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The Impact of International Trade and Foreign Direct Investment on Economic Growth

The Case of the Municipality of Vila Nova de Famalicão

Ana Cristina Gonçalves Rego

Dissertation

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Óscar Afonso, PhD

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Abstract

The study of the impact of International Trade and Foreign Direct Investment on economic growth has been widely researched, and the literature has shown that the relationship between these is positive. However, most of these studies have been applied to a whole country or region, lacking an analysis of these variables on a city level.

Therefore, this study aims to understand the impact the promotion of international trade and inward flows of Foreign Direct Investment (FDI) can have on a city and how each city can have a great contribute for the national economic growth if its characteristics are valued and explored. For this purpose, we conducted a case study focused on the city of Vila Nova de Famalicão that despite its small populational and geographical dimension is the third biggest exporter in Portugal and the first on the north region of the country. The results based on a qualitative and quantitative analyse of data, showed that the city contributes positively to the national economic growth. Moreover, this positive contribution is highly linked to the high export values of the city whose biggest contribution comes from the firms in the territory that represent inward flows of FDI.

JEL Codes: F10; F23

Keywords: Economic growth; International trade; Foreign Direct Investment; Exports, Vila Nova de Famalicão.

Resumo

O estudo do impacto do Comércio Internacional e do Investimento Direto Estrangeiro no crescimento económico tem sido extensivamente alvo de pesquisa, com a literatura maioritariamente a apontar que a relação entre estas variáveis é positiva. Contudo, a grande parte dos estudos é aplicado a um país ou a uma região, existindo, por isso, uma escassa análise destes fatores aplicados a uma cidade.

Assim, este estudo tem como objetivo perceber o impacto que a participação no comércio internacional e a promoção de fluxos internos de Investimento Direto Estrangeiro possa ter numa cidade e como isto pode contribuir positivamente para o crescimento económico nacional. Para esse efeito, foi desenvolvido um caso de estudo focado na cidade de Vila Nova de Famalicão que, apesar a sua pequena dimensão populacional e geográfica, se afirma como o terceiro maior exportador nacional e o maior da região norte do país. Os resultados, baseados numa análise qualitativa quantitativa de dados, mostram que a cidade contribui positivamente para o crescimento económico nacional. Nomeadamente, este contributo positivo está fortemente ligado ao grande volume de exportações, que tem como principais contribuidoras as maiores empresas do concelho que representam fluxos internos de Investimento Direto Estrangeiro.

Códigos JEL: F10; F23

Palavras-chave: Crescimento económico; Comércio internacional; Investimento Direto Estrangeiro; Exportações; Vila Nova de Famalicão

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List of Abbreviations

CAPEX – Capital Expenditures

CENTI – Center for Nanotechnology and Smart Materials

CITEVE – Centro Tecnológico Têxtil e Vestuário

EU – European Union

FDI – Foreign Direct Investment

GATT – General Agreement on Tariffs and Trade

GDP – Gross Domestic Produc

IAPMEI – Instituto de Apoio às Pequenas e Médias Empresas e à Inovação

IMI – Imposto Municipal sobre Imóveis

IMT – Imposto Municipal sobre as Transmissões Onerosas de Imóveis

INE – Instituto Nacional de Estatística

IRC – Imposto sobre o Rendimento de Pessoas Coletivas

IT – International Trade

M&A – Mergers & Acquisitions

MNE – Multinational Enterprise

NATO – North Atlantic Treaty Organization

P/L before tax – Profit and Loss before tax

R&D – Research & Development

UN – United Nations

UNCTAD – United Nations Conference on Trade and Development

V. N. de Famalicão – Vila Nova de Famalicão

WTO – World Trade Organization

1. Introduction

The Master's Thesis will address the influence of International Trade (IT), more specifically the role of exports, and Foreign Direct Investment (FDI) on Economic Growth, having GDP growth as the measure concept of economic growth. For this purpose, we will study the case of the city of V. N. de Famalicão, which with its big industrial heritage, is the biggest exporter on the northern region of the country and the 3rd on the country. With the analysis of its contribution to the national trade balance, as a component of GDP, and the importance that FDI has on the city and how it contributes to the trade balance and other components of GDP, such as investment and consumption.

This dissertation aims to study the impact a city can have on the national economic growth, by focusing on IT and having FDI has an important contributor to the economic growth.

The theories of economic growth derived from exogenous growth models and evolved to endogenous growth models. The exogenous models have as a main figure Solow (1956) and his neoclassical theory of growth, which affirms that economic growth derives from a combination of three factors – labor, capital, and technology. The theory explains that equilibrium can be reached on short-term with labor and capital in the production function, but that for a long-term growth, technological progress is a crucial factor to have positive economic growth since the productivity of labor and capital is positive but decreasing. Therefore, technology allows increasing labor capabilities and further productivity. The role of technology inspired the endogenous growth models, which believed that technological progress could also be dependent on the capital and labor factors, since the accumulation of capital, could be for instance intellectual capital that can impulse technological progress (Frankel, 1962).

The years following World War II brought a straightening of the relations between countries, including trade relations. Alongside with these came the foundation of several international organizations, that aimed to regulate and promote trade, economic and political relations between its member, such as the World Bank, the International Monetary Fund and the GATT agreements that led to the foundation of the World Trade Organization. The effect of the trade relations has been studied by several authors, among them Balassa (1977), Feder (1982) and Fedyunina (2016) that concluded that IT leads to GDP growth in both developed and developing countries, since it provides a better reallocation of resources that,

in turn leads to economies of scale, higher (and better) investments and, therefore, increases production efficiency.

Another motor for economic growth can be, as according to several authors, FDI. Dunning and Lundan (2008), for example, defend that FDI brings to recipient countries several benefits, asserting itself as an important driver of wealth, due to the creation and/or improvement of infrastructures, increased business activity, job creation, development of technological capacities, tax revenues and advantages in the balance of payments. In the following dissertation should be explained how it influences national and municipal revenues, which allow for structural reforms that drive economic growth.

The institutions of a country, its currency, geography, levels of corruption, its legal system among other factors have a huge impact on its ability to take advantage from FDI. These advantages can result in an increase on the employment rate, technological and production capacity, better education of the workforce and all these combined result in a bigger rate of economic growth, that provides trust to the investors.

The main purpose of this dissertation, as mentioned before, is to analyze the importance of the city of V. N. de Famalicão on the national GDP, despite the small geographical and populational dimension, and the fact that it is not a capital of district. The analysis will mainly focus on the evolution of the GDP and national trade balance, following by the observation of the city's trade balance, to observe its percentage on this component of the national GDP. Afterward, we will examine the biggest firms on the municipality (the ones with a bigger turnover) and examine which have foreign capital and represent FDI, observing its contribution to the different components of the GDP, such as investment, consumption, and trade balance.

In the next chapter of this dissertation will be performed a literature review with the theories of economic growth, followed by some studies done on the importance of IT and the role of FDI on growth. Then, Chapter 3 will focus on the case study and will be divided in three parts. The first one will introduce the methodology used. In the second part the results obtained on the research will be presented. These results show the conditions that Portugal and V. N. de Famalicão have that can favor international trade and promote inward flows of FDI; a description of GDP as the indicator of economic growth; an analysis of several economic indicators such as the openness index of Portugal's economy, in order to understand the importance of foreign exchanges for the national economy, its trade balance,

and the coverage ratio, followed by the coverage ratio, trade balance of the city and the percentage of the exports of V. N. de Famalicão in the national ones; the last part will have an observation on the evolution of the inward flows of FDI in Portugal and as for the difficulty in finding these flows just for the city, its study will mainly focus on which of the biggest firms (the ones with the bigger turnover) in the city have foreign capital, which at a certain point in time represented FDI. On this last sub-section we will study different factors that can represent a positive influence of FDI on economic growth, such as the number of jobs created, the wages, the amount of production destined to foreign markets and the taxes paid. This different analysis will allow to connect this contribution to the impact it can have on the different components of GDP besides the trade balance, such as consumption, investment, and government spending. The results will be followed by a final discussion. Finally, a conclusion will be drawn.

The dissertation will support its evidence with data collected from different data banks, such as PORDATA and INE for the macroeconomic analysis and Orbis for the information about the firms.

2. Literature Review

In this chapter is presented a literature review regarding, initially, the theories of economic growth, followed by an analysis on the importance of international trade on the first, and finally, the influence that inward flows of FDI also have on economic growth.

2.1 Economic growth

Modern economic growth, "meaning a rapid and continuous process of growth per head of the population" (Baines, 2003, p.16) began with the industrialization process in Europe, having Britain has the main figure and expanded firstly to the other west European countries and then to the periphery, growing much faster and persistently than any other period before.

Economic growth theory evolved from exogenous growth models to endogenous ones. In 1956, Solow, creates the neoclassical theory of growth, introducing an exogenous growth model, that was based on a production function, with constant population growth and constant returns to scale, describing the relation between output, accumulation of capital and growth. Solow's theory implies that if the output *per capita* is on an inferior level of balance, the physical capital stock would grow faster. Since the productivity of the inputs is positive, but decreasing, there would be a *steady-state,* in which the output per capita growth rate, would be determined by the exogenous rate of technological progress. This exogenous rate of technological progress, increases the productivity of the factors of production, allowing capital to grow without decreasing its marginal productivity, allowing a sustained positive output growth. The explanatory variable of the output growth rate is clarified by the three previously explained growth effects, leaving apart other variables that could increase growth, such as international trade, that is taken as a level effect (Africano et al, 2018).

Technological progress as an explanatory – i.e., endogenous - variable of economic growth inspired the endogenous growth models, that wanted to explain what Solow's model was not able to. These were sustained by Frankel (1962), Romer (1990), Aghion & Howitt (1992). Frankel (1962, p.997) defended that the growth rate should also consider a long-term growth rate in output per worker, which "rises steadily because of the action of forces-variously referred to as technical change, improvements in organization, improvements in the human factor- outside the system and independently of forces within it".

Technological absorption capacity plays a major role in the economic growth process and this capacity of absorption is highly dependent on the country's human capital resources (Frankel 1962). This factor, which provides to a country the ability to absorb technical progress, is a complementary effect of the endogenous growth models. Nelson & Phelps (1966) based their theory on the hypothesis that education accelerates the process of technological diffusion and the capacity to catch-up with more advance economies, relating this way economic growth with the stock of human capital and its characteristics. The authors argue that the level of technology in practice can increase by leveling up the educational accomplishment and would make countries more skilled to absorb technical progress. Moreover, Bassanini et al. (2001) defend that investment in human capital, with higher investments on education and training plays a major role in the growth process, since high levels of education are highly linked to technological progress. The increase of educational levels contributes not only to improve the skills of the workforce, but also stimulates innovation.

Romer (1990, p.71) established in his model that growth "is driven by technological change that arises from intentional investment decisions made by profit-maximizing agents" – R&D – with imperfect competition in the capital goods sector. According to Romer (1990, p.72) "technological change provides the incentive for continued capital accumulation, and together, capital accumulation and technological change account for much of the increase in output per hour worked". Thus, capital and labor use the stock of technology available and technological progress allows the output growth of both factors. This conclusion makes Romer's theory similar to Solow's, however they diverge on the determination of the technological progress growth rate, because in Solow's it is determined by external factors and in Romer's it is endogenously determined, depending on how many efforts are put on the R&D factor inside each firm.

For Aghion & Howitt (1992, p.349) economic growth is based on Schumpeter's (1942) process of creative destruction, in which labor is constant and set between R&D and the production of capital goods, there is no capital accumulation, only "monopoly rents" and "innovation consists of inventing a new intermediate good that can be used to produce final output more efficiently than before". Therefore, they assume that growth is generated by quality improving innovations that derive from research activities. These generate positive externalities, such as the possible continuous innovative progress, and a negative externality

which is the destruction of the previous innovation and consequently its "monopoly rent" that become obsolete by the next innovation – vertical R&D.

According to Africano et al. (2018) the growth factors can be identified both on the demand and supply side. On the demand side, economic growth is reflected in the increase of the national market, import substitutions and promotion of exports. On the supply side it is measured by the available production factors and their contribution to output growth.

The main drivers for economic growth are the accumulation of means of production, improvements in the production's technology, and intangible influences on the productivity of the means of production, such as the accumulation of human capital (Africano et al., 2018).

Africano et al. (2018) analyse the relationship between trade and growth, in the perspective of static analysis, which is focused on the exogenous accumulation of the means of production, and dynamic analysis, that studies the role of technological growth on the increase of trade.

On the static analysis, Africano et al. (2018) invoke the theorem of Rybcyznski, which defends that if the we keep the terms of trade persistent and we have the full usage of the means of production (including human resources), an increase in one of the means will increase the production of the goods that are intensive on that mean and will decrease the production of other goods because there is a need to locate the means to the production of that good. Depending on the type of good, a country can increase or diminish its ability to take an active role in international trade, which will depend on the type of good and if this is a good that is mainly exported or imported. The reallocation of means to the creation of this good, can then represent an import substitution or an increase on exports. If it represents an increase in exports, it is a pro-trade growth. Since the production of this type of good will increase, comparing to a mainly imported good, the international trade will grow more than the growth rate of this mean of production. However, Africano et al. (2018) also focus on the influence the size of the country can have on the terms of trade. If a country reallocates more means on the production of a good that his highly exportable and less on a mainly imported good, it will increase the amount of this good available on the market and decrease the other. Depending on the size of the country it can affect the terms of trade and by increasing the supply, diminish the price of a certain good and increasing the price of another, by decreasing its supply. In this case, the benefits will not occur since there will be a loss in

the terms of trade. Nevertheless, if a country has little influence on the global market, it will not have the power to influence a good's price and therefore not change the terms of trade.

When it comes to the dynamic analysis Africano et al. (2018) praise the work of Smith (1776) and Ricardo (1817) on the origin of the dynamic analysis on the positive effects of international trade on economic growth. On the "Wealth of Nations" (Smith, 1776) there are two main ideas, international trade provides the possibility to expand besides the national borders and to sell the surplus beyond national demand and provides the opportunity to deepen the work division, increasing the productivity. This way, Africano et al. (2018) defend that international trade can be seen as a dynamic force, that by amplifying the market and the capacity of its workers, encourages technical innovations and capital accumulation. For Africano et al. (2018) the contribute of Ricardo was through his dynamic growth model with its three driving forces, which are savings, international trade and the institutional element, and its two restrictions, which are the law of decreasing returns and the *Malthusian* theory of population. In its theory, Ricardo defends that there is a progressive state that allows higher levels of savings, that increases capital and therefore the productivity and production and therefore the returns. This would increase the demand for workforce, wages and consequently the population. However, as the land is limited, the additional food resources required for the increasing population, would be reachable with decreasing returns, since the production would be done in less fertile soil. This way the prices go up and the wages would have to adapt to it, lowering the profit of the investments and leading to a new stationary state. The growing decreasing returns can only be stopped by new technological discoveries or by international trade, but as the first one can lead to a saturation of the inventive capacity, international trade would be the only way to the stationary state.

2.2 International Trade and Economic Growth

The end of the Second World War brought a desire to straighten relations between countries. These were reflected in the amount of new international organizations that were created to promote trade, economic and political relations globally. Besides, in the last decades the development of transports and information technologies also constituted a driver of the development of these relations (Baines, 2003; Africano A., et al., 2018).

According to Africano A., et al. (2018, p.14) "International Trade is a designation used for the transaction of goods and services that occur between economic agents located

in different countries"[1]. This allows firms from a country to produce more than what their national market would consume and allows the population of a country to import goods or services that are scarce in their territory.

