POLITECNICO DI TORINO

Collegio di Ingegneria Gestionale

ELABORATO DI LAUREA

# The Multinational Mnterprise and the localization of its functions: the case of FCA group

*Gianluca Cirillo*

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Relatore

Luigi Benfratello

Gianluca Cirillo

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# INTRODUCTION

Historically, the first modern multinational enterprises were born during the XIX century in USA and Europe to sell raw materials and agricultural product. Many branches extended over time and, consequently, firms start built their own manufacturing plants abroad. During ’70 European and Japanese multinational enterprises grew up rapidly and, from a business perspective, they intensified investment in developing countries. Recently, several multinational enterprises are coming out from rising economies. In the first section, the document will deeply analyse the main theories and trends publicized over that time.

The core chapter follows introducing the FIAT Auto, from the beginning to the birth of FCA, Fiat Chrysler Automobiles, which is the 8$^{th}$ largest group auto maker nowadays. In particular, using the abstract perspective defined in the first chapter, you will observe practical evidences of the Italian and American multinational enterprise business case.

In this view, it deserves to spend few rows on Sergio Marchionne, who expired in 25/07/2018. He was elected as an independent member of the Board of Directors of Fiat S.p.A. in May 2003, until being appointed CEO in 2005. He is widely recognized for turning around Fiat Group to become one of the fastest growing companies in the auto industry in a short time. In 2009, he was essential in Fiat Group forming a strategic alliance with the ailing US automaker Chrysler, with the support of the U.S. and Canadian governments and trade unions. Less than two years later, Chrysler returned to profitability, repaying all government loans. In 2014, Fiat and Chrysler merged into a new holding company, Fiat Chrysler Automobiles, now the seventh-largest automobile manufacturer in the world.

# 1 The Multinational Enterprise

*The current chapter introduces the theoretical framework that will be used to analyse and explain FCA behaviour over last 10 years.*

*It is fair to build a theoretical foundation starting from what is a multinational enterprise, which are its main decision drivers and what are their impacts on other entities and countries*

## 1.1 What is a Multination Enterprise

Several economists tried to define the Multinational Enterprise (MNE) over time using different elements. Thus, there is not a unique definition, but some main determinants can be identified. MNE is an entity managed from one country, the *home country*, and makes business in foreign countries, the *host-countries*; therefore, it manages and controls plants in at least two countries[1]. Also owning a relevant part of the equity share of a foreign company (frequently 50% or more) makes the owner firm a MNE[2]. From another point of view, a company (or group) is considered a MNE if it derives at least 25% of revenue from out-of-home-country operations[3].

From a legal point of view, "control" and "manage" over foreign establishment is an issue because countries have not the same minimum legal percentage level of equity ownership that they measure as a "direct investment" abroad. In addition, the prevalence of multiplant enterprises changes over sectors and countries, dependign on opportunities. Thus, it is interesting to analyse enterprises' conduct and actions that are strictly related to each other and to market framework because it is a kind of war, where behaviours and decisions base on actions and counters. In

[1] Caves, Richard E. (2007). Multinational enterprise and economic analysis. Cambridge University Press.
[2] Navaretti & Venables (2004). Multinational Firms in the World Economy. Princeton University Press.
[3] Black, Henry C. (1910). Black's Law Dictionary. Free Online Legal Dictionary 2nd Edition.

this view, according to the Vernon model[4], two distinct inclinations stand out: **aggressive conduct,** typical of those enterprises who identify profit opportunities extending their business abroad, and **defensive conduct**, which bases on rivals' imitation. Combining those two behaviours, sequential Foreign Direct Investment (FDI will be discussed later) will result in the same country in the same industry.

During last decades, new factors and drivers affected those previous theories. Historical events, improved information technology or privatization are just an example. In addition, the companies export not only production assets but also R&D activities, giving more importance to advantages born by exclusive knowledge.

## 1.2 The Multinational Enterprise in history

First of all, it is fair to contestualise the MNEs phenomenon from an historical point of view. Enstablishing plants in foreign countries or acquiring part of foreign companies' equity share drives a company toward an internationalization pattern, but those are just few features of MNEs today, as the result of a development process started several centuries ago.

### *1.2.1 Brief history of MNEs*

The current chapter inspires to Goldstein & Piscitello historical description of the MNEs evolution. An ancient couterpart of MNEs can be found in 2500 a.C. with Sumerian merchants, who used to stop agents in foreign ports to sell their own goods. That could be considered the first attempt of behaviours and strategies to conquer foreign resources and markets with creation of added value in a range of locations.

[4] Goldstein A., Piscitello L. (2007). Le multinazionali. Il Mulino

A step forward was made in the XV century, when a kind of credit institute spread in Europe. In this context, the most relevant example is the Medici family, who owned branches outside the Italian peninsula, such as London, Avignon, Basel and Geneva. That proves that the concept of MNEs was practiced before the concept of country.

After the discovery of America, Trading Companies were born and with them, international commerce obtained a new strength and different features. The most popular example is the East India Company. Between the end of the XVIII and the beginning of the XIX centuries, the first international banks spread in Europe, Swiss financier established in Paris, London and other stock exchanges, together with German and Jewish capitalists. After the second industrial evolution, during the last decades of the XIX century, the technological evolution into the telecommunication and transportation industry, thanks to tools like telegraph and ocean liners, gave an additional improvement to the goods and services international trading, which represents the first step of a globalization progress. All that aspects combined with the USA expansion, crude oil market and political interests increased the investment opportunities. As an example, firms like Bayer, Mercedes and Michelin started to install their business into USA and Latin America.

Political tensions created by the First and the Second World War added to the Great Depression slow down the globalization process, so enterprises change to protectionism tendency. It was just temporary, new information and communication technologies progess weaken barriers to international trading, so that enterprises could divide their operations into integrated activities.

### *1.2.2 The current MNE*

What happened after the Second World War drived the MNEs to the model known today. The emergence of industial capitalism, the improved production technology, the transportation and communication technology combined with social development fedeed a new internationalitation tendency.

Between the 1950s and 1970s, the United State leadership enstablished until the dollar crisis. In fact, if before the American MNEs exploited the nationalizations and exportations that complicated the operation of several MNEs in many countries, when the dollar became weaker, Japenes and European MNEs proved to be more smooth and agile and took advantage on American firms. That was the beginning of the 1980s, a period characterized by an increased degree of market integration and liquidity availability on international markets, thus, MNEs operations changed. In particular, production networks have been consolidated in few plants for each product and new offensive exportation policies were practiced.

The exploitation of new information and communication technologies, such as phones, computers and internet, accelerated the globalization process. It is around 1990s and 2000s, services have been liberalized, new opportunities were disclosed in several industries (commercial distribution, liberal professions and international transportation) and financial activities insinuated in the economic framework. All those aspects let MNEs making their activities more efficient, both in terms of performance and cost, and overflowing their operations beyond national bounderies.

## 1.3 The internationalization process

*The current chapter fixes some key points in the internationalization process. The first part focuses on the reasons behind firm's choice of internationalization. The second part defines 3 main steps in the internationalization path of a firm.*

### *1.3.1 Decision-making process of becoming international*

During history, the enterprises have invested in foreign countries for several reasons but recognizing an opportunity abroad and identifing the most suitable approach to get it are the key elements in the decision-making process. To investigate the determinants of why firms choose to undertake a path toward internationalization,

one of the most popular and influential theory is the OLI paradigm[5] performed by Jhon Dunning.

Ownership, Location, and Internalization (OLI) are recognized as three potential sources of advantage that may underlie a firm's decision to become a multinational:

- **The Ownership advantages** allow MNE to overcome the costs of operating in a foreign country. **Exclusive property advantages** on good/asset/know-how gives you a competitive advantage on rivals such as pioneering technology, exclusive productive processes, patents, management skills and such like, that can generate profits in the future.
- **The Location advantages** focus on the location choices of a MNE, which base on resource availability and/or institutional networks or structure in the host country. This category involves advantages from foreign country attractiveness to **market/business opportunitie**s **benefiting from conditions** such as: special tax regimes; lower production and transport costs; market size; access to protected markets, and lower risk..
- **The Internalization advantages** influence the approach that a firm chooses to operate in a foreign country, trading off the possible entry modes such as FDI, exports, licensing, or joint venture that gives the firm opportunities to grow up with **investments**, rather than market mechanism.

Starting from this point, John Dunning in 1993 classified 4 primary distinct (but not mutually exclusive) investment opportunities by nature (Goldstein & Piscitello, 2007):

1. **Resource seeking** – the main objective is get access to resources which lack or cost too much in the country of origin. Those desired goods could

[5] Neary, Peter j. (2010). World Economy FDI: The OLI Framework. University of Oxford and CEPR

be raw materials, labour force but also skills, managerial or technological competences.

2. **Market seeking** - the main objective is to support the host market (or the bordering ones) with investments. Generally, this practice requires home activity replication (for instance production or assembling), it is easy to recognize the "horizontally integrated" model described above.

3. **Efficiency seeking –** the main objective is a production framework rationalization. Have access to geographically scattered activities allows companies to take advantage of many countries conditions, such as political institution, economic systems or market differences. That is why multinational enterprises simultaneously invest into innovative countries, launching high added value activities based on technology, and in developing countries, undertaking intensive activities based on less qualified labour force.

