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**EXPORT AND INVESTMENT PROMOTION ORGANIZATION: AN ANALYSIS OF  
THE ORGANIZATIONS IN THE BRAZILIAN TRADE FLOW.**

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**ABSTRACT**

Facing the huge competition in the international market, it is noted that increasingly a larger number of governments found in the Export and Investment Promotion Organizations (EIPOs) an instrument to support the competitiveness of domestic firms in the global market. However what is the impact of the presence of the Agency in trade flows between countries? Do cultural aspects influence the performance of the EIPO? Does the experience in a particular market result in better impact on trade flows between the countries? In order to answer these questions was conducted an empirical research through the construction and analysis of a panel dataset that includes information on trade relations between 15 countries with Brazil between 1997 and 2011 as well as the performance of its agencies. The analysis investigated the impact of both the Brazilian agency and the agencies of these countries in Brazil. The research results lead to questions about the efficiency of the Brazilian agency compared to its peers, pointing the way for future studies on the topic.

**Keywords:** Export and Investment Promotion Organizations (EIPO), Trade Flow, Resource Based View, Governance of Knowledge; Transaction Cost Economics; Asymmetric Information.

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## EXPORT AND INVESTMENT PROMOTION ORGANIZATION: AN ANALYSIS OF THE ORGANIZATIONS IN THE BRAZILIAN TRADE FLOW.

### 1. INTRODUCTION

In the face of the enormous competition among markets, the importance of working with competitiveness has become a strategic relevance on the part not only of corporations, but also on countries. Therefore, not only do the states continue to be an important force in the formation of the world economy and the economic development of countries (DICKENS, 2010; CASTELLIS, 1999), but they as well have adopted governmental policies of promotion and international insertion of their companies with the objective of incrementing their competitive capacity (IPEA, 2012).

The knowledge of distinct economies has become essential to advance into new economies and, the governments, aware of this necessity, began to carry out policies to promote the performance of their companies (DICKENS, 2010; CASTELLIS, 1999; PORTER, 1989), even in their internationalization processes (VIETOR, 2007). Therefore, the concept of trade policies has taken on a political role of internationalization, involving from exporting aspects to direct foreign investment. The governments have perceived that the dynamism of domestic economies in a context of integration and competition is much more focused in the companies and the very countries (PORTER, 1989; KRUGMAN, 1996; DUNNING, 2003); however, equipping their companies with international competitiveness has become the key factor in disputing the power game and international prosperity.

Governments should develop short-term policies that support organizations in the areas that have the most difficulty to internationalize. Studies realized (BRASIL; LEONEL; ARRUDA; GOULART, 1996; IGLESIAS; VEIGA, 2005; SAUVANT, 2005; BNDES, 1995) identify that there is a lack of management resources and skills for internationalization, as well as the lack of sufficient financial resources and availability of useful information stand out as the greatest difficulties. It is beginning with such needs that the Export and Investment Promotion Organizations (EIPOs) deserve highlighting because it is exactly these deficits that they succeed in filling.

Since its launching in 1995, the World Association of Investment Promotion Agencies (WAIPA) have been registering the increasing number of members representing cities, regions, countries and free trade zones, involving 162 countries. The appearance of these EIPOs are a result of the efforts on the part of governments to promote an increase of the competitiveness of domestic companies, via exportations and investments abroad, besides seeking to attract foreign investment. Countries are competing to attract productive investments for their base of domestic production which, in turn, improve their competitive positions (DICKENS, 2010). The EIPOs act as an instrument of the government to assist the organizations in fulfilling the need for information, as well as the insecurity in new markets.

Recent empirical evidence has suggested that Foreign Direct Investment (FDI) can lead to positive productivity repercussions to local companies, especially in the supply industries (HARDING; JAVORCIK, 2010).

The EIPOs have a fundamental role when they are established in markets, develop an extremely valuable product for government and organizations – that is knowledge. This knowledge is treated as a valuable resource and will have a crucial role in the trade relations that the organizations promote among countries.

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The aspect of knowledge as a resource precedes the theory of the Resource Based View (RBV) which was conceived as the essence of strategic management (FOSS, 1997). RBV presents a basic theory about the importance of resources, such as knowledge, in the increase in sustainable productivity of the company (LEE; LEE, 2005). Therefore, with this perspective based on resources companies or organizations seek the competitive advantage, basing themselves on developed knowledge, tacit and explicit within distinct scenarios (HENDRIKS, 1999).

