently to the change of the latter. Indeed, we'll consider two firms that, due to the profundal change in the environment caused by the Covid-19 pandemic, differently set their strategy in the Chinese markets.

Being able to capture the dynamics in the environment, seize the opportunities and threats that emerge from these changes is a strong possibility to gain competitive advantages. Especially in global markets where companies can scan all the international chances and decide where to direct their focus, global economic and social turbulence might be beneficial.

What we are going to discuss in the last chapter of this thesis, is an application of the mentioned Dynamic Capabilities and how they might be applied to firms to obtain and sustain a competitive advantage in a dynamic environment. We're going to analyze how, organizations might use the acquired knowledge from prior experience to enhance the performance, particularly in an international environment.

CHAPTER 4

– Empirical Analysis –

4.1 Introduction

In the last chapter of this thesis, we'll try to empirically analyze the role of Dynamic Capabilities for companies operating in international markets; particularly, we are going to consider two Italian international companies exporting globally in over 40 countries and defining their approach to the changes in the international changing environment with a specific focus on the Chinese market.

Starting from recalling the theoretical argument developed in the previous chapter, we'll define various Research Questions to analyze the empirical translation of what previously stated by scholars. These questions will be then linked to specific Italian companies operating in the international environment with a predominance for the export strategy; similarities among these firms are presented and discussed here. Their presence in the Chinese market and the flourishing of their activities there are considered as a distinctive winning example for international enterprises thus, we'll try to describe activities and practices that might get them close to successful companies operating in a global turbulent environment.

To reach our objective, we'll use two family-owned Italian SMEs working in the construction sector (an industry in which Italy is considered exalted in a foreign country) and based in Rome. Our sample although restricted, is representative of the majority of Italian businesses entering a foreign market through an export strategy and by benefits from the remoteness of their brand are able to smoothly get into new countries.

4.2 Research Design: Data and Methods

As previously discussed in the previous chapter, an organization facing the international markets needs to be prepared to fastly adapt to the changes that might happen in one or numerous of the nations in which they operate. Moreover, thanks to the learning capabilities and absorption capacity, firms might enjoy a smoother process of resources and competences transfer when moving from one market to a different one. The present analysis will have a focus on what drives global companies and their export strategies, the role of information and knowledge, and how the latter need to be integrated to sufficiently create opportunities. In particular, we are going to define the Chinese market as a driver of growth for many international Italian companies and the presence of Italian export in this country. We'll take into consideration also how the organizations have faced the global crisis of the Covid-19 pandemic and the opportunities that this turbulence in the environment might offer to companies that are ready to catch them.

Once we have defined the Italian presence in the Chinese market, the threats and related opportunities coming from the dynamic changes in the environment by analyzing the same data, we'll propose some research questions and hypothesis related to how firms can use and are using dynamic capabilities and in particular learning and absorption ability to exploit and enhance their opportunities in the international field. By relying on two international Italian companies and questions posed to them, we'll try to analyze the changes that might arise from the adaptation to the new environment.

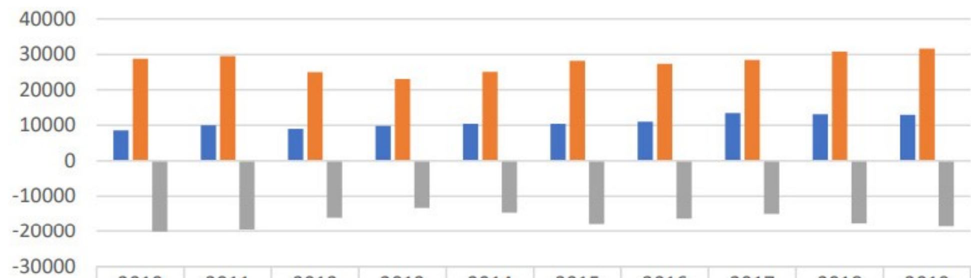
4.2.1 Market Data

Italian organizations in 2019 in the "Dragon country" are 1.700 with more than 150.000 employees and with the creation of exchanges of 44.6 billion of Euros (+1.46%) and in particular with the Export counting for 13 billion of Euros and 31.7 billion of Euros coming from the import. According to Eurostat data, Italy is the fourth European country as China's suppliers. The major sectors accounting for most of the Italian export in China comes not only from the traditional specialization of the "Made in Italy" but also from environment, sustainable energy, urbanization, and infrastructure.

Fig. 23: Italy-China total Exchange Source: ITA

In addition, Italy is one of the main actors of the "Belt and Road" and thanks to that, the exchange and commercial relationship along the years has grown. The mentioned infrastructural project fostered by the Beijing Government to mobilize foreign investments.

The composition of the Italian Export in China along the years has been more or less similar; the export of machinery has been reduced (3,9 Billion Euros; -1.06%), which represents the 30.4% of total export. Increasing values of export, on the other hand, are pharmaceutical (956 Billion Euros; +18.52%) and fashion (932 Billion Euros; +8.53%) sectors. Italian export in China represents 2.8% of the total, being the 10th destination for the overall export of the "made in Italy".



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Esportazioni	8609	9996	8999	9843	10494	10413	11057	13489	13169	12993
Importazioni	28789	29574	25006	23071	25075	28232	27346	28460	30780	31665
Saldo	-20180	-19578	-16008	-13228	-14581	-17819	-16289	-14972	-17611	-18673

Fig. 24: Italy: commercial balance with China Source: ITA

4.2.1.1 Belt and Road infrastructure opportunities for Italian firms

In March 2019, Italy and the People's Republic of China (PRC) signed a Memorandum of Understanding (MoU) for the former to join the Chinese-led Belt and Road Initiative (BRI) and becoming, in this way, the first European country and the first G7 member to participate in this project. During the visit of President Xi Jinping in Italy, he stated that "prospects for cooperation between Italy and China have a brilliant future"; for Italy, the focus was on the economic opportunities that the nation would have enjoyed from this agreement ($22.45 billion). The collaboration will have the main aspects of sectors like logistics, transport, and infrastructure. Italy considers the BRI as a vital opportunity to boost Italian Export in China, particularly for the rising Chinese interest in Italian products.

The Chinese big infrastructure plan "One Belt, One Road" (OBOR) consists of two main components: "New Silk Road Economic Belt", the land connection crossing all of Asia reaching Europe, and the "New Maritime Silk Road", the route arriving in the Mediterranean coast along with the Southeast Asian, East Africa and the Middle East. The total value for these projects is expected to be over 1.400 billion dollars, 65 countries for 13.000 km of railways.

Fig 25: China's New Silk Road Source: BBC

To be prepared to benefits from the opportunities, The OBOR Italian Institute has been established. China and Italy signed the Four-year Action Plan for Strengthening Cooperation on Economy and Trade, Culture and Science, and Technology in 2017. Therefore, there might be possibilities for Italian companies to invest in new international business as a driver for their recovery. As stated by the ex Italian Prime Minister Mauro Gentiloni, the -yet- a non-binding agreement between Italy (as only nations among EU countries and G7) and China does not have a political background and thus, does not want to take a side in any international dispute; on the other hand, it can be an investment opportunity for many Italian companies that want to focus their trade in the "Dragon Country".

4.2.2 Research Questions and Methodology Design

As previously discussed in chapter 2, the way in which organizational structure is built in a company is fundamental to foster adaptability in case of changes in the environment. Particularly, the organic structure, differently from the mechanistic one characterized by centralized decision making and overall low flexibility, grants the firm with a structure characterized by a low emphasis on strict procedures and rules (Burns & Stalker, 1961; Lawrence & Lorsch, 1967). Recalling the argument stressed by Rindova and Kotha (2001), companies with local autonomy and decentralized structure can fastly adapt to changes in the market. Therefore, an organic and flexible organizational structure is fundamental to be efficient and effective in enhancing the responsiveness to environmental changes. In addition, Zollo and Winter (2002), as for the learning mechanism, argued that organizations with a decentralized decision-making process and with a flexible structure have a higher probability of benefiting from learning mechanisms.