4. **Strategic asset seeking/competence creating –** the main objective is get access to competences and/or skills classified as "critical" in order to improve company competitive strength and enrich its portfolio. Activities which need an high research degree take part of this investment group.

Before last opportunity introduces an important aspect to consider as one of the most important input in multinational company and its internationality: the knowledge. In particular, using the **"knowledge capital model"**[6], the more intense the production activity, the higher the vertical production fragmentation. Since the knowledge-generating activities can be geographically separated by production, the better the localization of work factors, the most convenient the supply. On the other hand, the MNEs tend to fragment their production and locate activities according to factor prices and market size. Simoultaneously, knowledge-based services have

[6] Carr David L. Markusen James R., Maskus Keith E. (1998). Estimating the Knowledge-Capital Model of the Multinational Enterprise. American Economic Review

a partial joint-input characteristic that rises horizontal cooperations when different firms produces the same goods or services.

### *1.3.1 Main steps in internationalization process*

Assuming an assured resource availability, the stronger innovative capability of a country, the more international activities will get launched. That is Vernon's template bases for identifing three phases of intenationalization of an enterprise. on an interesting postulate (Goldstein & Piscitello, 2007):

1. **Development stage –** Technological uncertainty characterizes this phase. Flexibility faces uncertainty. It means that companies localize their plants as close as possible to consumers, to rapidly absorb feedbacks, and to suppliers, to adapt products or processes within a short time. During this period, enterprices focuses more on product attributes, until a dominant design comes out.
2. **Maturity stage –** Once the product attributes stabilize, the cost reduction subtitutes the flexbility need. The standardization comes out when the product characterics are known and companies focus their effort improving the process in order to be competitive. During this period, product is usually known and wanted, therefore the enterprises start increasing production (it calls economies of scale which easily figure out cost reduction) and export.
3. **Saturation phase –** Once the product is completely stable and mature, imitators emerges also abroad and cost competition pushes companies to minimize production cost. Thus, enterprices start settle in developing countries to decrease the resources and the labor force cost.

## 1.4 FDI - Foreign Direct Investment

At this point, the reasons behind interantionalization choices and the main stages in the internationalization process are defined. The current chapter wants to focus on a particular investment practice and its main determinants. To do so, the chapter inspires to Assunçao – Forte – Texeira (2011). Location Determinants of FDI: a Literature Review.

Foreign Direct Investment is noticed as a **driving economic growth factor**. Many governments from developed and developing countries believe that FDI can help them endure stagnation and even avoid the poverty trap. In this context, the detailed analysis of the determinants of FDI has provided invaluable information. Various theories have been developed since the 1960s to explain FDI. These theories advice a number of determinants that could explain foreign direct investment flows, involving the **micro** (e.g., organisational aspects) **and macro** (e.g., resource allocation) **dimensions**. The first includes **factors intrinsic to the company itself**, such as ownership advantages, cost reduction and economies of scale, whereas the latter engages **market specific factors** such as barriers to entry, availability of resources, political stability, country risk and market size, among others.

Several empirical studies aim to assess which of the key determinants explain the investment of multinational firms in a given location. Many authors have concentrated on the issue of the FDI anf put forward different and complementary theories trying to explain them. However, there is no general agreement insofar as some studies have not found any statistically significant relation with respect to certain determinants. It follows a brief summary of theories/theoretical approach of FDI determinants:

- **Higher return on investment**

Heckscher-Ohlin model (1933) and MacDougall-Kemp model (1960-1964) motivated FDI by an *higher profitability in growing foreign markets* thanks to a lower labour cost and exchange risks.

- **Market imperfections**

Hymer (1976) and Kindleberger (1969) assume that there must be *imperfections in the markets* for goods or factors of production for there to be FDI. The first confirms that *investment abroad involves high costs and risks* inherent to the drawbacks faced by multinationals because they are foreign. These include the *cost of acquiring information* due to cultural and language differences and the cost of less favourable treatment by the governments of host countries. To offset the disadvantages, Dunning (1993) believes the multinationals will thus have *to have ownership advantages* (e.g., innovative products, management skills, patents, and so forth).

- **Product differentiation**

A reverse reasoning was made by Caves (1971), who focused his study on *product differentiation.* In particular, he regards that FDI has an advantage over export and licensing if product differentiation is *based on the knowledge,* because access to knowledge creates market imperfetions.

- **Oligopoly markets**

Knickerbocker (1973) (in Hill, 2007) based his study on the oligopoly rivarly between firms and its relationship with FDI. In particular, he stated tha FDI flows mirror the *reactive behaviour of a new entrant in the market*. In other words, companies tend to follow competitors to not let them gain a strategic advantage.

- **Product life cycle**

Vernon (1966) (in Hill 2007) explored the theory of *product life cycle* because firms' decisions are led by rivarly. He asserted that during *growth stage,* company invest into developed coutries, characterized by growing markets and production

absorption capability; *during maturity and decline* stage, firms shift their investment into devepoling coutries, where new opportunities raise up.

- **Behaviour theory**

Ahoroni (1966) (in Faeth, 2009) argued tht companies may opt for FDI through competition factors, such as the *fear of loss of competitiveness*, the need to follow rivals into foreign markets and increased competition in the domestic market.

- **Internalization**

Buckley and Casson (1976) suggested internalisation theory: when *transaction costs* (such as information and negotiation costs, arising from recourse to the market) are higher than *internalisation costs* (related to internal communication and organisation), firms decide to internalise operations through FDI.

- **The OLI paradigm**

As described before, the more holistic approach of Dunning (2002) embraces the internalisation theory, traditional trade theories and systematises the benefits for firms that operate internationally, connecting them to the chosen entry modes (Faeth, 2009). For Dunning there are advantages in choosing FDI when there are *simultaneously ownership advantages, location advantages and internalisation advantages.*

- **A "new" theory of trade**

Based on Kindleberger's theoretical models along with those of Hymer and Caves, an alternative analytical framework emerges that combines the advantages of ownership (knowledge) and location (market size and low transaction costs) with technology and the *intrinsic characteristics of a country (factor endowments).* This new theory is an addition to Dunning's eclectic paradigm: it aims to correlate the

three variables ownership, location and internalisation with technology and a country's characteristics in a coherent manner (Markusen, 1984).

- **Institutional theory**

Also political variables could affect FDI. Institutional theory advice that firms operating in a complex and uncertain environmentmay be influenced by the institutional forces especially on *regulations and incentives*. In this view, the institutions set the "rules of the game", so the strategies adopted by companies and their performance on international markets are quite determined (Peng, 2009). Foreign investment can thus be regarded as a 'game' in which the players are the multinational firm and the government of the host country, or as a contest between governments to attract FDI (Faeth, 2009).

Government policies that include tax breaks, subsidies and easy repatriation of capital can thus influence the choice between exporting, FDI and licensing. This issue has been examined by a number of authors, such as Bond and Samuelson (1986), Black and Hoyt (1989) and Hubert and Pain (2002) (in Faeth, 2009), who have concluded that financial and fiscal incentives, tariffs and lower corporate tax rates have *positive effect on attracting FDI.*

*Corruption* is another, equally important, factor in firms' decisions to opt for a particular place. Bénassy-Quéré *et al.* (2007) and Cleeve (2008) are among those authors who say that low levels of corruption lead to greater prosperity and have a considerable influence on the institutional quality of a country, and stimulate its development.

## 1.3 The effects of FDI

Up to this point, the reasons behind FDI were discussed and analysed, but the consequences and the impacts have not been argued yet. In this view, Edward Graham used the Game Theory to develop a new belief defined as **"threats**

**exchanging"**. It starts considering the entrance of a company in a foreign market as a bother event, which changes the existing equilibrium because the new entrant tries to get some market share from incumbents. As a consequence, local firms may oppose acting either in the local market either into concurrent's market. In the former, incumbents tend to built agreements among eachother or to apply a price-war or to differentiate products.

The current chapter aims to explain that kind of consequences and impacts on the initial equilibrium considering either the host-county either home country point of view suggesting a sort of conductive framework [7].

### *1.3.1 How host coutries approach to FDI*

Many developing coutries faced the complexity and the difficulties in technology transfer and diffusion introduced by foreign investment, thus they tried to enstablish effective policies. Opening to FDI is not enough, in fact government policies need to encourage both domestic and foreign investments in raising adaptive and reactive capacities to allow spillover effects and to facilitate technological development. In this context, some basic practises can be identified:

- **Developing innovation system at various levels.** In this area, polices may attempt to prevent systemic weaknesses in knowledge acquisition, dissemination and use in the productive sector. Tipically, they include reducing risks associated to innovative activities, attenuating obstacles to coordination among innovation actors and approaching the issue of innovation externalities.
- **Boosting absorptive capacities of domestic economies.** Education policies, training services and creation of skilled workforce promote

[7] United Nations Conference on Trade and Development (2010). Foreign direct investment, the transfer and diffusion of technology, and sustainable development.

technology dissemination, thus goverments facilitate local firms to take take advantage of skills and technologies developed by MNEs.

- **Targeting specific technologies and companies.** Identifing priority areas helps government to boost specific technology development. In this context, polices try to attract MNEs investments throughout financial incentives, opening to universitities or other high-level public research institutions.
- **Promoting technology dissemination through linkages.** Joint-ventures, Build-Operate-Transfer arrangements or the creation of technological and industrial clusters screates linkages between local firms and MNEs, which support trasmission of know-how and technology.
- **Protecting Intellectual Property Rights (IPRs).** A well balance and enforceable systems of IPRs promotes knowlegde generation and helps cross-border flows of technology.

