

The new determinant creation theory: the case of Peru

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Abstract

The theory of the creation of new determinants applied to the case of Mexico and Chile has recently shown that both countries have used some of the determinants developed in this theory to capture flows of foreign direct investment, although to say by ECLAC (2015) The case of Latin America in general shows a decrease in the capture of investment flows in recent years compared to the rest of the world. Undoubtedly the recruitment has been very heterogeneous since the size of the economies is not the same as neither are the internal adjustments in public policies of development.

In the case of Peru, adjustments in public policy made in the 1990s brought great economic benefits since during the 1980s foreign direct investment was very limited. The changes made by the government cemented a solid economic framework at the beginning of the year 2000 and showed a growth in FDI flows of approximately 6% in recent years.

The international monetary fund (2015), which attributes Peru's success in terms of increased FDI inflows, refers to four key areas: implementation of structural reforms, improvement of political stability, solid regulatory and macroeconomic framework and favorable external conditions. These institutional changes also contributed to the distribution of outgoing flows in the world (Amal 2010).

In addition to the above factors, the use of natural resources, infrastructure and a great gross national product represented the most important determinants to attract foreign capital, based on the new determinant creation theory as demonstrated in this research.

1. Introduction

In recent years, FDI has grown faster than trade flows and global production for various reasons such as political and economic changes in many developing countries. Those changes are characterized by the shift to democratic political systems as well as changes toward economic and legal systems oriented in the direction of trade liberalization in which Peru and other countries played an important role since 1951 when signed as a GATT member.

Many developing countries have made economic and structural changes in order to obtain some benefits and attract FDI, in that sense, FDI flows are likely to be attracted to developing economies that pursue an outward-oriented strategy of economic development such as Peru (IMF, 2015).

In Latin America, the relative stability of the region and the adoption of outward-oriented public policies have reassured foreign and local investors based on market reforms (Ramírez, 2001). Because of such liberalization and changes, the FDI increased in developing countries in the 1990's (Erdal and Tatoglu, 2002) and particularly, Latin America has shown a sustainable growth since 2010 (ECLAC, 2013).

Since 1991 Peru is open to foreign direct investment and in addition, investors are not asked to obtain a special permit or be registered before investing, nor is there a minimum amount to be able to make a foreign direct investment. Has a legal framework which offers international investors the same treatment as nationals, as well as access to most sectors without any restrictions, free movement of capital, free competition, guarantee of private property (ProInversión, 2016).

On the other hand, the attractiveness of a state or a city for foreign direct investment flows depends on the number and kind of determinants they possess.

Deichmann *et al.* (2003) found that some factors determining the spatial decisions of multinational firms in a Middle East country depend on policy implications.

Considering the above, the government agenda should focus on making the country more attractive for FDI, especially in times of crisis when traditional determinants are put to the test and inspire proposals for new opportunities.

Popovici (2012) notes that the idea of entering a new era of determinants of FDI is not new as there are several studies that highlight the key factors for attracting FDI. This emphasizes that the classical theories of FDI probably should be changed and others should be based on the emergence of new local capacities.

This research is divided as follows. In second part, a literature review is offered. Several research papers were analyzed to describe the key factors for attracting FDI considering classical theories in order to compare them with the determinants used by Mexico (Botello and Davila, 2015). Section three includes the data and variables used to explain the new determinant creation theory; based on the model proposed by Botello (2015) where the most relevant determinants used to obtain FDI are infrastructure, skilled labor, low labor cost, security, tax-break, natural resources, gross domestic product, legal system, geographical location and industrial policy. A Probit model to test the theory in section four is presented. Finally, conclusions are discussed in section five.

2. Literature review

Most of the literature related to the attraction of FDI by countries is based on different theories such as localization economies and their determinants, trade and resource endowments. In that sense, the eclectic paradigm of Dunning (1988) argues that the path FDI takes is partly due to the specific advantages which one country has, because of its regional geographic location and / or location in the world. These advantages arise from using resource endowments and / or assets held abroad by some countries in the world which are attractive to a company by combining them with its own resources.