Opposite of financial stocks, natural resources or even non-qualified manual labor, the economic value of the resource “knowledge” is not so easily understood, classified or measured (TERRA, 2005). It is a resource that is invisible, intangible and difficult to imitate. Differentiated knowledge among markets determines distinct competitive advantages between countries and organizations. Knowledge management influences the decision-making process and determines the strategies that organizations and countries will assume in the face of future scenarios seeking the best for their respective positions in international commerce.

In this scenario the motivating question of this study was: **What is the impact of the presence of the organization (EIPO) in the trade flow among countries?**

In order that it becomes possible to answer this question, we have established the following specific objectives for the study:

- Understand the strategic role of the EIPO in the Resource Based View;
- Understand the governance of knowledge as a competitive advantage;
- Verify the function of the organization from the point of view of the Transaction Cost Economy;
- Analyze the main functions of the EIPOs;
- Define a quantitative method that can verify the impact of the EIPOs in the trade flow between countries.

With the intention of attaining these objectives, this article is presented in four main parts: chapter 2 brings the fundamental theory that gives a basis to our hypotheses; chapter 3 analyzes the method and the hypotheses that were brought up; in chapter 4 we present the results of the study; and, chapter 5 brings the conclusions and limitations.

## 2. THEORETICAL FOUNDATION

### 2.1. RESOURCE BASED VIEW (RBV)

The Resource Based View (RBV) presents the following approach conceived in the studies of Penrose, Kretzer *et al.*(2006) who state that there is a combination of internal analysis of the phenomena that occurs within a company, together with the external analysis of the sector and the competitive ambient, that develop the two previous approaches and about strategy, interacting the internal and external points of view.

RBV seeks to identify the organizational resources that make it possible for the company to achieve sustainable competitive advantage. The resources and skills of a firm include all of the attributes that they can employ to define and implement strategies (BARNEY; HESTERLY, 1999). Wernerfelt (1984, p.172) defines resource as “anything that can be thought of as a strong point or a weak point for the company”.

RBV seeks to explain and foresee why some companies are capable to establish positions of sustainable competitive advantage capable of obtaining superior results.

Furthermore, we can note that the company as a group of resources and capabilities where the main management task is maximizing the value through the excellent use of the resources and skills, developing a solid base for the future (GRANT, 1996).

Fernandes, Fleury and Mills (2006) understand that for the theories of the (RBV), resources are potential elements, a stock at the disposition of the organization whose simple existence does not necessarily translate in performance. It is necessary for such resources to be mobilized, coordinated and delivered to guarantee organizational performance.

An organization has a competitive advantage if it can create economic value beyond the point of balance of a competing product (BARNEY, 2007: p.24). Thinking of economic value as being the difference between the benefit gained and perceived by the buyer of the good or service and the economic cost of it to the company. Then, the competitive advantage is expressed in function of the skill of the organization in creating greater economic value.

The performance of the firm is related to the development of the internal resources or those acquired in the market in a specific format (FOSS, 1997).

The creation, the maintenance and the renewal of the competitive advantage of firms is largely associated to the internal resources (attributes), the sources of income are more specific to the firm than the industry (FOSS, 1993). The path to success passes through the creation of the specific conditions that allow the condition to identify those resources considered relevant, to the companies, to obtain sustainable competitive advantage, regarding the implementation of a strategy without your competitors being able to simultaneously implement it or even imitate it (BARNEY, 1991).

RBV seeks to link the dynamics of competitive advantage to the characteristics of the resources and how these characteristics change over time (FOSS, 1997: p.7). Sustainability of the competitive advantage is subject to the accumulation of the stock of resources (BARNEY, 1995). Therefore, this sustainability will determine the superior position earned by the firm, generating superior returns and resisting the pressures of the competitors.

The fundamental distinction between the distinct ways of approaching competitive advantage (positional) based on deliberate restrictions (market strength or efficiency) and legal (well-defined property rights) is that the second focuses on complex restrictions (the continued reproduction of resources by the firm itself is as difficult as imitation by the competitors, because they are subtle and difficult to understand) and tacit (difficult to code and transfer knowledge).

