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Evaluation of Public Support to Outward FDI. An Exploratory Analysis with an Ordered Probit Model Applied to Portuguese Firms

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Abstract

Internationalisation has become increasingly important for the viability of business organizations. The engagement of domestic companies in international business is regarded as determinant for the competitiveness of developed and developing countries. In the last decade several countries launched public measures to encourage internationalisation through foreign direct investment. Policy makers are increasingly concerned with the role and effectiveness of such policy schemes. Most research on public support towards internationalisation does not focus on support to FDI but on support to other types of international activities, like exports. In the field of outward foreign direct investment, the role of formal policy of the capital-exporting country to promote FDI have been largely neglected. This paper aims at filling this gap, by providing an empirical analysis on the role of public support upon firms' O-FDI projects. The analysis is conducted on data from 87 Portuguese firms that have foreign direct investment and that have used some type of public support towards internationalisation. The results, overall, show a low use of the measures. However, when using public support, firms considered it to have been 'important-to-essential' for their outward investment. An ordered probit model reveal that the importance of the measures depends mainly on firm internal competencies, being them less important for firms with stronger ownership advantages.

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Abstract

Internationalisation has become increasingly important for the viability of business organizations. The engagement of domestic companies in international business is regarded as determinant for the competitiveness of developed and developing countries. In the last decade several countries launched public measures to encourage internationalisation through foreign direct investment. Policy makers are increasingly concerned with the role and effectiveness of such policy schemes.

Most research on public support towards internationalisation does not focus on support to FDI but on support to other types of international activities, like exports. In the field of outward foreign direct investment (O-FDI hereafter), the role of formal policy of the capital-exporting country to promote O-FDI have been largely neglected.

The present paper aims at filling this gap, by providing an empirical analysis on the role of public support upon firms O-FDI projects. The analysis is conducted on data from 87 Portuguese firms that have foreign direct investment and that have used some type of public support towards internationalisation.

This is (one of) the first attempts to develop an empirical evaluation of the role of public policy for firms outward internationalisation exploiting the availability of detailed information collected through questionnaires.

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To study the issue is challenging also from a methodological perspective, as there is an increasingly perceived need for improving and developing adequate methodologies for public policy evaluation. The results, overall, show a low use of the measures by firms. However, when using public support, firms considered it to have been important-to-essential for their outward investment. The econometric results, stemming from an ordered probit model, reveal that the importance of the measures depends mainly on firm internal competencies, being them less important for firms with stronger ownership advantages (larger, older, higher int. experience).
From our results we derive policy implications and conclude that there is a need and ample scope for further research on measuring and assessing the effectiveness of home country policy measures towards O-FDI.

Key words: Public policy; Foreign Direct Investment; Ordered Probit Model.

JEL:F23, H23

1   Introduction

There is substantial literature on whether, when and how governments should aid their firms and industries [21].
By and large, this literature concludes that, on efficiency grounds, aid may be justified if it contributes to correct market failures. The typical reasons cited of market failures are externalities, economies of scale and asymmetric information. These market failures are particularly relevant when one considers firms investments in research and development and other knowledge-generating activities, in training, in lagging regions[21, 6] or in international-related activities.
This paper focuses on the role of home country public measures for firms internationalisation. Indeed, the positive home country effects of higher international involvement of firms, by exports and outward direct investment for example, have been clearly highlighted in recent years. Internationalisation is said to stimulate economic development, employment, foreign exchange revenues, technology and innovatory capacity of home economies [19, 14, 7, 11][1].
At firm level, it has been suggested that firms' internationalisation impacts

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[1]There are also further gains from trade, such as economies of scale - by specializing, countries may increase their output and gain lower unit costs; efficiency - the competition which arises from trade acts as an incentive to domestic firms to increase their competitiveness; political, social and cultural gains from bringing countries close together.

positively on their performance in terms of the sales volume, market share and profitability [13, 14, 7].

Despite these potential benefits, a relatively small number of firms are involved in internationalisation [24, 7]. Many firms are not internationalized because market diversification beyond the national borders is not considered at all.

Otherwise, firms that consider internationalisation as essential for their development face several constraints when developing their international activities. These constraints are related to the high complexity of the international investments. The latter involve high asymmetric information, high operational costs, and high capacity by the firm. These barriers identified or indeed faced during the process of internationalisation may reduce even more the likelihood of internationalisation.

Conscious of these aspects related to the international investment activities of firms, many governments implemented promotion programs using a wide variety of internationalisation support measures (ISMs). These measures can be financial or non-financial.

Public financial support may take the form of financial envelops, investment insurance, credit insurance, mutual funds, risk capital, fiscal benefits and, preferential credit conditions through protocols with banks [5]. These measures have direct effects reducing the firms' cost of capital for investment and eventually improve the likelihood of undertaking additional (or larger) projects. Indirectly, this type of support strengthens the firm capabilities [17]. Financial means allows the recruitment of (more) qualified staff or external consultants to explore the external opportunities more accurately. Additionally, a reduction in costs of capital implies a relatively lower valuation of risk what can lead firms to extra investments.

The non-financial ISMs contribute mainly to reduce the information asymmetries. Measures at this level consist on the offer of training and consulting activities by public institutions, developing cooperation and agreements to promote or protect investments, support to participate in market or state missions or hostage trainees in foreign firms. These measures contribute to reduce information asymmetry, reducing the risk of the investment and improving the decision making processes. In spite of its apparent potential positive effects, recent studies found a very low use of ISMs and a high lack of awareness about ISMs by firms [8, 18, 2, 4, 14, 7].[2]

These measures involve also high opportunity costs, and eventually, distort the financing of private investment [17]. Hence, there is a need to evaluate the effects, efficiency and consequences of ISMs at firm level and on the

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[2]In a study of Directorate-General for Enterprise and Industry of European Commission, involving 9480 SMEs, it was verified that only 16% of firms be aware to ISMs, moreover, the use of financial support measures the overall European average was 9% and for other type of support was just 6%.

economic performance of countries. Regarding the role of the measures, it is necessary to know for which type of firms and under which conditions they are more effective and relevant. Studies in this issue are scarce. Especially in times of great budgetary constraints, insights at this level will help policy makers to define priorities and to allocate funds more efficiently. Therefore, this paper investigates the use and degree of importance of the public measures towards internationalisation on firms outward foreign direct investment (O-FDI) projects from a firm point of view. It investigates for which firms and under which investment characteristics are the support measures more important for the O-FDI projects.

The study is based on firm level data collected through a questionnaire survey in Portugal to firms conducting O-FDI. So far, there are no studies evaluating the role of public policy on the internationalisation of firms from this small economy.

In the next section the theoretical framework is developed, and in section 3 and 4 are reported the methodological procedures and the results. The conclusions are presented in section 5.