Additionally, our research proposition wants to analyze how organizations are able to benefit from the information learned in the development of their company in the international market and how this can be re-used to approach a different foreign country. In particular, because prior knowledge is known to be self-reinforcing (Bower & Hilgard, 1981), owning prior knowledge might foster and smooth the process of knowlegìdge accumulation of unexplored markets. Because learning is built in an associative way, the learned activities might positively influence and improve performance on subsequently learned skills (Ellis, 1965). It is not to say that the presence of “learning to learn” (Ellis, 1965; Estes, 1970) and the prior knowledge is an enhancement of the performance in a new market per se but that there is a relationship between early learning and subsequent experience.

Moreover, the acquisition of learning has been defined in two ways; quasi-automatic or unconscious way and a deliberate way (Arthur & Huntley, 2005). Nonetheless, it is important to note that in a context as international markets characterized by high uncertainty, turbulence, and fast change, the learning acquisition needs to be deliberate. This planned learning (Levy, 1965), in an international environment, wants to understand the dynamics between practices and their performance implications. Specific learning activities or routines learned in a foreign market, can be a source of success if correctly adapted in a different international context.

According to this, the first research question to be formulated might be as follow:

RQ1: Does the organizational structure of the company influence its ability to cope with the change of knowledge and information in the environment? Does the organic and flexible structure grant a learning method that brings opportunities in markets? The knowledge and information acquired and learned in a formerly launched country, have subsequently been the subject of study to face new foreign markets?

Proceeding, as already analyzed in the second and third chapter when discussing the benefits that organizations might enjoy in developing the Dynamic Capabilities, we'll analyze if the latter, are effectively a way to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece, Pisano, & Shuen, 1997). In particular, we'll study if the scanning and researching activities across the markets that organization might put in place to be ready in dealing with opportunities and/or threats coming from environmental change and to maintain a close relationship with international stockholders is an asset expendable for the firms itself. Besides, the investment opportunities coming from the sensed change in the different markets are to be analyzed in order to determine if the best strategic choice and enterprise flexibility can be reached. Lastly, we'll define the importance of the reallocation and reconfiguration of the resource-based of a business (Teece, 2007) to benefits from the seized opportunities from the market.

Then, recalling what has been discussed in the previous 3rd chapter concerning the speed of strategic change and the related speed in adapting companies' organizational structure and goals to the changing of the environment, we'll analyze the role of the former in the international enterprises' success. According to Baum and Wally (2003), especially in a globalized world, in which global companies operate, shaped by fast and continuous dynamism, the speed in taking action and makes strategic changes is crucial. To make this strategic change quickly, organizations need to possess specific resources and capabilities known as AMC (Awareness of the need for change, Motivation for the change, and Capabilities as being able to benefits from various options for a future change). Thus, the decision-making speed and the peed for implementing the new strategy are essential (Dooley, Fryxell, & Judge, 2000). (Dooley, Fryxell, & Judge, 2000). We'll study if there is a specific form of Dynamic Capabilities that enterprises could leverage on in this context, specifically Technological capabilities (firms' ability to use different technologies and enclose production-skills and know-how; with the related possibilities in becoming sunk costs), Marketing Capabilities (as businesses ability in adapting to the change if the valuable aspects come from customers and competitors) and Market-Linking Capabilities (allowing firms to sense market change, maintain customers' relations and sustain a close relationship with channel members).

Therefore, the second Research Question will be built in a way like:

RQ2: Owning the capabilities that allow businesses to anticipate the reaction of the various international market to environmental changes caused by a transformation of the markets is to be considered necessary competence?. How much, the speed of anticipating and adapting to new conditions (i.e. Covid-19 pandemic), has influenced organizations' performances?

4.2.2.1 Methodology

Due to the characteristic of this research, which is based on Italian SMEs operating in the construction sector and with a strong international presence with a particular focus on China, we are employing an "analytic generalization" giving that the previously mentioned theories are going to be used as a template with which our results will be compared (Yin, 2003). His method of using case study as a research method in particular as *"an empirical inquiry that:*

- *investigates a contemporary phenomenon within its real-life context, especially when*
- *the boundaries between the phenomenon and the context are not evident" (Yin, 2003, p.13)*

The difference in deciding, which typology of case design to foster for our research, we should consider the advantage and disadvantages of both possibilities; here we can confirm that the evidence from multiple cases design is considered more compelling, consequently the study is considered more robust (Herriott & Firestone, 1983). Conversely, the rationale for single-case designs cannot usually be satisfied with multiple cases. Our analysis of case study, as stated by Yin (2003), when defined as multiple-case can be seen as more complex and requiring of high resource but the similarities (that are later discussed) of the chosen sample helped our analysis.

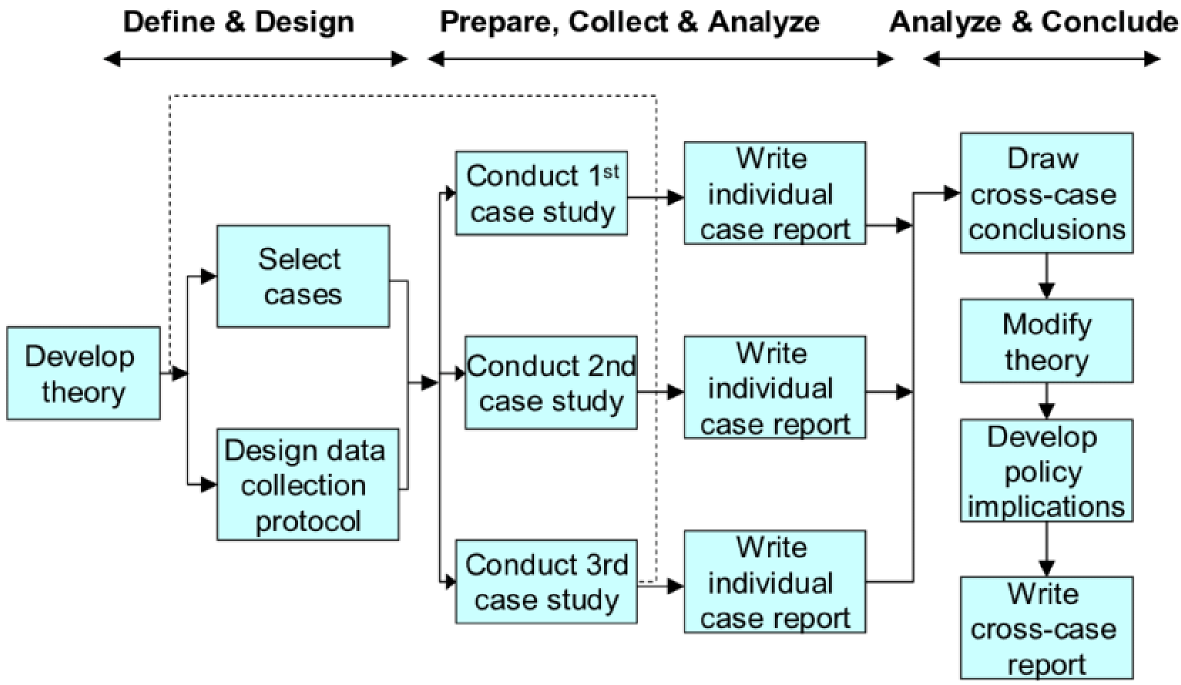


Fig. 26: Case Study Method Source: COSMOS Cooperation

When chose between single and multiple case design we select the specific circumstances regarding the questions posed by the authors;

- the so-called "replication" (n.b. not "sampling" model) models allow to precisely use the same reasoning and replicate it to (a) predicts similar results (a *literal replication*) or (b) predicts contrasting results but for anticipatable reasons (a *theoretical replication*).
- The number of cases used, because as already state we are not using a sampling model, is irrelevant. What is important is the replication possibilities which is arranged as two or three for literal replication and similar for theoretical replication (here the competitive arena is determinant but considering the characteristic of our analyzed companies such as high-quality products, international markets and strong history we can use a small number of cases to create a difference and contrast results).

