

Foreign Direct Investment: ¿A Doubtful Blessing? A Fuzzy-Set QCA Approach

*Inversión extranjera directa: ¿una bendición? Aproximación
desde un análisis cualitativo comparativo difuso*

*Investimento estrangeiro direto: uma benção? Abordagem de
uma análise qualitativa comparativa difusa*

Alberto Castillo Castañeda¹
Juan Manuel Gil-Barragán²
Michael Torres Franco³

Received: November 1st, 2020

Accepted: July 12th, 2021

Available: September 6th, 2021

How to cite this article:

Castillo Castañeda, A, Gil-Barragán, J.M. and Torres Franco, M. (2021). Foreign Direct Investment: ¿A Doubtful Blessing? A Fuzzy-Set QCA Approach. *Cooperativismo & Desarrollo*, 29(121), 1-21.
doi: <https://doi.org/10.16925/2382-4220.2021.03.04>

Research article. <https://doi.org/10.16925/2382-4220.2021.03.04>

- ¹ Ph.D en Ciencia Política y de la Administración y Relaciones Internacionales. Máster en Desarrollo y Ayuda Internacional. Máster en Política Internacional. Decano Facultad de Gobierno y Relaciones Internacionales Universidad Santo Tomás.

E-Mail: albcasti@ucm.es

ORCID: <https://orcid.org/0000-0002-9778-933X>

- ² Doctorado en Administración y Dirección de Empresas de la Universidad Politécnica de Valencia, Profesor Asociado de Negocios Internacionales en la Universidad EAN.

E-Mail: jmgilbar@universidadean.edu.co

ORCID: <https://orcid.org/0000-0001-5541-4655>

- ³ Magíster en Análisis de Problemas Políticos e Internacionales Contemporáneos de la Universidad Externado. Director de los Programas de Negocios Internacionales en la Universidad EAN.

E-Mail: metorres@universidadean.edu.co

ORCID: <https://orcid.org/0000-0001-9891-5871>



Abstract

The article starts from the analysis of the main theoretical economic works on Foreign Direct Investment (FDI) to extrapolate argumentatively what has been the influence, whether positive or negative, in the economic growth of the states. Once some relevant FDI factors in economic growth have been inductively identified, this study uses fuzzy-set qualitative comparative analysis (fsQCA) to identify the combination of factors that a country must coordinate for FDI to have a positive impact on its economic growth. For this purpose, we use data from Brazil, Russia, India, China, and South Africa (BRICS).

Keywords: fuzzy-set qualitative comparative analysis (FsQCA), BRICS, Foreign Direct Investment, Economic Growth.

Resumen

El artículo parte del análisis de los principales desarrollos teóricos económicos sobre la Inversión Extranjera Directa (IED) para extrapolar argumentativamente cuál ha sido la influencia, sea ésta positiva o negativa, en el crecimiento económico de los países. Una vez identificados, de manera inductiva, algunos factores relevantes de la IED en el crecimiento económico, se lleva a cabo un análisis cualitativo comparativo de categorías difusas a países como Brasil, Rusia, India, China y Sudáfrica (BRICS) con el ánimo de identificar deductivamente cuáles son las combinaciones de factores que debe coordinar un país para que la IED tenga un impacto positivo sobre su crecimiento económico.

Palabras clave: Análisis cualitativo comparativo de categorías difusas, BRICS, crecimiento económico, Inversión Extranjera Directa.

Descriptores

F23 Empresas multinacionales
O16 Mercados financieros
F21 Inversión internacional

Resumo

O artigo parte da análise dos principais desdobramentos teóricos da economia sobre o Investimento Estrangeiro Direto (IED) para extrapolar argumentativamente qual tem sido a influência, positiva ou negativa, sobre o crescimento econômico dos países. Uma vez identificados alguns fatores relevantes do IED no crescimento econômico indutivamente, uma análise qualitativa comparativa das categorias fuzzy é realizada para países como Brasil, Rússia, Índia, China e África do Sul (BRICS) com o objetivo de identificar dedutivamente quais são as combinações de fatores que um país deve coordenar para que o IDE tenha um impacto positivo em seu crescimento econômico.

Palavras-chave: Análise qualitativa comparativa de categorias fuzzy, BRICS, crescimento econômico, Investimento Estrangeiro Direto.

Introduction

The flow of international capital under the modality of Foreign Direct Investment (FDI), has led to the support of different positions that endorse the positive aspects of FDI. The economic globalization, has promoted their presence as optimal management structures, has helped the liberalization of trade, and has promoted the lifting of barriers with the purpose of generating economic growth in the country recipient of these capitals.

The experience of countries such as Brazil, Russia, India, China, and South Africa (also known as BRICS economies), in improving growth and development, shows that this has been supported by the increase of FDI inflows. However, the countries are heterogeneous and FDI might generate positive or negative impacts on the country's economic growth (Agrawal & Khan, 2011; Balasubramanyam, Salisu & Sapsford, 1999; Haddad & Harrison, 1993; Rodríguez-Clare, 1996; Yingxi & Hung, 2018). Apparently, this difference can be explained by the conditions that host countries have (Borensztein, De Gregorio & Lee, 1998; Durham, 2004). Several studies have found that these conditions are: the capacity of the business sector to absorb technology (Borensztein et al., 1998; De Mello, 1997), the existence of institutional agreements that promote the transfer of technology (Rodríguez-Clare, 1996), the level of education of the host country (De Mello, 1997; Li & Liu, 2005), FDI regulation in the country (Almsafir & Almfraji, 2013), and finally, the FDI inflows (Almsafir & Almfraji, 2013; Solomon, 2011).