2   Firm and investment characteristics and the importance in public support towards O-FDI

Based on different strands of the literature, it can be argued that the importance of public support to internationalisation of firms depends on a number of firm and investment level characteristics. Based on Zou and Stan (1998) [23]and others, firm variables of relevance may be grouped under the labels firm competencies, firm structural features and firm international strategy. Taking in consideration the hazards associated to direct investment abroad, firms with higher competencies are expected to consider less important the external public support. Firms with high international experience for example, are more likely to have relevant competencies and an international identity, and, therefore a will to follow international opportunities autonomously [14]. Therefore the perceived importance of public support is expected to be less noticeable in more international experienced firms.

Otherwise, larger and older firms do tend to have competitive advantages over smaller and newer firms, no matter how able the management of the latter may be [10]. Their market connections tend to be more extensive, their standing in the capital market better and, their internal funds larger. They have accumulated valuable experience and, by virtue of their size, they can take advantage of many technological and organizational economies not possible at smaller scales of operation.

One of the most serious handicaps of small and newer firm is the problem of access to capital. In this particular issue, these firms face two facts. First, they pay a relatively higher rate of interest and, second, face a lower ab-

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solute limit to the amount of capital they can obtain at any rate, both of which are the result of higher risk of lending [10].

Therefore the perceived importance of public support is expected to be less noticeable in older and larger MNEs.

When internal finance is insufficient firms have a hard time attracting funds. Excessive collateral requirements, high interest rates or an underdeveloped banking system may preclude bank finance to international projects. Banks are often not well capable of evaluating foreign direct investments and suffer from an home bias orientation. Furthermore, they are frequently only willing to finance fixed assets and base credit decisions on a capital gearing approach. Typically, the FDI assets cannot serve as collateral. Attracting external equity may not be available, too expensive or require giving up control. Venture capitalists are reported to offer unattractive investment terms. MNEs often rely on government grants to alleviate the private market's failure to finance their FDI projects. Next to a direct positive effect, government support provides a positive signal to private financiers. Partnerships, both with domestic and local firms are repeatedly utilized, and facilitate access to finance [17].

Firms with lower level of financial constraints have higher capacity to negotiate funds in several fields being less dependent of public support valuating it less.

Therefore the perceived importance of public support (of financial type in specific) is more noticeable for MNEs with higher financial constraints.

Firms with qualified human resources have more international competencies to embark on international investments, and may experience several advantages in exploration of other sources of finance than public support.

Therefore the perceived importance of public support is expected to be more noticeable in MNEs with lower qualified human resources. The innovative capacity of a firm can also be understood as a signal for firm competencies. However, as firms depend greatly on external public support for their research and development investments, it becomes ambiguous the relationship between firms R&D activity and the importance they allocated to public support for other activities such as internationalisation.

In what regards firms international strategy, the literature indicates that firms with presence in a smaller number of markets experience less sources of difficulties.

Therefore the perceived importance of public support is expected to be more noticeable for MNEs present in a higher number of markets (more diversified MNEs).

Regarding firm structural variables, aspects related firm ownership (share of foreign capital and family ownership) are bound also to affect the importance attributed by firms to public support. Foreign owned firms benefit from internal knowledge and resources and therefore are expected to attribute less importance to the public support. By contrast, family owned

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firms are expected to attribute more importance to available public support. Another aspect of interest, relates to the location of the firm [3]. Firms located in central areas benefit from economies of agglomeration, specifically from the flow of knowledge between peers making imitation and knowledge diffusion about international processes easier. Hence, the perceived importance of public support is expected to be more noticeable for MNEs located in the periphery.

Beyond the above mentioned firm characteristics, investment related variables are bound to affect the degree of importance of public support. In general, international investments involving higher resources, higher risk or higher managerial capabilities are likely to increase firms need for public external support. Along these lines, the perceived importance of public support is expected to be more noticeable when the O-FDI project is through Greenfield, or into geographically distant economies or into economies with high country risk.

In the next sections we conduct the empirical analysis on how these firm and investment related aspects influenced the importance allocated to public support by Portuguese foreign direct investors.

3 Methodology

3.1 Sample and data collection

The study is based on data collected through a questionnaire to firms located in Portugal with international activities. [3]

Several business associations collaborated in our study, either by e-mailing the questionnaire to their associates or by providing their contacts. A total of 4637 firms were contacted by email, phone or by personal interview.

From December 2009 until March 2010, 424 responses fully completed were received. All these 424 firms reported to have international activities, but only 87 reported to have internationalized through outward FDI[4]

As the focus of our analysis is on the importance of policy measures to promote internationalisation through FDI, this paper focuses on the data from

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[3]In order to ensure valid and reliable measures, questionnaire development follow three steps. First, the relevant literature was reviewed to identify existing measures of the constructs. Second, to have content validity, 2 consultants and 5 managers reviewed the questionnaire and provided input for revision. Third, the questionnaire was pre-tested by personal interviews with financial directors of 10 firms.

[4]This value represents a response rate of 2%. However, should be considered the existence of approximately 1000 MNEs in Portugal, what increase the representativeness of our sample to 8,7%. With a confidence level of 95% and a confidence interval of 10, in terms of reliability the sample size needed is of 87 firms. There are zero questionnaires non-eligible because when a questionnaire is not fully or properly filled, the respondent was contacted to give the missing informations.

the 87 firms that reported to have FDI.

In last decade a number of measures were launched by the government with the aim to promote Portuguese firms internationalisation (Table 1).

Table 1: ISMs launched by the Portuguese Government in the last decade

ISMs	Instruments	Main objectives
Participation in trade fairs or state missions promoted by business associations with public support	Law 560/2004; Law 1463/2007	Market studies and first approaches in concerted programs; develop capabilities especially by SMEs
Supply of training and consulting services by public institutions with public support	Law 560/2004	Consolidation, growth and development of firms to improve their competitiveness
Informational services by public institutions as the AICEP or IAPMEI	Law decree 245/2007; Law decree 51/1975	Spread information to develop and execute structural policies to support firms' internationalisation
International exchange programs for human resources	Law 1103/2008	Support the training of youg people with higher qualifications in an international context; to build a network of high qualified young workers.
Financial public support through investment insurance, credit insurance and mutual funds	Specific protocols signed by public entities and insurance or mutual companies	To reduce the financial constraints verified in exports and foreign direct investment especially by SMEs
Financial public support regarding risk capital	Specific protocols signed by public entities and risk capital companies	To reduce the financial constraints verified in exports and foreign direct investment especially by SMEs
Fiscal benefits	Law decree 401/1999; Law decree 249/2009	Stimulate the national economy
Other public support instruments	Law 560/2004; Law decree287/2007; Law decree 65/2009; Law decree 1463/2007; Law decree 250/2008; Law decree 353-A/2009; Law 1254/2003; Ministerial decree 1998/2006	Stimulate the national economy
Collaboration protocols between AICEP and banks	Several collaboration protocols signed by AICEP with national or foreign banks	Directly providing a lower interest rate into projects of internationalisation
Governmental bilateral agreements to promote or protect Portuguese investments abroad	Several agreements available in "AICEP - Acordos bilaterais 2010"; Law 249/2009	Promotion and protection of national investments
Support to acquire or develop brands, marketing or sales	Law 560/2004; Law decree 1463/2007; Law 353-A/2009; Law decree 250/2008; Law 1254/2003; Law1020/2009	Promote the development of brands, patents and strength the value of national products abroad

Source: Adapted of: www.portugalglobal.pt (accessed in October, 26th, 2009).