The efforts for increasing these transactions grew a lot in the past decades. To create peace and stability around the world, many International Organizations were created. The United Nations (UN) improved the political cohesion between its members, reaching all the continents. Other types of political agreements started to grow in a more regional level as the project of economic union, which later allowed the foundation of the European Union. Other economic and finance institutions followed, such as The World Bank and the International Monetary Fund. When it comes to trade, the General Agreement on Tariffs and Trade (GATT) defined the conditions for the development of the trade conditions between its members, being the foundation of the World Trade Organization (WTO) that nowadays is the organism that sets the rules for international trade.

The technological developments that occurred in the same time frame also helped the expansion of transactions worldwide. The reduction of the costs of transports, the development of the air transport, the improvements in the infrastructures on the railroads and highways and the better logistics on the nautical transport, with the use of containers and better tracking of the shipment, made it easier to trade worldwide. Besides the progress in the technologies of information made it easier to communicate worldwide and to exchange services between different countries (Mckinsey, 2020).

The fall of trade barriers leads to economic growth in every country. Even though the growth rate varies between countries, according to Fedyunina (2016, p.70), the openness to international trade can lead to an economic growth in "developing and transitional economies of 1,5-2,1%" and in a "long-term effect it also leads to a GDP growth of at least 1%".

These rates of economic growth are possible because, firstly, international trade increases the production efficiency "through reallocation of resources between industries", that make possible the "specialization in industries having comparative advantage" (Fedyunina, 2016, p.71). Secondly, "production efficiency increases as resources are reallocated across industries with increasing returns to scale" (Fedyunina, 2016, p. 71).

[1] Translation of the author: "Comércio Internacional é a designação utilizada para a transação de bens que ocorrem entre agentes económicos localizados em países distintos" Africano A., et al. (2018, p.14)

Thirdly, "production efficiency grows as resources are reallocated across industries, from the least to the most productive firms", contributing to "a growth in revenues in the most productive firms, which results in an increase in gross productivity" (Fedyunina, 2016, p.71).

Balassa, (1977, p.181) defends that economies which focused themselves on being export-oriented had a "better growth performance" than economies with "policies favoring import substitution". Feder, (1982, p.71) justifies this phenomenon with the fact that export-oriented policies "bring the economy closer to an optimal allocation of resources", which brings "substantial differences in marginal factor productivities between export and non-exports sectors", due to the "failure of entrepreneurs to equate marginal factor productivities and in part due to externalities". Krueger (1978) affirms that export-oriented economies have a better growth performance, because they exploit economies of scale and have the effects of competition on the performance of firms, since they have to compete on the international markets and make themselves more competitive, which requires a better quality control, changing product lines with new technological developments, and a more optimal allocation of time. Abu-Quarn & Abu-Bader (2001) concluded that exports incentive technological advancements that create spillover effects and improve economic performance. For Afonso (2001) exports allow a better allocation of resources, since the economy tends to specialize on goods that have a better comparative advantage. These effects and conclusions support the export-led growth hypothesis that defends that the increase of exports is the dominant cause of economic growth.

The export-led growth hypothesis has been applied to different economies by several authors. Medina-Smith (2001, p.35) studied the validation of this hypothesis on developing countries, having Costa Rica as the example, and concluded, by using time series data, that even though the impact of exports could be small and limited, it still represented an engine of growth and the annual data through the period analyzed showed that there is a "long-term relationship between GDP, investment, population and exports", since they share a linear common trend, they move together on the long-term. Abu-Quarn & Abu-Bader (2001) analyzed the MENA region and found positive causality between manufactured exports and economic growth, even though the same did not happen when using the total exports. Hatemi-J & Irandoust (2000) focused on the European Nordic countries and found bidirectional causality for all countries, apart from Denmark, concluding that exports are crucial for economic growth. Baharumshah & Rashid (1999) by examining the cointegration

and causality of the time-series properties of data, concluded that in Malaysia exports enhance productivity through the accomplishment of bigger economies of scale, that leads to rapid economic growth.

Despite of the previous results, for Dodaro (1991) export promotion and the export-led growth hypothesis might not be as strong as suggested since its effectiveness depends on the level of development and the structure of the exports. Yang (2008) also concluded that the non-tradable sector together with the high export growth one also generates high economic growth. For Yang (2008, p.3) if the ELG hypothesis is the true explanation for "high GDP growth episodes accompanied by high export growth, we should have been able to observe real exchange rate appreciation in all such episodes". Therefore, he analyzed 71 export-led growth episodes and observed that only 37 of them are consistent with the ELG hypothesis, the remaining 24 experienced exchange rate depreciation and better characterized as "growth driving exports", explained by a productivity raise in a non-tradable sector. Rodriguez e Rodrik (2001) also defend that the expectations on international trade can too high and sometimes "crowd out" other institutional reforms that potentially have greater payoffs. For Henriques & Sadorsky, (1996, p.552) this specialization on goods with a better comparative advantage creates growth, but this growth "precedes changes in exports", since an economy that specializes efficiently and presents comparative advantages will then "turn to foreign markets for exports of goods that use its most abundant factor of production most intensively"

Imports are one aspect of international trade that are often misleading because they have an unfavorable impact on the trade balance but can also bring a lot of advantages to countries. Afonso (2001, p.22) refers that imports as a factor of international trade bring to countries access to "imported production factors and new improved technologies" that have a great impact in investment and the accumulation of capital. Humpage (2000, p.2) defends that there is a positive relationship between imports and economic growth, because there is a need "to finance imports with exports that add directly to output or with capital inflows that sustain other types of expenditures ensures that imports do not lower GDP or its growth rate" and that ensures that countries that promote trade openness and reject trade barriers promote economic growth through specialization and cross-border technological transfers. Frankel and Romer (1999) by considering total trade (exports and imports) in their analysis

found that both, by reflecting trade in general contribute to long-term economic growth, which implies that imports are also an important part of this growth.

Frankel and Romer (1999, p. 394) also focus on the geographical component and the effect that it can have on trade and affirm that some countries trade more, just because they have a bigger population or are closer to other countries, which makes interactions easier. According to the authors "the relation between the geographic component of trade and income suggests that a rise of one percentage point in the ratio of trade to GDP increases income per person by at least one-half percent" and that this raise is done both "through capital accumulation and through income through given levels of capital", such as physical and human capital.

When it comes to the geographical conditions, Fedyunina (2016, p.73) focuses on a regional/city level and defends that "cities bear different costs of access to international markets", meaning that the "population of cities, wages, and the rent will decrease as the distance to the border and the seacoast increases". Summing to this, other factors as the quality of the transport infrastructures, the proximity to an airport, a seaport, and the quality of the technologies of information also have a big impact for the success of a region on international trade.

For Frankel and Romer (1999) even though geography-based factors can have a greater impact on trade, policy measures can also boost the international contacts a country has. The International Organizations that rose in the last decades, make it easier to standardize the rules of the trade relations between states. Besides, they also led the way to a big number of trade and economic agreements and unions that took part on the world. Being a member of such agreements makes it easier to trade between the nations that are in it, because the trade barriers are much fewer, as the abolition of import taxes or quantitative restrictions to trade (Africano et al., 2018).

The gravitational model is in accordance with Frankel and Romer (1999) study, defending the importance of policy and geographical proximity, and affirms that a country tends to have bigger economic relations with countries that share the same currency, borders, cultural similarities, a historical past in common and that present a similar economical capacity. The proximity of two states makes it easier and decreases the costs of transactions, because it makes possible using a faster and cheaper mean of transportation, a lot of times having roads connecting both territories. According to Rose et al, (2000, p.199) economies

with the same currency are three times more likely to trade with each other, than with economies that have a different currency and present a higher currency risk. Similarities in culture, such as, sharing the same language, historical past and religion can provide a bigger insight on interpersonal behavior and "not only on attitudes toward economic matters but also on values that influence them".

2.3 Foreign Direct Investment

The increase of international trade, due to the decrease of its barriers, made it easier for firms to make business worldwide and made the distance between countries a smaller barrier. For these reasons, a lot of firms desired to start growing beyond borders to diversify its products. According to Kim et al (1997, p.767) international diversifications "defined as expansion across the borders of global regions and countries into different geographic locations or markets". The level of internationalization of a firm is measured by the number of countries in which it operates and the importance of international trade and foreign markets for a firm. Internationalization is important because it makes it possible for firms to grow to many countries and to beat imperfections through internalization. Internalization "refers to bringing new foreign operations within the boundaries of a firm rather than using arm's-length market transactions" (Kim et al 1997, p.767).

According to OECD (2008), FDI is an international investment, by an investing entity from a specific country, with the purpose to establish itself in another country through a firm in a long-term view. This means, the international exchange of capital, through which a firm sets itself in another country, creating a subsidiary.

The Foreign Direct Investment can be made through a Greenfield Investment or through Mergers & Acquisitions (M&A) (Nguyen, 2020). An investment through Greenfield implies the creation of a new entity "through the establishment of plants, factories and human capital" (Nguyen, 2020, p.2). Greenfield FDI is perceived to create new capital assets, supplementary production capacity and increased competition (Ashraf et al., 2015).

An investment made through Mergers & Acquisitions involves "a change from local to foreign ownership of existing assets and production capacity" (Ashraf et al., 2015, p.2) can be and is usually made through a joint venture, that combines the resources and efforts of the partners in a long-term view and allows them to share risks, profits, and losses (UNCTAD, 2000).

Dunning and Lundan (2008) define four main motivations for MNEs to venture abroad through FDI: market seeking, resource seeking, efficiency seeking and strategic asset seeking. Market seeking is defined when firms explore new markets or are trying to develop their presence in markets in which they usually already operate through exports – horizontal FDI (Dunning and Lundan, 2008). Resource seeking FDI aims to get resources more affordably or some that are inexistent in the country of origin and is mostly done with an export purpose, therefore taking advantage of the comparative advantages of the host country (Dunning and Lundan, 2008). Efficiency-seeking is defined by the need to rationalize and make more efficient a firm's structure of supply and distribution, by reducing costs of transport, communication, and coordination, explore economies of scale, diversify the risk and explore cultural, political, institutional, and economic international differences – vertical FDI (Dunning and Lundan, 2008). Finally, strategic asset-seeking focus on the acquisition of very developed resources, that do not exist in the home country, on the exploration of imperfections of the market or in creating new imperfections in the market, and therefore, increasing the "firm's global portfolio, physical assets and human competences and weaken those of their competitors" (Dunning and Lundan, 2008, p. 73).

Dunning (2000) determines that the foreign production undertaken by MNEs is determined by the interaction of the elements present in the eclectic/OLI[2] paradigm. The first element, ownership (O), is linked to the comparative advantages of the firm that is seeking to engage in FDI, that explains that the greater the comparative advantage of a firm, the more likely it will engage in foreign production (Dunning, 2000).

The second element is the location (L) attractiveness of the potential host countries that determines that "the more the immobile, natural or created endowments, which firms need to use jointly with their own competitive advantages, favor a presence in a foreign, rather than a domestic, location, the more firms will choose to augment or exploit their ownership (O) specific advantages" (Dunning, 2000, p.164).

Other authors also defend the importance of the characteristics of the host location for the success of FDI. To Dunning and Lundan (2008) successful foreign investments require the existence of a competition authority, supervisory agency for the financial markets, a central bank and policies to secure property and contract rights. According to Stiglitz (1998) societal transformation, in areas such as health, education and equality are key for

[2] Ownership, Location, and Internalization.

development and economic growth. Additionally, Sachs (2001) defends that the effects of geography cannot be ignored, corroborating with the previous references to Balassa (1977) and Fedyunina (2016). Li and Resnick (2003) also defend that democracy encourages flows of FDI. Mahbubani (2020) ensures that the Protection of Intellectual Property Rights is essential to attract FDI. Furthermore, Tanzi (1998) defends that corruption repels investment, since it represents for investors an arbitrary form of taxation. Finally, the environment protection legislation increases the trust of investor in a country and Dunning and Lundan (2008, p.314) affirm that environmental laws do not represent a big burden for MNEs, as production with low levels of pollution requires big technological developments, which can be favorable for companies and thus "there is no reason to expect a trade-off between environmental quality and FDI-assisted development".

Finally, the third sub-paradigm of the OLI model, internalization (I) avows that a MNE will internalize the production of a good or service in a foreign market, if the net benefits are bigger than outsourcing or producing in the home country (Dunning, 2000).

2.3.1 Impact of Foreign Direct Investment for the Host Country/Region

The settlement of FDI in a country can have a great impact on the development and economic growth of that country (Wang and Wong, 2009). Besides, investments from abroad can also have a great influence in terms of technology transfer, employment, the balance of payments, tax revenues, market structure, and business practices (Dunning and Lundan, 2008).

According to Blomström and Kokko (2001) the effects of FDI result in a combination of financial capital, transfer of production technology, R&D capabilities, management and marketing methods, skills, institutions, and entrepreneurship. Therefore, it will encourage further entrepreneurship, increase output, restructure economic activity, and raise domestic productivity.

Dunning and Lundan (2008) affirm that inward flows of FDI increase job vacancies in the host countries, especially if the mode of entry selected is Greenfield (Ashraf et al., 2015). Since Multinational firms have a bigger efficiency and work with higher value-added sectors, they require a more efficient international division of labor. Therefore, they require higher qualified workers and tend to invest more on training to upgrade the technological skills of its human resources. Because higher qualified employees are required, MNEs usually

also pay higher wages, which can result in an increased employee motivation and productivity on its subsidiaries (Dunning and Lundan, 2008).

Balasubramanyam et al. (1996) found, not only just like Balassa (1977) that exported-oriented countries found a better growth performance than imported substitution-oriented ones, but also that the first ones could get more gains from FDI and that it was also these investments and not the domestic ones that contributed more to exports and consequently economic growth. De Melo, L. (1999) discovered that in developed countries FDI increased Total Factor Productivity growth.

Xu (2000) defends that MNEs have a big impact on the technological capacity of the regions in which they operate and found that in developed countries, technology diffusion created productivity increases, by studying the expenditure on royalties and license fees. Coe and Helpman (1995, p.860) emphasize the benefits that R&D brings to a receiving economy, through FDI and that these consist of "learning about new technologies and materials, production processes, or organizational methods". Moreover, Edfelt (1975) also shows that foreign firms usually do more on-the-job training than the domestic ones, what improves the flows of R&D and the qualification of the local human resources, which can also present spillovers to the domestic firms. For Teece (1977) multinationals are very competitive firms because they possess non-tangible productive assets, as technological know-how, export experience, managing and marketing skills, and organized and long relationships with suppliers and customers.

Aitken and Harrison (1999) studied a panel of more than 4,000 Venezuelan firm plants between 1976 and 1989 and found that foreign equity participation on domestic enterprises is correlated with increases in productivity of plants with less than 50 employees, for bigger ones the increases are not so visible. The major improvements are nevertheless concentrated and remain within the joint ventures.

Buckley and Artisien (1987) studied the impact of several foreign firms on Greece, Portugal and Spain and concluded that these countries were highly dependent on FDI for industrial and commercial development and that in all instances these investments resulted in positive employment gains. Besides, the inward flows of FDI made through the investing firms also upgraded the local skill levels, by injecting new technology and training programs.

Aitken et al. (1996) found that the presence of FDI in Mexico, Venezuela and the USA raised wages in the area. The study concluded that in all of the countries, FDI firms

offered 30% higher wages for both skilled and unskilled labor than the domestic ones. Feliciano and Lipsey (1999) used BEA and Census data about industry in the US and concluded that foreign affiliates paid higher wages than domestic firms.