The problem with these studies is that they evaluate the impact of each of these conditions separately. Therefore, the joint impact of these conditions on the economic growth of a country is unknown. The aim of this research is to identify under what combination of conditions, FDI becomes a catalyst for the development of a country's economy. To achieve this purpose, we carried out a fuzzy-set qualitative comparative analysis (FsQCA) on the conditions, that were described above, of the countries called BRICS. In the first part of the article, a conceptual approach to the referring terms and explanatory theoretical models in the dynamics of the FDI will be given in a descriptive way. The second part will analyze the main conditions that a country must have so that the FDI have a positive effect on its economic growth. The third part will discuss the importance of the State in correcting market failures and the possible problems that non-regulation or lack of control of FDI may cause. Finally, we will seek to establish the combination of factors that a country requires for FDI to have a positive effect on economic growth.

Foreign Direct Investment: An Approach to the Basics

The United Nations and the International Monetary Fund (IMF) have made a conceptual approach that will be considered from now on in this work. The United Nations, through its conference on trade and development (UNCTAD), considers the FDI to be long-term investments that reflect lasting interest and control of an international entity in a host company, which leads to the generation of a capacity to decide and a significant degree of influence on the management of the resident company (UNCTAD, 1999, p. 465). In contrast, the IMF defines as direct, those foreign investments made by a direct investor that has acquired 10% of the ownership of the resident host company or more than the ordinary shares or the voting power of a company abroad (Patterson, Motala & Cardillo, 2004).

The Multinational Corporation (MNC) is the entity that channels these investment operations in foreign countries. Depending on the degree of control and dependence between the company that invests and the recipient, FDI can be classified as follows: i) Branch: There is total or majority participation of the parent company, and it doesn't have any commercial or financial autonomy, ii) Subsidiary: It has some commercial and financial autonomy, or iii) Joint venture: There is a union with another national company to form a new company in the country recipient of investment, with symmetry in the property or capacity of decision. It should be noted that, in addition to these degrees of control and dependence, multinationals could choose to have their seat in a country in different ways, for instance, Greenfield, which is about the creation of a new company. Likewise, Brownfield, which refers to the acquisition or participation in a local company (Velázquez, 2005).

The OLI paradigm - Eclectic Approach

There are different theories that explain the reasons for FDI. One of them is the classic model of international trade, which is explained in relation to the scarcity of capital in developing countries and its abundance in developed countries, causing a difference in capital productivity. With this approach, what can be done is to transfer an absent factor, as it is from capital, to low-income countries so that it can be complemented with the other factors in their own economy. The eclectic approach or OLI paradigm (Ownership, Location, and Internalization) refers to the advantages of ownership of the company, the location of the countries of destination of the FDI, and the productive process carried out by the company (Dunning, 1977). The advantages of ownership

and internationalization determine the movements of the FDI based on intangible assets, such as the brand, more developed levels of technology, and better knowledge of business management techniques. Usually, these characteristics are found in multinational companies. The combination of ownership advantages with other advantages that can be found outside their own territory are usually linked to the costs and availability of the production factors. This situation is denominated advantages of localization (Díaz, 2003). In most cases, the advantages of location are determined by a high level of infrastructure, macroeconomic stability, degree of government intervention in the economy, and the greater or lesser presence of scale economies.

According to Hymer and Romero (1982), the theory of location suggests that the activities corresponding to the branches, will spread throughout the planet in accordance with the availability of labor, markets, and raw materials. This view is very distant from the idea of the Marshallian companies where everything is concentrated in a single nucleus. The difference among these views corresponds largely to the fact that supply and demand relation determines the behavior of a company. Consequently, the option of combining the market factors that represent more profitability does not necessarily (Vernon & Suárez, 1979).

Effects of the FDI on the Economic Growth

Several authors have studied the effects of the FDI on the economic growth of a country (Caves & Caves, 1996; Dunning, 1977; Hirschman, 1970; Hymer & Romero, 1982; Vernon & Suárez, 1979). As discussed above, the location of the FDI responds to economic and profitability mechanisms that the company may obtain. However, it is not clear yet, if it represents any type of advantage for the country receiving this investment. The theoretical debates have oscillated between the negative and positive effects that the entry of the MNCs has had in developing countries. In the middle of Cold War, the approach was that MNCs only extracted natural resources without contributing anything to the growth of the economy of the host country.

According to the Report on Foreign Direct Investment and the challenge of developing countries, the priority development objectives established by developing countries are

the achievement of sustained income, the growth of the economy by the increase of investment rates, the strengthening of technological capabilities, the improvement of the competitiveness of their exports in world markets, the equitable distribution of the benefits of growth, improving

employment opportunities, and the protection of the environment for future generations. (UNCTAD, 1999, p. 24)

In this globalized economic context, with a global liberalization and globalization pressuring developing countries to improve their resources and their capacity to achieve their goals,

the FDI and the international production of MNCs can play an important role in complementing the efforts of national companies in this regard. However, the objectives of the MNCs differ from the objectives of the recipient governments. Governments seek to boost national development, while MNCs seek to improve their own competitiveness in an international context. (UNCTAD, 1999, p. 24).