Most devoloping countries of those practices because government policies need to aim at maximize benefits and minimize its own set of risks.

### *1.3.2 What happens in Host and Home Countries*

The current chapter aims at outline the most relevant effects of outward foreign direct investment on the developed home countries of multinational corporations and on the developing host country.

Opening that outward FDI is generally beneficial to the investing firm[8]; it is true that the effects on the home country depend on the features of the business environment and project industry both in the home and host countries considering also the nature of double-side effects (what happens in host countries will reflect in home countries and viceversa).

[8] The current chapter inspires to "Kokko, Ari (2006).The Home Country Effects Of Fdi In Developed Economies. The European Institute of Japanese Studies" and "Essays UK. (November 2013). Both home country and host country in FDI"

One of the most relevant impact of FDI is the **Employment Effect.** New employment opportunities in both countries are created, generally labour intensive activities are outsourced to the host countries with lower wage level, while the home countries focuses on more advanced operations.

FDI also implies **Resource Transfer Effect.** Namely, MNEs invest capital, technology and managerial skills in foreign countries, on the other hand firms access to low priced labour force, rare or cheap raw materials.

In addition, FDI may affect **Balance of Payments (BOP)[9].** Since the sum of all transactions recorded in the balance of payments must be zero, every credit appearing in the current account has a corresponding debit in the capital account, and vice-versa. As an example, if a country exports an item (a current account credit), it effectively imports foreign capital when that item is paid for (a capital account debit). The topic is sensible and can generate tensions between countries; therefore, economic policies are often targeted at specific objectives that impact the balance of payments.

# 2 Entry modes of a Multinational Enterprise

When a firm decide to undertake an international path, it can choose between two different types of FDI: **Green-field investments and Brown-field investments**. The former occurs when a parent company[10] or government begins a new venture by constructing new facilities in a foreign country compared headquartered country. The latter occurs when an entity purchases an existing facility to begin new production. Studies suggest that, by raising the accumulation of capital,

[9] The balance of payments divides transactions in two accounts: the current account and the capital account. The former includes transactions in goods, services, investment income and current transfers. The latter includes transactions in financial instruments and central bank reserves.
[10] A company that has a controlling interest in another company, giving it control of its operations.

productivity, and transfer of knowledge and technology, both green-field and brown-field investments positively influence economic growth.

# 3 Location, co-location & agglomeration theories

This chapter provides the elements to recognize and identify the evolution of agglomeration through time. In particular, you will see three main section, which clearly point out an evolution of the agglomeration economies. Researchers have produced much knowledge about the links between agglomeration and international trade. The following paragraphs will provide an excursus on those theories and their progress over time. Nevertheless, before starting, it is appropriate to define the concept of "Agglomeration Economies".

## 3.2 Agglomeration economies

Agglomeration economies comes out **when firms and people locate closely in cities and industrial clusters**. These benefits come from transport costs savings. Of course, transportation costs must be interpreted broadly, and they include the difficulties in exchanging goods, people, and ideas. The connection between agglomeration economies and transport costs would seem to suggest that agglomerations should become less important, as transportation and communication costs have fallen. Yet, a central paradox of our time is that in cities, industrial agglomerations remain remarkably vital, despite ever-easier movement of goods and knowledge across space.

**Declining transport costs** have facilitated trade between counties across the world, in particular with emerging economies like China, India or Brazil for instance. Within those countries, development has centred in urban areas. Across the world,

urbanization continues to increase. Indeed, megacities have become the gateways between those developing countries and the developed world. Within the richer nations of the West, many cities, like New York and London, have experienced remarkable comebacks since the dire days of the 1970s. Wages, population, and especially housing prices in many dense centres have experienced robust growth. Indices of industrial agglomeration show only a slight decrease in concentration over the last thirty years (Dumais, Ellison, and Glaeser, 2002).

Over the last forty- five years, the **spatial equilibrium** has been the primary tool for urban and regional economists trying to make sense of cities. The logic of the spatial equilibrium is that since people and firm can move freely within a nation, they must be indifferent between different locales. This indifference implies that high wages must be offset by high prices or low amenities; otherwise, people would flock to high-wage areas. High housing prices reflect high wages, high amenities, or both. However, the spatial equilibrium concept only gives us one-half of the labour market equilibrium that determines area wages. The other half is labour demand, or rather the willingness of firms to pay for their workers. Therefore, while high wages must reflect something bad about an area, like high prices or poor amenities, high wages must also reflect something good about an area that makes firms willing to tolerate a high cost of labour. Wages, therefore, can be interpreted as telling us about the core determinants of urban productivity, and high wages in an area are usually interpreted as meaning that the area is unusually productive.

The **agglomeration economy** is classified as one of the main determinants in the attractiveness and the competitiveness of a location especially because of the effects on firms placed in a specific area, either for domestic companies either for foreign ones. The positive externalities generated from the geographical co-presence of firms create two main flows:

- **Localization or specialization externalities** – intra-industry spillovers thanks to knowledge spread among competitors specialized labour created by industry demand and specialized suppliers (Marshall, 1920).

- **Ubranization or diversification externalities** – inter-industry spillovers arise from co-presence of firms operating in different complementary industries (Jacobs, 1969).

Thus, on one hand, **Marshall** observes that industries specialize geographically, because **proximity favours the intra-industry transmission of knowledge, reduces transport costs of inputs and outputs, and allows firms to benefit from a more efficient labour market**. In particular, Marshall (1890), Arrow (1962), and Romer (1986) put forward a concept, which was later formalized by the seminal work of Glaeser et al. (1992) and became known as the Marshall–Arrow–Romer (MAR) model. This model claims that the concentration of an industry in a region promotes knowledge spillovers between firms and facilitates **innovation in that particular industry within that region.**

Specialization encourages the transmission and exchange of knowledge, of ideas and information, whether tacit or codified, of products and processes through imitation, business interactions, inter-firm circulation of skilled workers, without monetary transactions. However, knowledge externalities among companies only occur between firms of the same (or similar) industry[11]. Thus, it can only be supported by regional concentrations of the same or similar industries. Since **information flow is strictly focused on a narrow sector**, it is also assumed that there cannot be any transmission of knowledge spillovers across industries. These localization externalities are likely to arise when the industry to which a firm's main activity belongs is relatively large. Workers are consequently better protected from business uncertainty and demand shocks if located in a region with a large local base in their own industry. Glaeser (1992) further argues that "local monopoly is better for growth than local competition, because local monopoly restricts the flow of ideas to others and so allows externalities to be internalized by the innovator".

The MAR model therefore perceives **monopoly as better than competition** as it protects ideas and allows the rents from innovation to be appropriated. Such

[11] Famous Italian examples are the tile or faucet markets, which are concentrated in Emilia Romagna region.

interactions can thus positively influence firm productivity and growth. These intra-industry spillovers are known as **localization (specialization) externalities,** Marshall or MAR externalities.

In addition, Marshall notices two other benefits of geographic concentration: **labour market pooling and transport cost savings**. Sharing inputs as labour, equipment and infrastructures among firms concentrated in the same industry generates economies of scale, another important source of localization economies. In general, a good cost reduction practice is to locate firms to both their suppliers and customers to reduce either transportation costs either distribution costs. The labour market pooling argument rises from the fact that in many industries, workers are often victim of fluctuating demand[12].The local concentration of firms within the same industry gives rise to a greater number of employment opportunities to dismissed workers. Thus, the migration of these workers from firm to firm also contributes to knowledge spillovers.

On the other hand, **Jacobs** (1969) believes in **diversity as the major engine for fruitful innovations**, because "the greater the sheer number of and variety of division of labour, the greater the economy's inherent capacity for adding still more kinds of goods and services".

Jacobs argues that the most important sources of knowledge spillovers are external to the industry within which the firm operates. Since the diversity of these knowledge sources is greatest in cities, she also claims that cities are the source of innovation. Her theory emphasizes that the **variety of industries within a geographic region promotes knowledge externalities, ultimately innovative activity, and economic growth.** A more diverse industrial fabric in close proximity fosters opportunities to imitate, share and recombine ideas and practices across industries. A science base, which facilitates the exchange and cross-fertilization of existing ideas and the generation of new ones across disparate but complementary industries, represents the common basis for **interaction**. Against the previous

[12] For instance, in aerospace contracts.

concept, the information spreads among different industries. Thus, the exchange of complementary knowledge across diverse firms and economic agents facilitates search and experimentation in innovation. A more diverse economy pushes toward the exchange of skills in order to emergence in the new fields. In addition, a well-functioning infrastructure of transportation and communication, the proximity of markets, and better access to specialized services are extra sources of urbanization externalities, which facilitate the operation of firms. Jacobs sees diversity rather than specialization as a mechanism leading to economic growth. Therefore, a diversified local production structure gives rise to **urbanization (diversification) externalities or Jacobs externalities.** A further argument in her thesis concerns competition, which is more desirable for growth as it serves as a strong incentive for firms to innovate and hence speeds up technology adoption.