That combination suggests that if a foreign company wants to use the resources of a country, it should establish a subsidiary by initiating a flow of FDI and then establish a start-up operating facility (Hill, 2008) but, the risk is a main determinant that has to be considered. Peru has 84 of the 103 ecosystems that exist on our planet; therefore, the economic activities in this country vary widely from mining, agriculture and fishing, to the exploration and production of gas and oil in the jungle.

Likewise, the theory of international production suggests that the decision of a company to start manufacturing operations in other countries depend on certain attractions that the country of origin of the company has compared to the resources and benefits that it will obtain in locating a manufacturing subsidiary abroad (Morgan and Katsikeas, 1997).

According to the ECLAC (2011), most of investments made in Latin America have a significant impact on the consolidation or diversification of the production profiles, particularly as foreign direct investment has a major impact on host economies, roughly measure the relationship between foreign direct investment and gross domestic product. According to Hausmann (2008), there are some key determinants related to the increase in foreign direct investment worldwide as well as the Andean countries, among these determinants are the location, the size of the country in terms of GDP and the distance between the investors and the host countries.

The National Institute of Statistics and Informatics of Peru (2015) concludes that in the last 25 years, the economy of Peru has grown an average annual rate of 4.7%, mainly due to growth in activity of the construction, extraction of oil and minerals, manufacturing and finally the external demand of traditional and non-traditional products.

The theory of trade and resource endowment explains that FDI is directed toward countries with low wages and abundant natural resources that provide inherent differences of opportunity and initial favorable conditions for businesses.

There is a consensus about the characteristics required for a host country to attract FDI which is that it depends on the motivations that foreign investors have in relation to their investment projects. According to Dunning (1983), the first reason is related to the market, whose main purpose is to serve local and regional markets from the FDI host country if the market grows and generate some return for the investor, the second relates to the investment made by a company in acquiring resources that are not available in the country of origin such as natural resources and low-cost inputs including labor. The latter corresponds to the level of efficiency achieved through the dispersion of value chain activities considering that the geographical proximity to the country of origin will minimize transportation costs.

All this suggests that the direction, in which FDI is aimed, is highly related to the comparative advantages (Kinoshita, 2003) of a given country. Then, one country that has, among other determinants, access to markets as well as cheap labor and abundant natural resources will attract larger inflows of FDI.

As for Peru, the use of natural resources was also a determinant that helped increase FDI, because Peru has a great wealth of minerals from copper, gold and polymetallic deposits. Investment in the minerals sector boomed during 2003–12. Investment in the sector grew at an annual rate of 32 percent in real terms, over the period. As a share of total private investment, investment in the minerals sector increased from 3 percent to over 20 percent. Mineral commodity investments are concentrated in copper (68 percent), gold (13 percent), iron ore (13 percent), copper-zinc (4 percent), and other poly-metallic minerals (6 percent). About 70 percent of all foreign direct investment goes into the extractive industry sector (International Monetary Fund, 2015).

Berkoz (2009) argues that countries have traditional factors and environmental variables that are attractive to foreign companies. The traditional factors are market potential, labor costs, economic growth and government policies. The environmental variables correspond to political, economic, legal and infrastructural factors.

Kinoshita (2003) in turn, maintains that the most important determinants a country has to attract FDI are government institutions, natural resources and economies of agglomeration. Government institutions are one factor contributing to decisions by investors as to whether to invest or not in a particular country because these institutions directly affect the operating conditions of enterprises. The investment cost for companies is not only economic but they also have to fight against entrenched practices in countries such as bribery and time lost in engaging in diverse and various negotiations resulting from the arrival of the company to a new market. Therefore, for the operating conditions of a company to appear reliable to the investor, there are two institutional variables to be considered: The legal system and the quality of the bureaucracy. As for the legal system, both its impartiality as well as popular perception of it is good determinants of the reliability of legal institutions in the country.