Hirschman (1970) considers foreign direct investment as a human invention and institution with a "high degree of ambiguity, with a high potential for good as well as for evil" (p. 489). Similarly, Hymer and Romero (1982) consider that the FDI has a dark side with many problems that must be strongly controlled. Additionally, Vernon and Suárez (1979) goes further, resuming the dilemma that was raised above on the differences between the national objectives and those of MNCs. On the effects of the FDI and the relationship of the MNCs, the author analyzes the different confrontations with national objectives. In other words, the subtle line that makes it possible to connect the objectives of the FDI and the MNCs, and those pursued by the host country.

The objectives of developing countries are very difficult to define, since they are very different and, in this case, they can differ between the conception of the positive or negative of this situation. In addition, the author points out that within the developing countries, those who support the FDI come from the anti-socialist extreme of the national political spectrum, a fact that is not very contrasted. Moreover, there is a level of increase in the FDI when the political position of the host government is on the right wing, and a decrease in the opposite direction, when it is on the left wing. The previous authors have acknowledged the importance of the benefits of the FDI on the obstacles to economic growth in developing countries, but they also point out the causes that must be examined in detail and that may prevent FDI from being used for this purpose.

The Benefits of FDI

In the first place, the benefits received by the host country from incoming FDI flows through MNCs will be analyzed. One of them is the capacity to face two important obstacles of the developing countries to make their economy grow. The scarcity of financial resources and the technology or knowledge. This has determined the necessity to motivate the attraction of the FDI in these countries, in general.

With the opening of the markets, the aggregate benefits derived from the productive resignation that drives the economy in the process of relocation to a new equilibrium have been glimpsed. In the long term, it can be considered a benefit for developing countries, but in the short and medium terms, the economy must bear high costs associated with this opening process. Some of the relations leading to trade liberalization are:

a) a more complete development of economies of scale, by operating the company in broader markets, b) a more active process of technological improvement, by virtue of the processes of dissemination and emulation in this area, c) access to more efficient productive technologies through the use of more flexible means of importing capital goods, and d) better management and reduction in inefficiency, as the level of competition increases in the markets. (Alonso & Garcimartin, 2005, pp. 5-6)

According to Hirschman (1970) the undoubted contributions of the FDI to economic growth are the contributions of capital, entrepreneurial capacity, technology, efficiency in management, and other skills, as well as their connections in international markets. All of the above factors are lacking completely or insufficient in developing countries. In addition, he points out that the FDI can cause production to rise sharply, by providing the host economy with a large amount of formerly scarce inputs. Although it might be considered that FDI is positive if it contributes production factors that are absent or that can be complementary to local economies in the initial stages of the development of a developing country; Hirschman (1970) argues that: "the private foreign investment is a doubtful blessing that may very well be more pernicious in the intermediate stages of development that characterize much of the Latin America of present-days" (p. 495).

According to Hymer and Romero (1982, p.107), the control over capital and technology of the MNCs, in addition to their ability to rationalize their use at a global scale, will lead this situation to an extension of production on the surface of the planet. In the first instance, there may be a tendency towards the diffusion of industrialization

to the less developed countries, creating new centers of production. Although the most striking fact is that it postulates some points so that MNCs can correct them to maintain a modern sector and promote continued growth. First, settling foreign exchange restriction, providing them with the possibility of making imports for the formation of capital and modernization of their economies. Second, financing and supporting the extension of public expenditure programs aimed at training and formalizing the workforce; which allows providing auxiliary services for the process of urbanization and industrialization. Third, solving the problem of food derived from the growth of urban areas, and all this to keep the level of inequality or population marginalization low (Hymer & Romero, 1982).

Vernon (1979) points out the fact of acting as a contractor, supplier, and distributor, as opportunities of counting with MNCs to eventually take over foreign ownership and, finally, obtain a minority association. Currently, a country does not have much opportunity when opting for isolation, because it would be too expensive.

The World Bank points out some positive contributions for countries receiving FDI flows, stating that "long-term foreign investment will continue to provide important benefits to developing countries" (World Bank, 1999 cited in Ramírez, 2006, p. 81). This implies a flow that may be less volatile than portfolio investments or international loans. Increasing the degree of investment and the volume of capital because of the reaction of local capitals to the intensification of competition, promoting a growth scheme driven by exports due to global articulation (external demand for components, links with suppliers) of large MNCs, main actors of the FDI; and thus, they could provide complementary resources for the financing of the establishment and modernization of public infrastructures. Especially in periods of economic contraction, which would generate technology transfer, incorporated through technical or managerial training programs (Ramírez, 2006).

In this way, as poor countries have non-existent rates of savings and, therefore, inability to generate domestic investment, they have problems when accumulating capital, which means a slow growth of the Gross Domestic Product (GDP); leaving the attractiveness for investment as one of the solutions of governments to counteract the poverty of their nations. For this reason, most developing countries consider FDI an important way to achieve access to resources for national growth.

The Conditions for FDI to Generate Economic Growth

The article falls within the theoretical developments that have been generated from the study of the FDI in host countries, on the one hand, from the work of Hymer and Romero (1982) who indicated that the FDI involved a series of transfers of resources, such as technology, management skills, entrepreneurship, and not just financial capital, which contributes to improve the allocation of resources to overcome market failures. Vernon (1966), on the other hand, based on the concept of the product cycle, argued that as it matures, the imitators appear, the demand of the consumer make the prices more elastic, and the labor becomes a fundamental aspect that makes it more attractive to locate value-added activities abroad.