Protection against imitation, in that which refers to property resources by the competitors basically depends on defined and/or legal restrictions, although many competitors can have the sufficient knowledge to reproduce them. The patent, for example, proportions little protection against imitation of the physical resources of a firm (WINTER, 1987; TEECE, 1998; BARNEY, 1995) and they continue as the technology of a patented product can be obtained by strategies utilizing reverse engineering.

The Knowledge Based View (KBV) considers that the basis of productive and organizational knowledge of the firm is its competences, its capabilities and skills being the fundamental resources for obtaining the sustainable competitive advantage (KRETZER, *et al.*, 2006).

When we are dealing with resources based on knowledge, the protection against any imitation is directly related to the very tacit and socially complex nature rather than the regime of intellectual property (strong or weak).

Teece (1998, p.57) conceives of this in the following manner “the assets of knowledge frequently are inherently more difficult to copy than the physical assets; some assets of knowledge enjoy the protection against robbery by the laws of intellectual property of individual nations”. A source of competitive advantage for the firm, for example, is the know-how, which is presented in distinct scenarios such as the differential for expansion and/or market control.

The vision of the firm based on knowledge sees knowledge as a most valuable and primordial resource for the creation of essential capacities that generate sustainable competitive advantages (GRANT, 1996).

## 2.2. GOVERNANCE OF KNOWLEDGE

The governance of knowledge permeates the numerous areas of management. Especially, it represents the crossing of management of knowledge, strategic management and theories of the firm. It is a practice with a controversial definition, the Management of Knowledge is described by Davenport and Prusak (1999), as an action based on existing resources, such as IT management, organizational change and human resources; but for Bukowitz and Williams (2002), it is almost synonymous with Administration science: the process through which the organization generates wealth, starting from its knowledge or intellectual capital.

Probst, Raub and Romhardt (2002), speak of methods to influence intellectual assets of the organization and orient its development. Management of knowledge would therefore be the systematic process of identification, creation, renewal and application of the knowledge that is strategic in the life of an organization. It is important to emphasize that the division in phases is a methodological resource to facilitate the analysis and understanding of a dynamic and interactive process and that the three steps, described below, are not impervious nor are they isolated.

Acquisition and generation of knowledge: includes the knowledge acquired by an organization as well as one that it develops. The conditions supporting organizational learning are creative liberty, liberty of other activities (time to think), congruence of interests and tolerance for errors. To develop collective knowledge, the key conditions are interaction, communication, transparency and integration (PROBST; RAUB; ROMHARDT, 2002).

We observed in distinct scenarios that knowledge produces some transactional problems in the firms, among them the difficulty of measuring the marginal product of each participant in the process of creating knowledge, difficulties in verifying the results and asymmetry of information (LINDENBERG, 2003). Foss and Mahoney (2010) emphasize that the importance of governance of knowledge occurs not only within firms, but also between them, forming strategic alliances.

## 2.3. TRANSACTION COST ECONOMICS AND EIPOs

As emphasized by various authors (RICUPERO, 2007; PORTER, 1989; FLEURY and FLEURY, 2007), in a globalized world competitive advantage can be beyond the borders of one country. Therefore, international projection of the companies in a country is fundamental. Considering that in the real market the costs of transactions is zero then the appearance of the company would be justified when the coordination process of the activity was internally more productive than leaving it to perform isolated in the market. For Coase



(1937), the economy is basically oriented by the market and the companies only appear when the managerial coordination is shown to be superior to the market.

The process of internationalization of companies can be understood through this context. Beginning with the ideas of Coase, Buckley and Casson (2009) who consider that the existence of imperfect markets generate benefits if they internalize the production, causing the appearance of trans-national companies. Analyzing it from this perspective, not only are the end consumer markets the motivators for internationalization of the companies, but also the intermediary markets, being that the productive and commercial processes in the international ambient can proportion advantages in terms of technology, patents, human capital, etc.

However, the international transactions are not exempt from uncertainties. Uncertainty is associated to unforeseen effects, impossible to have a function of known probability associated to them (ZYLBERSZTAJN; NEVES, 2000). The impossibility of forecasting shocks that can alter the characteristics of the results of the transaction does not permit that the agents participating in these design contractual clauses associated to the distribution of the results to external impacts, being that they are unknown *ex ante* (ZYLBERSZTAJN; NEVES, 2000: p.29). Therefore, the uncertainties present in the international transactions cause many companies to diminish the uncertainties through the realization of a direct investment abroad.