Likewise, the variable related to the quality of the bureaucracy describes a non-political and professional bureaucracy which in turn facilitates the procedures for staff to be hired. With respect to agglomeration economies, investors seek those markets where there are benefits derived from the concentration of economic units which results in positive externalities (benefits and technological spill, use of skilled labor and concentrated in specific locations and links forward and backward with related industries) but also by investments made by other investors which can be seen as a positive

sign of favorable investment conditions reducing uncertainty. As for the natural resources, Rasiah (2000) argues that developing economies with a resource-rich endowment obtains FDI.

Other studies describing the FDI determinants indicate that the infrastructure, good governance, taxes (Rasiah, 2000) and the labor market are conditions that governments must maintain (Bellak, et. al., 2010) but Lim (1983) found a negative relationship between investment incentives and FDI in 27 developing countries.

Government policy can also enhance the attractiveness of FDI flows by ensuring the adequate provision of economic and social infrastructure in the form of paved roads, ports, airfields, relatively cheap energy supplies and a well-educated work force. Those quasi-public goods are used by the private sector (Ramirez, 2001).

Groh and Wich (2009) describe the determinants to attract FDI in a country as labor costs, quality and the provision of quality infrastructure and legal systems. On the other hand, some authors consider that the provision of infrastructure should be a precondition for companies to establish subsidiaries in foreign markets as are a major emphasis on the provision of transport infrastructure as well as information and communication technologies (Botric and Skufflic, 2006, Goodspeed, et. al., 2009).

Studies by Wei *et al.* (1999), Mariotti and Piscitello (1995), Broadman and Sun (1997) and He (2002) conclude that there is a positive relationship between infrastructure and FDI because the better the infrastructure is in a location the higher its desirability. Rasiah (2000), states out that FDI in developing countries is concentrated in economies endowed with good infrastructure.

In a recent research conducted by Botello and Davila (2013), concluded that public policy used in some states of Mexico to attract FDI, is based on the attractiveness of some determinants like skilled labor, cheap labor and infrastructure.

Another factor that helped to generate the increase of FDI in Peru was the infrastructure. Between 2008 and 2012 the country invested around 31.8 billion dollars in this sector and as a consequence of this; the country showed an enormous boost (ECLAC 2014).

Peru has given great importance to generating the appropriate infrastructure, especially in terms of transportation to attract new investments, which is why the free trade agreements signed by this country in conjunction with the investments made by the state to achieve development and Modernizing the road, rail, port and airport infrastructure, has generated the growth of investments. This country intends to continue with the 31 investment projects that are currently in place and continue with the expansion of the sector (ProInversión, 2016).

As opposed to what Botello and Davila (2013) concluded, Ondrich and Wasylenko (1993) and Rasiah (2000) found that there is no evidence that wages affect the location of new foreign plants, specially cheap labor but that it's not the case for skilled labor. Flexible production forms have given rise to greater dispersal of organizational power as well as process innovation; local accumulation at peripheral sites has stimulated economic progress, albeit only in locations generating the requisite skills (Rasiah, 2000), suggesting that specialized FDI requires skilled labor. In the same way, Mendoza (2011) found that manufacturing companies established with foreign economic resources in Mexico demands skilled labor.

During the decades of the 1970s and 1980s, Peru did not show significant growth, as the FDI inflows were very low, even in several years of this period the flow of FDI became negative because Peru became an economically and politically unstable country. ECLAC (2010) found that in 1980, the balance of foreign direct investment in Peru was a total of 759.9 million dollars, due to political instability.

According to a research conducted by UNCTAD, during the 1990s foreign direct investment increased dramatically, during this time 35% of foreign direct investment was due to the privatization program, as the government focused on creating a political environment and economic activity that allowed the creation and development of private businesses, and in 1991 a new

investment law was created which established three main points; the introduction of pro-market policies in favor of the private sector and the completion of the new privatization program.

Another factor influencing the increase in foreign direct investment in Peru was the introduction of a new constitution of 1993, which was in favor of multinational corporations, as well as the rights to private property and the freedom to start international trade.