Therefore, the product cycle becomes a dynamic interpretation framework for international trade. Regarding the impact of FDI in host countries, one of the first authors to review the secondary effects of the consequences of FDI by analyzing its impact on general welfare was MacDougall (1960); another author who reviewed the industry pattern and the effects of FDI on well-being was Caves (1971). However, the work of authors such as Blomstrom and Kokko (1997) involved an analysis of the empirical evidence of the impact of FDI in host countries from the study of technology transfer and diffusion. From these works, it can be extrapolated that the FDI contributes to the economic development of the host countries through the growth of productivity and exports, nonetheless, the nature of the relationship of MNCs with the economies of the host countries must be considered, because depending on the characteristics of the economic sector and the political environment, it can be effectively determined whether the effect of the FDI is positive or negative.

In short, there is no univocal decision regarding the impact of the FDI. Some authors, such as Balasubramanyam et al. (1999), Bende-Nabende and Ford (1998), and Agrawal and Khan (2011) argue that FDI has a positive impact on economic growth. Likewise, Yingxi and Hung (2018) point out that FDI income has positively affected the economic growth of countries like China and India. In contrast, authors such as Rodríguez-Clare (1996), Haddad and Harrison (1993) argue that FDI has a negative impact on economic growth. Finally, other authors such as Borensztein et al. (1998) and Durham (2004) explain that the positive or negative impact depends on different conditions that host countries have, such as the following variables that we measure in the model that was applied to our object of study.

First, the existence of institutions or agreements that strengthen the technology transfer and labor skills from the foreign company to the recipient of the FDI.

Rodríguez-Clare (1996) explains that the positive effects occur when there is an adequate connection between the FDI and the domestic companies.

Thus, another theoretical development is based on the inclusion of institutions in the analysis of the economic performance of countries. In this regard, the work of the economic historian North (1990) proposes an understanding of the institutions through formal and informal rules on which countries are based to pursue their own objectives by allocating the necessary resources and trying to correct market failures. Based on the above, it will be sought to link these perspectives specifically with the aim of providing an approximation to the effects of the FDI in developing countries, taking into consideration institutional pluriformism (Alonso & Garcimartin, 2008), and its relationship with the promotion and development of markets (Rodrik, 2000).

Finally, this is how authors such as Mudambi and Navarra (2002) analyzed institutions and international businesses from a theoretical framework, highlighting the important role that is played by institutions in international businesses. Similarly, Dunning and Lundan (2008) in their work on institutions and the OLI paradigm of the MNC, argue that institutions play a very important role in the provision of the game rules that help determine complementarity of the different modes of coordination and generation of good governance for economic efficiency, economic growth, and social welfare.

Second, the absorption of technology of the company, which measures the ability of the company in the host country to adopt new technologies. Borensztein et al. (1998) and De Mello (1997) explain that the positive spillovers of the FDI take place when companies have the capacity to absorb the technology that this dynamic entails.

Additionally, there may be problems for the adaptation of the technology because in the developing countries, the qualified workforce is limited and the local companies may not take advantage of this technology. In this way, they would not benefit from the insertion of technology and they would end up displaced from the market. In relation to this type of problems, it is the State and, more specifically, the different policies that are applied by those who really connect FDI and development through a channeling of the benefits of the FDI in the development and economic growth.

Third, as Solomon (2011) points out, the FDI flows can have a negative impact on economic growth as reported by Almsafir and Almfraji (2013). A high dependence on FDI may affect local companies and local production. If the technological gap is very large between the foreign company and the host country, the FDI can have a negative effect on development. The above can explain why a low FDI can generate economic growth.

The fourth point is the impact of the regulation on the FDI on companies, that is, how much they end up encouraging or not the rules to attract the FDI. The literature suggests that the political stability in the host country allows attracting greater flows of FDI because it generates greater confidence in the present and future of the economy, so the norms affect the decisions that are made and, in the institutions (Almsafir & Almfraji, 2013).

When there are market failures, the government must intervene in order to attract the FDI through incentives and operating conditions. Among the strategies that exist, it is possible to highlight the reduction of taxes, the elimination of restrictions, and the presentation of a good business in optimal operating conditions, representing an incentive to invest.

In 2017, as shown in Figure 1, 65 countries adopted approximately 126 investment policies that ended up affecting foreign investment, where 93 policies are liberalization and promotion of investments, representing 84% of the total investment policies, while 18 are of restriction or regulation, the rest are neutral. These policies are specifically framed in Asian developing countries. However, this trend is being reduced by new restrictive and regulatory investment policies, especially in priority national sectors (UNCTAD, 2018). The general trend of the FDI policies followed the course of greater openness, including the limitation of barriers to the FDI and the reduction of taxes on company profits.