The three main aspects of the transaction costs economy are the specificity of the asset, its frequency and the uncertainty related to maintain it (WILLIAMSON, 1985). We can state that the difficulties with information and knowledge of the market are uncertainties that increase the transaction costs.

The asymmetries of information generate greater transactional costs and, normally, are disadvantageous, mainly for new entrants. Another characteristic of the transaction is that the companies are not familiarized with the informal rules of the new market, which also adds to the transaction costs.

When making information available to the market, it aides the investors in the search for partners, to render services and divulge information about the country, coordinate activities that improve the business environment, the EIPOs reduce the uncertainty of the market, and the risk of opportunistic behavior of the companies abroad. Therefore, it is expected that the promotional organizations reduce the uncertainty of the transaction and, therefore, reduce the transaction costs, making it possible for a larger number of transactions to be realized.

The EIPOs and their operations can serve as a mirror to governments, reflecting the state of the implementation of the policies, as policies of promoting exportations and flows of IDE should be seen as two sides of the same coin. They are inseparable and promotion is nothing more than the execution of a fundamental part of the policies of governments which frequently are easier to be articulated than put into practice.

On the side of the company, more than the exportation IDE is an intrinsically risky business strategy. It involves great investments, such as those relative to the costs of acquiring information to surpass the lack of knowledge and familiarity with the local market.

In other words, asymmetric information – the lack of knowledge about the preferences of the consumers, suppliers and other important characteristics of the external markets – it is a characteristic of the market which discourages performance in other countries.

With the aim of softening the elevated commercial and investment risks abroad, some countries create governmental or semi-governmental organisms to help the companies

perform in other countries. Such organizations promote exportations and the flow of external investment in between the two because many times it is difficult to establish the relations due to the effects of endogeneity – specific elements of the country emitting and receiving investments and exportations that should be carefully analyzed case by case.

Despite the complexity of the process that involves the trade flows between countries, the differentiated structures of the EIPOs with differentiated support systems have rendered a significant contribution to the development of their economies. Small, medium and large-sized, private or public companies have benefitted by the numerous types of support made available by these organizations in countries that are at different phases of economic development and with varied productive structures.

### **2.3.1. ORGANIZATIONS PROMOTING EXPORTATION AND INVESTMENT**

Consistent with that which was emphasized earlier, many governments see in the EIPOs an instrument in the strategies of a country's development. Wells and Wint (2000:4) define promotion of investment as “activities that divulge information about, or try to create an image of the location of the investment, as well as render services for potential investors.” Based upon this definition, these authors argue that the two main justifications for the existence of the EIPOs are:

- Communication and disclosing the information: promotion campaigns constitute an important mechanism to communicate all the characteristics that make a place attractive for investors, including the policies, recent reforms and existing initiatives;
- Coordination of the activities that improve the business environment in the host country: this role can vary from rendering assistance to potential and existing investors with their daily lobbying problems and legal reforms. In many countries, the EIPO is seen as an interface between the public and private sectors.

Table 2 presents the four key functions exercised by the EIPOs (WELLS; WINT, 2000).

**Table 2: Principal functions exercised by the EIPOs**

<b>Construção de imagem</b>	Publicidade dos meios financeiros. Participação em exposições de investimento. Publicidade na indústria ou setor de meios específicos. Realização de missões de investimento do país de origem para país de acolhimento ou vice-versa. Realização de seminários sobre oportunidades de investimento.
<b>Prestação de serviços aos investidores</b>	Prestação de serviços de aconselhamento de investimento. Acelerar o processamento dos pedidos e autorizações. Prestação de serviços de pós-investimento.
<b>Geração de investimento</b>	Engajar-se em mala direta ou campanhas de <i>telemarketing</i> . Realização missões específicas por indústria ou setor econômico de investimento do país de origem para país hospedeiro e vice-versa. Realização seminários com informações de setores específicos. Engajar-se em pesquisa específica para determinada empresa.
<b>Defesa política</b>	Participar de forças-tarefa políticas. Desenvolvimento de atividades de <i>lobbying</i> Elaboração de leis ou recomendações políticas. Relatórios de percepção dos investidores.