After these changes we can notice a dramatic increase if we compare the year 1990 in which the balance foreign direct investment was of 1298.6 million dollars, whereas in the year of 1994 the balance was of 4440.8 million dollars according to the data presented by (ECLAC, 2014).

According to the research studies mentioned above, there are similarities in the description of the traditional determinants, which explain the attractiveness of a country with respect to foreign capital which suggests that the design of public policy in some countries like Peru, in relation to attracting financial resources from abroad, is very similar. In the case of Peru, the statistics of attracting FDI for the period covering 2008 to 2014 show that relationship. In fact, Peru showed that the most common used determinants for attracting FDI are infrastructure, natural resources and gross domestic product.

Berkoz (2009) found almost the same determinants for the case of Turkey and suggests that a location analysis needs to be done in order to develop specific growth strategies to be applied by policy-makers in their plans to attract FDI to certain locations.

Figuerola (2012) assumes that tax facilities, proximity to markets, and cheap labor are insufficient factors to guarantee the cycle of capital, since what stands out is the outgoing transfer of the innovation activity itself, which suggests that the attraction of new FDI flows requires the creation of new determinants or the renewal of the most used. The advance of global knowledge has become itself as an attractive determinant to catch the attention of investors. In recent years, many countries around the world are worried about the way they are going to attract capitals.

Perhaps, their research agenda would change to more focused analyses of the fundamental determinants that drive such flows of FDI (De los Santos, 2014). Should they create new determinants or renewal the ones that are already used to?

As for the case of Peru, an FDI behavior from 2008 to 2014 is described in section 4.

3. Objectives, Variables, Hypotheses and Data

3.1 Objectives

The objective of this research is to find out the determinants used by Peru during 2008 through 2014 to attract foreign direct investment using the model of the new determinant creation theory.

3.2 Variables

The dependent variable used in this research is:

- 3.2.1 fdi (amount of foreign direct investment). Foreign Direct Investment (FDI) has been selected as a dependent variable relative to the amount of Peru's foreign direct investment inflows from 2008 to 2014.
- 3.2.2 impde (improvement of determinants). This variable was selected as a dependent variable to use it in the *probit* model in order to explain if the probability of improvement of the determinants used to attract foreign direct investment contributed to increase inflows from 2008 to 2014 by Peru.

The independent variables in their different modalities that will be considered for the theoretical model are:

- 3.2.3 ifra (infrastructure). This variable explains if infrastructure was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru. Infrastructure is considered as paved roads (km) and airports (number).

- 3.2.4 qualab(qualified labor). This variable explains if skilled labor was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru. This variable was measured by the number of professionals that Peru has.
- 3.2.5 wage (minimum wage). This variable explains if low cost labor was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.
- 3.2.6 sec (security). This variable explains if security was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.
- 3.2.7 taxex (exemption from tax payment). This variable explains if exemption from tax payment was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.
- 3.2.8 natures (natural resources). This variable explains if natural resources were used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.
- 3.2.9 gnp (gross national product). This variable explains if gross national product was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.
- 3.2.10 legal (legal framework). This variable explains if a legal framework was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.
- 3.2.11 geoloc (geographical location). This variable explains if geographical location was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.
- 3.2.12 indpol (industrial policy). This variable explains if a foreign direct investment industrial policy was used as a determinant to attract foreign direct investment from 2008 to 2014 by Peru.

3.3 Hypotheses

For main model is:

H₁: The attraction of foreign direct investment in Peru depend on infrastructure development, on skilled labor, on low cost labor, on security, on tax exemption, on natural resources, on gross national product, on legal framework, on geographical location and industrial policy from 2008 to 2014.

For Probit model representing the most efficient variables:

H₂: The probability of improving infrastructure, skilled labor, low cost labor, security, tax exemption, natural resources, gross national product, legal framework, geographical location and industrial policy will attract more foreign direct investment flows.

3.4 Data

Reports from Peru's government were reviewed by the authors to build a database in this research. The authors found in those reports that the determinants used to attract foreign direct investment by the departments during 2008 and 2014 were skilled labor, cheap labor, tax exemption, legal framework, security, natural resources, infrastructure, gross national product by state, industrial policy and geographical location, according to the new determinant creation theory proposed by Botello and Davila (2015).