Therefore, our methodology will start with the use of a simple multiple-case design with a selection of two cases considered as literal replication. Finally, due to the features of Family-owned businesses such as scare resource and non-rigid organizational structure in which subunits are marginals, we found and holistic design (Yin, 2003)

4.2.2.2 Data Collection

The following illustrated source of information is the most common in the case study analysis, we try to collect data in the more complementary way possible; indeed, use multiple sources of evidence gives our analysis a more robust backbone.

Data Source	Time/Effort	Use in the analysis	Interviewers and seniority position in the firm
In-depth Interviews	6 interviews for a total amount of 8h	To collect insight on international experiences in different geographical markets and study the effectiveness of learning mechanism and adaptiveness	Mauro Vaccaro- *Export Manager* (>10 years experience in the firm) Antonio Federico - *International Sales Director* (>10 years experience in the firm)
Direct Observation	3 hours	Understand the dynamics of the environment in which the two enterprises operates and markets' opportunities	
Participants observation	1 hour during the remote meeting	Examples and integrations on the topic posed to better understand the context of operations	Mauro Vaccaro- *Export Manager* (>10 years experience in the firm) Antonio Federico - *International Sales Director* (>10 years experience in the firm)
Documents	30 between documents, projects and brochures	To define and analyze the corporate organizations and firms' strategies	

Fig 27: Own elaboration on collected data

4.3 Sample

The database used for carrying out the empirical analysis has been built up upon the collaboration with two Italian enterprises operating in International markets. The questionnaire has been sent in English and has been implemented by the Export Managers (Dr. Antonino Federico & Dott. Mauro Vaccaro) of both companies with the collaboration of all their team. The chosen sample to which the questionnaire has been submitted was defined according to specific characteristics and can be described as a "convenience sample" according to the last international events related to the global pandemic and to feature opportunities for Italian organizations in foreign markets.

Sample Requirements	
Country of Origin	Italy
Size	Small and Medium Enterprises
Secor/Industry	Construction sector due to the possibilities coming from the "Belt and Road project" in China. The latter might provide chances for international investments and partnerships.
Organization	Flexible and adaptable structure
Foreign Strategy	Mainly Direct Export
Holding Structure	Family-Owned Businesses
Growth	Steady annual growth in foreign markets allowing the reinvestment in the international context
Investments	Consistent investments in marketing and communication, ad hoc human resources and technical adjustment
Foreign Strategy	Built ad hoc to fulfill the company's objective
Budgeting	Firm performing costs-sales budgeting yearly
Family-member	Despite being a Family-owned enterprise, the firm has invested in education and training to subsequently select the family member to appoint according to their specialization. Meritocracy as the backbone of the business.

Fig.28: Sample requirements Source: Own elaboration

Both companies that we select and contact for our sample own all the necessary and imposed requirements. The specificity will be discussed in the following paragraphs.

4.3.1 Ondulit

Since 1953, when the insulating multilayer protected steel roofing was successfully launched in the market, the Italian company has proved itself a revolutionary metal roof solution. Technology, experience, and know-how are the more representative assets that the enterprise is known for; professionalism and enthusiasm lead the work team to satisfy customers' needs. The main values that the company use as a flag are integrity, commitment, sustainability, and cooperation. The company was founded in the middle of the boom for the post-war reconstruction of the country, for this reason, the business was not born with the idea of expressively working in foreign markets. Indeed, the requests for high-quality products for both private and public buildings were huge. In particular, in the Public Administration (PA) of the capital (where the firm is located) the request for the construction of Railways, Hospitals, schools, and military harbors was massive. The historical period post II World War, our Nation in line with the "Marshall Plane", has been characterized by a boom in the infrastructure and both the companies of our sample perfectly espoused the role of advocate for the growth of the Nation.

What is important to clarify is the social background of the founder family; first, the commitment to supply high-quality roofing solutions and last but not least foresight attitude of the household granted the family members good education and degrees allowing them to bring the company from mere trade commerce of product to real industrial activities. Therefore, the CEO of the firm had all the necessary high qualifications and professionalism needed in that historical period to interject with the public administration that was providing projects for the reconstruction of the nation. This high degree of specialization granted the company an enormous resource for determining the strategy and the organization of the enterprise and planning a steady growth for the following decades.

The expansion in the foreign market started in the francophone countries; the first projects were secured by word-of-mouth with the mere use of the product in an extreme climatic context. Indeed, the product follows the characteristics of the different environments in which it is employed. The project started to be applied heavily to built Harbours in the foreign market thanks to the high quality and assurance provided by the resistance of the product in the extreme situation present in the Italian sea. The great performance was ensured by a fabricated technology known as “Multilayer Technology” which turned to be successful. The founders of the businesses understood that the proper material to endure the stress of the climate was steel which has one weakness, corrosion. Hence, they lined the steel with chemical protection known as a modified bitumen compound, a natural insulator to later cover it with a layer of aluminum on both sides. This product was immediately considered as winning and was employed in the tropical island in the French territory (Dom Tom or overseas France; Guadeloupe, French Guiana, Martinique, Réunion, Mayotte) characterized by tough climate. The various projects were later enlarged in other countries starting from the French former colonies such as Algeria, Tunisia, Marocco and eventually Egypt, Lybia, Nigeria, Israel, Benin, Eritrea, South Africa, Malawi, Tanzania.

Fig. 29: Ondulit’s project and trade fairs Source: Firms’ website

The final step, which ensured the Roman company strongly enter the international market, was the participation in the global exhibition held in France, the Batimat. The latter was the springboard for the firm to engage African countries and to start its path to the East. It is important to notice how the enterprise’s turnover nowadays is fairly divided by %50% coming from the foreign market and 50% from the national market (in 2019, the turnover was 9 million coming from the Italian market and 8 million coming from the global market).

Combining intuition and continuous research and innovation, Ondulit has developed a unique high thickness steel coating and roll forming technology. The multilayer protection is the distinctive element of the entire product range. Ondulit steel roof panels are synonymous with supreme quality, high performing, and maintenance-free long-lasting metal roofing systems. The diversified Ondulit range of solutions is designed to meet any technical and architectonic requirements for both non-residential and residential construction. The design and manufacturing in Italy (Rome) is a guarantee for excellence and quality in the infrastructure sector.