**A third type of externality** raises according to Porter's (1990) argument, also associated with Jacobs, that **competition** is better for growth. Strong competition in the same market provides significant incentives to innovate which in turn accelerate the rate of technical progress of hence of productivity growth. High competition acts as a strong incentive to R&D spending, since firms are forced to be innovative in order to survive. However, the Schumpeterian model also states that if innovation occurs at too fast a pace, the returns on R&D investment are too low hence counterbalancing the incentive for further spending. Porter also argues that knowledge spillovers occur mainly within a vertically integrated industry, thus agreeing with the Marshallian specialization hypothesis in identifying intra-industry spillovers as the main source of knowledge externality.

MAR, Jacobs and Porter agree that there are **geographical effects of the agglomeration of firms**, but that is as far as it goes. They disagree on the effect of industry concentration, MAR (and Porter) arguing that knowledge spills over from firms of the same industry, while Jacobs makes the case for variety of industries.

The two schools of thoughts disagree on the effect of diversity, Jacobs arguing that knowledge spills over across industries while MAR (and Porter) specifically argue against this. MAR and Jacobs hypotheses also differ in the effect that local competition has on knowledge spillovers and growth, Jacobs (and Porter) favour a more competitive environment as conducive to growth while MAR would argue that such an environment is not conducive to innovation as the risks of idea leakages to others are too high.

**The role of externalities also varies according to the nature of the sector**, whether manufacturing or services. Consumer service sectors provide non-tradable goods, which should be produced and consumed closely to customers. This results in spreading the service activities around and among the customers rather than the concentration of these activities. Business services, on the other hand, greatly benefit from the presence of other sectors located around and are concentrated near the firms to which they sell their products. In both cases the location of services should be more suitable in cities (or diversified regions).

The effects of Marshall externalities are nevertheless slightly stronger in low-tech sectors, while the positive impact of Jacobs externalities on regional performance increases with increasing technological intensity.

During '90s and on, in particular between 1995-2005 more or less, agglomeration economies have been analysed not only when firms have to decide the location for their activities abroad, but also when it affects factors that are internal to the firm (Beldebros et al. 2016; Alcer and Delgado, 2016; Defever 2012). Again, two main flows emerged:

- **External agglomeration effects –** disperse activities along the value chain in a specific area.
- **Internal agglomeration effects** – geographical proximity between different units within the firm.

Considering a within-activity perspective, multinational enterprises concentrate their activities in regional clusters of industrial excellence and in metropolitan areas. The internal proximity could be motivated by the aim to generate economies of scale and scope, to facilitate local knowledge transfer or to reduce the information costs and the uncertainty related to operating in a foreign market, to reduce the liability of foreignness and to bet on a positive cost-benefit balance**.**

The term **'liability of foreignness' (LOF)** was coined by Zaheer in her seminal work, (1995) to refer to the additional costs that firms operating internationally experience in relation to local firms. Thus, at the core of LOF is the insight that firms face **social and economic costs when operating in foreign markets**.

The first contribution on this principle was built by Hymer (1960) who theorized the costs experienced by firms investing overseas as a fundamental aspect of the theory of foreign investment. Zaheer refined the concept, and supplemented the economic approach that characterizes Hymer's theorization with an organizational perspective that stresses liabilities, which arise from **lack of local knowledge and unfamiliarity with the norms and social expectations in foreign countries.**

Notwithstanding variations across countries, firms and time, studies find evidence that **foreign firms underperform comparable local firms**, a performance gap that is attributed to the liabilities they experience on the ground of their foreignness (Mata and Portugal, 2002; Mata and Freitas, 2012). These findings have generated interest in exploring ways to mitigate the LOF. Hymer (1960) was explicit in recognizing the superior advantages that foreign firms have relative to local firms, which enable them to overcome the LOF and compete successfully with them. Subsequent research has refined the understanding of these superior advantages. Zaheer (1995) suggested that, in addition to **building on their parents' advantages** (Hymer, 1960), foreign affiliates can mitigate their liabilities by **imitating the practices of successful local firms**. Luo, Shenkar and Nyaw (2002) distinguished between defensive and offensive strategies, referring, respectively, to greater reliance on the parents and on formal institutions in host countries, and deeper local embeddedness, as complementary means of dealing with the LOF.

**Under certain circumstances, foreignness appears to be an asset** rather than liability, Nachum, in 2003, advanced theoretical frameworks that attribute this variation to the type of advantages that matter in a given context, and to the context-specific balance between the costs and advantages that foreign firms have relative to local firms. Kronborg and Thomsen (2009) show that foreign affiliates enjoy what they name 'survival premium' over local firms, a finding they interpret as suggesting that foreignness is associated with advantages rather than liabilities. Adopting an institutional perspective, Edman (2009) demonstrated that the **freedom from the constraints of local institutions** that foreign firms enjoy affords them strategic choice that local firms are deprived of and translates into a competitive advantage. In a similar spirit, Siegel, Pyun and Cheon (2010) show that being an outsider frees foreign firms from the constraints of local norms and, as a result, provides them access to local resources that local firms cannot utilize. An extended this line of research by suggesting that the advantages of foreign affiliates originate in the incentives they have to extract commercial value from their R&D investments, which are stronger than those that local firms have. As theory suggests, these are more powerful sources of advantages than the technological capabilities of their parents (Hymer, 1960).

In this view, an aspect that affects multinational enterprises behavior is the **political institution**. What businesses must focus on is how a country's political system influences the economy as well as the particular firm and industry. Firms need to assess the balance to determine how local policies, rules, and regulations will affect their business. Depending on how long a company expects to operate in a country and how easy it is for it to enter and exit, a firm may also assess the country's **political risk and uncertainty**. A company should take into account several factors to assess possible risks, for instance:

- A government's stability
- The political system - democracy or dictatorship, for instance
- How much dramatically business rules could change if a new party comes into power

- The concentration of power - in the hands of a few or is it clearly outlined in a constitution or similar national legal document
- How the government is involved in the private sector
- The legal environment – if there is a well-established legal environment both to enforce policies and rules as well as to challenge them
- The transparency of the government's political, legal, and economic decision-making process

While any country can, in theory, pose a risk in all of these factors, some countries offer a more stable business environment than others. In fact, **political stability is a key part of government efforts to attract foreign investment to their country**. Businesses need to assess if a country believes in free markets, government control, or heavy intervention (often to the benefit of a few) in industry.

**The country's view on capitalism** is also a factor for business consideration. In the broadest sense, capitalism is an economic system in which the means of production are owned and controlled privately. In contrast, a planned economy is one in which the government or state directs and controls the economy, including the means and decision making for production. Historically, democratic governments have supported capitalism and authoritarian regimes have tended to utilize a state-controlled approach to managing the economy. Established democracies, such as those found in the United States, Canada, Western Europe, Japan, and Australia, offer a high level of political stability. While many countries in Asia and Latin America also are functioning democracies, their stage of development affects the stability of their economic and trade policy, which can fluctuate with government changes. Within reason**, in democracies, businesses understand that most rules survive changes in government**. Any changes are usually a reflection of a changing economic environment, like the world economic crisis of 2008, and not a change in the government players.

**This contrasts with governments that are more authoritarian**, where democracy is not in effect or simply a token process.

In this view, China leads to an emerging model which combines **an authoritarian form of government with a market-oriented economy** as a better alternative model for fledging economies, such as those in Africa. China has pursued a new balance of how much the state plans and manages the national economy. While the government remains the dominant force by controlling more than a third of the economy, more private businesses have emerged. China has successfully combined state intervention with private investment to develop a robust, market-driven economy—all within a communist form of government. This system is commonly referred to as "a socialist market economy with Chinese characteristics."

This new combination has also posed more questions for businesses that are encountering new issues—such as privacy, individual rights, and intellectual rights protections—as they try to do business with China, now the second-largest economy in the world behind the United States. The Chinese model of an authoritarian government and a market-oriented economy has, at times, tilted favor toward companies, usually Chinese, who understand how to navigate the nuances of this new system. Chinese government control on the Internet, for example, has helped propel homegrown, Baidu[13], which earns more than 73 percent of the Chinese search-engine revenues. (Rolfe Winkler, "Internet Plus China Equals Screaming Baidu," *Wall Street Journal*, November 9, 2010, accessed December 21, 2010).

Coming back to the original topic, it might seem straightforward to assume that businesses prefer to operate only in democratic, capitalist countries where there is little or no government involvement or intervention. However, history demonstrates that, for some industries, global firms have chosen to do business with countries whose governments control that industry. Businesses in industries, such as commodities and oil, have found more authoritarian governments to be predictable partners for long-term access and investment for these commodities. **The complexity of trade** in these situations increases, as throughout history, governments have come to the aid and protection of their nation's largest business

[13] The most popular search engine in China

interests in markets around the world. The history of the oil industry shows how various governments have protected their national companies' access to oil through political force. In current times, resuming the Chinese example, the government has been using a combination of government loans and investment in Africa to obtain access for Chinese companies to utilize local resources and commodities. Many business analysts mention these issues in discussions of global business ethics and the role and responsibility of companies in different political environments.

As a consequence of what described before, **co-location** economies came out. In particular, co-location may imply **clustering of firms that mutually benefit from being located in the proximity of each other**, although they do not belong to the same industry. The mutual benefit is a place-specific increasing returns to scale (McCann, 2001).

A key aspect in this view has been the **increased mobility because it enlarged global competition, technological change, the use of information and, as a consequence, the communication technologies**. Another important aspect is that **manufacturing flexibility** has never been as important for industry as it is today. In a world of interconnected devices and smart factories, the ability of a manufacturer to innovate and adapt to its customers' requirements is vital.