Evaluation of public measures is a very challenging task. One if the main methodological tasks is to to find out whether and how the observed changes are causally linked to the policy and measure under consideration (the "independent" variable)[25].

Taking in consideration this issue, and in order to address the research question, in the questionnaire firms were asked about the importance of

ISMs for their main foreign investment abroad. The next sections describe the dependent and independent variables and the econometric methodology used to link the dependent to the explanatory variables.

3.2 Dependent variable(s)

The perceived importance of the ISMs for outward foreign direct investment is our dependent variable.

Using a Likert scale [15], firms were asked about the importance of public support in their main O-FDI project (1 - unimportant; 2 - of little importance; 3 - important; 4- very important and; 5 - essential).

The table 2 shows the degree of importance of the measures for firms outward foreign investments, as well as results on the use by firms of each measure.

Table 2: Importance and use of ISMs

Measures	Unimportant	Of little importance	Important	Very important	Essential	Use(%)	N
Participation in trade fairs or state missions promoted by business associations with public support	12,9%	22,6%	27,4%	22,6%	14,5%	71,3%	62
Supply of training and consulting services by public institutions with public support	20,9%	25,6%	16,3 %	18,6%	18,6%	49,4%	43
Informational services by public institutions as the AICEP or IAPMEI	23,0%	20,3%	16,2 %	20,3%	20,3%	85,1%	74
International exchange programs for human resources	4,0%	24,0%	36,0%	12,0%	24,0%	28,7%	25
Financial public support trough investment insurance, credit insurance and mutual funds	18,8%	25,0%	21,9%	21,9%	12,5%	36,8%	32
Financial public support regarding risk capital	18,2%	0,0%	36,4%	9,1%	36,4%	12,6%	11
Fiscal benefits	14,3%	21,4%	19,0 %	23,8%	21,4%	48,2%	42
Other public financial support	19,6%	21,7%	28,3 %	17,4%	13,0%	52,9%	46
Collaboration protocols between AICEP and banks	22,2%	27,8%	33,3%	11,1%	5,6%	20,7%	18
Governmental bilateral agreements to promote or protect Portuguese investments abroad	23,8%	14,3%	23,8%	23,8%	14,3%	24,1%	21
Support to acquire or develop brands, marketing or sales	11,1%	27,8%	27,8%	16,7%	16,7%	20,7%	18

Source: own elaboration

The descriptive results in table 2 show that ISMs in general have low level of usage by firms. It is also possible to conclude that on average the measures were considered of relatively low importance by firms. There are

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however, significant differences between firms regarding the importance allocated to the measures. In order to investigate the sources of variation, for which firms and under which situations are the measures more relevant, the econometric analysis focuses on the measures more frequently used: *Participation in trade fairs or state missions promoted by business associations with public support*, *Informational services by public institutions as the AICEP or IAPMEI*, *Fiscal benefits* and *Other public financial support*.

3.3 Independent variables

Following the discussion on section 2, the explanatory variables are related to the firm and to the type of investment. *firm-level* and *investment* related variables.

Measurement of firm-level variables The firm-level variables are related to the firm *competencies*, *strategy* and *structural characteristics*.

As firm competencies it is considered: *firm export experience* (F.EXE) measured by the difference between the year previous to the investment and the first year of export; *firm age* (F.AGE) measured by the difference between the year before investment and the year of firm's establishment; *firm size* (F.SIZE) measured by number of employees; *firm R&D intensity* (F.RDI) measured by the % of expenditures in R&D relatively to sales; *firm financial constraints* (F.FCS) measured by a ratio of loans plus liabilities divided by assets; *human resources qualification of the firm* (F.HRQ) measured by the percentage of employees with bachelor's degree.

The *strategy of sales* (F.MDE) was measured by the number of export markets in the year previous the investment.

As *structural characteristics* the analysis takes into account: if the firm is a family firm, that is if it is owned and managed by a family, or not; if the firm is located in a peripheral or central region *location* (F.LOC); we also accounted for *firm industry* (F.IND) a categorical variable based in the International Standard Industrial Classification of Economic Activities, Rev.4 of United Nations that consider a set of 22 activities[5].

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[5]Agriculture, forestry and fishing; Mining and quarrying; Manufacturing; Electricity, gas, steam and air conditioning supply; Construction; Wholesale and retail trade, repair of motor vehicles and motorcycles; Transportation and storage; Accommodation and food service activities; Information and communication; Financial and insurance activities; Real estate activities; Professional, scientific and technical activities; Administrative and support service activities; Public administration and defense; compulsory social security; Human health and social work activities; Arts, entertainment and recreation; Other service activities; Activities of extraterritorial organizations and bodies; Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use.

Measurement of investment-level variables   The variables related to the investment include: *type of investment* (I.TYP) measured by a categorical variable (greenfield, merger and acquisition or joint venture); *main motivation of investment* (I.MOT) also a categorical variable (natural resource seeking; market seeking; efficiency seeking or; strategic assets seeking)[9], and characteristics of the host country of the investment. The later includes: *gross domestic product per capita* (I.GDP.c) and *gross domestic product growth* (I.GDP.g) of host country; *political risk* (I.PRK) measured by the OECD' classification of country risk credit (0 to 7); and the *distance between headquarters and subsidiaries* (I.KMS) measured by number of kilometers between the capital of home and host country.

3.4   Data descriptive analysis

Firms have on average 11,3 years of export experience and 31,8 years of existence. The average size is of 1093 employees. The R&D intensity is of about 6%, and the ratio of indebtedness is of 44%. On average 17,4% of the human resources on the replying firms have a bachelor's degree.
The average number of export destinations is of about 20.
Regarding structural features 33,3% of the firms are family owned and 72% are located in peripheral regions. In terms of industry, 47% are from manufacturing, 7% of wholesale and retail trade firms, 19,5% of construction firms and 26,4% of other industries.
Greenfield is the most frequent mode of entry (66,7% of firms). Only 14,9% internationalized through merger or acquisitions and 18,4% by joint ventures. In what concerns the main motivation for the international investment, 62,1% of the firms answered market seeking, 14,9% strategic assets seeking, 13,8% natural resources seeking and 9,2% efficiency seeking motives.
The host countries have on average a GDP per capita of 9996 USDs, a GDP growth of 4,6%, a level of political risk of 3 (in a scale 0-7) and a distance from headquarters in average of 3576 kilometers.