4.3.1.1 Economic and Financial Performance

ONDULIT	*Years*	*c.a*	*Changes*		
Cuba	2018	1.600.000,00 €		48%	foreign sales
	2019	3.000.500,00 €	88%	50%	foreign sales
Cina	2018	2.950.000,00 €			
	2019	2.500.000,00 €	-15%		
Oceano Indiano	2018	800.000,00 €			
	2019	650.000,00 €	-19%		
Centro America	2018	140.000,00 €			
	2019	150.000,00 €	7%		
Estero	2018	3.637.510,60 €			
	2019	2.319.187,50 €	-36%		
Italia	2018	8.425.394,40 €			
	2019	8.619.687,50 €	2%		
Totale	**2018**	**17.552.905,00 €**			
	2019	**17.239.375,00 €**	-2%		

Turnover (2019)	**17.239.375 EUR**
Profit (loss) (2019)	25.767 EUR
Total assets (2019)	21.738.065 EUR

	31/12/2019	31/12/2018	31/12/2017
	EUR/12 months	EUR/12 months	EUR/12 months
	Detailed ICS	Detailed ICS	Detailed ICS
Revenues from sales and services	**17239375**	**17552905**	**13476129**
EBITDA	**688896**	**748515**	**-1472539**
Profit (loss)	25767	36805	-2128100
Total assets	21738065	20935004	20303571
Total shareholder's funds	11304014	11278248	11241443
Net financial position	**1818535**	**1847363**	**1668613**
EBITDA/vendite (%)	3,91	4,19	-10,5
Return on sales (ROS) (%)	0,7	0,86	-15,35
Return on asset (ROA) (%)	0,57	0,73	-10,61
Return on equity (ROE) (%)	0,23	0,33	-18,93
Debt/equity ratio	0,28	0,19	0,16
Banks/turnover (%)	15,49	9,56	10,11
Debt/EBITDA ratio	4,55	2,83	-1,24
Total assets turnover (times)	0,79	0,84	0,66
Number of employees	**68**	**63**	**61**

RATIOS	31/12/2019	31/12/2018	31/12/2017		31/12/2019	31/12/2018	31/12/2017
1. Financial indicators				**3. Profitability ratios**			
- Liquidity ratio	1,43	1,02	1,15	- EBITDA	688.896	748.515	-1.472.539
- Current ratio	2,1	1,7	1,74	- EBITDA/Vendite	3,91	4,19	-10,5
- Current liabilities/Tot ass.	0,6	0,77	0,77	- Return on asset (ROA)	0,57	0,73	-10,61
- Long/med term liab/Tot ass.	0,4	0,23	0,23	- Return on investment (ROI)	0,78	1,03	-15,01
- Tang. fixed ass./Share funds	0,8	0,8	0,83	- Return on sales (ROS)	0,7	0,86	-15,35
- Depr./Tang. fixed assets	n.a.	n.a.	n.a.	- Return on equity (ROE)	0,23	0,33	-18,93
- Leverage	1,92	1,86	1,81	- Net P&L / Operating P&L	20,81	24,04	n.s.
- Coverage of fixed assets	1,66	1,47	1,39				
- Banks/Turnover	15,49	9,56	10,11	**4. Productivity ratios**			
- Cost of debit	2,66	2,45	2,81				
- Interest/Operating profit	9,47	17,86	n.s.	- Number of employees	68	63	61
- Interest/Turnover	0,41	0,23	0,28	- Turnover per employee	259.220	283.430	229.970
- Solvency ratio	52	53,87	55,37	- Added value per employee	63.180	66.260	31.250
- Share funds/Liabilities	1,15	1,25	1,41	- Staff Costs per employee	53.050,00	54.380,00	50.720,00
- Net Financial Position	1.818.535,00	1.847.363,00	1.668.613,00	- Turnover/Staff Costs	4,89	5,21	4,53
- Debt/Equity ratio	0,28	0,19	0,16				
- Debt/EBITDA ratio	4,55	2,83	-1,24	**5. Significant data**			
2. Management ratios				- Net working capital	6.505.474	4.836.940	4.546.016
				- Gross profit	8.385.965	8.261.613	5.713.994
- Total assets turnover (times)	0,79	0,84	0,66	- Net short term assets	584.649	-1.573.604	-948.276
- Working cap. turnover (times)	1,39	1,49	1,26	- Share funds - Fixed assets	2.102.147	2.194.914	1.818.265
- Incidenza circolante operativo	26,13	27,09	30,66	- Cash Flow	590.834,00	632.242,00	-1.447.241,00
- Stocks/Turnover (days)	82,47	95,59	93,88				
- Stocks/Cost goods sold (days)	160,91	179,76	168,91				
- Durata media dei crediti al lordo IVA (days)	104,55	99,1	126,33				
- Durata media dei debiti al lordo IVA (days)	130,4	117,77	128,01				
- Durata Ciclo Commerciale (days)	135,07	161,09	167,23				

Fig. 30: Own elaborations on company's data

Source: Aida

4.3.2 Basaltina®

Basaltina Srl is an Italian organization founded in 1925 by Giuseppe Tecchi; in the Bagnoregio mine, among the biggest in the stone sector where it extracts and works lava stone. The latter is known from the Roman Empire; the Romans created wide solid roads and imposing monuments from the quarry owned by the Basaltina s.r.l. to demonstrate their power. The biggest own mines in Europe are known since the Romans and regards the so-called "Pietra nera"; we can found references to it coming from Virgilio and Ancient writers.

The company's exacting standards have earned it the maximum official recognition available in its field. Basaltina®'s brand is synonymous with Made in Italy excellence, combining craftsmanship and industrial refinement. Basaltina® is a registered brand coming from the founder that by unificating various small mines were able to give this name to his company and to the stone itself, providing the firm with a sort of monopoly. The strength and cohesion of being a family-owned business are known this and is the core characteristic of many Small and Medium Italian enterprises.

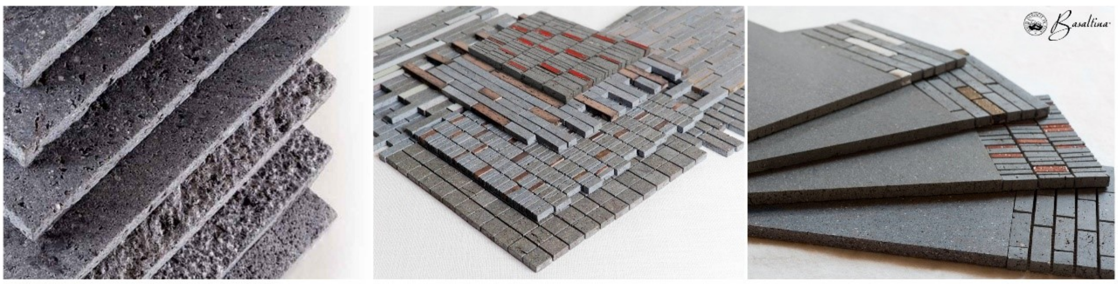


Fig. 31: Basaltina®'s product Source: Basaltina®'s website

Due to the natural characteristic of Basaltina®'s product, in the first phase, the organization doesn't have a huge competition in Italy and the international markets if not for the "grey products" that are fundamentally different but might be considered as an alternative. The family business, starting from the end of the 90s, thanks to the globalization and the consequent ease of the international transportation costs and logistics (to be considered is the massive weight of marble and lava stone and its related costs of shipment before the globalization), started its growth in the global market. The company started its expansion through an export strategy in European neighbors such as France, the United Kingdom, and Spain. On the latter, noticeable is its presence due to the need for lava stone in the construction of the Gaudì's "Sagrada Familia"; here, because of the exhaustion of the Spanish quarries, the government relied on the Basaltina®'s product to finalize the monuments.

During this expansion period, the firm entered the USA market with a strong and exclusive agreement with the American company "Stone Source". Thanks to the latter contacts with famous New Yorks' architects, the Basaltina® product became famous all over the world. Important to underline how, later on, this exclusive and special agreement between Basaltina® and Stone Source ended for the international competition and now Basaltina® has distributors in every foreign market.