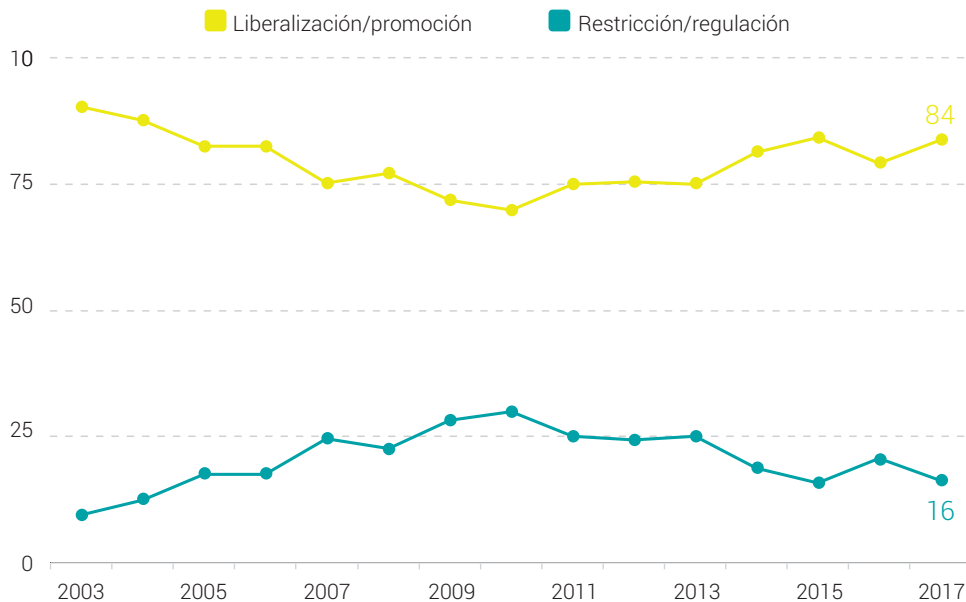


Figure 1. Percentage of changes in national investment policies (2003-2017)

Source: UNCTAD (2018).

The role of the state is fundamental in the relationship with the attraction of the FDI. In many cases, the policies themselves are the ones that end up hindering the entry of these inflows. Many times, it is the ideological conviction of the countries. As is the case of Latin Americans, who intermingle with the ideas of sovereignty, the loss of autonomy in the sectors that can have an important participation in the MNC. Additionally, the relevant dependence of the relations of the MNC to external factors. Therefore, barriers to the flow of external capital in different sectors of the economy that are privileged or not are established. For this type of situation, different tools are used, such as the limitation of the ownership of companies or the creation of performance requirements. Many of the developing countries can boost the FDI through an express policy, but their bureaucracies and regulatory framework may end up not being conducive to a quiet business climate, as well as the cost of the transaction.

As a fifth point, barriers to the FDI are analyzed; being understood as the limitations to the patrimony, mechanisms of governmental approval, and restrictions to the foreign personnel, among others. Asiedu (2002) argues that the impact of the opening of the FDI depends on the type of investment. When MNCs are export oriented, there will be a greater preference to be located in open economies, thereby reducing the transaction costs that may arise.

As a sixth point, the technology transfer is analyzed, since FDI allows the host country to know cutting-edge technology that can be implemented in production processes and in the construction of knowledge among workers. The FDI will stimulate this transfer and help improve the qualification of the workforce through the creation of skills, management practices, and better organizational agreements.

The main issues that governments must address according to the global investment report are:

Information and coordination failures in the international investment process; the considerations regarding incipient industries regarding the development of national companies, which may be in danger of being displaced by the inflow of FDI; the static nature of the benefits transferred by the MNCs when the national capacity is low and does not improve over time, or the MNCs do not make enough investments to improve them; the weakness of the governments of the host countries in terms of negotiating capacity and regulatory, which may lead to an unfair distribution of the benefits or abuse of the power exercised by MNCs in the market. (UNCTAD, 1999, pp. 229-230)

Governments can take advantage of the introduction of organizational technologies and improve the content of technology transfers by MNCs, by promoting better capacities for national supply and infrastructure. The cost of restricting the FDI in order to have the same technology is high, due to the prices of purchases of foreign licenses, machinery, and equipment.

BRICS, FDI, and Economic Growth

The positive impacts of the FDI on the economy are clear and allow us to understand that it is a good mechanism to improve the economy and that there is real growth and economic development accompanied by social improvements. This can be seen in the existing relationship between the countries of the BRICS group and their economic dynamics; that went through the path of development and went from being lagging economies to regional and even global powers.

This classification of countries assumes that they are emerging economies (the economy is at least 1% of the world economy) and that, given their geographic and population size, they could achieve economic development faster than their counterparts could. These countries can hold about 40% of the world's population, be a quarter of the planet earth and be a strong economic and military force that counterbalances the dominant powers.

According to Nistor (2015), the FDI received by these countries reached 20% of the world total in 2012, and its increase has continued supported mainly in cheap labor and, in some countries, a rather permissive labor and environmental regulation. It can be understood with this that this group of countries have become an attractive destination for MNCs and currently houses any MNCs that exist; achieving with these high rates of economic growth, improvement in the qualification of the workforce, and a considerable reduction of poverty and social inequality, without saying that it has been overcome.

Methodology

Sample

The work focuses on identifying the conditions that those countries must have for FDI to generate economic growth. To this end, we built a database with the following indicators: the existence of institutions or agreements that encourage the transfer of

technology and skills from foreign companies to domestic companies, the capacity that national companies have to absorb technology, the FDI and the technology transfer, the value of the country's FDI inflow, the quality of higher education and training, the quality of the infrastructure, whether the country's regulations encourage the attraction of FDI, and the barriers to FDI. These indicators were obtained from the "TCdata360" database of the World Bank for our countries under study; Brazil, Russia, India, China, and South Africa, from 2008 to 2017.