Source: Wells and Wint (2001)

The results of the empirical study by Morisset and Andrews-Johnson (2004) indicate that the more efficient organizations share great visibility and potential for participation in the relatively strong private sector. According to the study of these researchers, these influences are generally increased through the existence of an administrative council which includes representatives from the private sector and the participation of the Prime Minister or President of the country.

Currently, the information about the activity of these organizations, especially in developing countries has not been investigated using correct criteria. Due in part to the fact that there is a lack of trustworthy data, few empirical studies about EIPOs and their efficacy have been realized. This gap signifies that the debate about the efficiency of these same continue without an empirical fundament. The study of Morisset and Andrews-Johnson suggest that the promotion of investment is more efficient in countries where there is a greater presence of asymmetric information and more complex bureaucratic procedures. Furthermore, the organizations are structured in such a way so as to prioritize activities and focus on the efforts in determinate sectors of the economy that represent a direct relation with the generated result. This reinforces the argument that the EIPOs act as reducers of the transaction costs in the process of internationalization of the companies.

### 3. HYPOTHESES

Taking into consideration the theoretical support presented, the following hypotheses were formulated for this study:

#### *Asymmetrical Information*

What is the impact of the asymmetrical information in the trade flows and investments among countries? How does the presence of EIPOs impact in this flow? Does the transaction cost economy (TCE) suggest that the asymmetry of information increase the transaction costs, being that they were established to safeguard against opportunism (KLEIN;



CRAWFORD; ALCHIAN, 1978; WILLIAMSON, 1985; DYER, 1997) and, with this, reduce the transactions and the flow of investments.

Therefore, the presence of the EIPOs, with the availability of information in the market, reduces the uncertainty and the asymmetry of information. These arguments led to the following hypotheses:

**Hypothesis 1a (H1a):** The presence of the EIPO in the country of origin of the capital in the host country increases the flow for the host country of the EIPO.

**Hypothesis 1b (H1b):** The presence of the EIPO in the host country increases the flow of the host country for the country of origin of the EIPO.

In this second hypothesis, despite that this is not a part of the objectives of the EIPO (being that it increases the flow of the importation of the country of origin of the EIPO), it shows the impact of the organization in reducing the uncertainties.

#### *Cultural Distance*

Based on a study by Johanson and Vahlne (1977; 1990) countries with higher cultural distances between them, made costs more expensive in an environment that was more uncertain for companies. In countries with greater cultural distances between them, the impact of the presence of the EIPO would be positive, being that the same acts on the uncertainties of the market. For this, the following hypothesis was formulated:

**Hypothesis (H2):** The impact of the EIPO will be greater when the cultural distance between the country of origin and the destination of the flow.

#### *Learning*

Based on the theories of management of knowledge, the longer the time involved the greater the gain with knowledge and learning. Based on this idea, the following hypothesis was formulated:

**Hypothesis 3 (H3):** The impact of the EIPO will be greater the longer it has stayed there.

Following, we described the method used to test the different hypotheses presented.

## 4. METHOD

Since the seminal of Jan Tinbergen (1962), it has been accepted that bilateral trade flows between countries can be approximated by the gravitational model, by analogy with the theory of Newtonian gravitation. Just as the planets are mutually attracted in the proportion and proximity of their dimensions, the commerce between countries is attracted in the proportion of their respective Gross Domestic Product (GDP) and geographic proximity.

Recent studies about the theoretical foundation of the gravitational model highlights the importance of obtaining the specifications and the variables used in the model through the economic theory. The article by Anderson and Wincoop van (2003) was particularly important in this sense. The authors showed that relative commercial cost control is crucial for the well-specified gravitational model. Its theoretical results indicate that bilateral commerce is determined by relative commercial costs, in other words, the propensity of country  $j$  to import from country  $i$  is determined by the cost of the sale country  $j$  charges country  $i$  relative to his global “resistance” to importations (average commercial costs weighed) and for the median “resistance” faced by the exporters in country  $i$ ; not simply by the absolute commercial costs between countries  $i$  and  $j$  (ANDERSON; van WINCOOP, 2003). Therefore, the authors highlight the importance of obtaining specific variables referring to the commercial costs of the countries (taking into consideration that this is not the

easiest task). Kleinert and Toubal (2010), as well as Yeaple (2009) emphasize the use of the gravitational model in the analysis of flows between countries.