The company is present in several foreign markets, among the most important we find France, Germany, Spain, Russia, UK, the USA, Mexico, Australia, Canada; Brazil, India, China, Korea, Japan. Basaltina® has never sold its raw product; indeed other stone companies selling Carrara's marble, decided to sell their quality product in a raw manner in China to later discover that the marble was sliced and re-sealed at a cheaper price. For this reason, the Basaltina® firm is selling only its processed or semi-processed products to keep control over them.

Noticeable masterpieces created and formulated by international architects and designers with the Basaltina's products are Aurora Place Apartments by Renzo Piano, Asian Art Museum by Gae Aulenti, Winspear Opera House by Norman Foster, Sagrada Familia, Doha Hamad International Airport, and the three Samsung skyscrapers in Seoul among others. The firm has 60-70 employees with the majority of blue-collar while the commercial structure is based on 3 pillars: one manager in charge of the Italian market, another one with the responsibility for Spanish-speaker markets, and the last one in chief of the rest of foreign markets. The main responsibility and decision-making is in charge of the family members.

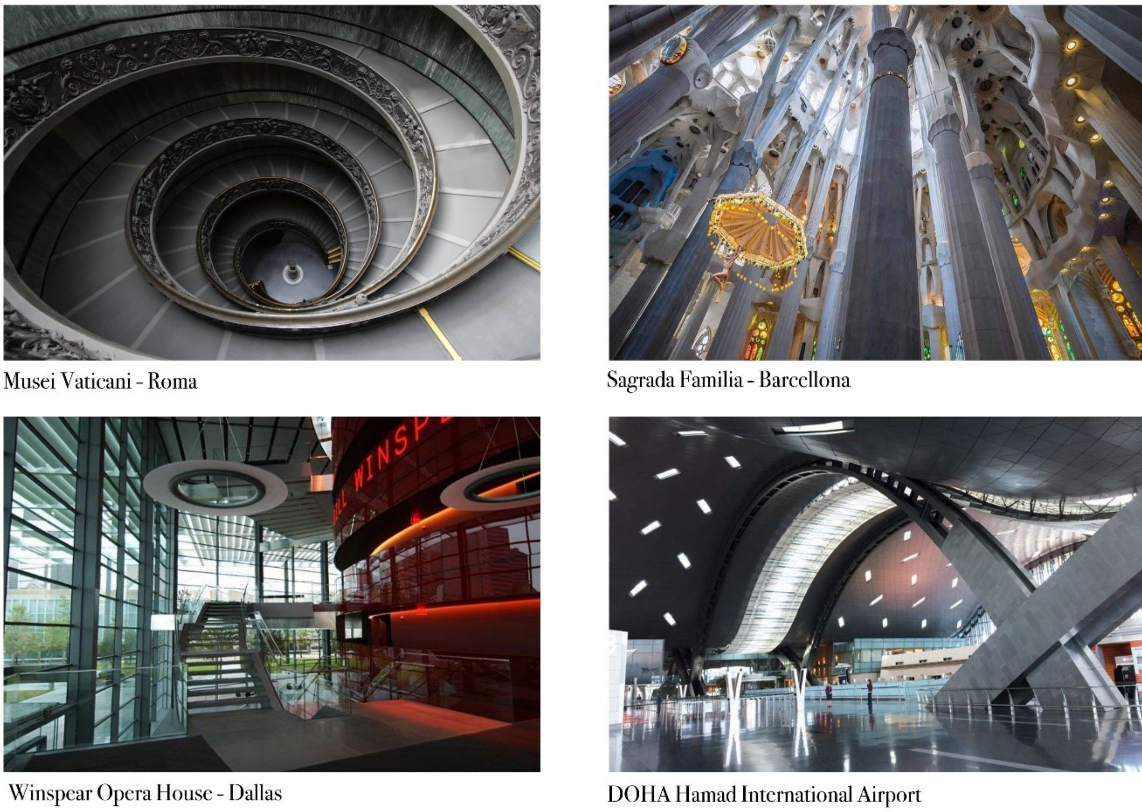


Fig. 32: Basaltina®s' Works Source: Basaltina®'s website

Basaltina® may enjoy the "Made in Italy" label which represents prestige and quality all over the globe, in addition, the stone sector, thanks to Carrara and Verona, is the most known and it is considered as the best quality in the whole world. Therefore, in some markets, there was no need for the promotion of the product because "it sells itself" because Italy is the leader in the marble and stone sector.

4.3.2.1 Economic and Financial Performance

FATTURATO PER ZONE	ANNO	TOTALI	CHANGES
NORD	2019	1084670	-32%
	2018	1586408	
VERONA	2019	1125446	23%
	2018	916253	
CARRARA LUCCA	2019	977408	-11%
	2018	1093001	
ZONA CAVE	2019	248753	9%
	2018	228520	
LAZIO	2019	48780	-29%
	2018	68785	
CAMPANIA	2019	162227	35%
	2018	120204	
PUGLIE LUCANIA	2019	0	-100%
	2018	43238	
ITALIA SUD	2019	0	-100%
	2018	28078	
MARCHE ABRUZZO	2019	18823	-53%
	2018	40263	
ESTERO GERMANIA	2019	713560	12%
	2018	638969	
ESTERO INGHILTERRA	2019	13430	251%
	2018	3826	
ESTERO SVIZZERA	2019	422241	267%
	2018	115199	
ESTERO FRANCIA	2019	60180	-43%
	2018	106005	
ESTERO SPAGNA	2019	33482	-39%
	2018	55313	
ESTERO BELGIO	2019	12201	19%
	2018	10294	
ESTERO U.S.A.	2019	703023	13%
	2018	622725	
ESTERO GIAPPONE	2019	299941	-31%
	2018	433058	
ESTERO SUD KOREA	2019	481956	103%
	2018	237951	
ESTERO BRASILE	2019	172455	-9%
	2018	190355	
ESTERO ISRAELE	2019	52762	-40%
	2018	87558	
ESTERO CINA	2019	402836	-3%
	2018	417200	
ESTERO AUSTRALIA	2019	71996	-9%
	2018	79134	
ESTERO ALTRE PARTI	2019	363070	73%
	2018	209520	
LIBANO	2019	97556	268%
	2019	26526	
INERTI	2019	355616	44%
	2019	247005	
TOTALI	2019	7922412	
	2018	7610731	
DIFFER.PERCENTUALE		4,10%	
		TOTALI	
FATTURATO ITALIA	2019	4076279	-5%
FATTURATO ESTERO	2019	3846133	17%
FATTURATO ITALIA	2018	4310344	
FATTURATO ESTERO	2018	3282089	

		JAN	FEB	MAR	APR	MAY	GIU	JUL	AGO	SEPT	OCT	TOTALI	
FATTURATO ITALIA	2020	331609	274895	62721	5845	151684	238969	314074	193207	231236	274694	2078934	-39%
FATTURATO ESTERO	2020	142213	200892	15238	199148	176528	332747	189547	185137	348828	428550	2218828	
FATTURATO ITALIA	**2019**	**279967**	**349180**	**290823**	**576002**	**382161**	**331733**	**545973**	**58583**	**226317**	**348206**	**3388945**	-33%
FATTURATO ESTERO	**2019**	**203186**	**203210**	**338596**	**324012**	**447682**	**381842**	**551136**	**232115**	**182474**	**428542**	**3292795**	