Variables

The dependent variable is the country's economic growth, measured through the indicator "GDP growth" with data from the World Bank. The independent variables are: 1) the existence of institutions or arrangements to encourage technology transfers and skills transfers from foreign players to domestic players: this indicator is part of the "Institutional Profiles Database" that aims at measuring the business environment through perception surveys; 2) Firm-level technology absorption: this indicator is part of the measurements carried out by the World Economic Forum to make the "Global Information Technology Report"; 3) the value of the country's FDI inflow: this indicator is measured by UNCTAD; 4) the barriers to FDI: this indicator is measured by the OECD; 5) Business impact of rules on FDI: if the country's regulations encourage the attraction of the FDI; and 6) FDI and technology transfer: these two indicators are measured by the World Economic Forum for the "Global Competitiveness Index".

Fuzzy-set qualitative comparative analysis (FsQCA)

The methodology of fuzzy-set qualitative comparative analysis (FsQCA) is used to identify the necessary and sufficient conditions for economic growth to happen. This methodology began to be used in the late 80s and early 90s (Rihoux & Ragin, 2009) allowing the identification of the combinations of causal conditions that generate a specific result (Woodside, 2013).

In order to use the variables under this methodology, they must be calibrated first. This is done through the "direct method" which consists of converting the data into Diffuse Categories, giving it a membership value; according to the theoretical support (Ragin, 2008). For example, the variable that allows identifying if the country's regulations encourage the attraction of FDI is measured through a Likert scale from 1 to 7, where 1 means nothing at all and 7 to a large extent. Therefore, 1 is equivalent to non-full membership that is represented by the value of 0.10, and 7 as full membership

and is represented by the value of 0.95. The value of greatest ambiguity is 0.50 and it is used to calibrate the intermediate data (2, 3, 4, and 5).

Once the calibration is finished, the truth table is built, on which Boolean algebra is implemented (Ragin, 2008). From this process and using the software FsQCA 3.0, we proceed to identify the causal conditions that generate economic growth.

Discussion

Configuration	IN_IED	TT_IED	B_IED	IP_IED	FE_IED	BT	Raw coverage	Unique coverage	Consistency
1	○	○	○	●	○	●	0.282950	0.058460	0.828967
2	●	●	○	●	○	●	0.302543	0.063926	0.946867
3	●	○	○	●	●	●	0.415965	0.197899	0.980676
Solution coverage		0.558902							
Solution consistency		0.898519							

Note: Black circles indicate the presence of a causal condition and white circles indicate the absence or negation of a condition. These are common denominations in the presentation of fsQCA results

Figure 1. Configuration of causal conditions of investment to achieve economic development in the BRICS

Source: Own elaboration.

Based on the variables that were analyzed, we obtained a series of causality relationships that allow understanding how the FDI can generate greater development in a country. The pillar of this relationship is based on the fact that the barriers to the FDI, together with the transfer of knowledge and the industry's absorption capacity, must be met under the three conditions. That is, the FDI seems to generate economic growth when MNCs transfer technology and the industry has the capacity to absorb this technology (Rodríguez-Clare, 1996). However, by itself, this pillar does not guarantee economic development. It is necessary for this condition to be accompanied by three possible combinations between regulation, technology, and the flow of money.

A first combination shows that the above can generate economic growth even when there are regulations against the FDI, when the FDI does not provide new technology and the flows are low. This first combination confirms the findings of Borensztein et al. (1998) and De Mello (1997) on the importance of the capacity that companies have to absorb technology, so that FDI generates positive impacts on the country's growth. The second combination shows that, when the country has regulations that encourage FDI, and has an institutional framework that encourages the transfer of technology; there may be economic growth supported in the first group of combinations.

This, despite the fact that the country is a recipient of low investment flows. The third possible scenario shows that the absence of institutions that encourage the transfer of technology can be compensated by high flows of FDI.

If we add laws that encourage FDI to the first group of combinations, along with the non-transfer of technology and high flows of FDI, the growth and economic development of the nation receiving FDI flows can be increased.

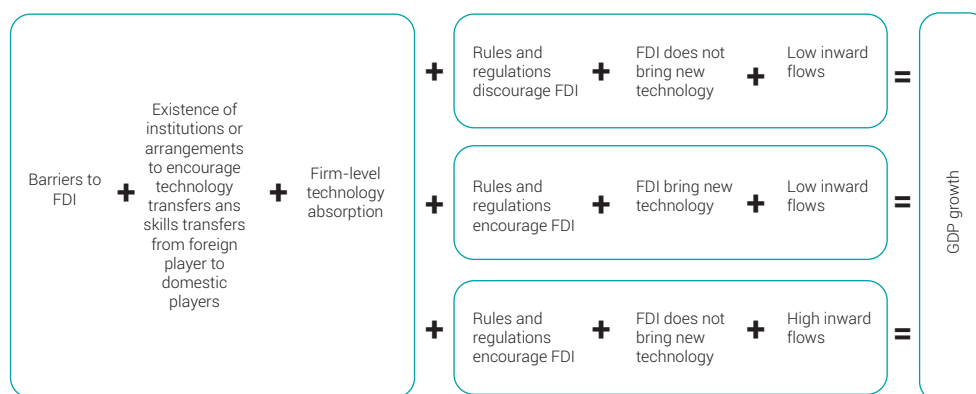


Figure 2. Model of conditions for FDI to generate economic growth

Source: own elaboration.

With the previous conceptual background and having analyzed the benefits and costs of FDI, with their differences in the objectives that are pursued, it can be considered that the FDI can be thought of as obtaining absolute and not relative profits, that is, under a strategy where everyone can win by this type of flows. To achieve this, it is necessary for the role of the State to be dynamic and drive efficient policies that are coherent with the different objectives that have been set. This is not very easy to implement, because the host country must have a high bargaining capacity and also a robust institutional apparatus, since, in the case of finding ourselves in a situation that is contrary to the one described, the MNC is the one that will carry out the capital and technology flows for the period of time in which it makes its presence profitable, and once said advantage of the host country is finished, it will stop doing so and will end up stepping out.