Driffield and Taylor (2000) showed that in the UK foreign affiliates employed more skilled workers than the domestic firms, within the same industry and across industries. They realized that average skill intensity increases because there is a large demand from MNEs for higher skills in the host countries. The authors also found that the big technology capacity of MNEs and their demand for further technology skills on its workers, led to technology spillovers on the domestic firms, which expanded the demand in the national market for skilled labor.

The International Labor Office (1984) also realized that in some developing countries, MNEs affiliates gave its employees granted social security plans above the legal requirements. Another report from the International Labor Office (2001) concludes that the impact of MNEs on host countries was highly positive, regarding employment creation. Besides, it states that MNEs' activity raised productivity, promoted vocational training and technology development.

Liu et al. (2002) based on 19 FDI firms in China, discovered a connection between growth of inward FDI in China and growth of Chinese exports. For Barry and Bradley (1997) MNEs had a prominent impact on the balance of payments of Ireland. The authors analyzed that between 1990 and 1995, 86% of the output of foreign affiliates in the country was exported. Likewise, Steuer et al. (1973) trying to estimate the change that foreign affiliates brought to the balance of payments in the UK, concluded that inward FDI improved the balance of payments in the country by 10%.

Another study involving the Central and Eastern economies of Europe done by Hunya (2000), showed that even though these economies received high inward flows in the period of its transition to market economies, they presented high deficits in the trade balance, due to imports exceeding exports. However, as previously corroborated by Afonso (2001), Humpage (2000) and Frankel and Romer (1999), the author defends that this deficit might be the result of upgrading technology and capital imports, that represent consequently an increase on competitiveness.

3. Case study

The Case Study of this dissertation aims to understand how IT and FDI can impact economic growth, by studying the presence of both factors in the city of V. N. de Famalicão and their contribution to national economic growth. Section 3.1 introduces the methodology used. Section 3.2 examines the results found on the research, which is divided in 4 sub-sections. Sub-section 3.2.1 analyses the conditions that favor the participation of both Portugal and V. N. de Famalicão in IT and make it attractive for inward flows of FDI. Sub-section 3.2.2 has a description of GDP as the indicator of economic growth. Sub-section 3.2.3 will have an analysis of the performance of Portugal and V. N. de Famalicão on IT and the contribution of the city to the national trade balance. In Sub-section 3.2.4 there will be an examination of the inward flows of FDI received by Portugal and to understand these flows in the city, the biggest ten firms with foreign capital in the territory and its contribution to the different components in GDP will be examined. Finally, in section 3.3 there will be a final discussion of the results obtained.

3.1 Methodology

As aforementioned, the aim of this dissertation is to understand the impact IT and inward flows of FDI have on economic growth, by having GDP and its components as an indicator for economic growth. Therefore, and to achieve the goal of this dissertation, we selected a mixed method of qualitative and quantitative analysis, as the best approach to answer the research question. A qualitative method "embraces research methodologies that deal with phenomena by analyzing experiences, behaviors and relations without the use of statistics and mathematics", additionally it can be defined "as a sequence of interpretive techniques that try to describe, decode and translate concepts and phenomena rather than to record the frequency of certain phenomena in society" (Basias & Pollalis, 2018, p.94). Whereas a quantitative analysis "involves systematic and empirical investigation of phenomena through statistics and mathematics and the processing of numeral data", providing "the fundamental link between empirical observation and mathematical expression of quantitative relations" (Basias & Pollalis, 2018, p.92).

The Case Study will be focused on the city of V. N. de Famalicão, its participation in IT and how the FDI in the city contributes to the national economic growth. A case study "ensures the transformation from the local to the global for explanation", characterizing "such singularity as a concentration of the global in the local" (Tellis, 1997, p.5), being in this

case the local the case of V. N. de Famalicão. In the following case study, we conducted firstly, an analysis of the conditions given by the country and city that can promote IT and inward flows of FDI. Afterward, there was an analysis of the trade balance both from the country and the city, to understand the impact of the city in the national values, using data from the data banks INE and PORDATA. Finally, to study the inward flows of FDI, the national values were taken from the UNCTAD data bank and to analyze the biggest foreign capital firms in the city, we worked with the information given by the software Orbis.

3.2 Results

3.2.1 Characteristics of Portugal and the city of V. N. de Famalicão

In the following chapter there will be an analysis of the characteristics enumerated on the literature review that make a country/city more susceptible to take part on international trade and be more attractive to inward flows of FDI and this will be applied to Portugal and V. N. de Famalicão. Even though the case study is mainly about the city of V. N. de Famalicão, many of the characteristics that allow the city being so active on IT and receive remarkable amounts of FDI are because it is a city within Portugal that also belongs to the European Union and is affected by all its conditions.

The main characteristics analyzed in this chapter will be the geographical location, the quality of transports and infrastructures, policy measures, main industries, and quality of its institutions, which has an impact on the democracy levels, economic facilities, social opportunities, levels of corruption, educational achievements, and environmental regulations.

3.2.1.1 Portugal

Portugal is located on the southern point of Europe, being surrounded by the Atlantic Ocean on the West, and having a border with Spain on the North and East sides of the country. Even though it is significantly distant from the remaining countries of Europe, its location allows the existence of several maritime ports, being the most important, on the mainland territory, Leixões and Sines, several rail roads, highways and three airports on the mainland.

The country is a semi presidential constitutional republic since 1975, where legislative, judicial, and executive power are divided, represented by the parliament, the courts and the government, respectively. It was a founding member of NATO in 1949 and in 1960

it took part in the International Monetary Fund. In 1986, it integrated the European Economic Community, which nowadays represents the European Union and took part too, in 2002, on the Eurozone. By being part of the European Union, Portugal belongs to a community of countries, where there is free trade (without tariffs), a common external trade policy, free circulation of people and production factors, and coordination of the economy's policies between its members. The integration on the Eurozone counts not only with all the previously mentioned characteristics, but also with a single currency for all its members and common exchange and monetary policy as well as with a harmonization of the remaining macroeconomic policies.

Portugal also took part since 1962 on the General Agreement on Tariffs and Trade (GATT), which evolved in 1995 to the World Trade Organization (WTO). The members of the WTO are bound to the principles of the Organization, which are mainly the of non-discrimination and reciprocity. Nowadays, even though Portugal is still a member of the WTO, all its relations with this organization are not done directly with the country, but with the European Commission, that deals with the trade policies of all its members.

The monetary policy of the country is secured by the European Central Bank that is also the central bank of the other 18 countries in the Eurozone. This institution contributes to the safety of the European banking system, develops, and issues the money in the economy, sets interest rates to control inflation, maintaining it around 2%, and by trying to stabilize prices. European Central Bank also runs part of the network of infrastructures that ensures the safety of digital payments across the Eurozone, and follows the financial markets, to assure the stabilization of prices. On a national level there is Banco de Portugal, which is the central bank for the country. Nevertheless, by being part of the European System of Central Banks, the bank is under the supervision and rules of the European Central Bank, which is the main entity for monetary policy in the Eurozone. Therefore, the main rules of Banco de Portugal are to manage the assets of the country, to oversee all the credit and payment institutions, and financial societies, to secure the safety of its funds, and has the power to sanction all of the institutions it oversees, in case of misconduct.

The Democracy Index done annually by the economist analyses topics, such as the electoral process and pluralism, functioning of the government, political participation, political culture, and civil liberties and has since 2006 set Portugal between a flawed democracy and a full democracy, as Figure 1 presents.

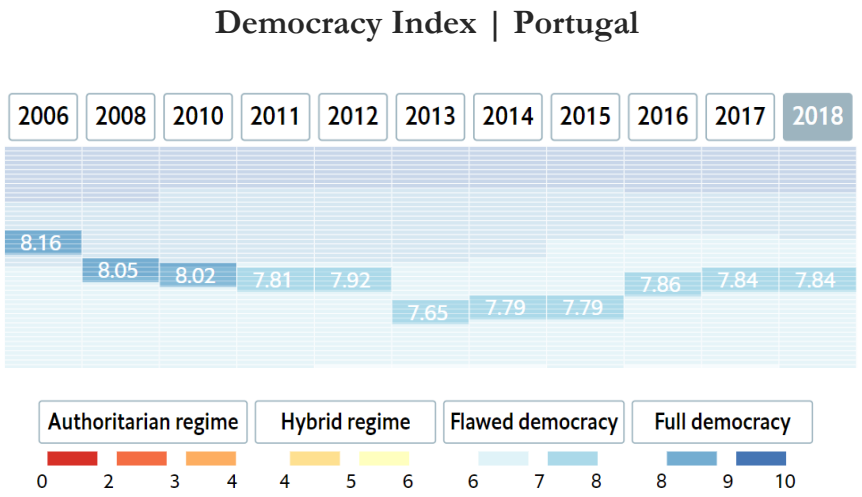

Figure 1 - The Economist Intelligence Unit's Democracy Index Source: Economist Intelligence Unit

When it comes to civil liberties, the Freedom House gave a score of 57/60 to Portugal and a score of 39/40 to the topic political rights, with an overall score for freedom of 96/100 on the year of 2020.

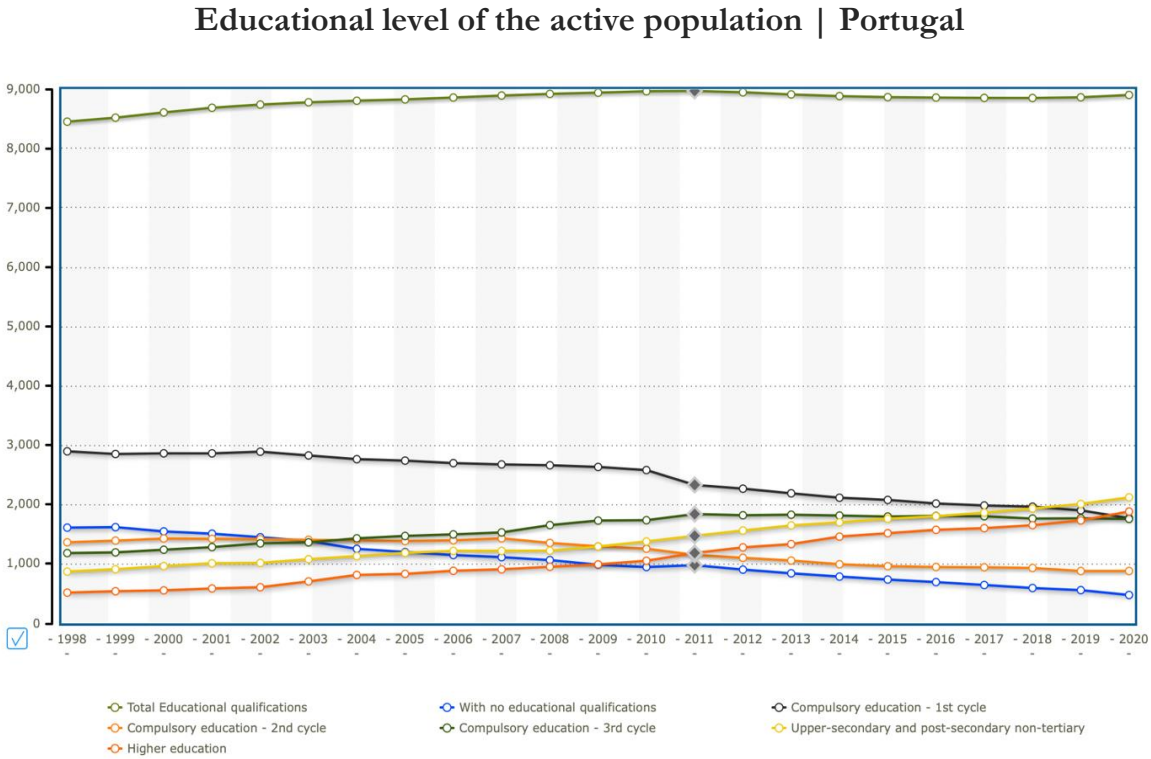

Figure 2 - Population of Portugal in thousands with more than 15 years and their educational level. Source: PORDATA

The educational levels of the country have also been raising, data from PORDATA, as seen in Figure 2, shows that since the year 2000, the number of individuals with secondary and above secondary, and superior education have been raising constantly for the last 20 years, whereas the number of illiterate individuals or those with low levels of education has been diminishing in the same time frame. The overall levels of education have been raising since the beginning of the century, with only a small diminishment suffered from 2010 until 2014, probably due to the global financial crisis.

The Human Capital Index done by the World Bank measures the capacity of countries to fully mobilize the economic and educational/professional capacity of its citizens, considering several factors, such as GDP per capita, educational achievements, literacy standards, life expectancy and health spending on a scale from 0 to 1.

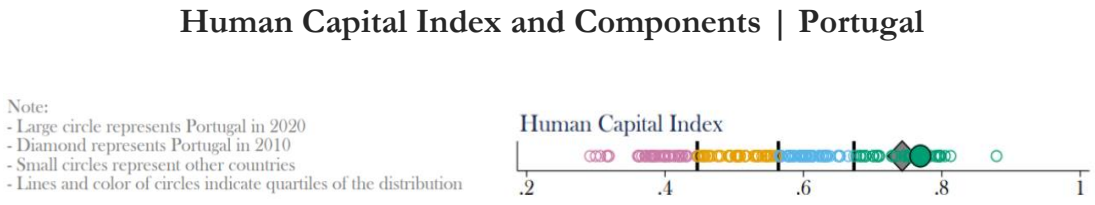

Figure 3 - Human Capital Index of Portugal in 2010 and 2020. Source: Human Capital Project, World Bank

As seen in Figure 3, Portugal's score on the Human Capital Index evolved positively over the last 10 years, increasing from a score of 0,74 to 0,77. The country is also relatively well qualified worldwide, since the worldwide score in 2020 is 0.56. The total of 0.77 means that a child born in 2020 in Portugal can expect to accomplish 77% of its full economic and educational potential, *ceteris paribus*. The increase of this qualification in the last 10 years, means that life expectancy, healthy growth, the expected years of school and the harmonized test scores have positively developed for the population, but mainly that the children born in this period of time can expect better conditions in life, regarding the previously enumerated topics.

The Digital Economy and Society Index done annually by the European Commission, measures the level of digitalization of economies' inside European Union and how these levels of technology offer firms inside its territory competitive advantages, to improve its services and maintain them secure.

Digital Economy and Society Index (DESI) 2020 | Portugal

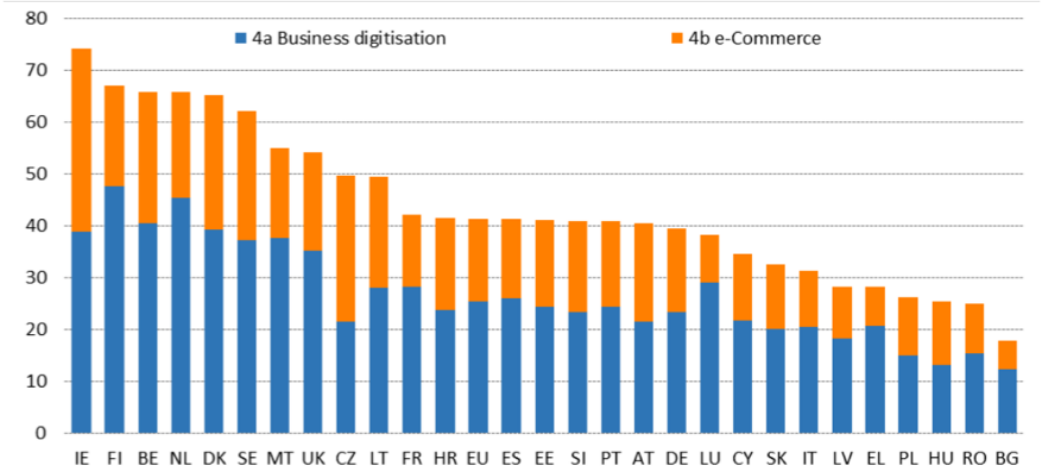

Figure 4 – Digital Economy and Society Index (DESI) 2020, position of all EU countries, as well as the European average. Source: Digital Economy and Society Index 2020, European Commission

When it comes to the integration of digital technologies, Portugal was on the 16th position in the first two years (2014 and 2015) of elaboration of this report and remained in the same position in the most recent report for the year of 2020. The overall score was in the first year, 2014, equal to the European Union average, but presented lower results in 2015 and 2020, which represents a bellow than average integration of digital technologies in the country.