Chen and Moore (2010), as well as Kleinert and Toubal (2010) indicate that the cultural distance can also be related to the cost of entering into a country for investors. Another variable used in the analysis of attractiveness is the size of the domestic market that can be obtained by Proxy GDP of the host country. If the GDP is relatively large, this makes the country attractive for exporters and investors.

Given the multiplying nature of the gravitational equation, the standard procedure for estimating the equation of the gravitational method is simply taking the natural logarithms of all of the variables and obtaining a log-linear, that can be estimated by regression of the ordinary minimum<sup>2</sup> (clearly easier than non-linear methods). This brings us to the following equation:

$$\ln \text{Flow}_{ij} = \beta_0 + \beta_1 \ln \text{GDP}_i + \beta_2 \ln \text{GDP}_j + \beta_3 \ln \text{Distance}_{ij} + \varepsilon_{ij},$$

Where  $\text{Flow}_{ij}$  represents the flow of importation or exportation of country  $i$  to country  $j$ ,  $\text{GDP}_i$  is the GDP of the country of origin,  $\text{GDP}_j$  is the GDP of the host country,  $\text{Distance}_{ij}$  is the geographis distance between the country of origin and the host country.

The parameters of an equation estimated in logarithms are elasticized. For example, the estimated parameter for the GDP in an estimated gravitational equation in logarithms is the elasticity of the commerce relative to GDP, which indicates the percentage variation in the sale after increasing GDP by 1 percent.

Considering that the central objective of this article is to analyze the impact of the EIPOs in the flows of importation and exportation thereby, we introduced a dummy EIPO in the gravitational equation, as well as a variable to measure the CulturalDistance $_{ij}$  is the distance in power, individualism, masculinity and structure between the country of origin and the host country.:

$$\ln \text{Flow}_{ij} = \beta_0 + \beta_1 \ln \text{GDP}_i + \beta_2 \ln \text{GDP}_j + \beta_3 \ln \text{Distance}_{ij} + \beta_4 \text{APEI}_{ij} + \beta_5 \ln \text{CulturalDistance}_{ij} + \varepsilon_{ij},$$

The presence of the EIPO in the country of origin increases access to information and knowledge about the market in the host country. A positive coefficient  $\beta_4$  implies that the presence of the EIPO will have a positive impact on the commercial flow helping to reduce the costs of entering into the market. However, in evaluating the impact of the EIPO this equation presents some problems

Normally, empirical studies use additional variables to reflect the hypothesis that transport costs increase with geographical and cultural distances. Most of the time dummy variables are used to analyze the cultural aspects (WTO; UNCTAD, 2012). Study costs are probably lower between countries where the business practices, competitiveness and confidence of delivery are well-known about one another. For this reason, the businesses have a greater propensity to seek suppliers or clients in countries where the business environment is familiar to them.

The problem with the estimated equation is that the so-called multilateral resistance terms (MRTs) are not directly observable. Various methods can be used to avoid this problem the simplest and most-frequently used is a method that consists of the use of fixed effects per

country for the importers and exporters (ROSE; van WINCOOP, 2000; FEENSTRA, 2004; BALDWIN; TAGLIONI, 2006).

The problem of endogeneity frequently appears in the gravitational models to estimate the impact of the commercial policies, being that they are not purely exogenous (WTO; UNCTAD, 2012). The commercial flows will be more susceptible with partners that they have already negotiated with. Therefore, the right side of the equation is correlated with the gravity of the error of the equation, because the non-observed characteristics of some pairs of countries explain why current flows increase the probability of new flows. Therefore, problems of endogeneity can appear due to the omitted polarizing values, that is, other omitted characteristics in the regression (pacific relation, common legal origin, etc.) which facilitate the sale.

There is not an easy solution for the problem of endogeneity, therefore, the use of a data panel, with variables of (country-pair) fixed effects can help to overcome part of the problem of endogeneity due to the omitted variable bias (WTO, UNCTAD, 2012).

In particular, two factors can influence the investments as much as the presence of the organization. The first is related to the effects of the specific relationship between the two countries. Therefore, unless there is a control of the specific relationship between two countries, this would be a positive correlation to the presence of the EIPO, which implies an “overestimation” of the coefficient of the EIPO.