Therefore, the existence of **internal linkages across R&D and production activities interdependence have a strategic relevance** has been investigated. Inter-functional communication, sharing of not-standardized knowledge, joint problem solving and tacit knowledge transfer are strongly incorporated into the production process and into the generation of innovation

In the last decade, multinational enterprises are the main drivers of the growing internationalisation of enterprise R&D and in many countries foreign affiliates carry out more R&D than domestic firms. The type and motivations of R&D

investment vary depending on whether R&D activities were located, for instance in developed or emerging countries[14].

The result of those changes bring the R&D foreign investment into core firm strategy. In this context, it is challenging to identify where R&D activities are allocated and what factors drive that choice.

**Technological and Innovation Capabilities are considered the most important elements in achieving enhanced competitive advantage** (Diaz, 2008). Hence TICs are assets which facilitate the development of new products, application of new process technologies, and the ability to appropriately adapt to unexpected technological uncertainties (Adler and Shenbar, 1990). As one of the pioneers of the concept Burgelman et al., (2004) define TICs as a comprehensive set of organizational elements which through the tracking of technological development within the environment, and adaptation of the firm's systems and structures to the changing technologies and industrial progresses support organization's innovation strategies.

Although the literature provides different definitions of TICs, a common view highlights that these resources (e.g. knowledge, skills, products, processes, technology, experience, and organization) not only incorporate internal elements of the firm (Guan and Ma, 2003) rather they embed the external determinants. The ability to create, transfer, organize and utilize technological knowledge, as well as the ability to integrate, coordinate, adapt and respond according to technological developments play a key role in order to establish successful commercialized innovations (Yam et al., 2011)

However, the nature of knowledge (tacit vs explicit), access to TIC, ability to the firm to coordinate activities across distance, product and process complexity, industry characteristics affect the benefits of co-location of R&D with the

[14] In recent years, an increasing amount of R&D outward investment has gone to emerging economies.

production activities. Therefore, as research highlights**, there exists both reasons to co-locate and to unbundle.**

It is easy to observe that the innovative activities are strongly geographically agglomerated in both Europe and the US. The nature and utility of knowledge is at the heart of R&D economics, innovation and technological change. Two types of externalities are usually recognized to play a major role in the process of knowledge creation and diffusion: **specialization externalities**, which operate mainly within a specific industry, and **diversity externalities**, which work across sectors.

## 3.3 Value chain fragmentation and co-location patterns

# 4 The case of FCA Group

*The theoretical framework has been organized. MNEs storyline, their expansion and their behaviour. Thus, after a brief description of car manufacturing, a description of FCA group history and structure follow. The aim of this paragraph is recognize some features in foreign investment made by the group and the features of that behaviour and location choices.*

## 4.1 Focus on car manufacturing

*Since the thesis deals with a car manufacturer, it is appropriate to introduce this kind of operation to better set the context. In particular, it will be highlighted the importance of combining the manufacturing capability with knowledge, technology and research support.*

**Manufacturing capability** is defined as the ability of a firm's production system to compete in the market through increased cost efficiency, flexibility, delivery and

quality (Mukerji et al. 2010). Organizations increasingly become skilled in manufacturing products and services, which enhance the existing knowledge regarding technologies, procedures, processes and market inputs through manufacturing capabilities (Benner and Tushman, 2003). Manufacturing capability in the technological systems of firms is often regarded as the ability to convert R&D outcome to commercialized products and services (Guan et al., 2006). Manufacturing capability enhances both internal and external technological learning (Mukerji et al., 2010; Sapsed and Salter, 2008). **Flexibility** in particular leads to the enactment of the ability of transferring technology and technological know-how from the external environment (e.g. suppliers, competitors, customers) through establishing a suitable environment for the adaptation of the three technological learning elements i.e. human actors, processual containers and content. Authors argue that firms in order to engage in effective technological learning need to engage in both explorative and exploitative learning in the means that, besides the frequently experimenting R&D functions, firms need to reduce variability, increase efficiency and control in their process management efforts through strengthening manufacturing capabilities (Benner and Tushmen, 2003). For instance manufacturing capabilities improve technological learning such that:

- the effort for increasing vendor quality contributes to the speed of production (Ferdows and De-Meyer, 1990)
- the strength of quality control activities enhance the success of pretesting new products and processes (Li, 2000)
- the availability of pre and post-sales services facilitate the customization of products and processes for local markets (Li, 2000)
- the increased level of manufacturing flexibility enables the new product flexibility (i.e. the ability to introduce new products to be manufactured) (Malhotra and Mackelprang, 2012)
- high quality, low cost and flexible production enhances the speed and volume of product/service introductions (Mukerji et al., 20 10).

## 4.2 FCA storyline

### *The origins – Fiat Auto S.p.A*

**Fiat Automobiles S.p.A.** (originally FIAT, Italian: *Fabbrica Italiana Automobili Torino*') is an Italian automobile manufacturer, a subsidiary of FCA Italy S.p.A., which is part of Fiat Chrysler Automobiles (previously Fiat S.p.A.). Fiat Automobiles was formed in January 2007 when Fiat reorganized its automobile business, and traces its history back to 1899 when the first Fiat automobile, the Fiat 4 HP, was produced.

Fiat Automobiles is the largest automobile manufacturer in Italy. During its more than century-long history, it remained the largest automobile manufacturer in Europe and the third in the world after General Motors and Ford for over twenty years, until the car industry crisis in the late 1980s. In 2013, Fiat S.p.A. was the second largest European automaker by volumes produced and the seventh in the world, while currently FCA is the world's eighth largest automaker.

Coming back to the origins, Fiat was born thanks to a group of Turin personalities and, within them, Giovanni Agnelli, representative of the family which still controls the company. The most expansive period was between ’50s and ‘60s. In that period, an aware product policy based on “economy cars” and an efficient commercial organization, which relies on an high number of stores and mechanical workshop combined with encouraging measures on purchasing, improved the Italian private motorization.

### *From a stable period to expansion*

During ‘70s, Fiat intensified its diversification, especially emphasising the multinational framework of the group. In particular, there have been two important events:

- **1973 – Fiat-Allis Group foundation**, merging activities in the earthmoving machines sector (77% Fiat, 23%Allis Chalmers Corp.[15])
- **1978 – IVECO Group foundation** - merging activities in the industrial vehicles sector (80% Fiat, 20% Klockner-Humboldt-Deutz[16])

After that, Fiat started a reorganization of its activities[17], which meant the separation of specific production sectors and fed into dedicated corporations. In that period, it started also the separation of automobiles function, hence, Fiat began to play an industrial "holding" role and Fiat Auto was born in 1978. At that time, in Italy, the automobiles sector operated through 30 branch offices and 557 dealers. Abroad, Fiat Group takes place in 150 countries thanks to 22 branch offices and 170 dealers. The commercial organization integrates around 12 thousand licensed workshop and assistance points all over the world.

After 6 years, in 1984, the commercial overview noticed 32 branch offices, 10 management area, 730 dealers and 3'311 licensed workshops operating in the domestic context, no relevant changes in the abroad numbers. As you can see, Fiat works all over the world as a group but Fiat Auto core business relies on Italian market.

In 1986, Fiat signed an agreement with Finemeccanica to acquire Alfa Romeo. In particular, that deal settled that starting from 01/01/1987, Alfa Romeo, Lancia and Autobianchi have been bestowed to Fiat Group and totally managed by it. That event makes changes in terms of product differentiation and market share, **indeed Fiat was the first car supplier in Europe with 12.9% of market share.**

During '90s, Fiat Group continued growing up and diversifying its business. In 1990, Fiat Group got control of Toro Assicurazioni, bought the 49% of Maserati

[15] **Allis-Chalmers** was a U.S. manufacturer of machinery for various industries. Its business lines included agricultural equipment, construction equipment, power generation and power transmission equipment, and machinery for use in industrial settings such as factories, flour mills, sawmills, textile mills, steel mills.
[16] The **Klöckner-Humboldt-Deutz DZ 710** was a German aircraft engine manufactured by Motorenfabrik Oberursel A.G. in the early 1940s.
[17] Suche as agricultural vehicles, earthmoving machines, industrial vehicles, iron and steel industry, components, shaping machines, engineering, energy.

s.r.l. share capital and acquired part of ENASA[18]. In the end of the same year, Fiat and Ford Capital B.V. created the N.H.Geotech N.V.[19], an holding company (80% owned by the Italian company) which settled the activities of the two founder groups assuming an important role in the global overview. In addition, still in 1990, Fiat and Gruppo CGE signed several agreement, investing into telecommunication business. After the Fiat and Lancia merged in 1991, the Fiat Group was noticed as the 6th global car supplier and the 2nd in Europe taking 14% of market share.

During the **1993-1995** period, Fiat Group intensified its investments in Italy, opening Melfi and Pratola Sella plants[20], which have been designed according to "integrated manufacturing" know-how, and in the international development of automotive business activities and selling on non-domestic markets. The main policies dealt with **Poland**, where 13 plants have been built, **Russia**, where joint-venture agreements took place in the industrial vehicle and components production, **Cina,** where light vehicle and components production was settled, and **Argentina**, investing 600 million dollar to realize a manufacturing plant in Còrdoba. In addition, Fiat Auto operates in **Czech Republic and Slovakia** establishing local operating commercial societies. In this years, Fiat Group was the 7th global car supplier and one of the main producers in Occidental Europe taking the 11% of market share.