Digital Economy and Society Index (DESI) 2014 and 2015 | Portugal

	Portugal		Cluster	EU
	rank	score	score	score
DESI 2015	**16**	**0.46**	**0.51**	**0.47**
DESI 2014	16	0.44	0.47	0.44

Figure 5 - Portugal's score on the Digital Economy and Society Index in 2014 and 2015. Source: Digital Economy and Society Index 2015, European Commission

However, on the topic cyber security, Portugal presents good results. As seen in Figure 6, the number of enterprises that had problems with cyber security was much lower in the country than in the European Union's average and Portugal is the fourth country

where less problems related to the topic happened, which represents security of data that might contain technology and business know-how for the firms.

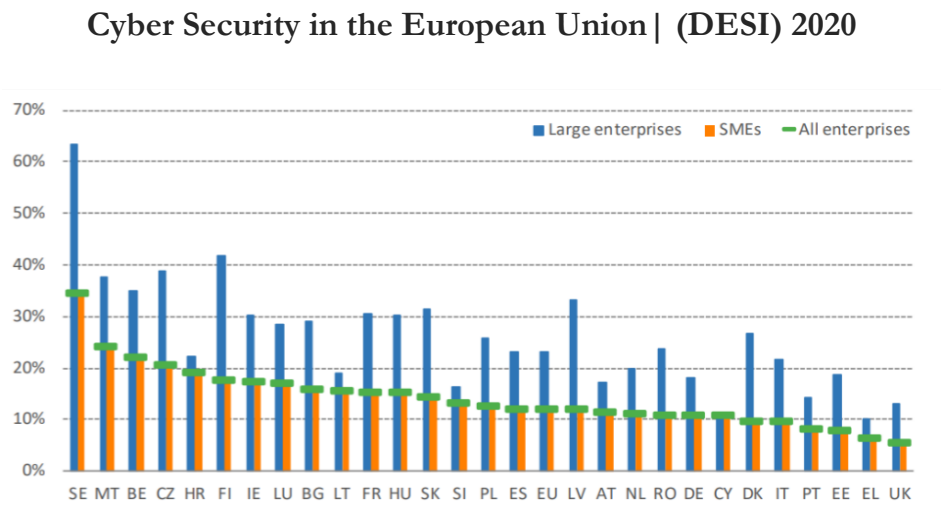

Figure 6 - Enterprises that suffered cyber security related issues in the European Union, by country. Source: Digital Economy and Society Index 2020, European Commission

Portugal by being part of the European Union and the World Trade Organization, also takes part of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which consists of a multilateral agreement on intellectual property. This agreement is applicable to the knowledge and creativity that are shared on trade and aims to establish minimum standards of protection that every member of the WTO must give to the remaining members.

A sustainable development is also very important to the country, as Portugal takes part of several agreements and is under many laws on environment protection, such as the Paris Agreement, the EU's Emissions Trading System, and the articles 11 and 191-193 of the Treaty on the Functioning of the European Union. By being bond to the first one, Portugal accepts to take part of an economic and social transformation that requires countries to reduce theirs Greenhouse Gas emissions and take actions to build resilience to adapt to rising temperatures. Additionally, the EU's Emissions Trading System does not demand countries or firms to reduce its CO_2 emissions, but instead the European Union sets an annual quantity of gas that the union can emit and sells authorizations for these emissions to the firms operating in its territory, that also have to report its annual number of emissions.

On what concerns the levels of corruption, the Transparency International Organization gave on the year of 2020, the score of 61/100, being 100 the level of less corruption, and the country stayed in position 33 on the rank. As Figure 7 shows, Portugal has had in the analyzed years a very similar score, with a small improvement in 2020. The results show that not much has been done in the country to improve these results and that more should be done, so that the levels of corruption do not deteriorate the trade relations of the country, nor the trust investors can have in it.

Corruption Perceptions Index | Portugal

Rank	Country	2020	2019	2018	2017	2016	2015	2014	2013	2012
33	Portugal	**61**	62	64	63	62	64	63	62	63

Figure 7 - Corruption Perceptions Index of Portugal from 2012 to 2020. Source: Transparency International

3.2.1.2 V. N. de Famalicão

Besides offering all of the above characteristics, by being a part of Portugal and the European Union, the city of Vila Nova de Famalicão also has some characteristics of its own, that favor international trade relations and inward flows of FDI. V. N. de Famalicão is a Portuguese city located in the north of the country, in the Minho region with approximately a distance of 20 km to the Atlantic Ocean and a population of nearly 140.000 inhabitants.

Geographically, it is located near important cities in the region, such has Braga in the North, Guimarães on the east, Porto and Trofa on the south, Vila do Conde and Póvoa de Varzim on the west and Barcelos on the northwest. As the border with Spain is also close, Vila Nova de Famalicão is also connected to a strategic city in Galizia, Vigo. The same happens with transport infrastructures, being a point of passage for two important high roads A3, that connects the cities of Porto and Vigo (Spain) and A7 that connects the cities of Guimarães and Póvoa de Varzim. It also has main roads with direct connection to the cities of Porto, Braga, Guimarães, Barcelos, Póvoa de Varzim and Vila do Conde. On its territory there is also important railroads, connecting to Porto, Lisbon, Guimarães and Valença. Other types of transport infrastructures are also close to the city, such as the Leixões Harbor, with around 40 km distance, and Francisco de Sá Carneiro Airport, 35 km away from the city.

This geographical location and good infrastructures to reach its location, makes it easier for the city to be an important hub of international trade. The city main economic drivers are the Textile and Clothing, Agri-Food, Metalwork, and Automotive industries. The textile cluster is the main one in the city, having a lot of incentives for development. In an area of 60km around the city, it is possible to find solutions for all the stages of the textile supply chain. The metalwork cluster is mainly focused on exports, as the firms in the territory are mainly focused on the textile, military, fuel, chemical, naval, and aeronautic. Finally, the automotive cluster has as its main figure the firm Continental Mabor, that produces tires, which is the biggest exporter in the city and one of the biggest in the country. However, this sector is raising in the city, with a growing number of firms that dedicate themselves on the manufacturing of different car parts for several brands, such as rubber and plastic parts, textiles, and electronics.

It is the home of 6 big firm hubs and is the 3rd biggest exporter of Portugal, the 1st one of the north of the country, and the 2nd with the biggest trade surplus, counting with almost 15.000 firms in its territory. It has two of the biggest Universities located in an area of 30km or less, the University of Porto and the University of Minho, with whom the firms in the city create several protocols of cooperation, like internships for the students and research projects that can bring development and several benefits for the firms. Moreover, there are two important technological investigation centers for the textile sector, CITEVE and CENTI, which work with technical and functional materials and nanotechnology for the development of this sector.

V. N. de Famalicão is a credited entity of the Agency for Competitiveness and Innovation (IAPMEI). Furthermore, the municipality counts with an Investors Support Office (*Gabinete de Apoio ao Empreendedor*), that supports investors and new entrepreneurs that desire to invest in the city, by helping on the search for real estate, giving investment stimulus, and by providing business hosting areas. Besides, the city is very cautious with the municipality's finance stability, in order to promote trust among national and international investors and grants them tax benefits, when it comes to the municipal taxes existent in the country. The municipal surtax (*derrama municipal*) on taxable firm profits (*IRC*) is only 1,2% and it was settled that from 2021 on, firms with less than 250.000€ of annual turnover would be free of this tax. Previously this exemption was only applied to firms with an annual turnover smaller than 150.000€. Moreover, for new investments there are additional tax

incentives, such as exemption of property taxes (*IMI* and *IMT*) and reduction of 50% in urban planning taxes.

3.2.2 Economic Growth

The main indicator of economic growth analyzed in this dissertation will be the national GDP and its evolution on the last 10 years. The components that allow the calculation of the GDP, by the demand side, are the following:

GDP= C+I+G+(X-M)

C= Private consumption

I= Investment

G= Government Spending

X= Exports

M=Imports

To analyse the impact of international trade on economic growth, the impact of the trade balance and its percentage of GDP shall be studied. Afterward, the trade balance of V. N. de Famalicão shall be analysed, to understand its impact on the national trade balance and therefore on the GDP. Other components, such as the evolution of the degree of openness will be considered. The GDP of Portugal in the time frame from 2010 to 2020 evolved positively overall, but with a decline from 2011 to 2013, because of the financial crisis. Since

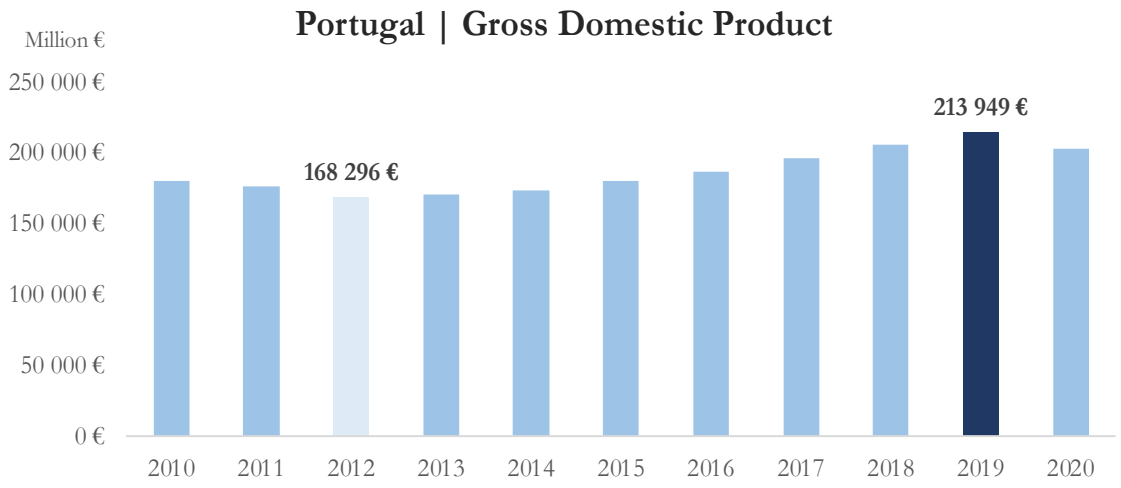

Figure 8 - GDP in absolute values from 2010 to 2020, numbers in Millions. Source: Instituto Nacional de Estatística

2014 it has been growing only with a decline in the last year of 2020, due to the COVID-19 pandemic.

To better analyse the variation of the GDP, we can observe the variation rate it has had in this time frame. As seen in Figure 9, in the years of 2011 until 2013 the GDP had a negative variation with its peak in 2012 with a fall of -4,06%. Since 2014 it resented a raising growth that reached its peak in 2017 with a growth rate of 3,51%. In the following years of 2018 and 2019 the growth rate still presented positive values, but with a small diminishment of the growth rate, until the year of 2020, which showed a drastic fall on the growth rate of the GDP of -7,6%, due to the COVID-19 pandemic.

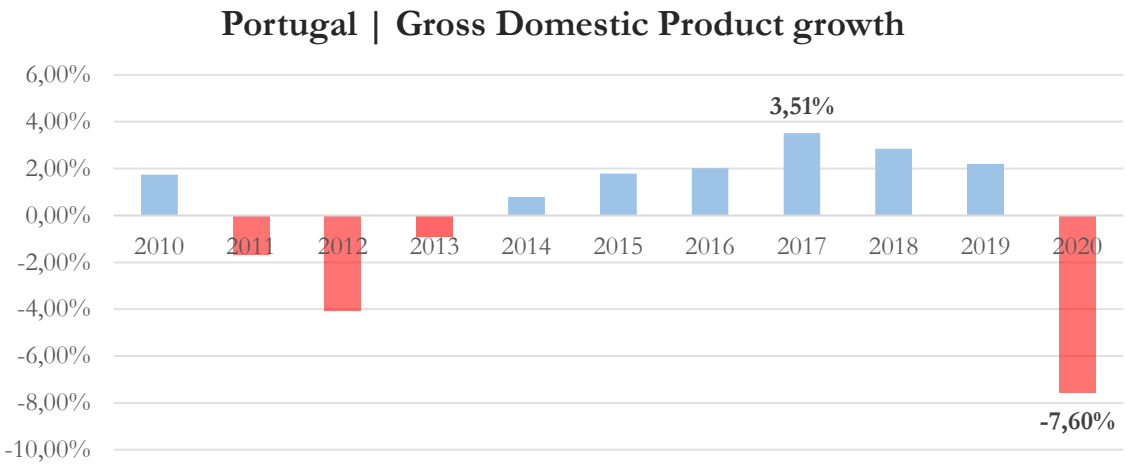

Figure 9 - GDP Growth from 2010 to 2020. Source: PORDATA

3.2.3 International Trade

International trade is an important part of an economy and can greatly influence the GDP and economic growth. By being a part of the GDP, the trade balance can either influence positively or negatively, depending on the coverage of the imports by the exports.

The importance of international trade on an economic relies on how open this economy is to foreign trade. Portugal by being part of the European Union and of the WTO presents a high openness index rate as Figure 10 presents, with values between 53 and 65%, presenting small variations throughout the years, but never significant ones. The year with a smaller openness index is 2010 and the ones with a bigger rate are 2018 and 2019, which are the ones that in the time frame analysed present a higher GDP.

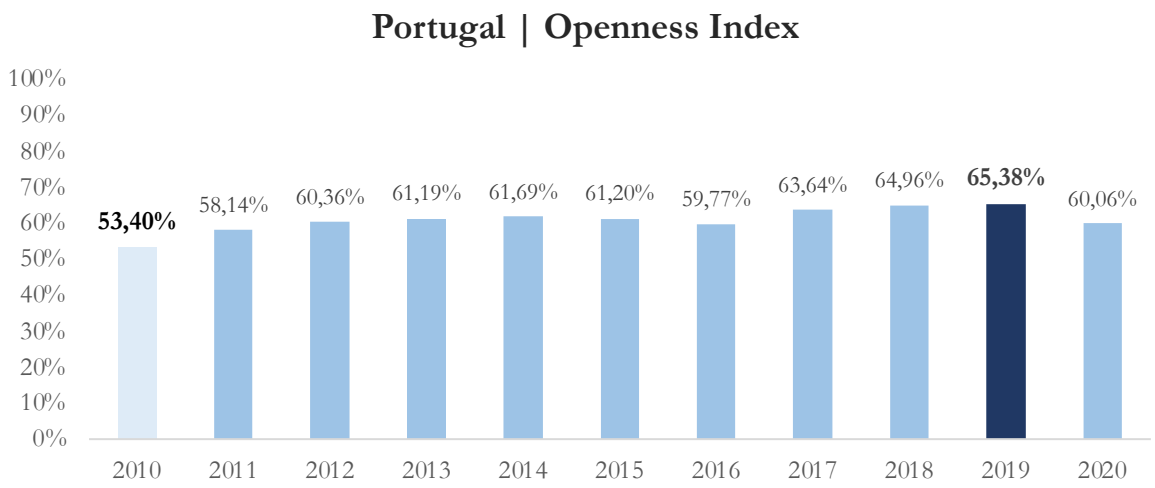

Figure 10 - Openness Index of Portugal from 2010 to 2020. Source: Data from PORDATA and INE

These levels of economic openness represent a big influence of international trade on the country and that the country has an intense trade activity with the rest of the world, when comparing to its economic dimension and that Portugal is highly dependent of international trade to be able to sell its production and provide its population all the goods needed on a daily basis. However, this dependence can represent a positive influence if the exports exceed the imports or a negative influence if the imports exceed the exports and the country needs the international markets more to supply its population than to sell its production surplus.