Table 3: **Definition of variables and summary statistics**

Function	Variable	Description	Obs	Mean	Std Dev	Min	Max
Dep.	**ISM1A**	Importance of public support to "Participation in trade fairs or state missions promoted by business associations with public support" in FDI, evaluated in 5 ordered categories	62	3,016129	1,234636	1	5
	ISM3C	Importance of public support to "Informational services by public institutions as the AICEP or IAPMEI" in FDI evaluated in 5 ordered categories	74	2,945946	1,470177	1	5
	ISM7G	Importance of public support to "Fiscal benefits" in FDI evaluated in 5 ordered categories	42	3.166667	1.377815	1	5
	ISM8H	Importance of public support to "Other public financial support" in FDI evaluated in 5 ordered categories	46	2.826087	1.304766	1	5
Ind.	**Firm-level**						
	-Competencies						
	- F.EXE	Export experience, measured in years	87	11,26437	12,01207	0	63
	- F.AGE	Firm's age, measured in years	87	31,75862	25,24483	1	133
	- F.SIZE	Firm's size, measured by number of employees	87	1093,034	2978,21	1	20869
	- F.RDI	Firm's R&D intensity, measured by a ratio between of expenditures in R&D and sales	87	0,0574793	0,2592664	0	2,3027
	- F.FCS	Firm's financial constraints, measured by a ratio between value of loans plus liabilities and assets	87	0,4354828	0,2032686	0,001	0,862
	- F.HRQ	Firm's human resources qualification, measured by the percentage of employees with bachelor's degree	87	0,1741609	0,2513678	0	1
	-Strategy						
	- F.MDE	Firm's strategy, measured by number of export destinations	87	19,70115	32,65504	0	229
	-Structural characteristics						
	- F.FAM	Firm's family ownership (binary: 1 if non-family owned firm and 2 if family owned firm)	87				
	- F.LOC	Firm's location (binary: 1 if located in a central region and 2 if located in a peripheral region)	87				
	- F.IND	Firm's industry (categorical variable with 22 industries)	87				
	Investment						
	- I.TYP	Investment type (categorical variable with 3 values)	87				
	- I.MOT	Investment main motivation (categorical variable with 4 values)	87				
	- I.GDPc	Host country GDP per capita, measured in USD	87	9995,782	8184,249	675	31357
	- I.GDPg	Host country GDP growth	87	0,0464483	0,066608	-0,384	0,206
	- I.PRK	Host country political risk (categorical variable with 8 values)	87	3,126437	3,234281	0	7
	- I.KMS	Distance between headquarters and subsidiaries, kms from home and host country capital	87	3575,885	3099,424	499	10990

Source: own elaboration

3.5 Econometric model

The modeling methodology used to analyze the importance of public support in the main O-FDI project is the ordered probit model. Ordered probit is especially appropriate in this case because, like ordinary least squares (OLS) regression, it identifies marginal effects and statistically significant relations between independent variables (in this case a set of variables related with firm and investment) and a dependent variable (importance of public support in main O-FDI project) [12]. But unlike OLS regression, ordered probit discerns unequal differences between ordinal categories in the dependent variable. Thus, for example, it does not assume that the difference between "unimportant" and "of little importance" is the same as the difference between "of little importance" and "important", given a unit

change in the explanatory variable. Here, ordered probit captures the qualitative differences between different levels of public support importance.

Whereas in a linear regression, a firm with $I = 2$ would evaluate the importance of an ISMs twice as one with $I = 1$, in the ordered probit model, no such presumption of cardinality is made; $I = 2$ simply indicates higher level of importance than $I = 1$.

The basic notion underlying the model is the existence of a latent or unobserved continuous variable [12], I^* ranging from $-\infty$ to $+\infty$, indicating the level of ISMs' importance. This latent variable is related to a set of explanatory variables by the standard linear relationship:

$$I^*_{im} = \beta^, X_{im} + \varepsilon_{im} \tag{3.1}$$

where, X_{im} is a vector of explanatory variables, which may include the firms' and investment variables that influences the firms' evaluation in every m measure. β is the associated parameter vector, and ε is a random error term draw from a standardized normal distribution. Although I^* is unobserved, the integer index is observed and is related to I by the following relationship:

$I_{im} = 0$ if $I^*_{im} \leq 0$,
$I_{im} = 1$ if $0 < I^*_{im} \leq \mu_1$,
$I_{im} = 2$ if $\mu_1 < I^*_{im} \leq \mu_2$.
...
$I_{im} = J$ if $\mu_{j-1} \leq I^*_{im}$.

where μ_j are the unobserved thresholds defining the boundaries between the different levels of importance. These parameters are free, with no significance to the unit distance between the different observed values of I. Given the relationship between I and I^* and the distribution of the error term ε, one may express the probability of observing an individual as having zero value of the index I as:

$Prob(I = 0|X) = p(I^* \leq 0)$
$= Prob(\varepsilon \leq -X\beta)$
$= \int_{-\infty}^{-X\beta} (2\pi)^{-\frac{1}{2}} exp(-\frac{u^2}{2}) du$
$= \Phi(-X'\beta)$

where $\Phi(.)$ indicates the standard normal distribution function. Similarly, one may specify the other probabilities:

$Prob(I = 1|X) = \Phi(\mu_1 - X'\beta) - \Phi(-X'\beta)$
$Prob(I = 2|X) = \Phi(\mu_2 - X'\beta) - \Phi(\mu_1 - X'\beta)$

...
$Prob(I = J|X) = 1 - \Phi(\mu_{j-1} - X'\beta)$
with
$\mu_j > \mu_{j-1} \ \forall j \in a, ..., J.$
As noted above, the only restriction is that a firm with an observed index value of j have a higher importance than one value of $j - 1$. The values of the thresholds μ_j are estimated as additional parameters of the model. Estimates are obtained by maximum likelihood.

Relatively to the marginal effects of the regressors X on the probabilities, they are not equal to the coefficients. In our specific case with 5 categories the model has 4 unknown threshold parameters.

In general we have:

$$Prob(I = j|X) = F(\mu_j - \sum_{k=1}^{K} X_k \beta_k) - F(\mu_{j-1} - \sum_{k=1}^{K} X_k \beta_k) \qquad (3.2)$$

The marginal effect on event probability in probit models as the partial derivative of probability with respect to X_k, in general are:

$$\frac{\partial Prob(I = j|X)}{\partial X_k} = (f(\mu_{j-1} - \sum_{k=1}^{K} X_k \beta_k) - f(\mu_j - \sum_{k=1}^{K} X_k \beta_k))\beta_k \qquad (3.3)$$

Therefore, in order to verify if the independent variables have statistical significance over the probability of answer to the question:"How important public support (ISM1A, ISM3C, ISM7G and ISM8H) is in the main O-FDI project?" (variable dependent) where the respondents might vary in intensity of feeling about the question depending on certain measurable variables, xs and certain unobserved factors, ϵ, was used an ordinal regression with the probit link function. The selection of probit link function is fitted with the probit regression [**?**]

The ordinal regression procedure is a extension of the general linear model to ordinal categorical data with five possible link functions. The choice of link function was done accordingly with category' frequencies distribution criteria of dependent variable defined in Agresti (2002) [1], Long and Freese (2006) [16] and Norusis (2010) [22].

There was considered other link functions as the logit, cauchit and log log, but the probit link function presented better significance in the all dependent variables analyzed.

The homogeneity of slopes' model was validated in all independent variables with the test of parallel lines [22].