4. Methodology, Models and Results

4.1 Methodology

To test the hypotheses, we carried out several models of time series data, the results for these models indicate the nature of each of the variables used, and the relationship they have with the dependent variable.

Once we have variables that will be employed in a probit model originally used by Bliss (1934) as well as applied to stochastic models by Steinbrecher and Shaw (2008) it was necessary to check and simulate the dependent variable (impde), which was developed as the probability that there is an improvement in the determinants that each one of the Peruvian departments used in their public policies and in their development plans, related to foreign direct investment flows. The probit model tested the hypotheses and the main objective of this research.

The probit model was used to propose a new theory of attraction of foreign direct investment based on the creation of new determinants or renewal thereof as part of the public policy of the countries. The database developed for this study contains data on the determinants used by Peru for a period of eight years. During those years, there are departments that do not use the ten determinants commonly used to attract foreign direct investment or there are departments that decide to improve the determinants and previously used by them. In any of these circumstances apply to the proposal of the new theory.

4.2 Models

The following equations are the proposal models to prove the hypotheses postulated earlier:

Main model is:

$$fdi_t = \beta_0 + \beta_1 ifra_t + \beta_2 qualab_t + \beta_3 wage_t + \beta_4 sec_t + \beta_5 taxex_t + \beta_6 natures_t + \beta_7 gnp_t + \beta_8 legal_t + \beta_9 geoloc_t + \beta_{10} indpol_t + u_t$$

For the main model we have the following equation for efficiency:

$$fdi_t = \beta_0 + \beta_1 ifra_t + \beta_2 sec_t + \beta_3 natures_t + \beta_4 indpol_t + u_t$$

This probit model is that represent the whole variables in this model:

$$P(impde_t) = \beta_0 + \beta_1 ifra_t + \beta_2 qualab_t + \beta_3 wage_t + \beta_4 sec_t + \beta_5 taxex_t + \beta_6 natures_t + \beta_7 gnp_t + \beta_8 legal_t + \beta_9 geoloc_t + \beta_{10} indpol_t + u_t$$

The next probit model is that represent the most efficient variables:

$$P(impde_t) = \beta_0 + \beta_1 ifra_t + \beta_2 natures_t + \beta_3 gnp_t + u_t$$

4.3 Results

As the models described before were handled through time series, we verified that the variables have a stationary stochastic process. The variables presented a nonstationary process so, the models are not useful to find reliable results by the method of ordinary least squares (OLS), in accordance with Engle and Granger (1987) that conducted a cointegration study. Then, we made a linear combination of two series, each of which is integrated of any kind of order, additionally checked and corrected the errors through the Granger causality (Granger, 1969 and Granger and Newbold, 1974) to verify that indeed the time series used are stationary, the following model show this test and in the Table A1 are the results for them:

$$fdi_t = \delta_0 + \alpha_1 fdi_{t-1} + \alpha_2 fdi_{t-2} + \alpha_3 fdi_{t-3} + \alpha_4 fdi_{t-4} + \gamma_1 ifra_{t-1} + \gamma_2 ifra_{t-2} + u_t$$

In addition, was revised collinearity of the variables through a model of vector autoregressive (VAR), where it was found that indeed the variables presented a high collinearity and that has to be corrected for the stationary variables; besides that, we use the Wald test (Wald, 1940) to prove if the model has an asymptotic chi-square distribution. The model was as follows and in Table A2 we show the results for them:

$$fdi_t = \delta_0 + \alpha_1 fdi_{t-1} + u_t$$

Once we have corrected the errors that could be present in the time series, and we are sure that the variables shown a Stationary Stochastic Process we proceeded to find the corresponding relations with each of the proposed variables as determinants for foreign direct investment flows that have been submitted in Peru by 2007 to 2014.