As Figure 11 presents the trade balance of Portugal has been highly negative on the past 10 years, with imports highly exceeding the total amount of exports. A negative trade balance negatively impacts the GDP, since as showed in the Figure 12 the total amount of exports is not able to cover the total amount of imports, with values between 64 and 83%.

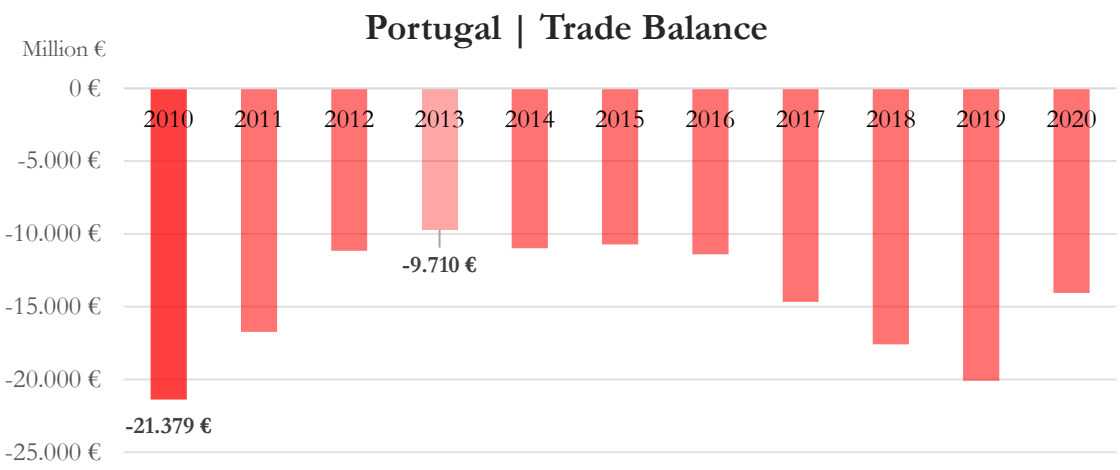

Figure 11 - Portuguese Trade Balance from 2010 to 2020. Source: PORDATA

A coverage ratio below 100% means that the exports of Portugal do not cover its imports and that the country's economy is not internationally competitive and is highly dependent on international trade to supply its population. As the economic openness rate in the country is high, a low coverage ratio has an even more negative impact on its economy, since the country is very dependent on international trade, but is not competitive and as the number of imports exceed those of exports, the country needs international funding to cover the percentage of imports that are not covered by exports.

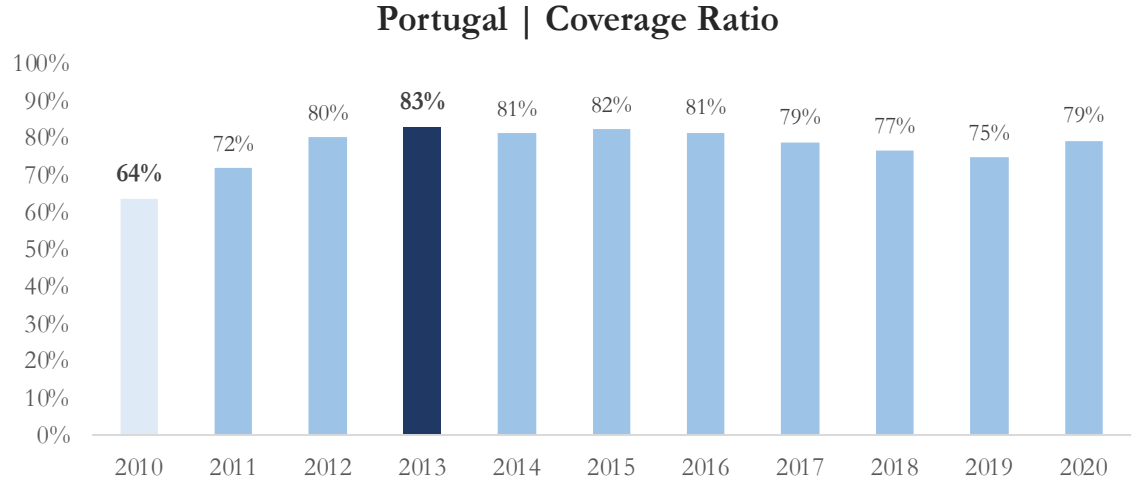

Figure 12 - Coverage Ratio of Portugal from 2010 to 2020. Source: PORDATA

Nevertheless, when we analyse the trade balance of V. N. de Famalicão (Figure 13), we observe that it is highly positive, unlike the national one. In the period analysed there is always a positive balance, which means that the contribution of the city to the national trade balance has always been positive, with a highlight to the year of 2019, which presents a positive balance of almost 1 thousand million euros. The lower trade balance presented in the years between 2010 and 2012 is linked to the years of the global financial crisis, that, minding the fact that the city produces mainly industrial goods, can be linked to a decrease in the international demand for these products, which can present a significant elasticity of demand.

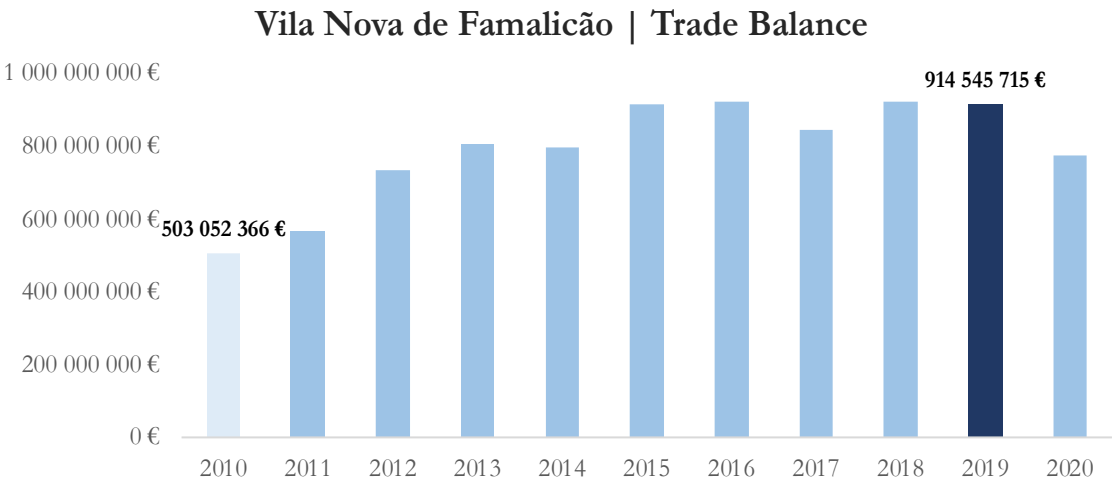

Figure 13 - Trade Balance of Vila Nova de Famalicão from 2010 to 2020. Source: PORDATA

The Coverage Ratio of V. N. de Famalicão, unlike the national one has presented in each year of the time frame analysed positive values, which means that the ratio was always more than 100%. In this case the coverage ratio was never less than 150%, with the lowest values obtained in 2010 and 2011, that just like the values in the trade balance of the city in these years can be justified with a diminishment of the demand for industrialized goods, due to the global financial crises. The highest values observed in Figure 14 were in the years of 2012, 2015 and 2016 with percentages of 190% or more, which means that in these years the exports almost covered twice the imports of the city. From Figure 14 we can conclude that V. N. de Famalicão is very competitive in the international trade and has a great positive impact in the trade balance of the whole country.

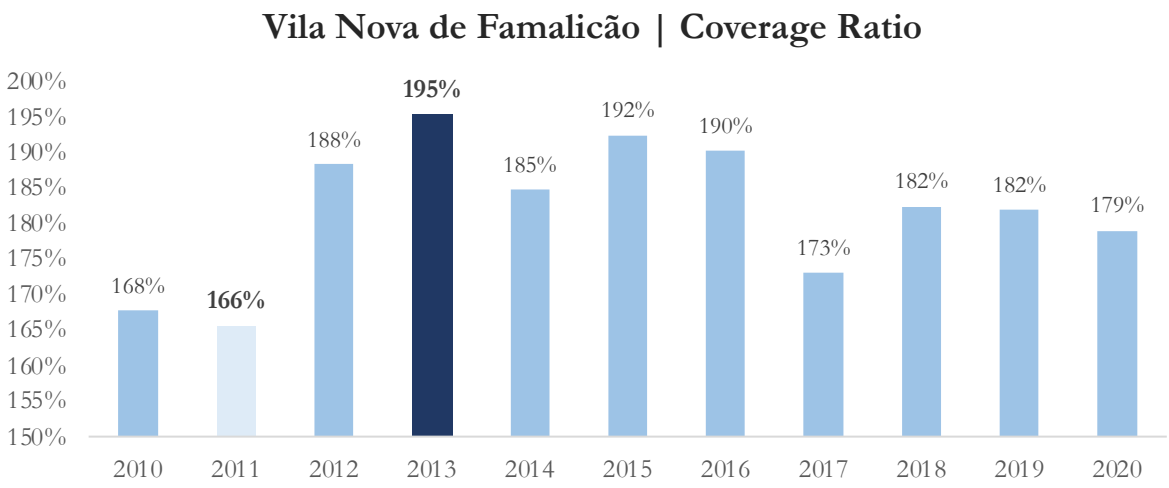

Figure 14 - Coverage Ratio of Vila Nova de Famalicão from 2010 to 2020. Source: PORDATA

To better understand the positive impact that the city has on the national trade balance, the Figure 15 shows the percentage of the national exports and imports that belong to V. N. de Famalicão. The percentage of the municipality in the national exports, varied between 3,26 in 2020 and 3,88% 2016. The lowest value observed in 2020 must be linked to the COVID-19 pandemic that forced the diminishment of workforce together in the same factory, therefore reducing the production per shift, and caused a lot of problems in the distribution of goods, due to the closure of borders and the break in the economic activity. The percentage of the municipality in the national imports varied between 1,27% and 1,66%, with the lowest value in 2010, linked to the financial crisis that lowered the purchasing power of the population and lowered the industrial activity. The highest value of contribution of imports was also observed in the years of a bigger contribution to exports, which can represent imports that were supplying the industrial activity of the city. Overall, in the time frame analysed, the contribution of V. N. de Famalicão to the national trade balance was always positive, contributing positively for the GDP and therefore for the economic growth and shows that the city possesses a strong trade position, given the fact that it merely represents 1,28% of the population and 0,22% of the national territory.

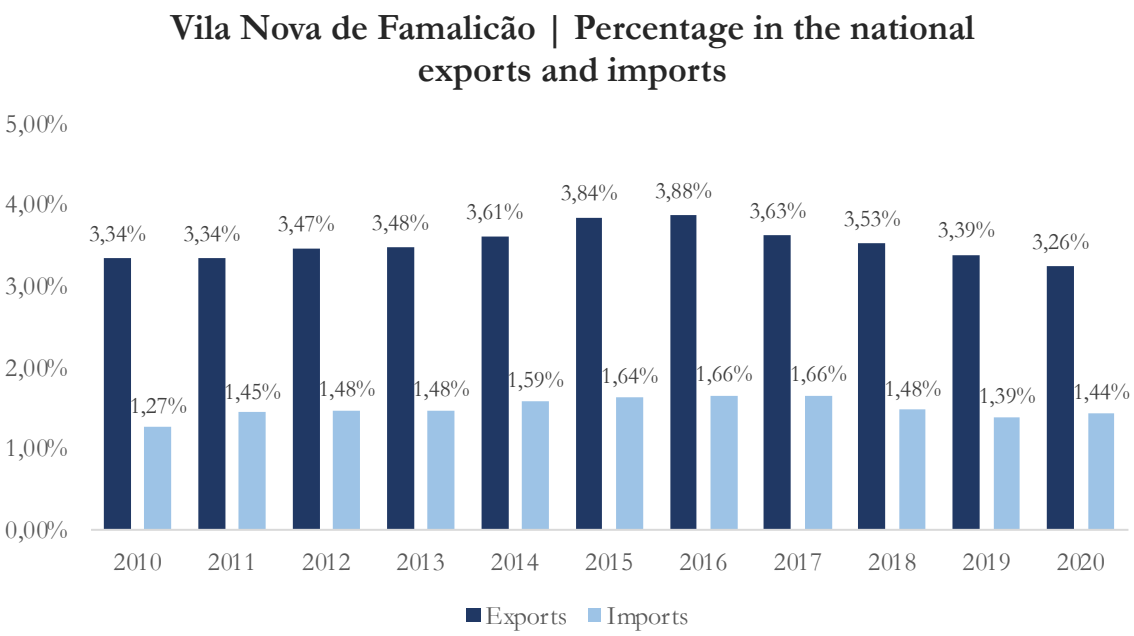

Figure 15 - Contribution of Vila Nova de Famalicão to the total value of national imports and exports from 2010 to 2020. Source: PORDATA

3.2.4 Foreign Direct Investment

As previously presented, Portugal is an economy that is highly open to foreign markets, which involves not only trade exchanges with other countries but exchanges of investment with foreign economies. In this chapter, we will analyse the inward flows of FDI that Portugal has received in the last 10 years and for the impact of FDI in V. N. de Famalicão, as the annual value of inward FDI is not available, the ten biggest firms in the municipality will be studied as well as their contribute to the big export component of the city and national economic growth.

As seen in the Figure 16, Portugal has in the last 10 years received remarkable amounts of FDI. Contrarily to what can be observed in Figure 7 the years following the global financial crisis caused a decrease on GDP, but not a decrease on the inward flows of FDI, which present high values on the years that followed the global financial crisis, with the highest value on the year of 2013, which was the year with the lowest GDP. The years after 2013, do not present stable results, however the year of 2019 totally breaks with the observation explained before, as it was the 2nd biggest on the inward flows of FDI and the year with the biggest GDP.