We intend to propose the conception of a "chaining" of the productive system in relation to the complementary factors of foreign companies as mentioned by Hirschman (1970). Such chaining can take place with the modernization of local production by means of the absorption of foreign technology, boosting local knowledge through the investment in research and development; since research resources and research activity are normally carried out in the countries where the matrix is

located, but it is necessary to promote institutions and resources for research and local development.

In addition, a close linkage must be made between the relationships that there are between MNCs and local companies to create exchange channels that prioritize a transfer model of specialized, technical, and technological knowledge that will drive economic growth in the dynamic local business sector. In these cases, the FDI would inject relevant elements for the development of a dynamic economy of the host country.

Another factor to consider for an efficient and coordinated development is the investment in infrastructure, as advised in the 2008 Global Investment Report, since they generate competition, trade, and research (UNCTAD, 2008). Investment in infrastructure by developing countries is much lower than what would actually have to be done to promote a clear development, poor countries, says the report, invest between 3% and 4% in infrastructure approximately, being in fact necessary an investment of around 9% to alleviate the problems of poverty and development. Many of the MNCs have turned their investments in this type of sector, but, in any case, it is necessary to consider that very few actually inject a considerable flow so that such mechanism of development invigoration takes place. In many countries, among which the vast majority are from Southeast Asia, MNCs have entered infrastructure investments, where MNCs have been attracted by telecommunications, more specifically mobile telephony. Others have been attracted by the construction and restructuring of railways.

Conclusions

From the present work different considerations and positions can be taken in relation to the beneficial or harmful consideration that FDI can bring through MNCs for the growth of an economy. The positions are so diverse that there is still a theoretical debate on the table: different impacts in the social, economic, and environmental spheres. According to the model of the necessary and sufficient conditions for the FDI to generate economic growth, the following conclusions are postulated:

First, it should be noted that MNCs move with clear business objectives that seek to achieve profitability and benefits at the lowest possible cost. In a globalized world, with an international market, companies capture their global strategies in the international capitalist production. As Hymer and Romero (1982) points out, the business, organization has developed into a complex administrative structure that coordinates its activities, and plans its survival and growth. According to this, it is unlikely that the objectives and activities carried out without due control by an MNC can be channeled

by themselves into an important component for the development of a country. In the same way, Vernon and Suárez (1979) allude that the objectives of developing countries are very different and differ from those pursued by the MNC. It should be noted that it is also very difficult for an economy today to achieve its economic development by isolating itself from the world economy; the costs of its growth would be very high and would generate an interpretative dilemma.

This means that, as such, FDI is not a mechanism for promoting economic growth if there is no control and regulatory mechanisms. It is by regulations and the capacity of the State to negotiate that it can make from these flows of capital and technology a stimulating and promoting instrument of economic growth. The State has to correct market failures and encourage the attraction of FDI to sectors that are considered important for its development, make FDI durable over time and have a considerable amount of capital flow so that it can provide the optimal conditions for economic growth. The host State, when motivating FDI, must establish its limits, since it cannot afford to apply a very high tax reduction to encourage investment, since its fiscal revenues would collapse.

In the second place, seeking for favorable business environments means that those low-income countries will be taking a step forward in the restructuring of their bureaucratic apparatus, introducing dynamic mechanisms for dealing with foreign investors. In this regard, it is important to mention that by means of these regulatory mechanisms to search for the balance of benefits between the MNC and the local companies, of the creation of instruments for the efficient use of the technology received, and the strengthening of internal capacities with external opportunities, it is possible to avoid the uncertainty of the investors for possible privatizations or the so-called "obsolescent negotiation pattern" (Vernon & Suárez, 1979). In this case, with a dynamic, transparent, and good negotiating state that maintains its autonomy, the FDI can be channeled for the growth of the host country and can be used in the process of chaining (Hirschman, 1970), through internal productive processes with optimal technology incorporation. This, combined with national factors, would end up being a very good tool for sustainable economic growth.

Finally, it should be noted that the conditions that are necessary to obtain economic growth in accordance with FDI, as observed, are the application of barriers, knowledge transfer agreements, and the industry's absorption capacity. It is very important to have protection and motivation mechanisms so that the population qualifies and becomes a dynamic and sustainable production over time. This triad of factors, although necessary, is not enough; therefore, it must be accompanied by

factors such as regulation, technology, and the flow of money to generate economic growth according to the optimal combination of the countries.