Hence, in 1993 a strong internationalization policy got started. In particular, the objective was to directly extend and reach emergent markets with an higher motorization demand thanks to investments and joint-venture agreements. Fiat Group focus that activity mainly in 7 foreign countries (Argentina, Brazil, China, India, Russia, Poland and Turkey) in order to build up an integrated production network on a global scale considering the particular market condition of each place.

[18] Spanish industrial vehicle producers which joined IVECO Pegaso S.A.
[19] The company will be named as New Holland starting from 1993.
[20] During the period 1992-1997, around 4'700 billion £ have been invested

In this view, in 1996 the Fiat Palio was launched on the Brazilian market, the first "world car[21]" series designated to promote the Fiat Group in the world.

### *Internationalization on the edge of a new crisis*

In 1998, Fiat Group and Renault agreed to focus their steel and iron activities in Teksid. Thanks to that operation, Fiat held the 66.5% of the company on the 30/06/1999.

Other relevant events have been noticed in 1999. In particular:

- Fiat Group totally acquired the Gruppo Pico – Progressive Tools and Industries Co., American leader in building production systems for car bodies.
- New Holland incorporated the American firm Case Corporation. After that, CNH Global was born
- Fiat Group controlled the Fraikin, French leader in long term industrial vehicle leasing
- It was agreed to merge IVECO and Renault in the bus sector. The joint-venture was called Irisbus.

In the end of 1999, Fiat Group represented di 6$^{th}$ largest car supplier producing 2.6 million vehicles[22] either in world and in the European Union, in particular it takes 10% of market share in the Old World.

In July 2000, Fiat Group and General Motors signed an agreement, in particular the Italian company entered into a **joint venture with General Motors**, ceding 20% of its capital to the Detroit company. The objective was to cooperate and find

[21] The "**world car" program** is an engineering strategy used to describe an automobile designed to suit the needs of global automotive markets with minimal changes in each market it is sold in. The goal of a world car program is to save costs and increase quality by standardizing parts and design for a single vehicle in a certain class, in hopes of using the cost savings to deliver a superior product that satisfies expectations for quality, appeal and performance of automobile buyers worldwide.
[22] The number takes into account also joint-ventures production.

synergies in the engines and transmissions buying and production sector. The two companies decided to cooperate also in other industries. In fact, to support that business, their financial services and advanced technological researches worked together. However, the agreement, established at a time when the groups was undergoing a severe crisis, did not lead to the desired results. Five years later, in 2005, Fiat and General Motors ended their alliance by mutual consent, putting an end to a cooperation that never effectively had off the ground. That "success" will be discussed later.

From now on, a crisis period started for the Fiat Group. Rationalization and reorganization are the most popular practices. As example, in the end of 2001, 18 productive plants closed[23], then the Fiat Auto Group was organized into 4 main entities (Fiat/Lancia, Alfa Romeo, Sviluppi Internazionali, Servizi); in 2002, Fiat transferred the 34% of Ferrari to Mediobanca; in 2003 all aerospace activities by FiatAvio have been acquired by Carlyle Group and Finmeccanica.

### *The miracle in Turin*

In order to face that crisis period, on the 26/06/2003 the Fiat Board of Director approved the "Piano industriale e finanziario di rilancio del Gruppo". It was a 4 year plan, from 2003 to 2006, focused on automotive activities (vehicles, components and systems). Its final objective was the Net Income budget in the 2005 for the Group, in 2006 for the Auto sector. That plan relied on around 19.5 billion Euro of investments. The total budget was mainly invested into new product (9.1) and R&D (7.9). The financial coverage was provided by transferring completion. Additionally, 12 plants have been closed in two years, that removed around 12 thousand employees (9.5 abroad). It is important to say that, as briefly described in the introduction, In may 2003, Sergio Marchionne was elected as an independent member of the Board of Directors of Fiat S.p.A., until being appointed CEO in 2005.

[23] 2 in Italy and 16 abroad, as a consequence 6 thousands people lost their job.

In order to analyse better this turning point, it is useful to call back what happened until now because the origins of Fiat crisis lay on its history. As it was said in the section of the current chapter, Fiat lived a sort of golden age during ‘50s and ’60, being successful in Italy. That was possible also because of protection from rivalry and competition, a condition agreed with governments. However, opening markets to international businesses and competitors, with the progressive European integration and the consequent reduction of incentives from the Italian government during ‘90s, little by little, all the Fiat limits come out in terms of ancient company’s framework and of a not always measured up management. Here they come organizational changes and renovation attempts. The scenario drives to the death of Umberto Agnelli, the last member of the famous family who led the company since the Second World War, and to nomination of Sergio Marchionne as CEO. He has been clear about his ambitions to **create a company with a global scale to challenge the world’s leading automakers**: General Motors, Volkswagen and Toyota.

From now on, Marchionne started a “lean burocracy” policy, the management was completely changed, several executives were fired and focus the effort of the company focused in the automotive sector, in fact the selling process of assurance, aerospace and telecommunications braches was completed. That approach leads to the “Piano industriale e finanziario di rilancio del Gruppo” introduced above and the production on few new car model edited by Fiat, Alfa Romeo, Lancia and Abarth. However, according the public opinion, the greatest success of that period has been convince General Motors to pay 2 billion dollar to not buy the Italian company. It was possible taking advantage of American company’s fear to face debts hold by Fiat Group. Thus, Marchionne let Fiat being independent and, using that payment, the most compelling part of the debt was paid. That approach combined with a strong and complex legal policy to dodge credit banks’ assaults let Fiat come out from the crisis, get a positive net income in 2005 (as planned) so that the Economist celebrated “The miracle of Turin” in 2008.

Thus, the company was temporarily secured, but to be secured it was not enough. Indeed, the automotive sector was on saturation, the plants and the employees were too much compared to sold vehicles. In addition, 2008 was the year of global economic crisis, which led to a massive recession and consumption reduction in the Western world. As a consequence, hardship come also on solid automotive companies such as Ford, General Motors or Chrysler. In this context, Fiat was not an exception. At that time, Marchionne started to find out a partner because, as he said, the automotive market was becoming narrower and the crisis would lead to dramatic changes – in terms of technology, business and consumption – that the few strongest competitors could have survived and Fiat alone was not large enough.

### *Crisis as an opportunity*

To find a partner is not easy. Fiat first attempt was approaching to Opel, the agreement was stopped by Syndicates, which did not trust the Italian investment conditions. Then, a second trial was performed becoming interested to General Motors again, without reaching the target. In 2009, the third attempt had success: after a long and complex negotiation with American Syndicate and shareholders, Fiat signed an agreement to acquire the Chrysler company.

The preliminary agreement signed in January 2009 by the management of the two car groups stipulates that **Fiat may purchase up to 35% of Chrysler's shares in exchange for its technologies.** Initially, the Fiat headquarters in the Turin district of Lingotto in northern Italy will not pay cash to Chrysler but instead exchange technologies, facilities and vehicle platforms. The Turin group may purchase the equity stake by 2009, but has the option of purchasing a further 55% thereafter.

The alliance would help Chrysler to relaunch and catch up with General Motors and Ford in the production of low-emission small and medium-sized cars. In fact, Chrysler is facing a severe crisis, notably in its cash flow, and needs to switch to the production of cars with low environmental impact to access funds made available by the US government. One of Chrysler's weaknesses has been its heavy

reliance on pick-ups, sports utility vehicles (SUVs) and minivans, which make up about 70% of its sales. **For Fiat, by contrast, the deal could open up the US market for its Alfa Romeo and Fiat 500 models**.

In 2008, Chrysler sold two million cars, mainly in the American market. In the same year, Fiat sold 2.5 million cars in Europe and Italy. In comparison, large multinational companies like Toyota and General Motors sell about nine million cars each year. As described above, the agreement comes at a difficult financial time for Fiat, despite having reported an increased trading performance at the end of 2008 compared with 2007. Indeed, the group has announced that it will not be paying dividends to its shareholders in 2009, with the exception of those on its savings shares, amounting to €25 million, as established by the company statute. However, according to the Chief Executive Officer of the Fiat Group, Sergio Marchionne, the alliance "will enable both companies to gain **access to important automotive markets with innovative and environmentally friendly products**, a field in which Fiat is a recognised world leader while benefiting from additional **cost synergies**. The deal follows a number of targeted alliances and partnerships signed by the Fiat Group with leading car and components manufacturers over the last five years aimed at supporting the growth and volume aspirations of the partners involved".

### *Driving toward FCA Group*

In 2011, as planned in the agreement, Fiat acquired the majority stake of Chrysler, giving back the loan granted by the American government. On the 14/10/2014 FCA Group was born when the acquisition of Chrysler by Fiat Automobiles was finalized. Fiat, "Fabbrica Italiana Automobili Torino", the first car manufacturer in Italy and the main one in Europe before the crisis of the automotive industry in the 80s, and Chrysler, founded in 1925 by Walter Chrysler and has had a tumultuous history as the third-largest of Detroit's auto companies, create a new unique entity.