The interaction of all independent variables in the Main model is shown with respect to the dependent variable in Table A3. It was expected that all the variables were significant but, the independent variables *qualab*, *wage*, *taxex*, *gnp*, *legal*, and *geoloc* (corresponding to qualified labor, low rate salaries, gross national product, legal framework and geographical location), were not.

Subsequently, the interaction of the dependent variable with each of the independent variables was done to confirm its significance, the models were shown before. The results (see Table A4) demonstrate that all the variables have a high significance more than 95%.

Once interactions were tested using linear regressions, a simulation using the *probit* model was done. The results showed that the probability of an improvement in the determinants increased flows of foreign direct investment. The presented results correspond to the model and we only use the most efficient variables to demonstrate the theory (see Tables A5 and A6).

5. Conclusions

The theories proposed by several authors to explain how countries attract FDI are diverse. Some of them are based on the use of different determinants as part of its public policy like the new determinant creation model proposed by Botello and Davila (2015). Considering that model, during the 2007-2014 period, Peru also used ten determinants to attract foreign direct investment, however, the main model with efficiency demonstrated that the most important determinants used by Peru to attract FDI were infrastructure, security, natural resources and industrial policy.

According to The Global Competitiveness Report (2015), Peru is one of the most attractive developing nations for foreign investors. UNCTAD (2000) explains that many political and economic changes transformed Peru into a reliable country. The most important were the creation of a new constitution, a better legal frame work and a new foreign direct investment law.

Investing in an efficient infrastructure provides better conditions to attract foreign capital (ECLAC, 2014). Peru invested \$ 3.1 US billions between 2008 and 2012 to improve roads, airports and the like.

Since the period studied is seven years, it was observed that some departments in Peru during that period decided to create or renew their determinants in order to attract more and new flows of foreign direct investment. In that sense, the purpose of this article was to test the new determinant creation theory proposed by Botello and Davila (2015) as part of the public policy of Peru and the *probit* model demonstrates that relationship.

In Table A6, we see that Peru is currently using infrastructure, natural resources and gross domestic product as the most relevant determinants of the tenth to attract inflows. A report from ECLAC (2014) indicates an important increase in FDI flows. Peru is capturing more inflows related to its gross national product. The mining sector still continues to be one the most relevant sector to attract FDI especially because of copper, gold and polymetallic deposits.

As a last idea, if any government in the world is interested in attracting new or more foreign direct investment must create or renovate the determinants used to attract investment flows. There are probably cities or provinces who want to attract resources for certain types of industry but they must create or renew the related determinants, such that the different types of industry prevailing in a country use different determinants and some of them they shall not be used to attract new resources and should focus on the development of new determinants.

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Appendix

Table A1. Econometric results for the Vector Autorregresive (VAR) models, to prove collineality.

	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
fdi						
L1	0.9717	0.0711	13.67	0.000	0.8324	1.1110
L2	-0.0046	0.0711	-0.06	0.949	-0.1440	0.1348
ifra						
L1	42.4443	81.9408	0.52	0.604	-118.1567	203.0454
L2	70.9483	79.3382	0.89	0.371	-84.5517	226.4482
qualab						
L1	-155.9970	123.3170	-1.27	0.206	-397.6939	85.6999
L2	-106.9871	124.8019	-0.86	0.391	-351.5943	137.6200
wage						
L1	35.8423	69.6527	0.51	0.607	-100.6744	172.3591
L2	102.5203	68.8440	1.49	0.136	-32.4114	237.4520
sec						
L1	48.5407	80.2129	0.61	0.545	-108.6737	205.7550
L2	71.4972	79.6543	0.90	0.369	-84.6223	227.6166
taxex						
L1	-4.5563	84.0637	-0.05	0.957	-169.3182	160.2055
L2	-67.1570	83.5940	-0.80	0.422	-230.9983	96.6843
natures						