4 Results

As mentioned above, on average, the measures were considered of low importance. There is however high variance between firms. Next, we report the econometric results for the measures more frequently used by the firms in order to investigate for which firms and under which conditions policy measures were more important.

4.1 Public support to participation in trade fairs or state missions

The ordered probit model that relates independent variables with public support to participation in trade fairs or state missions (ISM1A) is statistically significant[6] (χ^2=97,75; ρ=0,0000; pseudo R^2=0,5045). Since the observed significance level in the test of parallel lines is large (ρ=1,000), we do not have sufficient evidence to reject the parallelism hypothesis.

The results (table 4) show that export experience, age, size, human resources qualification, family ownership and location are all negatively related with the importance of public support to participation in trade fairs or state missions.

This model suggests that as export experience ($\hat{\beta}_{F.EXE}$=-0,0396812; ρ=0,037), age ($\hat{\beta}_{F.AGE}$=-0,0307081; ρ=0,040), size ($\hat{\beta}_{F.SIZE}$=-0,000717; ρ=0,018) and the human resources qualification ($\hat{\beta}_{F.HRQ}$=-2,25403; ρ=0,034) increase, the probability of being verified higher level categories (or categories of higher importance) will decrease, *ceteris paribus*. Non-family owned firms (F.FAM=1) ($\hat{\beta}_{F.FAM=1}$=-1,130918; ρ=0,024) and firms located in central regions (FLOC=1) ($\hat{\beta}_{F.LOC=1}$=-1,209247; ρ=0,019) are more likely to assign lower level categories (lower level of importance).

By contrast, the variables R&D intensity and investment type (I.TYP=1) are positively related with the importance of public support. The model shows that an growth of R&D intensity ($\hat{\beta}_{F.RDI}$=4,444082; ρ=0,044) leads to higher probability of being verified more important level categories, and firms with greenfield investments (I.TYP=1) ($\hat{\beta}_{I.TYP=1}$=1,639927; ρ=0,010) are more likely to assign higher levels of importance to this measure.

The remaining variables do not appear to be related with the dependent variable.

In terms of marginal effects on the probability of an event[7] (table 5), with a year increase in export experience, the results reveal an increase in probability of public support to participation in trade fairs or state missions being

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[6]This means that can be rejected the null hypothesis that the model without predictors is as good as the model with predictors.

[7]Y=Pr(ISM1A=unimportant)=.01549743; Y=Pr(ISM1A=of little importance)=.34316596; Y=Pr(ISM1A=important)=.44285063; Y=Pr(ISM1A=very important)=.018057753; Y=Pr(ISM1A=essential)=.0,01790845

classified as unimportant of about 1,4%, and a decrease of being classified as essential of 1,6%. One year increase in firms' age will augments about 1,3% the probability of the public support being classified as unimportant, and reduce about 1,5% of being classified as essential. With an additional employee, the probability of public support being classified as unimportant will increase about 0,0002%, and of being classified as essential will decrease about the same amount.

With an increase of 1% in the ratio of human resources qualification, the probability of the public support being classified as unimportant will increase about 0,06%, and of being classified as essential will decrease about 0,07%. The probability of public support being classified as unimportant by family owned firms decreases about 15%, and of being classified as essential will increase about 17%, relatively to the non-family owned firms. The probability of public support being classified as unimportant by peripheral firms decreases about 13%, and of being classified as essential will increase about 15%.

Regarding variables with positive coefficients, an increase of 1% in the ratio of R&D intensity augments the probability of the public support being classified as unimportant of about 0,13%, and that of being classified as essential of about 0,14%. The probability of public support being classified as unimportant by firms whose investments were done by mergers and acquisitions or joint ventures increases about 11%, and of being classified as essential will decrease about 13% relatively to firms with greenfield investments.

Table 4: **Parameter estimates of ordinal regression model in "Participation in trade fairs or state missions promoted by business associations with public support" (ISM1A) (N=62)**

Parameter	Coef.	Std. Err.	z	Sig.	[95% Conf. Interval]
FEXE	**-.0396812**	.019053	-2.08	**0.037**	-.0770245; -.002338
FAGE	**-.0307081**	.0149494	-2.05	**0.040**	-.0600085; -.0014078
FSIZE	**-.000717**	.0003044	-2.36	**0.018**	-.0013136; -.0001204
FRDI	**4.444082**	2.204422	2.02	**0.044**	.1234942; 8.764669
FFCS	-.216413	1.032505	-0.21	0.834	-2.240086; 1.80726
FHRQ	**-2.25403**	1.064212	-2.12	**0.034**	-4.339848; -.1682116
FMDE	.0112327	.0063834	1.76	0.078	-.0012785; .023744
FFAM=1	**-1.130918**	.501132	-2.26	**0.024**	-2.113118; -.148717
FFAM=2	0(a)				
FLOC=1	**-1.209247**	.5148393	-2.35	**0.019**	-2.218314; -.2001807
FLOC=2	0(a)				
FIND=1	-2.908251	1.707342	-1.70	0.088	-6.25458; .4380784
FIND=2	1.101585	.7124462	1.55	0.122	-.2947835; 2.497954
FIND=3	8.834555	622.8917	0.01	0.989	-1212.011 ; 1229.68
FIND=4	-2.051413	1.578103	-1.30	0.194	-5.144439; 1.041612
FIND=5	-.0113197	.8301208	-0.01	0.989	-1.638327; 1.615687
FIND=6	.8152015	.9973201	0.82	0.414	-1.13951; 2.769913
FIND=7	.7902099	1.133158	0.70	0.486	-1.430739; 3.011159
FIND=8	8.742578	880.9261	0.01	0.992	-1717.841; 1735.326
FIND=9	.2587641	1.045748	0.25	0.805	-1.790865; 2.308393
FIND=10	3.272528	1.730984	1.89	0.059	-.1201379; 6.665194
FIND=11	0(a)				
ITYP=1	**1.639927**	.6370673	2.57	**0.010**	.3912985; 2.888556
ITYP=2	-.3005879	1.138897	-0.26	0.792	-2.532785; 1.931609
ITYP=3	0(a)				
IMOT=1	-1.781348	.976948	-1.82	0.068	-3.696131; .1334352
IMOT=2	-.8068938	.7998685	-1.01	0.313	-2.374607; .7608196
IMOT=3	0(a)				
IMOT=4	0(a)				
IGDPC	.0001325	.0000831	1.59	0.111	-.0000304; .0002954
IGDPG	-.826869	5.125456	-0.16	0.872	-10.87258; 9.21884
IPRK=1	-4.40038	1.907613	-2.31	0.121	-8.139233; -.6615273
IPRK=2	.211344	1.24675	0.17	0.865	-2.232242; 2.65493
IPRK=3	-.8848656	622.9294	-0.00	0.999	-1221.804; 1220.034
IPRK=4	-3.522014	1.680691	-2.10	0.136	-6.816108; -.2279209
IPRK=5	-1.284225	1.816322	-0.71	0.480	-4.844151; 2.2757
IPRK=6	-.2427971	.8459572	-0.29	0.774	-1.900843; 1.415249
IPRK=7	0(a)				
IKMS	-.0003295	.0001709	-1.93	0.054	-.0006645; 5.48e-06
Cut1	-7.761875	1.882122			-11.45077; -4.072984
Cut2	-5.398027	1.733369			-8.795368; -2.000686
Cut3	-3.484972	1.601354			-6.623569; -.3463747
Cut4	-1.723064	1.575816			-4.811608; 1.365479

Source: own elaboration [(a)This parameter is set to zero because it is redundant.]