*"The unified ownership structure will now allow us to fully execute our vision of creating a global automaker that is truly unique in terms of mix of experience, perspective and know-how. A solid and open organization that will ensure all employees a challenging and rewarding environment."*

*-Sergio Marchionne, chief executive of Fiat and chairman and chief executive of Chrysler Group.*

Fiat and the U.A.W.[24] trust have shared ownership since Chrysler emerged from bankruptcy in 2009. The deal to buy out the trust's 41 percent stake will make Fiat the world's seventh-largest automaker. Together, Fiat and Chrysler sold 4.5 million vehicles globally in 2012, according to OICA, an international organization of vehicle manufacturers. Toyota is the world's largest automaker, having sold 10 million vehicles, followed by General Motors, Volkswagen, Nissan-Renault, Hyundai and Ford. The merger will put Fiat and Chrysler just above Honda in terms of size.

Although Chrysler and Fiat have shared for years such resources as product development teams, and such production assets as single platforms that can be used to build several models and consolidated ownership will allow the company to move forward more smoothly, the public opinion considers the alliance as "unbalanced" toward American scenario. This thought takes partial consideration on the loss condition of the group in Italy and in Europe. What is certain is that the **geographic diversity** in the markets covered by Chrysler and Fiat is a great benefit to the merger.

*"Often, one global market will be up while another's down. If you're stuck in a single region, it can be a disadvantage to compete against global players."*

*– Mr Nerad, the executive editorial director at Kelley Blue Book.*

To conclude the most relevant data is the FCA share price: 1,6$ in 2004, 16$ in 2018. What happened in the middle is a spectacular and unexpected financial success. From a merely production point of view, the overview is quite ambiguous.

[24] United Automobiles Workers

Currently Fiat has a completely different nature from its beginnings, with financial offices in Netherlands and 167 production plants and 87 R&D centers all over the world.

## 4.3 The main brands in FCA Group

*As it was described above, the industrial group has a long and a complicated history. Thus, the current chapter provides a brief description of the main brands under the FCA Group up to present.*

Before discussing the evolution of the group through space and time in details, it is relevant to give evidences of the various brands which have been renamed FCA S.p.A., reflecting the incorporation of Fiat S.p.A and Chrysler Corporation made in 2014.

- **Abarth & C. S.p.A**. was founded into 1949 by the Italo-Australian Carlo Abarth. The is an Italian **racing car and road car** maker was re-estrablished as an independent unit of Fiat Group Automobiles S.p.A.[25] on 1 February 2007.
- **Alfa Romeo Automobiles S.p.A.** was founded into 1910 in Milan by the French investor Alexandre Darracq as A.L.F.A. ("Anonima Lombarda Fabbrica Automobili"). The **sporty car maker** was previously owned by Italian state holding company Istituto per la Ricostruzione Industriale between 1932 and 1986, when it became a part of the Fiat group. In February 2007, the Alfa Romeo brand became Alfa Romeo Automobiles S.p.A., a subsidiary of Fiat Group Automobiles.
- The **Chrysler Group** was founded by Walter Chrysler on June 6, 1925, when the Maxwell Motor Company was re-organized into the Chrysler

[25] The 100% of the control was on by Fiat Group Automobiles S.p.A., the subsidiary of Fiat S.p.A.

Corporation. The company focuses on **cars, commercial vehicles and automotive parts.**

- **Dodge** is an American brand of automobile manufactured by Chrysler Group. Dodge vehicles currently include the **lower-priced** badge variants of Chrysler-badged vehicles as well as cars, trucks, SUVs and vans/minivans.

- **FIAT S.p.A** was founded in 1906. The initiative was organized by Giovanni Agnelli following the foundation of the Società Anonima Fabbrica Italiana. Fiat Automobiles was formed in January 2007 when Fiat reorganized its automobile business. Its business focus on **cars, industrial vehicles and automotive parts.**

- **Fiat Professional** was launched on 17 April 2007 and replaced the **Fiat Veicoli Commerciali** division. The brand was a subsidiary for Fiat Group Automobiles. It mainly produces **light commercial vehicles and their passenger variants**. Since 2013, certain Fiat Professional models are reengineered and marketed by Chrysler (FCA US) under the Ram Trucks brand.

- **Jeep** was owned by Willys–Overland Motors**.** In 1987, Chrysler acquired the Jeep brand. Its current product range consists solely of **sport utility vehicles and off-road vehicles, but has also included pickup trucks and roadsters.**

- **Lancia** is an Italian automobile manufacturer founded in 1906 by Vincenzo Lancia as Lancia & C.. It became part of the Fiat Group in 1969; the current company, Lancia Automobiles, was established in 2007. Its product range focuses on **utility cars**, which are noted for using letters of the Greek alphabet for its model names.

- **Maserati i**s an Italian **luxury vehicle** manufacturer established in 1914. It has been owned by Fiat S.p.A since 1993. Maserati was initially associated with Ferrari S.p.A., which was also owned by FCA until being spun off in

2015, but more recently it has become part of the **sports car group** including Alfa Romeo and Abarth.

- **Mopar,** The name is a portmanteau of the words "MOtor" and "PARts", is the **parts, service and customer care** organization within Fiat Chrysler Automobiles. Mopar also designs and builds a small number of customized vehicles. It was was introduced by Chrysler as a brand starting in 1937.
- **Ram Trucks** was established as a division of Chrysler in 2010, as a spin-off from the Dodge brand, and using the name of the popular Dodge Ram line of pickups that is now sold under the Ram banner. Its main products are **light to mid-weight commercial vehicles** (trucks and vans).
- **Street & Racing Technology** (commonly called **SRT**) is a **high-performance automobile group**. SRT began as "Team Viper" to develop the Dodge Viper. In 2012 Chrysler implemented a plan to turn SRT into a separate brand under the Chrysler Group umbrella. SRT heavily tunes and produces vehicles for the Chrysler, Dodge, and Jeep brands.
- **Comau** began in 1973 as the COnsorzio MAcchine Utensili to unite all the businesses based in Turin and the surrounding area. Its core business deals with **industrial automation products, systems and services.**
- **Magneti Marelli S.p.A.** develops and manufactures **high-tech components for the automotive industry**. It was born in 1919 — as *Fabbrica Italiana Magneti Marelli (FIMM)*, a joint-venture between Fiat and Ercole Marelli (1891-1993), an Italian electrical manufacturing company.
- **Teksid S.p.A.** is an Italian company, which specialises in the **production of iron and castings for the automotive industry**. Originally known as Ferriere Piemontesi, Teksid was owned by Fiat S.p.A. since 1917. In 1998, the French car manufacturer Renault merged its foundry business with Teksid, creating a change of ownership. By 2013 Fiat grew its share to 84.8% and Renault retains 15.2%.

## 4.4 Fiat and FCA development

### *4.4.1 Fiat S.p.A. status in 2002*

As the reconstruction in the previous chapter, Fiat S.p.A. initial international presence is the result of the events, investments, mergers and agreements described. That context outlines a dynamic development but, looking on spatial distribution, the map stands out that Fiat core business operations still base in Italy and Europe.

The aggregate data reflects the approach of the company. It is fair to say that Fiat Group was growing up and diversifying its business. In particular, the Italian group intensified its investments, trading in assurances and telecommunication businesses, opening new plants in Italy and spreading toward non-domestic market to directly broaden and reach emergent markets. In particular, Fiat Group focus that activity mainly in 7 foreign countries (Argentina, Brazil, China, India, Russia, Poland and Turkey) in order to build up an integrated production network on a global scale considering the particular market condition of each place.

That internationalization attempt was combined with General Motors agreement. The objective was to cooperate and find synergies in the engines and transmissions buying and production sector.

The approach did not succeed. An hard crisis, followed by rationalization and reorganization practices affected the Italian industrial group.

In 2002, the size of the company involved 343 operative centers[26] in 4 macro areas: **Europe, North America, South America and Asia.**

[26] From the 2002 Annual Report of Fiat S.p.A.


*Figura 1 - Fiat S.p.A. operations in 2002*

### *4.4.2 Fiat S.p.A. status in 2007*

The status pointed out by Figure 2 reflects the consolidation practices instituted during the period 2002-2007. Comparing those maps, the scenario does not appear different, the most relevant evidence is in a reduction of operative facilities and plants in the North America, South America and Asia zones.

In addition, the graph stands out the organizational changes and renovation attempts. It is fair to say that consolidated the activities in Italy and Europe and discouraged in the other areas but, looking at the aggragate data composition, R&D is proportionally increased with respect to the past, especially in North America and Asia. Thus, the management restriced the number of facilities but proportionally increased the presence of inter-fuctional channels and knowledge and technological tranfers in those area. Even numbers supports those evidence, in particular, in the Annual Report published in 2008, the total number of operating centers was 292, subdivided into 174 facilities and 114 R&D centers, against 216 facilities and 127 R&D centers registered in 2002.


*Figura 2 - Fiat S.p.A. operations in 2007*

### *4.4.3 Fiat Auto S.p.A. status in 2012*

The first important change in that Fiat Auto S.p.A. was born, thus, according a more international establishment approach, the aggregate data is more detailed and provides different evidences.

Another important event was the the preliminary agreement signed in January 2009 by the management of the two car groups Fiat and Chrysler, which aimed at exchanging technologies. accessing to important markets with innovative and environmentally friendly products, while benefiting from additional cost synergies. The deal reflects into the map, which stands out the intensive investment made toward North America.