Another source of endogeneity is related to the effect of the presence of the EIPO in the host country. In this case, again, there would be an overestimation of the coefficient of the EIPO.

According to Baier and Bergstrand (2007) a more refined estimation of the impact of the EIPO can be obtained by using the data panel with fixed bilateral effects. The panel permits that the effect of the EIPO is isolated in bilateral commerce during all of the periods.

Therefore, you add the time variable in the model and the equation was modified to:

$$\ln \text{Flow}_{ijt} = \beta_0 + \beta_1 \ln \text{GDP}_{it} + \beta_2 \ln \text{GDP}_{jt} + \beta_3 \ln \text{Distance}_{ij} + \beta_4 \text{APEI}_{ijt-1} + \beta_5 \ln \text{CulturalDistance}_{ij} + u_i + u_j + u_t + \varepsilon_{ijt}.$$

#### 4. SAMPLE SELECTION

The analysis of the data panel has been used in the social sciences because it permits a cross-section analysis and of time periods in the same model which increases the number of available observations, making better estimations possible.

For this study, considering the restriction of data, we opted to do the analysis considering Brazilian commercial flows, for exportation as well as importation. Starting with the data survey taken from MDIC, we selected countries that have EIPOs in Brazil as well as the countries where the Brazilian EIPOs are present.

Therefore, the sample uses data from the years 1997 and 2011 of 16 countries: Germany, Angola, Belgium, Brazil, China, South Korea, Cuba, United Arab Emirates, United States, Italy, Japan, Poland, Portugal, United Kingdom, Czech Republic and Sweden.

For these countries and for this time interval we used some of the data necessary for the standard gravitational model, variable data that indicated cultural characteristics and, therefore, reduced the problem of endogeneity of the equation. In this way, the data bank could count on the following variables:

- Heritage Index - Heritage Foundation;

- Doing Business Indicators - World Bank;
- Cultural Distance Variables – Hofstede;
- Importation and Exportation Flows – MDIC
- Geographical Distance in km between the countries – CEPII
- GDP of the countries – World Bank
- Information about the organizations – obtained directly with the organizations.

Table 3, available in Annex A, presents some of the main variables that were selected through the procedure stepwise for the constitution of the model.

## 4.2. RESULTS

### *Asymmetric Information*

The result of the model (Annex B) represented an  $R^2$  within, which is the  $R^2$  of the model of fixed effects and it is called within because it considers a variation of time in each of the cross-sections, to the order of 52%. The  $R^2$  overall, which is the coefficient of the adjustment of the model of random effects and to the order of 98%. These coefficients indicate a good adaptation to the proposed model, being that it is quite common for the models of panel data to offer low  $R^2$ . The estimators between ( $R^2$  between), which only considers the variation between the observations in each cross-sections is the OLS estimator of the equation of average time, and in this case it was 99.9%, which indicates that the model is very well adapted.

The resulting significance of the variables indicates that the presence of the EIPO in the country of origin of flow was not significant. However, the presence of the EIPO in the country of destination of the capital is significant with  $p < 0.05$ .

Upon testing the effect of time on the EIPO in the country of destination of the trade flow in the country of origin of this flow (Annex C), the level of significance of this variable was shown to be better, and the coefficient of the variable was positive, which indicates that the longer the organization stays in a country, it impacts positively in the trade flows of the countries.

With this, hypothesis H1 was rejected, being that the presence of the EIPO of the country of origin of the flow, in the host country is not significant.

Hypothesis H1b was confirmed. The presence of the EIPO in the destination country of trade flow in the country of origin of the flow showed significance in the model. Furthermore, we also observed that the longer the EIPO was in a country, the impact was shown to be more significant and the coefficient of the variable indicates a positive impact on trade flow.

### *Cultural Distance*

To test hypothesis H2, the model was applied to specific countries. Annex D has the obtained results. The presence of the EIPO on the country of origin of flow, in this case, Brazil, did not have significance only in Portugal and in Germany. In all of the other cases presented, the presence of the EIPO of origin had impacted significantly the flow of Brazilian exports. Nonetheless, we did not verify a significant difference on the impact of the EIPO justified by cultural distance, therefore, H2 was rejected.

However, we noticed that in some countries the result of the presence of the EIPO indicated more significance than in others. This is the case of the relationship between Brazil and the United Kingdom.