References

- Agrawal, G. & Khan, M. A. (2011). Impact of FDI on GDP: A Comparative Study of China and India. *International Journal of Business and Management*, 6(10), 71–79.
- Almsafir, M. K. & Almfraji, M. A. (2013). Foreign Direct Investment and Economic Growth Literature Review from 1994 to 2012. *Procedia Social and Behavioral Sciences*, 129, 206–213.
- Alonso, J. & Garcimartin, C. (2008). *Acción colectiva y desarrollo. El papel de las instituciones*. Editorial Complutense.
- Alonso, J. A. & Garcimartín, C. (2005). *Apertura Comercial y Estrategia de Desarrollo*. Instituto Complutense de Estudios Internacionales (ICEI), Policy Papers N°2.
- Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different? *World Development*, 30, 107–119.
- Balasubramanyam, V. N., Salisu, M. & Sapsford, D. (1999). Foreign Direct Investment as an Engine of Growth. *Journal of International Trade & Economic Development*, 8(1), 27–40
- Bende-Nabende, A. J. & Ford, J. L. (1998). FDI, Policy Adjustment and Endogenous Growth: Multiplier Effects from a Small Dynamic Model for Taiwan, 1959–1995. *World Development*, 26(7), 1315–1330.
- Blomstrom, M. & Kokko, A. (1997). *How Foreign Investment Affects Host Countries Policy Research Working Paper 1745*. The World Bank International Economics Department International Trade Division.
- Borensztein, E., De Gregorio, J. & Lee, J. W. (1998). How Does Foreign Direct Investment Affect Economic Growth? *Journal of International Economics*, 45(1), 115–135.
- Caves, R. E. & Caves, R. E. (1996). *Multinational Enterprise and Economic Analysis* (2nd Ed). Cambridge University Press.
- Caves, R. (1971). International Corporations: The Industrial Economics of Foreign Investment. *Económica*, 38(149), 1–27

- De Mello, L. R. (1997). Foreign Direct Investment in Developing Countries and Growth: A Selective Survey. *Journal of Development Studies*, 34(1), 1–34.
- Díaz, R. (2003). Las teorías de la localización de la inversión extranjera directa: una aproximación. *Revista Galega de Economía*, 12(1), 1-12.
- Dunning, J. H. (1977). Trade, Location of Economic Activity and the MNE: A Search for an Eclectic Approach. In B. Ohlin, P. O. Hesselborn & P. M. Wijkman, *The International Allocation of Economic Activity* (pp. 395–418). Macmillan.
- Dunning, J. & Lundan, S. (2008). Institutions and the OLI paradigm of the multinational enterprise. *Asia Pacific J Manage*, 25, 573–593.
- Durham, J. B. (2004). Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European Economic Review*, 48(2), 285–306.
- Haddad, M. & Harrison, A. (1993). Are there positive spillovers from direct foreign investment? evidence from panel data for morocco. *Journal of Development Economics*, 42(1), 51–74.
- Hirschman, A. (1970). Cómo y por qué desinvertir en la América Latina. *El trimestre económico*, 147, 489-514.
- Hymer S. & Romero, L. R. (1982). *La Compañía Multinacional - Un Enfoque Radical*. Blume Ediciones.
- Li, X. & Liu, X. (2005). Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship. *World development*, 33(3), 393–407.
- MacDougall, G. (1960). The Benefits and Costs of Private Investment from Abroad: A Theoretical Approach. *Bulletin of the Oxford University Institute of Economics & Statistics*, 22(3), 189-211.
- Mudambi, R. & Navarra, P. (2002). Institutions and international business: a theoretical overview. *International Business Review*, 11(6), 635–646.
- Nistor, P. (2015). FDI Implications on BRICS Economy Growth. *Procedia Economics and Finance*. 32, 981-985.
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- Patterson, N., Motala J. & Cardillo, C. (2004). *Foreign Direct Investment: Trends, Data Availability, Concepts, and Recording Practices*. IMF.

- Ragin, C. C. (2008). *Redesigning Social Inquiry: Fuzzy Sets and Beyond*. University of Chicago Press.
- Ramírez, J. (2006). Los impactos de la internacionalización productiva: Aproximaciones teóricas y dimensiones de análisis. *Boletín Económico de ICE*, 2874, 33-54.
- Rihoux, B. & Ragin, C. C. (2009). *Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*. SAGE Publications.
- Rodriguez-Clare, A. (1996). Multinationals, linkages and economic development. *American Economic Review*, 86(4), 852-873.
- Rodrik, D. (2000). Institutions for High-Quality Growth: What they are and how to acquire them. *Studies in Comparative International Development*, 35(3), 3-31.
- Solomon, E. M. (2011). Foreign Direct Investment, Host Country Factors and Economic Growth. *Ensayos Revista de Economía*, 30(1), 41-70.
- United Nations Conference on Trade and Development (UNCTAD) (2018). *La inversión y las nuevas políticas industriales*. World Investment Report. United Nations.
- United Nations Conference on Trade and Development (UNCTAD) (2008). *Empresas Transnacionales y el reto de la infraestructura*. World Investment Report. United Nations.
- United Nations Conference on Trade and Development (UNCTAD) (1999). *Las Inversiones Extranjeras Directas y el desafío del desarrollo*. World Investment Report. United Nations.
- Velázquez, F. (2005). La inversión extranjera y las empresas multinacionales. In J. A. Alonso, *Lecciones sobre economía mundial* (pp. 1-373). Biblioteca Civitas Economía y Empresa.
- Vernon, R. (1966). International Investment and International Trade in the Product Cycle. *Quarterly Journal of Economics*, 80, 190-207.
- Vernon, R. & Suárez, E. L. (1979). *Tormenta sobre las Multinacionales – Las cuestiones esenciales*. Fondo de Cultura Económica.
- Woodside, A. G. (2014). Embrace perform model: Complexity theory, contrarian case analysis, and multiple realities. *Journal of Business Research*, 67(12), 2495-2503.
- Yingxi, M. & Hung, J. H. (2018). Inward FDI and Economic Growth: A Comparative Analysis of China Versus India. In J. Hung & Y. Chen (Eds). *The State of China's State Capitalism* (pp. 239-262). Palgrave MacMillan.