L1	11.9234	108.7278	0.11	0.913	-201.1792	225.0260
L2	35.2119	108.1363	0.33	0.745	-176.7312	247.1551
gnp						
L1	-26.8855	60.5283	-0.44	0.657	-145.5187	91.7478
L2	-64.5067	61.9706	-1.04	0.298	-185.9668	56.9534
legal						
L1	-0.0681	75.9335	0.00	0.999	-148.8950	148.7588
L2	-86.5309	74.7012	-1.16	0.247	-232.9426	59.8807
geoloc						
L1	38.6188	76.8745	0.50	0.615	-112.0525	189.2900
L2	122.1764	74.2823	1.64	0.100	-23.4141	267.7669
indpol						
L1	66.1555	76.5733	0.86	0.388	-83.9254	216.2364
L2	-14.7984	78.4126	-0.19	0.850	-168.4842	138.8874
_cons	51.6429	205.5020	0.25	0.802	-351.1337	454.4195

Table A2. Econometric results for find the Granger causality Wald tests.

Equation	Excluded	chi2	df	Prob> chi2
fdi	ifra	1.1730	2	0.556
fdi	qualab	2.3007	2	0.317
fdi	wage	2.4190	2	0.298
fdi	sec	1.1734	2	0.556
fdi	taxex	0.6455	2	0.724
fdi	natures	0.1095	2	0.947
fdi	gnp	1.4311	2	0.489
fdi	legal	1.3498	2	0.509
fdi	geoloc	2.7986	2	0.247
fdi	indpol	0.7571	2	0.685
fdi	ALL	13.4860	20	0.856

Table A3. Econometric results to prove the Main model.

fdi	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
ifra	995.90	312.40	3.19	0.002	379.67 1612.14
qualab	-701.23	494.52	-1.42	0.158	-1676.71 274.25
wage	181.02	282.00	0.64	0.522	-375.25 737.29
sec	991.71	308.75	3.21	0.002	382.66 1600.75
taxex	556.53	335.54	1.66	0.099	-105.35 1218.41
natures	547.40	433.39	1.26	0.208	-307.50 1402.30
gnp	240.55	242.78	0.99	0.323	-238.36 719.46
legal	233.17	302.20	0.77	0.441	-362.94 829.28
geoloc	-21.50	297.64	-0.07	0.943	-608.62 565.63
indpol	864.49	296.49	2.92	0.004	279.63 1449.34

_cons	5659.20	535.47	10.57	0.000	4602.95	6715.46
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Table A4. Econometric results for the efficiency for the Main model.

fdi	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ifra	1208.42	257.64	4.69	0.000	700.30	1716.53
sec	665.14	260.50	2.55	0.011	151.38	1178.91
natures	495.19	376.23	1.32	0.190	-246.81	1237.18
indpol	1027.15	263.28	3.90	0.000	507.90	1546.40
_cons	6271.23	449.62	13.95	0.000	5384.49	7157.96

Table A5. Econometric results to prove the probit model.

impde	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ifra	0.6226	0.2481	2.51	0.012	0.1364	1.1088
qualab	-0.3315	0.3875	-0.86	0.392	-1.0910	0.4280
wage	0.1841	0.2208	0.83	0.404	-0.2487	0.6169
sec	0.1197	0.2417	0.50	0.620	-0.3540	0.5935
taxex	-0.1046	0.2680	-0.39	0.696	-0.6298	0.4206
natures	-0.5688	0.3532	-1.61	0.107	-1.2611	0.1234
gnp	-0.4515	0.1914	-2.36	0.018	-0.8267	-0.0764
legal	-0.0237	0.2376	-0.10	0.921	-0.4894	0.4420
geoloc	0.1308	0.2344	0.56	0.577	-0.3287	0.5903
indpol	0.1022	0.2334	0.44	0.662	-0.3553	0.5597
_cons	0.4399	0.4251	1.03	0.301	-0.3933	1.2731

Table A6. Econometric results for the efficiency for the probit model.

impde	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ifra	0.5226	0.1917	2.73	0.006	0.1468	0.8983
natures	-0.4532	0.2934	-1.54	0.122	-1.0283	0.1219
gnp	-0.4326	0.1862	-2.32	0.020	-0.7976	-0.0676
_cons	0.5997	0.2846	2.11	0.035	0.0419	1.1575