With this market and asset seeking, the company aimed at ensure a stable access to a wide market and access to advanced technology. In terms of numbers, in 2012 Fiat Auto registered 243 operative centers, but aroud the 25% of them is enstablished in North America, in particular 48 manufacturing/Components plants

and 16 R&D centers, against 22 facilities and 14 R&D centers registered into 2007[27].


*Figura 3 - Figura 4 - Fiat S.p.A. operations in 2012*

### *4.4.3 FCA status in 2017*

As before, an important event changed the scenario: in 2014 FCA was born. in that Fiat Auto S.p.A. was born, thus, the international establishment is consolidated and the company has reached an upper level of dimensions.

After the merger, the number of plants and performing R&D increased. In addition, the map shows the location choices through the assembly, components production, car manufacturing and R&D functions. In terms of numbers, FCA counts on 253 establishment, subdivided into 103 components production factories, 103 manufacturing plants and 89 R&D centers.

[27] Data refers to Annual Repots published in 2008 and 2003

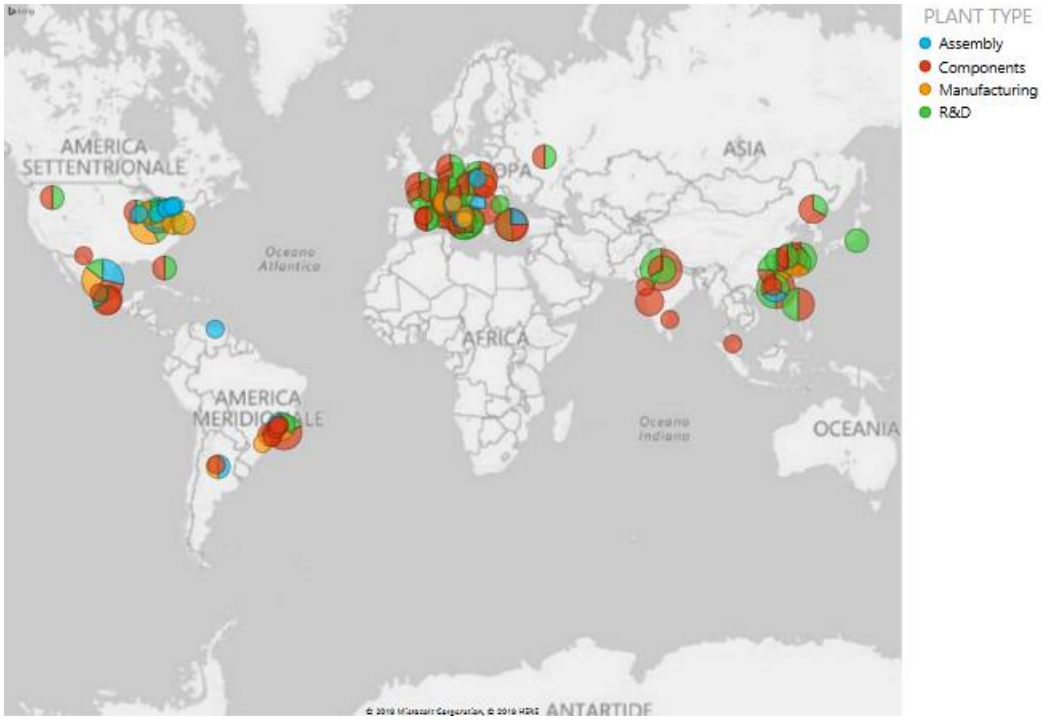


*Figura 5 - Figura 3 - FCA. operations in 2017*

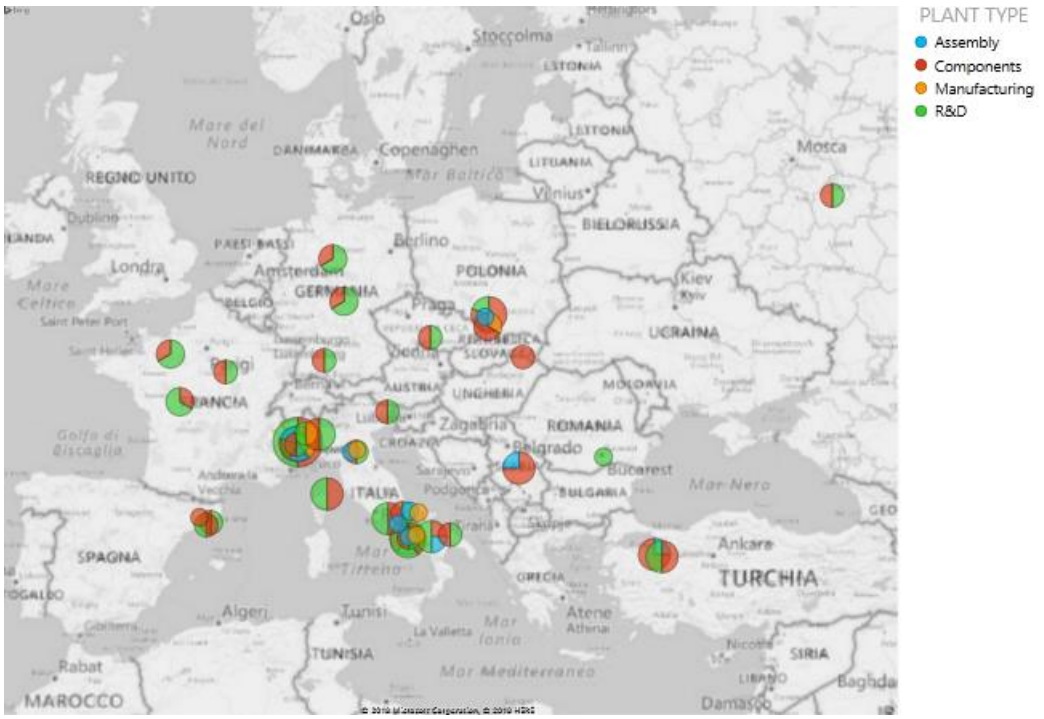


*Figura 6 - FCA operations in Europe in 2017*

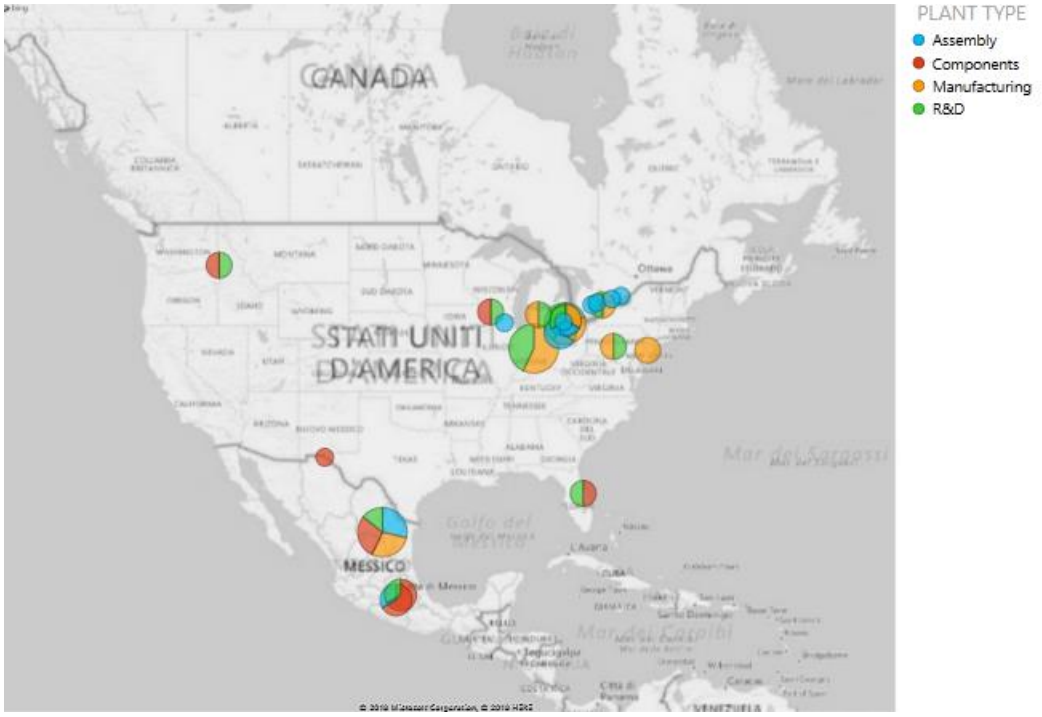


*Figura 7 -FCA operations in North America in 2017*


*Figura 8 - FCA operations in Asia in 2017*


*Figura 9 - FCA operations in South America in 2017*

# 5 Conclusions

The details provided by 2017 scenarios support the conclusion of the thesis. During its existence, Fiat and then FCA spatial behaviour outlined co-location patterns consistent with theory: the core business activities have been clustered in accordance to local opportunity, thus location determinants played a key role.

As an example, manufacturing and components production are strongly concentrated into North America and Europe. It is fair to say that in the automotive sector, mass production and manufacturing efficiencies relies on consolidated

practices, thus it is fair to locate that kind of factories in developed countries, where the technological scenarios support the activities. On the other hand, it is fair to take advantage of low-wage labour force and access to market opportunities as it happens in Asia and Latin America.

Finally, an interesting aspect is the strong presence of R&D activities in the Chinese context. It could be interpreted as an attempt to catch new opportunities in an emergent reality.

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