Fig. 33: Revenues 2018/19/20

Source: Company's data

	EUR/12 months	*EUR/12 months*	*EUR/12 months*
	Detailed ICS	Detailed ICS	Detailed ICS
Revenues from sales and services	**7.861.240**	**7.437.280**	**7.028.640**
EBITDA	**987.888**	**735.789**	**552.314**
Profit (loss)	530.150	225.417	5.480
Total assets	6.072.232	5.542.906	5.985.112
Total shareholder's funds	3.210.479	2.680.332	2.454.915
Net financial position	**-379.745,00**	**-101.502,00**	**1.069.358,00**
EBITDA/vendite (%)	12,22	9,69	7,6
Return on sales (ROS) (%)	7,47	3,72	0,83
Return on asset (ROA) (%)	9,94	5,1	1,01
Return on equity (ROE) (%)	16,51	8,41	0,22
Debt/equity ratio	0,21	0,2	0,45
Banks/turnover (%)	8,34	7,04	15,29
Debt/EBITDA ratio	0,68	0,73	2,01
Total assets turnover (times)	1,29	1,34	1,17
Number of employees	**65**	**65**	**64**

	31/12/2019	31/12/2018	31/12/2017		31/12/2019	31/12/2018	31/12/2017
1. Financial indicators				**3. Profitability ratios**			
- Liquidity ratio	2,48	1,64	1,2	- EBITDA	987.888	735.789	552.314
- Current ratio	3,61	2,66	2,07	- EBITDA/Vendite	12,22	9,69	7,6
- Current liabilities/Tot ass.	0,64	0,73	0,68	- Return on asset (ROA)	9,94	5,1	1,01
- Long/med term liab/Tot ass.	0,36	0,27	0,32	- Return on investment (ROI)	15,54	8,79	1,69
- Tang. fixed ass./Share funds	0,43	0,55	0,71	- Return on sales (ROS)	7,47	3,72	0,83
- Depr./Tang. fixed assets	n.a.	n.a.	n.a.	- Return on equity (ROE)	16,51	8,41	0,22
- Leverage	1,89	2,07	2,44	- Net P&L / Operating P&L	87,82	79,8	9,1
- Coverage of fixed assets	2,4	1,83	1,64				
- Banks/Turnover	8,34	7,04	15,29	**4. Productivity ratios**			
- Cost of debit	1,42	3,61	2,31				
- Interest/Operating profit	103,3	38,12	21,49	- Number of employees	65	65	64
- Interest/Turnover	0,12	0,25	0,35	- Turnover per employee	124.330	116.800	113.550
- Solvency ratio	52,87	48,36	41,02	- Added value per employee	62.240	56.610	58.480
- Share funds/Liabilities	1,7	1,41	0,9	- Staff Costs per employee	47.040,00	45.290,00	49.750,00
- Net Financial Position	-379.745,00	-101.502,00	1.069.358,00	- Turnover/Staff Costs	2,64	2,58	2,28
- Debt/Equity ratio	0,21	0,2	0,45				
- Debt/EBITDA ratio	0,68	0,73	2,01	**5. Significant data**			
2. Management ratios				- Net working capital	3.159.428	2.297.120	1.990.656
				- Gross profit	6.916.443	6.204.641	6.277.071
- Total assets turnover (times)	1,29	1,34	1,17	- Net short term assets	1.633.716	657.422	-16.317
- Working cap. turnover (times)	1,8	2,02	1,82	- Share funds - Fixed assets	1.595.228	929.987	423.952
- Incidenza circolante operativo	29,33	24,97	30,74	- Cash Flow	914.393,00	678.722,00	497.576,00
- Stocks/Turnover (days)	61,66	67,63	81,29				
- Stocks/Cost goods sold (days)	414,29	467,96	n.s.				
- Durata media dei crediti al lordo IVA (days)	80,24	66,13	88,51				
- Durata media dei debiti al lordo IVA (days)	73,19	91,69	119,14				
- Durata Ciclo Commerciale (days)	421,34	442,4	n.s.				

Fig. 34: Own elaboration on company's data Source: Aida

4.4 Results

The results obtained from the questions posed to the companies will be a representation of Small and Medium Italian enterprises operating in the infrastructural industry; in particular, we'll analyze the core characteristics and features of family-owned businesses working in an international environment using an export strategy. We posed the already discussed questions to the two businesses through which we conducted our model, we developed our analysis by collecting the information provided by them and using an "interview-like approach" to later describe the received data and compare them to the pre-analysis expectation. Lastly, comments on the results will be briefly discussed.

4.4.1 Results and Comments on the Results

Going from the theoretical background to the empirical evidence, we were conscious and prepared in seeing difference and complexity in the different models, especially in relation to the Italian SMEs that represents more than 80% of the total Italian enterprises. The following discussion will have the main goal to challenge or confirm the formerly exposed theories, and the section will try to follow the two-section articulation to be consistent with the question posed.

4.4.1.1 The "Best Organizational Form" and Learning outcomes

Particularly, our first objective was to clarify if what was discussed by scholars (Burns & Stalker, 1961; Lawrence & Lorsch, 1967, Zollo and Winter, 2002 among others) about the "Best form" of organizational structure to be used to deal with environmental turbulence was the one characterized by (also in the case of SMEs) an organic structure with high flexibility and if the latter was useful to deploy learning mechanism in global markets. On this, the collected information granted by the businesses was unanimous in underlying how one of the main characteristics of SMEs is their flexibility. The latter is considered maximum allowing, therefore, a quick change in the strategy and, on the opposite, minimum for the lack of organizational resources and useful data.

There are maximum flexibility and freedom of decision that allow a quick change in the strategy, but on the other hand, the limited resources and conservative approach are restrictions for strategic creation and collection/use of data (Dr. Vaccaro)

Family-owned businesses are conservative. Indeed, on this feature scholars and economists agreed on the overall conservative approach driven by the long-term perspective that is widespread in this typology of enterprises. Because of the mentioned characteristic, they can easily respond and managers within the organization can decide the correct approach to maximize the adaptation to the new changes in the environment. On the other hand, they are reluctant and perhaps unable to use the flexibility granted by the organizational structure to effectively adapt and grasp opportunities coming from the dynamic and turbulent international market. I want to stress the evidence found on how differently this conservative approach might result in the different enterprises; if it is true that family business is widely considered as conservative, we have evidence coming from the Ondulit Italian enterprise of how the mindset of the household is essential. Indeed, in the latter case, the generational change was functional to the strategy of the enterprise; the family members were appointed in the meaning role only if they possess specific capabilities and specialization. Therefore we can state that the behavior held by family-owned enterprises is deeply affected by the mindset of the family itself.

Family members that have a dominant and managerial role in the firm are specialized, with experience and highly educated. (Dr. Federico)

Regarding the related ability in developing the learning mechanism in relation to the flexibility of the organizational structure, we were told that due to the previously discussed "limits" related to the lack of finite resources in family SMEs, the knowledge acquired and the data learned from the markets are not often used for change the approach to those markets if not for geographical area (as we'll discuss later in this thesis).

It is important to recognize the export strategy that companies used to enter the international market. The latter has always been in the form of indirect export to later move to a direct export focusing on a waterfall strategy; the latter is often used by SMEs. The main characteristic of this internationalization strategy and market entry strategy is the single entry in the foreign market; once the company has established its presence in the foreign country it decides to expand into the subsequent market. In our specific sample, this approach follows a transformation and adaptation due to the quality products they produce and to the business history.

Our products sell by itself (Dr. Vaccaro)

In particular, referring to Basaltina®'s path and approach to the global market, a huge turning point was the agreement signed by the company and the USA enterprises "Stone Source". This arrangement has exposed the Italian stone firm to the most important and known international architects that, upon the discovery of the quality and design of the lava stone, started to create a network all over the world. The "partnership" with the USA large scale distributors granted the Italian firms a learning effect and knowledge of other markets. In addition, the latter served as doors openers for other foreign markets. The quoted statement made by the manager is easily proven by the marketing spending of the firm will be shown in the table at the end of this section.