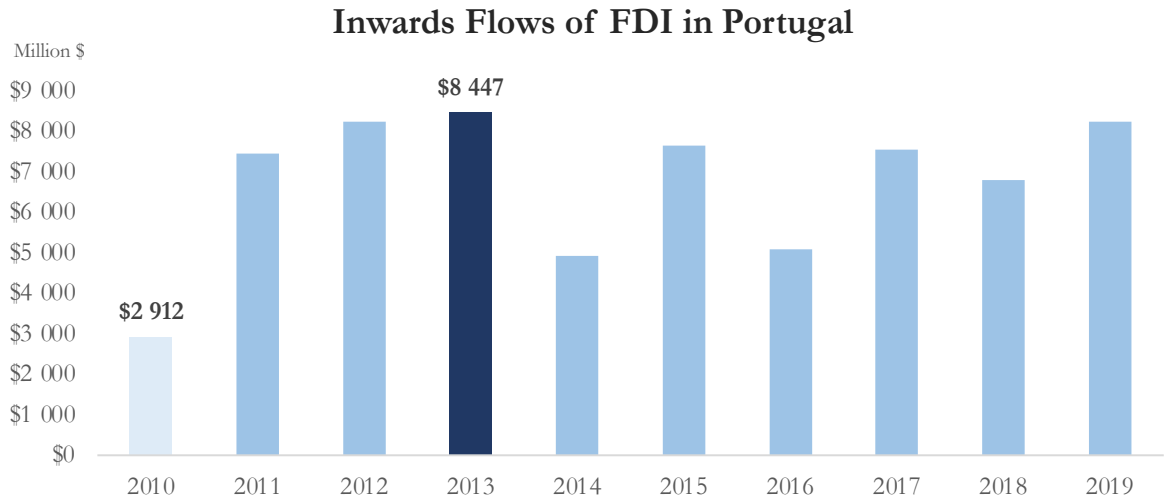

Figure 16 - Inward Flows of FDI in Portugal from 2010 to 2020, values in millions of US dollars. Source: UNCTAD, 2020

The big values of inward flows of FDI in the years following the global financial crisis might show us that these investments were done, so that the investors could diminish costs and be more competitive. This represents that Portugal might give investors good conditions for resource seeking FDI, in the way that investors come to Portugal to find labour force at more affordable prices, and efficiency seeking FDI, to rationalize a firm's structure and create in the receiving country economies of scale of certain parts of production or services of the firm that allied to smaller costs, makes it more efficient.

3.2.4.1 FDI in V. N. de Famalicão

Foreign Direct Investment flows in the city of V. N. de Famalicão will be analysed through the study of the impact the ten biggest firms with foreign capital impact have on the territory and on a national level. The difficulty in finding values of inward flows of FDI just for the city, led to this decision. However even though many of these firms have been in this territory for several decades now, they have been growing and making further investments on the city. After searching for the firms with foreign capital and the biggest turnover, the results were the following:

Table 1– FDI Companies with the biggest turnover in V.N. de Famalicão

1	Continental Mabor – Indústria de Pneus, S.A.
2	Coindu – Componentes para a Indústria Automóvel, S.A.
3	Continental – Indústria Têxtil do Ave, S.A.
4	Continental Pneus (Portugal), S.A.
5	Leica – Aparelhos Óticos de Precisão, S.A.
6	Olbo & Mehler TEX Portugal, Lda.
7	Tesco – Componentes para Automóveis, Lda.
8	Vishay – Electrónica, Portugal, Lda.
9	Telhabel – Construções, S.A.
10	Raclac, S.A.

Source: Own ellaboration, based on the data available in Orbis

Even though 10 firms were selected, the information available about Coindu was not sufficient for the firm to enter in all the parameters investigated and therefore it is only included in the data that includes the turnover in 2019, which is the contribution of exports for that year and the taxes paid.

In order to study the contribution of these firms to economic growth, the focus will be on the impact these firms have on the GDP and its components, such as the impact they have on private consumption, private investment, public investment and on the trade balance. The impact on private consumption is understood through viewing the job vacancies and by comparing their average salaries with the national ones for the same industry. The contribution to private investing is studied through the reinvested profits and capital expenditure done to upgrade their physical assets, that will develop and make more efficient its production. The contribution to public investment can be analysed through the taxes paid and how they contribute to the city budget, as an example. Finally, by calculating how much of the city's exports belong to the exports of these firms, the impact of FDI in

the city will be clear. All the firms above had their data available on the data bank Orbis, except for Coindu that, most likely due to a change of owners, only has data available for 2019.

The impact the biggest FDI firms have on consume is reflected on the number of jobs they create and on the salaries they pay. Even though not all the employees in these firms are inhabitants of the city, by considering the active population given by 2011 Census for all the years analysed (see appendix 2.1) it is observed that in the period analysed, the 9 firms would employ between 3,34% and 5,83% of the city's active population. In the period analysed, the jobs created by these firms increased every year, presenting a Compound Annual Growth Rate of 5,71%, which assuming the fixed number of active population, increases the percentage of active population in the city that could be employed by these firms.

When it comes to the salary, it was determined by calculating the total cost all the firms have with their total number of employees and then by assuming the deduction of the following expenses: 23,75% for Social Security, 1% for Work Insurance, 1% for Medical Expenses, 1% for Training, 1% Work Compensation Fund and 6% for Meal Allowance (see Appendix 2.5). Therefore, the assumption for the salary is of 66,25% of the total costs per employee. Since all ten firms in the study belong to the manufacturing industry, in order to

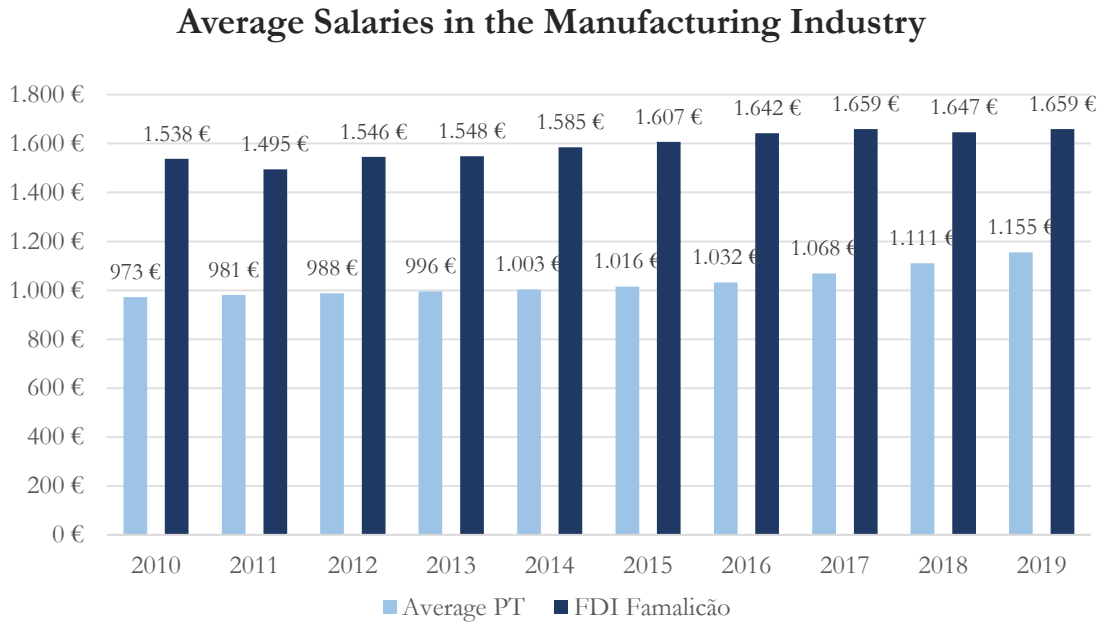

Figure 17 - Average Salaries in the Manufacturing Industry in Portugal and in the ten biggest companies with foreign capital in V. N. Famalicão from 2010 to 2019. Source: PORDATA & Orbis

know how beneficial, they are to the employees, it is crucial to compare the average salaries paid in the county for this industry and the average of salaries determined in these firms.

Figure 17 shows that in all the years represented, the ten biggest FDI firm in V. N. de Famalicão paid more than the national average for this industry. The lowest value for the national average was in the year of 2010 with an average of 973€ per month and for the FDI firms it was 1495€ in 2011. As for the maximum value it was for both observed in the year of 2019, reflecting an amount of 1155€ for the national average opposing to 1659€ for the FDI firms observed not only in 2019 as also in 2017. These values show that in this period FDI firms always paid above average to its employees, allowing them to have a bigger purchasing power, which contributes positively for the national private consumption.

Private investment is measured through the profits that are reinvested in the firm. However, as this data is not available for the firms in study, the Capital Expenditures (CAPEX) by Industry given by Damodaran (2021) will be the values taken to analyse the private investment. The ten firms in analysis belong to the Automotive, Textile, Semiconductor, Healthcare Products, Electronics and Construction. Damodaran A. (2021) set that the Capital Expenditures is 2,09% of the sales for the Automotive sector, 16,06% for the Semiconductor (Electronic) sector, 11,83% for Healthcare Products, 1,96% for Construction, 4,25% for Electronics and 0, 16% for Apparel. Therefore, as showed in Appendix 2.8 the average total of Capital Expenditures in these firms is 2. 547 740€, being Continental Mabor the biggest contributor to the total CAPEX, as its average counts 17. 157 057€, followed by Vishay Electrónica that invests an average of 2 654 935€, due to the 16,06% of CAPEX.

These enterprises contribute to public investment by paying taxes, both municipal and national taxes. The municipal taxes are present in the *Derrama Municipal* every firm with an annual turnover bigger than 250 000€ must pay to the municipality and it represents 1,2% of the profits a firm makes. In the last three years of the analysis, from 2017 to 2019, the contribution through the *Derrama Municipal* of the biggest foreign capital firms in the city to the municipal budget was of 3,4%, 4,4% and 3,8%, accordingly (see appendix 2.6). The national taxes the firms pay are visible on their effective tax rate. In the period analysed there was some irregularities in the effective tax rates, such as negative rates or tax rates that would highly surpass the P/L before tax, that can be justified as tax benefits that were not given in a certain year and therefore are deducted in the following years, increasing the assets of the

firm, and the last irregularity as expenses in the firms, such as firm cars, that require autonomous taxation and increase remarkably the taxes when comparing to the P/L before tax, but when compared to the turnover are more reasonable. Hence because of these deviations, the more accurate way to understand the average of effective tax rate paid by these firms is by calculating the weighted average. Appendix 2.7 shows that the weighted average of effective tax rate paid by each firm was between -4,45% and 32,79%, with the minimum value being negative, most likely due to the presence in the period studied of, as previously said, tax benefits that were not given in a certain year and were deducted in the following years. The overall effective tax rate's weighted average for all the firms in the total of years analysed is 26,01%, which means that in average they contributed with 26,01% of their profits to the Government and municipality's budget. This positive tax rate shows the great contribution these foreign capital firms bring to public investment.

The impact these firms have on the trade balance depends on the amount of its production is destined to foreign markets. After researching the amount exported by each firm the following percentages were concluded:

Table 2 – Percentage of production exported by biggest FDI companies in V.N. de Famalicão

	EXPORTS
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	97,00%
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	90,00%
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	97,00%
CONTINENTAL PNEUS (PORTUGAL), S.A.	97,00%
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	90,00%
OLBO & MEHLER TEX PORTUGAL, LDA	90,00%
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	80,00%
VISHAY - ELECTRONICA, PORTUGAL, LDA	100,00%
TELHABEL - CONSTRUCOES, S.A.	10,00%
RACLAC, S.A.	90,00%

Source: Own elaboration

The percentage of production destined to export is remarkably high in almost all the firms. The ones that export the most are the firms that belong to the Continental Group and Vishay, since the last one only produces for other subsidiaries. The remaining export around 90%, apart from Tesco that exports 80%, probably due to the necessity to supply other Automotive firms in the country, and Telhabel with 10%, which is a construction firm and supplies mostly the national market, only with a few works abroad.

Therefore, by calculating that the percentages on table 2 of the turnover of each firm goes to exports, it can be concluded, as Figure 18 shows, that these firms have a major

contribution to the exports of the city. In all the years analysed the contribution of these ten firms was more than 50% of the total exports of the city, being the minimum value 56% in 2016 and 2018 and the maximum 73% in 2019. However, it must be kept in mind the lack of data for firm Coindu, which means that in the years previous to 2019 the contribution of these firms to the city exports was even higher, since Coindu is not included in the graph from 2010 to 2018.

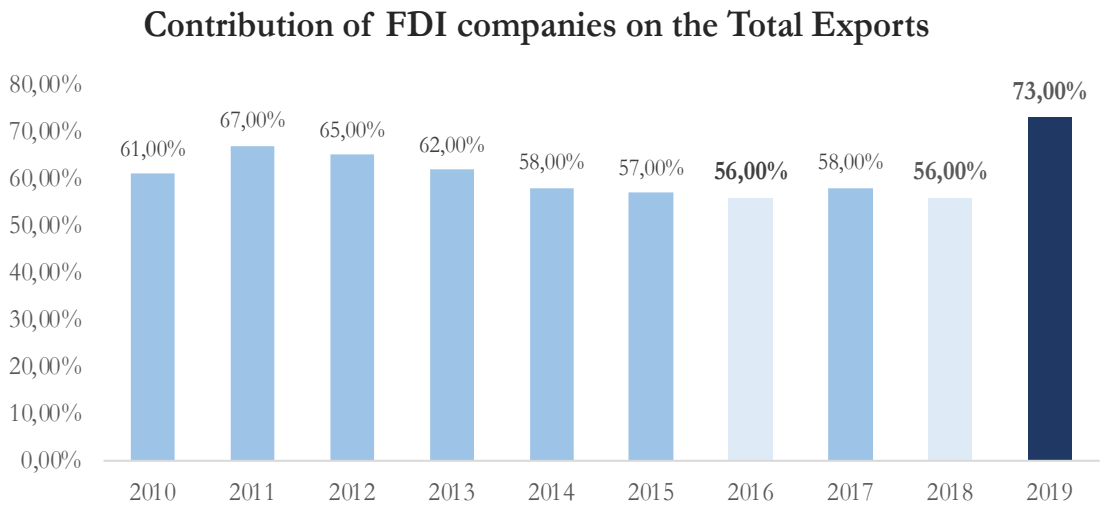

Figure 18 - Contribution of the ten biggest FDI companies in the city of Vila Nova de Famalicão from 2010 to 2019. Source: PORDATA and Orbis.

3.3 Final Discussion

The aim of this study was to understand how IT and FDI can impact economic growth, by examining the example of the city of V.N. de Famalicão and its contribution to the national economic growth. For this purpose, qualitative and quantitative data were compared and analysed. When it comes to the qualitative analyses, this was reflected in the characteristics of the city and country that promoted their participation on IT and made them more competitive for inward flows of FDI. In the quantitative analysis, we were able through the observation of several indicators to understand the importance of IT for the city and its contribution to the national economic growth and the impact of the inward flows of FDI present in the city.

From the global results gathered in the collection of data, we can observe that IT and inward flows of FDI contributed positively, in the period analysed, to economic growth,

having as reference the GDP. According to Africano et al. (2018) economic growth, on the demand side, reflects promotion of exports. This promotion of exports requires, as according to several authors (Frankel and Romer, 1999; Rose et al., 2000), several conditions that promote an easier participation on IT, such as geographical conditions, political institutions, and infrastructures of transports. When it comes to the attractiveness of inward flows of FDI, Dunning (2000), by mentioning the OLI paradigm, points out the importance of the Location (L) sub-paradigm, by referring that the characteristics of the host country are highly important for the decision of the investors and the success of FDI. The observation of the characteristics of V.N. de Famalicão and Portugal, showed that the territory offers several conditions to the success of the participation in IT and of inward flows of FDI. The national characteristics show a democratic country, that takes part in several International Organizations, having to follow by common rules, shares the same foreign policy and currency with other countries, and has increasing levels of digitalization and education rates. When it comes to the features of the city, the observation shows that V.N. de Famalicão is surrounded by a lot of important cities, being a point of passage for several means of ground transportation and is located near a Harbour and an Airport. Additionally, the city has four main economic drivers, the Textile and Clothing, Agri-Food, Metalwork, and Automotive industries, presenting therefore a big know-how in these areas. V.N. de Famalicão also presents some tax benefits and support for investors in different areas, such as helping on the search for real estate and giving investment stimulus.