Table 5: **Marginal effects in importance of ISM1A ordered probit model with interactions**

Variable	Unimportant	Of little impor-tance	Important	Very important	Essential
F.EXE	**.0014413**	.123857	-.0035139	-.008682	**-.0016311**
F.AGE	**.0013167**	.0113152	-.0032102	-.0079316	**-.0014901**
F.SIZE	**.0000187**	.0001611	-.0000457	-.0001129	**-.0000212**
F.RDI	**-.1258641**	-1.081618	.3068587	.7581823	**.1424407**
F.FCS	-.0334	-.2870239	.0814297	.2011953	.0377988
F.HRQ	**.062721**	.5389952	-.1529148	-.3778199	**-.0709815**
F.MDE	-.000099	-.0008512	.0002415	.0005966	.0001121
F.FAM	**-.0150709**	-.129512	.036743	.0907841	**.0170557**
F.LOC	**-.0131977**	-.1134149	.0321762	.0795005	**.0149359**
F.IND	.0033258	.0285801	-.0081083	-.0200338	-.0037638
I.TYP	**.0112227**	.0964423	-.027361	-.0676032	**-.0127007**
I.MOT	-.0023581	-.0202643	.0057491	.0142047	.0026687
I.GDPc	-1.31e-07	-1.13e-06	3.20e-07	7.92e-07	1.49e-07
I.GDPg	.0695521	.976988	-.1695692	-.4189694	-.0787123
I.PRK	-.0072907	-.0626532	.0177749	.043918	.0082509
I.KMS	2,56e-06	0,000022	-6,23e-06	-0,0000154	-2,89e-06

Source: own elaboration

4.2 Public support to informational services

The ordered probit model that relates independent variables with public support to informational services by public institutions as the AICEP and IAPMEI (ISM3C) is statistically significant (χ^2=70,90; ρ=0,0001; pseudo R^2=0,2988). Since the observed significance level in the test of parallel lines is large (ρ=1,000), we do not have sufficient evidence to reject the parallelism hypothesis.

From the variables significance levels (table 6), we verified that export experience, size, and host country distance are all negatively related with the importance of public support to informational services.

This model suggests that as export experience ($\hat{\beta}_{F.EXE}$=-0,0568576; ρ=0,003), size ($\hat{\beta}_{F.SIZE}$=-0,0006536; ρ=0,016) and host country distance ($\hat{\beta}_{I.KMS}$=-0,0003205; ρ=0,008) increase, the probability of being verified higher level categories will decrease, *ceteris paribus*.

In terms of marginal effects on the probability of an event [8] (table 7), with a year increase in export experience, the results reveal an increase in probability of public support to participation in trade fairs or state missions being classified as unimportant of about 0,9%, and a decrease of being classified as essential of 0,4%. With an additional employee, the probability of public support being classified as unimportant will increase about 0,0001%, and of being classified as essential will decrease about the same amount. With a kilometer increase in distance (between headquarters and host country) the probability of public support being classified as unimportant increases about 0,00003% and of being ranked as essential will decrease of about 0,00001%.

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[8]Y=Pr(ISM3C=unimportant)=.19659122; Y=Pr(ISM3C=of little impor-tance)=.3153214; Y=Pr(ISM3C=important)=.22641919; Y=Pr(ISM3C=very im-portant)=.20177106; Y=Pr(ISM3C=essential)=.0,05989714

Table 6: **Parameter estimates of ordinal regression model for "Informational services by public institutions as the AICEP or IAP-MEI" (ISM3C) (N=74)**

Parameter	Coef.	Std. Err.	z	Sig.	[95% Conf. Interval]
FEXE	**-.0568476**	.0193147	-2.94	**0.003**	-.0947038; -.0189914
FAGE	-.0172969	.0088549	-1.95	0.051	-.0346521; .0000584
FSIZE	**-.0006536**	.0002718	-2.40	**0.016**	-.0011863; -.0001209
FRDI	-.1584151	2.370305	-0.07	0.947	-4.804128; 4.487298
FFCS	-.315481	.8379451	-0.38	0.707	-1.957823; 1.326861
FHRQ	.5896845	.6842439	0.86	0.389	-.7514088; 1.930778
FMDE	-.0041319	.0051727	-0.80	0.424	-.0142702; .0060065
FFAM=1	-.2890157	.3786548	-0.76	0.445	-1.031165; .4531341
FFAM=2	0(a)				
FLOC=1	.2891002	.4023274	0.72	0.472	-.4994469; 1.077647
FLOC=2	0(a)				
FIND=1	.4809422	1.402631	0.34	0.732	-2.268164; 3.230048
FIND=2	-.2351309	.7137156	-0.33	0.742	-1.633988; 1.163726
FIND=3	.1412854	1.27145	0.11	0.912	-2.350711; 2.633282
FIND=4	.7144332	1.199926	0.60	0.552	-1.637379; 3.066245
FIND=5	.5084528	.7958915	0.64	0.523	-1.051466; 2.068371
FIND=6	-.3637392	.9275269	-0.39	0.695	-2.181659; 1.45418
FIND=7	.3676944	1.154329	0.32	0.750	-1.894749; 2.630138
FIND=8	-6.998104	423.9865	-0.02	0.987	-837.9963; 824.0001
FIND=9	-.0921638	.9739055	-0.09	0.925	-2.000983; 1.816656
FIND=10	.2481148	1.456832	0.17	0.865	-2.607222; 3.103452
FIND=11	0(a)				
ITYP=1	-.8145219	.5770419	-1.41	0.158	-1.945503; .3164595
ITYP=2	.497479	.9073779	0.55	0.584	-1.280949; 2.275907
ITYP=3	0(a)				
IMOT=1	.8651725	.7823057	1.11	0.269	-.6681186; 2.398464
IMOT=2	.8935193	.6816933	1.31	0.190	-.4425749; 2.229614
IMOT=3	0(a)				
IMOT=4	0(a)				
IGDPC	.0000385	.0000618	0.62	0.533	-.0000826; .0001596
IGDPG	1.110679	4.625535	0.24	0.810	-7.955202; 10.17656
IPRK=1	-1.794049	1.442546	-1.24	0.214	-4.621388; 1.033289
IPRK=2	7.597104	299.3456	0.03	0.980	-579.1095; 594.3037
IPRK=3	10.39632	300.2638	0.03	0.972	-578.1098; 598.9025
IPRK=4	4.704911	299.3484	0.02	0.987	-582.0071; 591.4169
IPRK=5	.9057453	1.415262	0.64	0.522	-1.868118; 3.679608
IPRK=6	.1998544	.5967439	0.33	0.738	-.9697423; 1.369451
IPRK=7	0(a)				
IKMS	**-.0003205**	.0001217	-2.63	**0.008**	-.0005591; -.0000819
Cut1	-4.30996	1.43028			-7.113258; -1.506663
Cut2	-3.390208	1.416547			-6.166589; -.6138265
Cut3	-2.71683	1.398566			-5.457969; .0243088
Cut4	-1.637829	1.373647			-4.330127; 1.054469

Source: own elaboration [(a)This parameter is set to zero because it is redundant.]