It is important to add the importance of the National Branding that Italian companies enjoy all over the globe with particular strength in the Far-east. The "made-in-Italy represents quality, design, professionalism, and prestige; a characteristic that brings the price and the perception of the product/services at another level with no added costs. The label "Made-in-Italy" is one of the core focus of many Italian Agencies that have the main goal of fostering the Brand awareness of our country among the other; I want to underline Italian Trade Agencies (ITA), a public organization that will have a role in the following discussion of the Research Questions. Another related aspect that needs to be discussed is based on the attractiveness that specific sectors enjoy in the Far-East, particularly in China. Here, the Italian construction companies, because of the uniqueness of the raw materials and the renewal of Italian architectural and Design history, have flourishing opportunities that many firms have already experienced (this aspect will be further investigated as an argument in the last RQ).

Because our products, to be sold in international markets require specific technicalities and certification by the country, thanks to the acquired knowledge in specific areas, we can apply a similar technology in homogeneous markets. (Dr. Federico)

A different approach has been used by Ondulit which, due to the characteristic needed by the product to enter a specific market because of the regulations imposed by each country, approached the international market with a strategy on homogeneous areas. This was firstly introduced in France where to be able to sell, there was the need for a certification called CSTB; by acquiring the latter, the company was able to sell in all the French-speaking territories. We can easily state that the acquired and necessary information and technicalities in a foreign market are being successfully used in a subsequent nation. To prove our thesis, a concrete example has been provided by the roofing solutions' company referring to the Caribbean Island; here, despite the presence of similar needs due to the extreme tropical climate, the legislations are different and the company can adjust its standards according to the requirements.

The learning mechanism that is usually used by large enterprises when deciding in which new market to enter, the collection of data from those markets is deeply different from the one used by the SME. Indeed, the latter, due to their restricted resources faces the analysis of the foreign market in different ways; market research is conducted with the assistance of governmental agencies (here ITA again), using a temporary export manager to systematize the internationalization process. This market research has been intensified in those countries considered strategic. In other markets, the most used approach is the one focused on the network, connection, and relationship created by enterprises in countries in which they are already present. A provided example was given by Basaltina®'s experience in South Korea where, after the construction of the Samsung building strongly desired by the architects, all the Nation started to covet the Italian lava stone for the buildings. Nonetheless, it is important to point out the importance that innovation and the systematization of processes have is the SMEs with the related need for firms in adapting and create a stronger learning mechanism.

Lastly, we want to stress, on top of the loss of learning that Italian organizations may experience, the "bad habit" that a lot of enterprises are having in selling know-how and technologies to the country in which they export. In this manner, they are suffering a loss of competition. When discussing this aspect with Basaltina®'s manager, for example, he strongly emphasized the different approaches his company is having in China with respect to other firms operating in the marble sector. The latter is indeed selling stones in a block as raw material together with their machines to slice the slab; in this way, foreign businesses are able to make a higher profit by cutting the panels in a cheaper way to re-sell it within the country. Knowing this problem, the company is unwilling in selling its raw product but the processed.

Italian marble companies started selling technologies with the attached related know-how to foreign countries. This is one of the reasons explaining our unwillingness to sell our products in blocks but providing semi-worked or finished products. To maintain control over the product. (Dr. Vaccaro)

4.4.1.2 Predict and adapt to change

Being able to plan, even slightly, the answers that various markets have are crucial to concentrate resources in those markets consider being more useful and valuable. This is one of the reason because many Italian enterprises, even before the Covid-19 pandemic, started to focus their activities in the Far-east where there are massive budget and chances.

We are gladly partnership with the ITA agency to support young specialists (especially from the Master CORCE) and in return, we exploit their knowledge in studying the specific foreign market and in approaching new projects. (Dr. Vaccaro & Dr. Federico)

This approach in the Far-East, as well as in many developing countries, is evident due to the change in the policy, going from a close to an open economy. For instance, well-known markets like the USA and Russia started to impose new tariffs and a non-tariff barrier to import; this attitude started years ago with Obama's policy of the "Buy American" that is to be considered a true state support and state preference upon the internal market. A similar limitation has been imposed by Putin's Russia under the pretense of mitigation of emission (due to the radioactivity of Chernobil) of products coming from the soil. This limitation to the import is one of the factors that has influenced our sample in entering the Rusian market only in the latest year. Accordingly, the ability that SMEs have to proactively predict the possible reaction of the various international markets in which they are presents is relatively scarce but they may benefit from the close relationship that is presented with the national partner.

What was stress and evident in our sample was the conformity in the state the necessary ability that enterprises operating in the global market must own. Changes in the international market are constant and firms need to be always ready in adapting to changes; the switch in a governmental policy, in the legislation, or the building up of restriction and limitation of a country are situations that are common for businesses operating globally. Change is inherent in carrying out business especially in developing countries; therefore if the company working in the international environment needs to be flexible to adapt to changes. Moreover, companies operating globally have great opportunities coming from the optimization and diversification (for the geographical area or clients) of the activities.

Change, in all its form, is inborn for companies operating internationally. The global pandemic moved the dynamic of Nations but we already had the necessary resources and capabilities to cope with it. What is critical to understand is that if companies want to operate globally (not randomly or once in a while) need to own the required flexibility. (Dr. Federico)

In addition, the diversification of risks put in place by companies operating internationally grants them the possibility of balance the potential loss in one harmed country with the gaining in a different one. The surveyed Italian SMEs stated their "readiness" for the Covid-19 pandemic. Of course, adaptation has been necessary, especially because of the change in communication with international customers. Nonetheless, the speed at which these firms reacted was commendable and granted a smooth adaptation to the newly imposed condition. Major changes were on the inability in making foreign trips, especially in China; nonetheless, this obstacle was easily overcome because of the strong presence of the businesses in the country.

An important example fostering their ability in being flexible enough to grant the adaptation was provided by the Ondulit firm; the latter was in the midst of an important project with a Chinese (a Chinese branch of an Italian Multinational Company of the new technologies sector) multinational and they needed consistent assistance for the building up of the product. The mentioned impossibility in traveling was an obstruction for the completion of the project; quickly the Italian company, through meticulous preparation, after identifying the proper technical devices and support, found the resources and skills to solve the upcoming issue. The technician in charge, who was previously supposed to carry on the supervision of the site, created video simulations on how the product should be assembled, together with advice and step-by-step explanations. The conclusions that we can draw from this experience are the extreme importance of flexibility, teamwork, and soft skills. Indeed, the technicians were chosen because of their skills and international past experience followed by on-the-job-training with managers that granted a strong and professional background to deal with possible obstacles.

As it is possible to notice from the constructed table in the following pages, the data given by the enterprises on different topics reveals their attitude and are in line with what was discussed previously. In detail, regarding Basaltina®, we can see how the company started its investments in specialized students coming from a different Master course only in the latest years; the willingness of the company is, however, to continue this partnership with specialized agencies and Universities to use the resources in performing markets analysis for strategic countries. Moreover, we can state the "unnecessary" or marginal influence, to acquire new foreign customers, of investments in marketing activities according to the value shown in the table. As previously discussed, the presence of the member family in the decision-making of the company is present but it is matched with the professionalism and experience of the members.