By having GDP, on the demand side, as the indicator of economic growth, the contribution of IT is mainly observed on the trade balance. According to Fedyunina (2016) IT leads to GDP growth. However, on the national values, this was not observed, as Portugal presented a negative trade balance with a high Openness Index, which means that the country is highly dependent from external transactions. Nevertheless, when analyzing the data of IT from V.N. de Famalicão, it was observed that the city profits from IT, as the exports highly surpass the number of imports, having therefore a positive trade balance, that contributes positively to the national one. By calculating the percentage of the V.N. de Famalicão exports in the national ones, it was possible to observe the significant contribution of the city, since the values varied from 3,26% to 3,88%, given the fact that the population of the city only represents 1,28% of the Portuguese population and 0,22% of the national territory.

According to Wang and Wong, (2009) the settlement of FDI can have a great impact on economic growth. To examine the veracity of this declaration in the city of V.N. de Famalicão, we analyzed the impact that the ten biggest firms with foreign capital in the city have on the different components of FDI.

Dunning and Lundan (2008) declare that FDI increases job vacancies in the host countries and that MNEs tend to pay higher wages than domestic firms. Hence, on the first component of analysis of GDP, private consumption, the results showed that the job vacancies created by the biggest FDI firms in the city increased every year and that if we considered the active population in the municipality, this job vacancies would employ 3,34% to 5,83% of the city's active population. When it comes to the wages paid by these MNEs the results showed that the salaries in the MNEs significantly surpassed the average of the national wages for the same industry.

Regarding the second component of GDP, private investment, Edfelt (1975) establishes that FDI firms improve the flows of R&D and Xu (2000) declares that MNEs have a big impact on the technological capacity. For this component, by analyzing the CAPEX by Industry from Damodaran (2021), it was observed that the CAPEX of these companies varied between 0,16% and 16,06%. The biggest investors in physical assets, given these values were Continental Mabor, with an average of 17. 157 057€, followed by Vishay Electrónica, with an average of 2 654 935€. The total average of the firms in the period analysed was of 2. 547 740€ invested annually in physical assets, which can represent an increase on the technological assets.

Additionally, Dunning and Lundan (2008) referred that the settlement of FDI can have a great influence in tax revenues, which contribute to the third component of GDP, which is public investment. By calculating the weighted average of the effective tax rate, we concluded that each FDI firm, in average contributed with 26,01% of their profits to the public authorities. When analysing the municipal taxes, represented by the *derrama municipal,* the results show that the tax paid from these firms to the municipality represented from 2017 to 2019, 3,4%, 4,4% and 3,8% of the municipality budget.

Finally, several authors (Liu et al., 2001; Barry and Bradley, 1997; Steuer, 1973) showed that FDI has a positive impact on the trade balance of the host countries, since the the output of foreign affiliates is mostly exported. It was previously observed that V.N. de Famalicão presents a positive trade balance with exports highly surpassing imports and that

the contribution to the national exports is also very significant. Research showed that most of the FDI companies analysed export a very high percentage of its output, apart from Telhabel – Construções. Therefore, the results presented that these FDI companies in the city highly contributed to the level of exports in the municipality, since its contribution always represented more than 50%, varying between 56% and 73%, concluding that the positive trade balance of the city is highly linked to the FDI firms present in the territory, and therefore, showing that the results of the authors are in accordance to our case study.

Conclusion

The main purpose of this dissertation was to explain the impact IT and FDI have on Economic Growth, by studying the case of V. N. de Famalicão and its contribution to the national Economic Growth, having GDP as its indicator.

The relationship between IT and inward flows of FDI and Economic Growth has been the study field of many authors. In the literature the study of economic growth is divided in two models, the endogenous one, having Solow (1956) as its main figure, and the exogenous model, embraced by authors like Frankel (1962), Romer (1990), and Aghion & Howitt (1992). Solow in the exogenous model of growth, defends that only an exogenous rate of technological progress could increase the output *per capita* growth rate. Contrarily, the endogenous model of growth explained that this technological progress was not only dependent from external factors, but also from the capacity of each firm to accumulate capital, since some of this capital can be intellectual capital, focused on R&D efforts. Africano & al. (2018) mentions the importance of the work of Ricardo to explain that even though technological progress is a key factor for growth, but as it can lead to a saturation of the inventive capacity, international trade also plays a major role in preventing the stationary state, since by increasing the market, it allows to maintain the profitability of investments. Other authors, such as Fedyunina (2016), Balassa (1977), and Feder (1982) defended that the openness to international trade brings positive rates of growth to developed and developing countries, since it provides a better reallocation of resources between industries and allows countries to specialize in industries with a comparative advantage. Additionally, inward flows of FDI have been proved to increase entrepreneurship, output, and raise domestic productivity.

V. N. de Famalicão is a big exporter in Portugal and counts with many foreign capital firms in its territory. The capacity to integrate so well in international trade comes from several condition offered by the country and the city. Among them are being part of the European Union, Eurozone and having solid institutions that makes the country a trustworthy partner for trade exchanges and investments. The conditions given by the city are linked to the good geographical conditions, being near to several important cities and important transport infrastructures, having a historical know-how in several industries, such as Automotive, Textile, Metalwork and Agri-Food, that is also linked to development centres, and several tax benefits and support in real estate.

The empirical analysis aimed to prove the impact this city, as a big exporter and receiver of inward flows of FDI had on the national economic growth, by measuring its contribution to the different components of GDP. Primarily, the Openness Index of Portugal showed the big influence IT had on the country, however the national trade balance in the period analysed always presented negative values, with imports surpassing the exports, which leads to a trade deficit. The values of the city contrast with the national reality, since the municipal trade balance in the years analysed was always positive and the coverage ratio showed that the exports highly surpassed the imports. Therefore, when observing the contribution of the city to the national imports and exports, it is concluded that the contribution to the exports was bigger in all years than to the imports, which shows a positive contribution to the national trade balance.

Secondly, to study the impact of FDI, the ten biggest firms with foreign capital and its contribution to the components of GDP were examined. The results showed that in all the years analysed the number of jobs in these firms increased and when analysing the average salaries paid by these firms to the average salaries paid in the manufacturing industry in Portugal, as all of them belonged to this sector, these firms' wages surpassed the national average, which reveals a positive contribution to consume, as its employees are granted a better purchasing power. When it comes to the contribution to private investing, the values given by Damodaran (2021) on the Capital Expenditures of each industry, show that all the sectors in which these companies belong to, there are annual expenditures for innovation and R&D, which provides continuous process, automation and allows firms to increase its Total Factor Productivity Growth. The contribution of these enterprises to public investment was done through municipal and national taxes, which showed that, besides some tax benefits these companies may have, its contribution with taxes was always positive, with a weighted average in the period analysed of 26,01% effective tax rate and a significant contribution to the municipal budget with the *Derrama Municipal*. Finally, as V. N. Famalicão contributed positively to the national trade balance, it was observed how this successful trade balance was dependent from these firms. The data showed that in all the years analysed the exports of these firms that represent FDI covered more that 50% of the city's exports, with a minimum value 56% and a maximum of 73%, which shows a remarkable contribution to the city's exports.

These conclusions, allow us to assume that, given the example of V.N. de Famalicão, IT and inward flows of FDI do impact positively economic growth. Moreover, we must emphasize the role of one firm, Continental Mabor, since data shows that it was the biggest contributor in many aspects, such as turnover, exports, jobs and salaries. Nevertheless, we faced some limitations when analysing the impact of these foreign capital firms, such as lack of available data about the firms , which is the case of the firm Coindu, one of the biggest in the territory, that in many parameters was not possible to take part in the study, and lack of public data about the municipality budget, that was only available for the most recent years, and forbids us to make a broader study of the contribution of the *Derrama Municipal* in the municipal budget.

Finally, we expect that the present dissertation contributes to the existing literature by increasing the knowledge of how IT and FDI can be great contributors to economic growth, and not less important how the exploration of the potential of each territory and its internationalization can increase national development.

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Appendix

1. International Trade

1.1 Gross Domestic Product in Portugal (2010-2020)

Year	GDP (million €)
2010	179 611 €
2011	176 096 €
2012	168 296 €
2013	170 492 €
2014	173 594 €
2015	179 713 €
2016	186 490 €
2017	195 947 €
2018	205 184 €
2019	213 949 €
2020	202 455 €

1.2 Gross Domestic Product's Growth Rate in Portugal (2010-2020)

Year	GDP growth (%)
2010	1,74%
2011	-1,70%
2012	-4,06%
2013	-0,92%
2014	0,79%
2015	1,79%
2016	2,02%
2017	3,51%
2018	2,85%
2019	2,20%
2020	-7,60%

1.3 Openness Index in Portugal (2010-2020)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Exports	37 267 906 508 €	42 828 033 392 €	45 213 015 628 €	47 302 913 319 €	48 053 695 644 €	49 634 001 363 €	50 038 841 230 €	55 017 987 697 €	57 849 991 618 €	59 902 809 944 €	53 772 000 000 €
Imports	58 647 391 261 €	59 551 441 805 €	56 374 082 889 €	57 012 824 865 €	59 032 120 694 €	60 344 799 543 €	61 424 014 899 €	69 688 564 626 €	75 439 246 300 €	79 977 128 345 €	67 823 000 000 €
GDP	179 611 000 000 €	176 096 000 000 €	168 296 000 000 €	170 492 000 000 €	173 594 000 000 €	179 713 000 000 €	186 490 000 000 €	195 947 000 000 €	205 184 000 000 €	213 949 000 000 €	202 455 000 000 €
Openness Index	53,40%	58,14%	60,36%	61,19%	61,69%	61,20%	59,77%	63,64%	64,96%	65,38%	60,06%

1.4 Trade Balance in Portugal (2010-2020)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Exports	37 267 906 508 €	42 828 033 392 €	45 213 015 628 €	47 302 913 319 €	48 053 695 644 €	49 634 001 363 €	50 038 841 230 €	55 017 987 697 €	57 849 991 618 €	59 902 809 944 €	53 772 000 000 €
Imports	58 647 391 261 €	59 551 441 805 €	56 374 082 889 €	57 012 824 865 €	59 032 120 694 €	60 344 799 543 €	61 424 014 899 €	69 688 564 626 €	75 439 246 300 €	79 977 128 345 €	67 823 000 000 €
Trade Balance	-21 379 484 753 €	-16 723 408 413 €	-11 161 067 261 €	-9 709 911 546 €	-10 978 425 050 €	-10 710 798 180 €	-11 385 173 669 €	-14 670 576 929 €	-17 589 254 682 €	-20 074 318 401 €	-14 051 000 000 €

1.5 Trade Balance in V. N. de Famalicão (2010-2020)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Exports	1 245 999 938 €	1 432 594 050 €	1 566 931 601 €	1 646 316 092 €	1 736 333 646 €	1 905 396 135 €	1 940 110 507 €	1 998 949 518 €	2 041 364 469 €	2 029 890 175 €	1 751 154 144 €
Imports	742 947 572 €	865 359 298 €	831 939 540 €	842 708 861 €	940 321 318 €	990 264 143 €	1 019 484 478 €	1 155 249 099 €	1 119 181 093 €	1 115 344 460 €	978 292 462 €
Trade Balance	503 052 366 €	567 234 752 €	734 992 061 €	803 607 231 €	796 012 328 €	915 131 992 €	920 626 029 €	843 700 419 €	922 183 376 €	914 545 715 €	772 861 682 €

1.6 Percentage of V. N. de Famalicão exports on the national ones (2010-2020)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Exports Portugal	37 267 906 508 €	42 828 033 392 €	45 213 015 628 €	47 302 913 319 €	48 053 695 644 €	49 634 001 363 €	50 038 841 230 €	55 017 987 697 €	57 849 991 618 €	59 902 809 944 €	53 772 000 000 €
Exports Famalicão	1 245 999 938 €	1 432 594 050 €	1 566 931 601 €	1 646 316 092 €	1 736 333 646 €	1 905 396 135 €	1 940 110 507 €	1 998 949 518 €	2 041 364 469 €	2 029 890 175 €	1 751 154 144 €
Famalicão nationally	3,34%	3,34%	3,47%	3,48%	3,61%	3,84%	3,88%	3,63%	3,53%	3,39%	3,26%

1.7 Percentage of V.N. de Famalicão imports on the national ones (2010-2020)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Imports Portugal	58 647 391 261 €	59 551 441 805 €	56 374 082 889 €	57 012 824 865 €	59 032 120 694 €	60 344 799 543 €	61 424 014 899 €	69 688 564 626 €	75 439 246 300 €	79 977 128 345 €	67 823 000 000 €
Imports Famalicão	742 947 572 €	865 359 298 €	831 939 540 €	842 708 861 €	940 321 318 €	990 264 143 €	1 019 484 478 €	1 155 249 099 €	1 119 181 093 €	1 115 344 460 €	978 292 462 €
Famalicão nationally	1,27%	1,45%	1,48%	1,48%	1,59%	1,64%	1,660%	1,658%	1,48%	1,39%	1,44%

2. Foreign Direct Investment

2.1 Cost of employees in the 10 biggest FDI firms in V. N. de Famalicão (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	€56 064 767	€60 801 679	€64 754 868	€67 612 702	€71 506 484	€75 003 084	€79 147 679	€85 610 500	€89 487 171	€96 139 237
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	€4 352 846	€4 762 028	€5 203 646	€5 223 134	€5 842 474	€6 154 604	€6 951 291	€6 977 200	€7 466 714	€7 785 550
CONTINENTAL PNEUS (PORTUGAL), S.A.	€1 680 152	€1 785 039	€2 029 826	€2 191 882	€2 569 765	€2 440 292	€2 301 846	€2 567 180	€2 846 164	€2 766 863
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	€0	€8 842 113	€9 429 586	€10 203 452	€10 536 447	€10 062 378	€10 821 511	€10 976 272	€11 671 854	€12 655 837
OLBO & MEHLER TEX PORTUGAL, LDA	€2 755 991	€3 341 759	€3 483 481	€4 021 507	€5 294 840	€4 987 238	€5 379 240	€5 884 427	€6 137 839	€6 267 499
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	€3 591 621	€4 197 088	€4 442 675	€4 831 605	€5 100 139	€5 902 454	€6 099 391	€6 497 040	€7 406 575	€6 015 552
VISHAY - ELECTRONICA, PORTUGAL, LDA	€3 860 559	€4 817 727	€3 746 008	€3 858 257	€4 086 082	€4 033 898	€4 184 354	€4 784 704	€5 679 746	€5 958 365
TELHABEL - CONSTRUCOES, S.A.	€2 267 692	€2 029 335	€1 860 822	€1 657 033	€1 810 480	€1 906 228	€1 495 369	€1 432 118	€1 503 724	€1 808 054
RACLAC, S.A.	€17 657	€19 672	€28 587	€38 342	€75 489	€114 853	€213 408	€340 181	€680 511	€796 765
TOTAL	**€74 591 285**	**€90 596 439**	**€94 979 498**	**€99 637 913**	**€106 822 200**	**€110 605 029**	**€116 594 088**	**€125 069 623**	**€132 880 297**	**€140 193 722**