4.3 Public support to fiscal benefits

The ordered probit model that relates independent variables with public support to fiscal benefits (ISM7G) is statistically significant (χ^2=88,89; ρ=0,0000; pseudo R^2=0,6632). Since the observed significance level in the test of parallel lines is large (ρ=1,000), we do not have sufficient evidence to reject the parallelism hypothesis.

From the variables significance levels (table 8), we verified that export experience, size and, family ownership are all negatively related with the importance of public support to fiscal benefits.

This model suggests that as export experience ($\hat{\beta}_{F.EXE}$=-0,1324101; ρ=0,038) and size ($\hat{\beta}_{F.SIZE}$=-0,0059499; ρ=0,015) increase, the probability of being

Table 7: **Marginal effects in importance of ISM3C ordered probit model with interactions**

Variable	Unimportant	Of little importance	Important	Very important	Essential
FEXE	**.0086738**	.0038096	-.0022956	-.0064637	**-.0037242**
FAGE	.0071026	.0031195	-.0018798	-.0052928	-.0030495
FSIZE	**.0001323**	.0000581	-.000035	-.0000986	**-.0000568**
FRDI	.2239621	.0983658	-.0592741	-.1668941	-.0961598
FFCS	.009679	.0042511	-.0025617	-.0072127	-.0041558
FHRQ	-.2504103	-.1099821	.0662739	.186603	.1075155
FMDE	.0004594	.0002018	-.0001216	-.0003424	-.0001973
FFAM	-.1369851	-.0601649	.0362546	.1020798	.0588156
FLOC	-9.34e-06	-4.10e-06	2.47e-06	6.96e-06	4.01e-06
FIND	-.0098246	-.0043151	.0026002	.0073212	.0042183
ITYP	-.155169	-.0681514	.0410672	.1156302	.0666229
IMOT	-.0085538	-.0037569	.0022639	.0063742	.0036727
IGDPC	.0000152	6.67e-06	-4.02e-06	-.0000113	-6.52e-06
IGDPG	.6966115	.3059571	-.184366	-.5191073	-.2990953
IPRK	.0264077	.0115985	-.0069891	-.0196787	-.0113383
IKMS	**.000032**	.0000141	-8.48e-06	-.0000239	**-.0000138**

Source: own elaboration

verified higher level categories will decrease, *ceteris paribus*. Non-family owned firms (F.FAM=1) ($\hat{\beta}_{F.FAM=1}$=-2,452503; ρ=0,019) are more likely to assign lower level of importance categories.

By contrast, the investment type are positively related with the importance of public support. The model shows that firms with greenfield investments (I.TYP=1) ($\hat{\beta}_{I.TYP=1}$=3,893491; ρ=0,020) are more likely to assign higher levels of importance to this measure than firms that done their investments by merger and acquisitions or joint ventures.

In terms of marginal effects on the probability of an event [9] (table 9), with a year increase in export experience, the results reveal an increase in probability of public support to participation in fiscal incentives being classified as unimportant of about 0,3%, and a decrease of being classified as essential of about 0,07%. With an additional employee, the probability of public support being classified as unimportant will increase about 0,02%, and of being classified as essential will decrease of 0,003%.

The probability of public support being classified as unimportant by family owned firms decreases about 9%, and of being classified as essential will increase about 18%, relatively to the non-family owned firms.

The probability of public support being classified as unimportant by firms with greenfield increases about 3,4%, and of being rated as essential decreases 0,7% relatively to firms with mergers or acquisitions and joint ventures.

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[9]Y=Pr(ISM7G=unimportant)=.03004012; Y=Pr(ISM7G=of little importance)=.56335577; Y=Pr(ISM7G=important)=.32528334; Y=Pr(ISM7G=very important)=.07657466; Y=Pr(ISM7G=essential)=.0,0047461

Table 8: **Parameter estimates of ordinal regression model for "Fiscal benefits" (ISM7G)(N=42)**

Parameter	Coef.	Std. Err.	z	Sig.	[95% Conf. Interval]
FEXE	**-.1324101**	.0636556	-2.08	**0.038**	-.2571727; -.0076475
FAGE	.0147123	.0309818	0.47	0.635	-.0460109; .0754355
FSIZE	**-.0059499**	.0024401	-2.44	**0.015**	-.0107325; -.0011674
FRDI	12.48671	10.59209	1.18	0.238	-8.273399; 33.24683
FFCS	-1.512673	2.851292	-0.53	0.596	-7.101104; 4.075757
FHRQ	1.83437	1.534641	1.20	0.232	-1.17347; 4.842211
FMDE	-.0190248	.0318138	-0.60	0.550	-.0813788;.0433292
FFAM=1	**-2.452503**	1.045023	-2.35	**0.019**	-4.500711; -.4042959
FFAM=2	0(a)				
FLOC=1	.5120425	1.097718	0.47	0.641	-1.639445; 2.663529
FLOC=2	0(a)				
FIND=1	0(a)				
FIND=2	-4.76715	1.482884	-3.21	0.051	-7.67355; -1.860751
FIND=3	.1837426	1.715379	0.11	0.915	-3.178339; 3.545824
FIND=4	-1.6592	1.893905	-0.88	0.381	-5.371185; 2.052785
FIND=5	-3.00197	1.738035	-1.73	0.084	-6.408455; .4045159
FIND=6	-11.72711	4.127174	-2.84	0.054	-19.81622; -3.637998
FIND=7	-3.178074	2.829501	-1.12	0.261	-8.723795; 2.367646
FIND=8	0(a)				
FIND=9	-3.490653	1.680387	-2.08	0.083	-6.784151; -.197155
FIND=10	-.6403815	572.2059	-0.00	0.999	-1122.143; 1120.862
FIND=11	0(a)				
ITYP=1	**3.893491**	1.675426	2.32	**0.020**	.6097155; 7.177266
ITYP=2	3.73289	2.973546	1.26	0.209	-2.095153; 9.560934
ITYP=3	0(a)				
IMOT=1	.0711971	1.430611	0.05	0.960	-2.732749; 2.875143
IMOT=2	-1.798679	1.277519	-1.41	0.159	-4.302571; .705213
IMOT=3	0(a)				
IMOT=4	0(a)				
IGDPC	-.000036	.0002053	-0.18	0.861	-.0004385; .0003664
IGDPG	2.142991	11.33111	0.19	0.850	-20.06557; 24.35156
IPRK=1	.5103953	4.007317	0.13	0.899	-7.343802; 8.364593
IPRK=2	11.08906	3223.208	0.00	0.997	-6306.282; 6328.461
IPRK=3	0(a)				
IPRK=4	-4.750887	572.2135	-0.01	0.993	-1126.269; 1116.767
IPRK=5	2.681678	4.10161	0.65	0.513	-5.35733; 10.72069
IPRK=6	-2.807377	1.781078	-1.58	0.115	-6.298225; .6834712
IPRK=7	0(a)				
IKMS	.0002349	.000493	0.48	0.634	-.0007313 ; .0012011
Cut1	-13.2847	5.957939			-24.96204; -1.607354
Cut2	-7.662053	4.720107			-16.91329; 1.589187
Cut3	-5.811261	4.695315			-15.01391; 3.391387
Cut4	-3.218085	4.529289			-12.09533; 5.659158

Source: own elaboration [(a)This parameter is set to zero because it is redundant.]