	Marketing Spendings	Specialized Students	Presence in Markets	Family Members
Basaltina®	2018 - € 106.514,54 2019 - € 96.796,40	2 CORCE (ITA) Master student to follow projects of markets analysis in South-Africa and Singapore 1 Trainee	40 countries in which the company had or have clients or interested in which 18 considered more important and strategic.	3 Managers (Production, Administration, and Commercial area) two of which graduates. 2 Employees
Onludit	2018 - € 80.000 c.a. 2019 - € 100.000 c.a	10 Specialized students for the Commercial, Marketing and Logistics Export	34 countries in which the company had or have clients or interested in.	3 (6 in total) family member in the executive and administrative role, all graduates 5 Employees (3 graduates)

Fig. 35: Summary of own elaborated data

4.4.2 Chinese appealing

Additionaly, our research was able to provide insight and possibilities for Italian SMEs, particularly in the construction sector in China, and it was discussed in both positive and -possibly- negative aspects. We can affirm that every agreement (nb. Recalling that the "belt and Road agreement is non-binding) aimed to ease the relationship with China is to be considered positive for businesses trading there. On the other hand, we also need to seriously consider the effects that Chinese import will have on the Italian economy. Indeed, for an organization like Basaltina®'s and Ondulit, characterized by a high-quality product with a strong and renowned brand, the competition coming from Chinese products is not threatening but for firms producing a low-medium product, this might be harmful. In addition, we should consider the Chinese product that is already present in the Italian market; for example, the cheap basalt coming from the Dragon country is already present in the Italian market and thus, the "new" agreement with China will not affect its customers base.

Finally, we need to make a significant distinction between companies that are already operating in international markets and firms that are aiming to approach China as first foreign market China. The former, through strong investments in quality, market research, and developing the organizational structure insight of the Dragon country might compete and build opportunities in that market. The latter, on the other hand, if has the idea of approaching the Chinese market to offset the negative trend in the balance sheet coming from the Italian market will probably perish in the competition arena because without the right entrepreneurial spirit or not ready with the internal organization and because of the long-term investment that Chinese market requires.

4.5 To sum up

The present empirical analysis might be helpful for Small and Medium Italian companies that already operate in the international market and for those who aspire to (with a specific focus on the far-East market like China).

In particular, for the first group of firms, we can describe the dynamic capabilities that might help or smoother the transfer of resources and knowledge going from one market to the subsequent one. Indeed, the ability of enterprises to effectively redistribute the resource-base according to the changes in the international environment is considered to be one of the keys to success. What has been considered extremely important, especially for firms operating in a sector characterized by high price and high-quality products, is the network and the relationship that the company is able to build with businesses' operators.

For enterprises that are aiming at entering the global market, we can firstly suggest a study of the environment by leveraging on Italian governmental agencies (ITA) that will foster and follow the export experience from the starting point to the final customer thanks to their already existing network with foreign markets. These opportunities are not often considered by SMEs because of misleading and insufficient marketing strategies due to the scarce resource of businesses. As second advice, we recommend to be bold hand have courage in facing international markets; this subject is a necessary characteristic to positively approach the turbulent global market.

CONCLUSIONS

The main objectives of the present research were to understand if, in an environment like the international market, depicted by high uncertainty, volatility, and turbulence, companies are able to successfully survive and increase the competitive advantage. These opportunities that enterprises could have grasped were often defined in the theoretical framework argued by many scholars with the focus on the so-called "Dynamic Capabilities". Therefore, our additional goal was to realize if these DCs were useful also for Italian SMEs and if the success of firms operating in a globally changing environment was also due to the ability to fast adapt, learn and change according to the reaction of different markets.

Theoretical Implications

- The similarities and typical attributes of the family-owned Italian SMEs are present in the way in which their organizational structure is built; here the theory (Litz, 1995) found the structured approach as conservative for the family involvement infirm ownership and management. Based on our analysis, we can state that this theory is partially confirmed. Regarding the Ondulit company especially, the presence of an investment in education and the consequent selection of ad hoc member of the family granted the business a more robust and strategic oriented structure. On the organizational structure, on top of our observation, we can strongly validate the theory (Burns & Stalker, 1961; Lawrence & Lorsch, 1967) stating the predominance of organic structure for dealing with international markets.

- In line with scholars (Teece, Pisano, & Shuen, 1997), the foundings of our analysis lead us to conclude that the DCs of enterprises in fastly and effectively anticipate the changes in the market and consequently change the strategy -being flexible- is an essential competency that enterprises operating in the global market need to have to sustain the competitive advantage.

- Results from the case study did not provide a complete analysis of what was discussed by the author (Arthur & Huntley, 2005) on the learning mechanism and ability of enterprises such that would give us the possibility to confirm or withheld the thesis. Nonetheless, from the experience had by both enterprises, we understand the ease of adaptation that SMEs have in international markets are valid to withhold the necessary information and to decide where to apply the acquired information and knowledge (i.e. Onulit's homogeneous zone use of technologies).

- Capabilities to effectively predict the changes in the different markets in which an organization operates is a success factor that allows companies to efficiently adapt their resource-based and routines according to what the singular market requires. Notwithstanding, this capability is hard to enhance and develop in a situation of a complete change of the global market; what firms might find helpful is to follow the overall trend of each country.

Managerial implications

When dealing with Italian SMEs that aim in entering the international market, considering the results from our analysis, we can provide guidelines and necessary capabilities they need to have before starting an internationalization process.

- Employ external competencies through specialists in the field of export strategies. In particular, in Italy, we have a designed agency, Italian Trade Agency (ITA/ICE) that has as main objective fostering and assisting SMEs in approaching the global market offering experts in trade such as Temporary Export Manager and Digital Export Manager. Moreover, Italian enterprises that are aiming to global markets, need to prepare their technologies, productions, and strategies to be ready and prepared for different foreign countries.

- Considering the need for flexibility that firms have to possess to operate in the global market, before starting the process of internationalization, the SMEs need to understand if it owns the necessary resources and capabilities to survive. As seen from the experience of the two enterprises, working in a turbulent environment as the international one, is a precondition to have a flexible organizational structure, mindset, and ad hoc strategy.

- A success factor in determining the presence or not of opportunities coming from investing in China was mainly the specificity of the product/service produced. Indeed, due to the strong competition coming from the well-established and powerful Chinese organizations, if the exported and produced product cannot be distinguished for their quality and design, the Italian firms might perish in the large and competitive Chinese market. In conclusion, for Italian SMEs that are aiming in entering the Chinese market by leveraging on the agreement coming from the Silk Road to effectively survive the crisis, it is first important to understand if they will be capable of survival thanks to the quality, reputation, and "Italianess" of the product they want to commercialize

Limitations and further research

The qualitative data resulting from the analysis showed the importance of understanding how the Dynamic Capabilities are used by SMEs and the key differences of their application and use when operating in the international turbulent environment. Themes that emerged in the research and were partially different or not mentioned by the literature are:

- The role that the investments in education and the selection of the family member has in presence of a family business. It was possible to notice how the meritocracy was considered a success factor to later define a strong organizational structure and to marginally solve the problem of a conservative approach in family-owned businesses. Appeared from our research that when family members were carefully selected based on their specialization, educational background, and experience when in a dominant and decisional position, they were more willing to embark on a strategic approach to deal with international markets.

- We considered sufficient the founding and data collected on the necessary abilities that SMEs need to possess before consider entering the international environment (the repeatedly mentioned flexibility require to adapt and survive to change). What might be studied in further detail can be how different businesses both owning and not these capabilities reacted to the global market. Did they survive od perish?

In conclusion, recalling the apprehension agued in the introduction of my work, I want now, after having analyzed and studied the opportunities for Italian SMEs, to lavish a positive thought; there are various and multiple possibilities for our Nation to not only survive to this crisis but also to enhance its position in the global market. What is necessary is passion, bravery, and study.

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