### *Learning*

As can be observed in the table presented in Annex E, the variable of time in the presence of the EIPO in the country of flow destination in the country of flow origin was very significant. Thus H3 can be confirmed; this result supports the theory showing the gain in knowledge with experience. The longer the presence of the organization in a country, the greater the knowledge about its markets, which indicates that it presents better conditions of offering support to the companies in the process of internationalization.

## **5. DISCUSSIONS**

The theoretical and empirical literature, reviewed in this article, suggests that asymmetrical information constitute a significant obstacle to the trade flows through international borders. “The investors, by living and working in a determinate country know very well the economic perspectives of the country than in other countries....foreigners lacking knowledge can also result in the less efficient use of resources, due to the example of the least capacity to deal with the idiosyncratic aspects of contractual laws and rights and local customs that govern work relationships” (GORDON; BOVENBERG, 1996: p.1059).

Promoting exportation and investment is an effort on the part of the governments to mitigate the problems associated to the lack of information. If the information supplied by the EIPOs were not useful for the firms to base their decisions on, there would be no statistical relationship between the performance of the EIPOs and the commercial and investment flows. In this sense, the study did not find a statistically significant relationship for the performance of the Brazilian organization, being that in the analysis of the Brazilian exportation flow the presence of the EIPO in the origin country was not significant. This result makes us reflect about any problems that could be occurring in the manner of performance of the Brazilian organization.

Furthermore, if promoting exports and investments is an efficient channel to mitigate the informational asymmetries, it should be more efficient in the case of countries where the information is more difficult to obtain. The study considered cultural distance as a proxy for asymmetrical information. However, the result of our analysis did not clearly state if this is a statistically significant factor. However, analyzing the variables that measure cultural distance between countries, we verified that these are very significant in the impact on commercial flows. Here, we need to emphasize that the variables of the Power Difference as well as the Escape from Uncertainty, both were obtained from Hofstede.

Relative to the performance of the organization over time, the results found confirmed the theory, indicating that knowledge is acquired and receives value over time. This can be observed in the table presented in Annex C, which shows that the variable of the EIPO, over time, is very significant statistically.

Summarizing, we can conclude that there is evidence that suggests a relation between the presence of the EIPOs and the trade flows between countries. However, we have not found evidence of the promotion of exports and investment which specifies their efficacy. What is very interesting from the point of view from our study is that in the individual analysis of relation between the countries, we noted that some countries were more significant

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than others, outstandingly so, in this case, was the organization in England, that presented more significant values. This result awakened the interest about what characteristics make an agency more statistically significant than the others, inevitable answering with the greater efficiency of the operation and application of resources.

The result of this study was surprising because it rejected the hypothesis of the impact of the EIPO of the origin country on the commercial flow in the flow generated. Here it is worthwhile, again, to emphasize that the great importance of the Brazilian agency in the sample can be responsible for this result.

## 6. IMPLICATIONS

This study generated numerous questions relative to the result generated by the EIPOs. It is important to emphasize that the analysis was realized considering the commercial relations between Brazil and selected countries, which implies heavily on the performance of the Brazilian EIPO (APEX Brazil). In this way, the result of the analysis of Brazilian export flows show that the performance of the EIPOs of the other countries is significant as to the performance of the EIPOs from the origin of the flow, in the case APEX Brazil is not significant, and this is concerning, opening doors for the questioning about the performance of the Brazilian agency.

## 7. LIMITATIONS AND SUGGESTIONS ABOUT FUTURE STUDIES

The greatest limitation to realize this study was in the difficulty to obtain the data that would permit the realization of the analysis. Besides the difficulty of obtaining some macroeconomic data, information about the agencies were not easily found. Another limitation was the short time of the panel between 1997 and 2011. More extensive data would have allowed a more trustworthy model. Furthermore, despite that our study used 16 countries we always considered between Brazil and the other countries, not verifying the relations country-pair of the rest, which could limit the result. Therefore, for future studies it would be necessary to build another data panel with more extensive data and which would involve a larger number of countries.

In the future it would be interesting to compare the impact generated by organizations in different countries, in one similar environment, identifying those that are more efficient and which would permit to define the most important characteristics for the EIPOs. Additionally, a study which could verify the impact of APEX Brasil in different sectors, as well as for different-sized companies would help to identify the social benefit generated by the agency/organization.

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