2.2 Number of employees in the 10 biggest FDI firms in V. N. de Famalicão (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	1 530	1 577	1 633	1 695	1 737	1 789	1 864	1 993	2 095	2 261
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	0	0	0	0	0	0	0	0	0	0
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	147	155	163	172	179	189	201	222	233	242
CONTINENTAL PNEUS (PORTUGAL), S.A.	37	39	38	39	40	41	45	50	52	53
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	0	485	489	523	535	531	516	553	589	578
OLBO & MEHLER TEX PORTUGAL, LDA	155	171	182	201	255	270	285	280	282	276
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	143	144	153	170	177	183	199	218	262	258
VISHAY - ELECTRONICA, PORTUGAL, LDA	186	204	162	169	179	170	179	186	227	241
TELHABEL - CONSTRUCOES, S.A.	95	91	85	73	83	75	60	52	63	61
RACLAC, S.A.	2	2	2	3	5	8	11	13	16	29
TOTAL	**2 295**	**2 868**	**2 907**	**3 045**	**3 190**	**3 256**	**3 360**	**3 567**	**3 819**	**3 999**
Total of active population in the city	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**
Percentage of population	**3,34%**	**4,18%**	**4,24%**	**4,44%**	**4,65%**	**4,75%**	**4,90%**	**5,20%**	**5,57%**	**5,83%**

2.3 Number of Employees in the 10 biggest FDI firms in V. N. de Famalicão (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	1 530	1 577	1 633	1 695	1 737	1 789	1 864	1 993	2 095	2 261
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	0	0	0	0	0	0	0	0	0	0
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	147	155	163	172	179	189	201	222	233	242
CONTINENTAL PNEUS (PORTUGAL), S.A.	37	39	38	39	40	41	45	50	52	53
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	0	485	489	523	535	531	516	553	589	578
OLBO & MEHLER TEX PORTUGAL, LDA	155	171	182	201	255	270	285	280	282	276
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	143	144	153	170	177	183	199	218	262	258
VISHAY - ELECTRONICA, PORTUGAL, LDA	186	204	162	169	179	170	179	186	227	241
TELHABEL - CONSTRUCOES, S.A.	95	91	85	73	83	75	60	52	63	61
RACLAC, S.A.	2	2	2	3	5	8	11	13	16	29
TOTAL	**2 295**	**2 868**	**2 907**	**3 045**	**3 190**	**3 256**	**3 360**	**3 567**	**3 819**	**3 999**
Total of active population in the city	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**	**68 616**
Percentage of population	**3,34%**	**4,18%**	**4,24%**	**4,44%**	**4,65%**	**4,75%**	**4,90%**	**5,20%**	**5,57%**	**5,83%**

2.4 Profit per Employee in the 10 biggest FDI firms in V. N. de Famalicão (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	€96 072	€103 834	€114 293	€115 481	€104 792	€135 882	€121 156	€106 157	€99 316	€91 438
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	€41 391	€42 222	€36 873	€38 987	€41 697	€43 639	€36 079	€36 890	€36 799	€30 056
CONTINENTAL PNEUS (PORTUGAL), S.A.	€18 699	€16 250	€19 738	€22 578	€26 017	€22 890	€23 735	€17 712	€18 067	€18 975
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	€0	€3 128	€3 336	€2 951	€4 817	€3 536	€4 324	€7 711	€6 174	€5 484
OLBO & MEHLER TEX PORTUGAL, LDA	€1 458	€1 627	€3 280	€112	-€8 267	-€2 027	€941	€3 318	€823	-€9 126
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	€3 236	€2 736	-€3 313	€1 549	€2 236	€7 796	€5 828	€5 167	€1 811	€830
VISHAY - ELECTRONICA, PORTUGAL, LDA	€1 867	€3 052	€2 647	€4 158	€1 147	€3 209	€2 699	€5 021	€4 895	€3 382
TELHABEL - CONSTRUCOES, S.A.	€3 271	-€1 317	-€1 942	-€4 412	-€502	-€217	€4 495	€1 524	€5 947	€21 428
RACLAC, S.A.	€6 982	€18 782	€27 546	€49 612	€79 412	€148 161	€78 286	€95 142	-€20 839	€11 402

2.5 Calculation of the Average Salary per Employee in the 10 biggest FDI firms in V. N. de Famalicão (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ANNUAL COST PER EMPLOYEE	€32 502	€31 589	€32 673	€32 722	€33 487	€33 970	€34 701	€35 063	€34 795	€35 057
MONTHLY COST PER EMPLOYEE	€2 322	€2 256	€2 334	€2 337	€2 392	€2 426	€2 479	€2 504	€2 485	€2 504
AVERAGE MONTHLY SALARY	€1 538	€1 495	€1 546	€1 548	€1 585	€1 607	€1 642	€1 659	€1 647	€1 659

AUXILIARY CALCULATIONS:

***Average monthly salary, assuming the following deductions:**

Social Security	23,75%
Work insurance	1,00%
Medical expenses	1,00%
Training	1,00%
Work compensation Fund	1,00%
Meal allowance	6,00%
Total deductions:	**33,75%**

2.6 Municipal tax paid by the firms (*Derrama Municipal*) (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	€2 331 355	€2 671 231	€3 034 197	€3 210 935	€2 997 799	€3 944 085	€3 715 304	€3 469 382	€3 433 912	€3 363 614
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	€0	€0	€0	€0	€0	€0	€0	€0	€0	€118 938
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	€93 735	€106 330	€90 950	€105 216	€108 398	€115 484	€107 022	€122 603	€113 509	€107 241
CONTINENTAL PNEUS (PORTUGAL), S.A.	€11 691	€11 001	€13 059	€15 570	€17 982	€15 858	€17 485	€14 409	€15 784	€16 455
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	€0	€25 610	€25 637	€23 056	€36 200	€30 634	€34 596	€56 515	€45 974	€49 110
OLBO & MEHLER TEX PORTUGAL, LDA	€2 761	€3 459	€6 209	€0	€0	€0	€4 006	€14 334	€4 143	€0
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	€6 060	€3 720	€0	€0	€6 291	€21 744	€18 142	€10 902	€791	€3 035
VISHAY - ELECTRONICA, PORTUGAL, LDA	€8 656	€10 339	€6 302	€5 496	€5 216	€6 953	€7 744	€11 512	€10 848	€12 818
TELHABEL - CONSTRUCOES, S.A.	€6 502	€123	€0	€0	€0	€287	€2 446	€3 570	€6 565	€17 374
RACLAC, S.A.	€0	€0	€0	€0	€4 765	€15 613	€12 494	€16 888	€0	€4 076
TOTAL	**€2 460 761**	**€2 831 813**	**€3 176 354**	**€3 360 273**	**€3 176 650**	**€4 150 658**	**€3 919 239**	**€3 720 116**	**€3 631 525**	**€3 692 662**

2.7 Effective tax rate (2010-2019)

P/L before tax

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AVERAGE P/L	WEIGHT
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	€194.279.558	€222.602.571	€252.849.765	€267.577.939	€249.816.582	€328.673.730	€309.608.675	€289.115.156	€286.159.325	€280.301.177	€268.098.448	94,53%
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	€0	€0	€0	€0	€0	€0	€0	€0	€0	€9.911.500	€991.150	0,35%
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	€7.811.262	€8.860.821	€7.579.136	€8.767.995	€9.033.176	€9.623.654	€8.918.476	€10.216.906	€9.459.083	€8.936.743	€8.920.725	3,15%
CONTINENTAL PNEUS (PORTUGAL), S.A.	€974.289	€916.769	€1.088.277	€1.297.527	€1.498.494	€1.321.530	€1.457.111	€1.200.722	€1.315.340	€1.371.283	€1.244.134	0,44%
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	€0	€2.134.168	€2.136.457	€1.921.296	€3.016.638	€2.552.852	€2.882.973	€4.709.600	€3.831.135	€4.092.534	€2.727.765	0,96%
OLBO & MEHLER TEX PORTUGAL, LDA	€230.050	€288.240	€517.419	-€104.212	-€2.567.930	-€669.434	€333.820	€1.194.521	€345.217	-€2.725.818	-€315.813	-0,11%
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	€505.032	€310.017	-€623.727	-€86.908	€524.268	€1.812.003	€1.511.820	€908.526	€65.935	€252.916	€517.988	0,18%
VISHAY - ELECTRONICA, PORTUGAL, LDA	€721.342	€861.561	€525.149	€458.003	€434.653	€579.447	€645.325	€959.363	€903.994	€1.068.159	€715.700	0,25%
TELHABEL - CONSTRUCOES, S.A.	€541.845	€10.281	-€210.267	-€362.187	-€5.465	€23.893	€203.838	€297.524	€547.063	€1.447.848	€249.437	0,09%
RACLAC, S.A.	€17.964	€51.101	€77.200	€210.096	€397.059	€1.301.081	€1.041.172	€1.407.332	-€148.990	€339.643	€469.366	0,17%
											€283.618.901	**100,00%**

weight of P/L before tax per year in terms of the total

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	7,25%	8,30%	9,43%	9,98%	9,32%	12,26%	11,55%	10,78%	10,67%	10,46%	100%
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	100,00%	100%
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	8,76%	9,93%	8,50%	9,83%	10,13%	10,79%	10,00%	11,45%	10,60%	10,02%	100%
CONTINENTAL PNEUS (PORTUGAL), S.A.	7,83%	7,37%	8,75%	10,43%	12,04%	10,62%	11,71%	9,65%	10,57%	11,02%	100%
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	0,00%	7,82%	7,83%	7,04%	11,06%	9,36%	10,57%	17,27%	14,04%	15,00%	100%
OLBO & MEHLER TEX PORTUGAL, LDA	-7,28%	-9,13%	-16,38%	3,30%	81,31%	21,20%	-10,57%	-37,82%	-10,93%	86,31%	100%
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	9,75%	5,99%	-12,04%	-1,68%	10,12%	34,98%	29,19%	17,54%	1,27%	4,88%	100%
VISHAY - ELECTRONICA, PORTUGAL, LDA	10,08%	12,04%	7,34%	6,40%	6,07%	8,10%	9,02%	13,40%	12,63%	14,92%	100%
TELHABEL - CONSTRUCOES, S.A.	21,72%	0,41%	-8,43%	-14,52%	-0,22%	0,96%	8,17%	11,93%	21,93%	58,04%	100%
RACLAC, S.A.	0,38%	1,09%	1,64%	4,48%	8,46%	27,72%	22,18%	29,98%	-3,17%	7,24%	100%

weight of P/L before tax per year in terms of the total * effective tax rate

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	1,76%	2,20%	2,47%	2,68%	2,53%	3,19%	3,12%	2,89%	2,91%	2,74%
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,23%
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	1,94%	2,60%	1,76%	2,31%	1,76%	1,54%	1,87%	2,27%	0,99%	1,86%
CONTINENTAL PNEUS (PORTUGAL), S.A.	2,27%	2,27%	2,72%	3,35%	3,68%	3,08%	3,13%	2,53%	3,02%	2,94%
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	0,00%	2,26%	1,85%	1,39%	1,61%	2,47%	2,39%	1,63%	0,71%	3,38%
OLBO & MEHLER TEX PORTUGAL, LDA	-0,13%	-0,32%	2,52%	4,01%	14,56%	3,87%	-2,08%	-8,41%	-3,58%	6,56%
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	0,82%	-1,62%	-2,26%	-6,76%	2,48%	7,44%	6,80%	-4,21%	-7,88%	0,75%
VISHAY - ELECTRONICA, PORTUGAL, LDA	5,23%	3,34%	1,35%	-3,42%	3,20%	0,47%	2,27%	0,35%	-2,89%	3,54%
TELHABEL - CONSTRUCOES, S.A.	9,27%	5,22%	-1,81%	-1,61%	1,45%	1,61%	-2,64%	8,75%	6,91%	5,64%
RACLAC, S.A.	0,09%	0,29%	0,47%	1,31%	0,00%	2,47%	3,84%	3,63%	3,93%	0,19%

COMPARISON **FOR VNF**

WEIGHTED AVERAGE	AVERAGE	WA CALC
26,50%	26,44%	25,05%
2,23%	0,22%	0,01%
18,90%	19,06%	0,59%
28,99%	29,08%	0,13%
17,70%	17,29%	0,17%
17,00%	22,98%	-0,02%
-4,45%	-15,60%	-0,01%
13,43%	13,17%	0,03%
32,79%	92,88%	0,03%
16,21%	2,37%	0,03%
		26,01%

2.8 CAPEX Analysis: Capital Expenditures per year (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AVERAGE	CAPEX	AVERAGE CAPEX
CONTINENTAL MABOR - INDUSTRIA DE PNEUS, S.A.	€618 849 315	€765 589 930	€824 282 752	€815 752 811	€775 854 608	€849 462 725	€847 750 951	€902 489 885	€885 964 817	€923 120 293	€820 911 809	2,09%	€17 157 057
COINDU - COMPONENTES PARA A INDUSTRIA AUTOMOVEL, S.A.	€0	€0	€0	€0	€0	€0	€0	€0	€0	€342 675 358	€34 267 536	2,09%	€716 191
CONTINENTAL - INDUSTRIA TEXTIL DO AVE, S.A.	€60 978 778	€75 765 542	€76 387 742	€77 132 148	€76 774 619	€81 648 251	€86 539 046	€91 001 750	€92 712 657	€99 013 256	€81 795 379	0,16%	€130 873
CONTINENTAL PNEUS (PORTUGAL), S.A.	€47 336 407	€54 568 960	€51 613 294	€59 364 367	€65 712 041	€73 351 639	€69 974 172	€73 158 050	€60 073 841	€59 102 747	€61 425 552	2,09%	€1 283 794
LEICA - APARELHOS OPTICOS DE PRECISAO, S.A.	€0	€35 698 864	€38 486 229	€43 176 466	€52 522 034	€49 638 059	€46 998 328	€51 196 871	€55 689 763	€53 714 642	€42 712 126	4,25%	€1 815 265
OLBO & MEHLER TEX PORTUGAL, LDA	€22 408 578	€28 206 951	€29 385 674	€29 211 580	€36 151 817	€36 441 247	€34 057 706	€38 133 748	€40 223 411	€29 628 009	€32 384 872	0,16%	€51 816
TESCO - COMPONENTES PARA AUTOMOVEIS, LDA	€14 160 576	€16 872 186	€19 381 438	€19 371 567	€22 745 667	€26 371 250	€26 068 725	€25 704 287	€27 112 675	€20 484 507	€21 827 288	2,09%	€456 190
VISHAY - ELECTRONICA, PORTUGAL, LDA	€18 431 986	€19 071 598	€12 497 609	€12 763 597	€13 691 893	€13 592 381	€14 127 225	€18 648 895	€22 218 875	€20 269 439	€16 531 350	16,06%	€2 654 935
TELHABEL - CONSTRUCOES, S.A.	€32 004 926	€26 309 579	€23 606 075	€14 214 241	€12 610 413	€13 186 482	€18 302 928	€53 524 357	€50 123 313	€16 790 444	€26 067 276	1,96%	€510 919
RACLAC, S.A.	€214 115	€749 274	€1 302 973	€3 050 373	€4 655 584	€6 858 977	€8 131 732	€10 580 384	€10 737 874	€12 921 141	€5 920 243	11,83%	€700 365
TOTAL	**€814 384 681**	**€1 022 832 886**	**€1 076 943 785**	**€1 074 037 149**	**€1 060 718 676**	**€1 150 551 011**	**€1 151 950 813**	**€1 264 438 227**	**€1 244 857 226**	**€1 577 719 835**	**€1 143 843 429**		**€25 477 404**