4.4 Other public financial support

The ordered probit model that relates independent variables with other public financial support (ISM8H) is statistically significant (χ^2=72,48; ρ=0,0000; pseudo R^2=0,4993). Since the observed significance level in the test of parallel lines is large (ρ=1,000), we do not have sufficient evidence to reject the parallelism hypothesis.

From the variables significance levels (table 10), we found a negative relation between size and the importance of public support.

This model suggests that as size ($\hat{\beta}_{F.SIZE}$=-0,0026192; ρ=0,022) increase, the probability of being verified higher level categories will decrease, *ceteris paribus*.

By contrast, the investment type are positively related with the importance

Table 9: **Marginal effects in importance of ISM7G ordered probit model with interactions**

Variable	Unimportant	Of little importance	Important	Very important	Essential
FEXE	**.0034884**	.0163794	-.0121597	-.0070012	**-.0007069**
FAGE	.0008953	.0042039	-.0031209	-.0017969	-.0001814
FSIZE	**.0001714**	.0008047	-.0005974	-.0003439	**-.0000347**
FRDI	.9897462	4.647304	-3.45005	-1.986436	-.2005647
FFCS	.0268996	.1263057	-.0937664	-.0539879	-.005451
FHRQ	-.1455622	-.6834799	.5073995	.2921455	.0294971
FMDE	.0002107	.0009893	-.0007344	-.0004228	-.0000427
FFAM	**-.091086**	-.4276899	.317507	.182811	**.0184579**
FLOC	-.0323721	-.1520018	.1128426	.0649714	.00656
FIND	-.0013975	-.0065618	.0048713	.0028048	.0002832
ITYP	**.0341924**	.1605486	-.1191875	-.0686246	**-.0069288**
IMOT	-.0192915	-.0905821	.067246	.0387182	.0039093
IGDPC	8.16e-06	.0000383	-.0000284	-.0000164	-1.65e-06
IGDPG	.3154404	1.481135	-1.09956	-.6330937	-.0639216
IPRK	.023984	.1126156	-.0836032	-.0481362	-.0048602
IKMS	-.0000169	-.0000795	.000059	.000034	3.43e-06

Source: own elaboration

of public support. The model shows that firms with greenfield investments (I.TYP=1) ($\hat{\beta}_{I.TYP=1}$=3,768232; ρ=0,039) are more likely to assign higher levels of importance to this measure than firms that done their investments by merger and acquisitions or joint ventures.

In terms of marginal effects on the probability of an event [10] (table 11), model shows that with an additional employee the probability of public support being classified as unimportant will increase about 0,01%, and of being classified as essential will decrease of about 0,003%.

The probability of public support being classified as unimportant by firms whose main motivation is natural resources seeking (relatively to other motivations) increases about 0,9%, and of being rated as essential decreases 0,2%.

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[10]Y=Pr(ISM8H=unimportant)= .08283574; Y=Pr(ISM8H=of little importance)=.34138335; Y=Pr(ISM8H =important)=.45633231; Y=Pr(ISM8H=very important)=.10531315; Y=Pr(ISM8H=essential)=.01413544

Table 10: **Parameter estimates of ordinal regression model for "Other public financial support" (ISM8H)(N=46)**

Variable	Coef.	Std. Err.	z	Sig.	[95% Conf. Interval]
FEXE	.0381793	.0264294	1.44	0.149	-.0136213; .0899799
FAGE	-.0428347	.0233006	-1.84	0.066	-.0885029; .0028335
FSIZE	**-.0026192**	.0011428	-2.29	**0.022**	-.004859; -.0003793
FRDI	13.03057	8.705945	1.50	0.134	-4.032772; 30.09391
FFCS	-1.434191	1.629207	-0.88	0.379	-4.627377; 1.758995
FHRQ	2.790746	1.747484	1.60	0.110	-.6342586; 6.215751
FMDE	-.0145367	.0218101	-0.67	0.505	-.0572838; .0282103
FFAM=1	.1400351	.7726117	0.18	0.856	-1.374256; 1.654326
FFAM=2	0(a)				
FLOC=1	-.4751044	.5765331	-0.82	0.410	-1.605088; .6548797
FLOC=2	0(a)				
FIND=1	0(a)				
FIND=2	-1.138311	1.169668	-0.97	0.330	-3.430818; 1.154195
FIND=3	.1674827	1.502881	0.11	0.911	-2.77811; 3.113076
FIND=4	-8.893792	546.7874	-0.02	0.987	-1080.577; 1062.79
FIND=5	.6584813	1.426765	0.46	0.644	-2.137927; 3.45489
FIND=6	-.9396057	2.521994	-0.37	0.709	-5.882623; 4.003412
FIND=7	.989826	1.769182	0.56	0.576	-2.477708; 4.45736
FIND=8	0(a)				
FIND=9	-2.368882	1.721173	-1.38	0.169	-5.74232; 1.004555
FIND=10	-1.343221	1.943512	-0.69	0.489	-5.152435; 2.465993
FIND=11	0(a)				
ITYP=1	1.156961	.9354389	1.24	0.216	-.6764659; 2.990387
ITYP=2	2.530333	1.370986	1.85	0.065	-.15675; 5.217417
ITYP=3	0(a)				
IMOT=1	**3.768232**	1.828851	2.06	**0.039**	.1837488; 7.352715
IMOT=2	1.079752	1.328997	0.81	0.417	-1.525033; 3.684538
IMOT=3	0(a)				
IMOT=4	0(a)				
IGDPC	.0000581	.0001541	0.38	0.706	-.0002439; .00036
IGDPG	.0663929	10.06463	0.01	0.995	-19.65992; 19.7927
IPRK=1	-4.950322	3.1016	-1.60	0.110	-11.02935; 1.128702
IPRK=2	.8124006	1.935764	0.42	0.675	-2.981628; 4.606429
IPRK=3	0(a)				
IPRK=4	-5.651248	3.243166	-1.74	0.081	-12.00774; .7052401
IPRK=5	3.313798	3.333306	0.99	0.320	-3.219362; 9.846958
IPRK=6	-1.529775	1.215155	-1.26	0.208	-3.911436; .851886
IPRK=7	0(a)				
IKMS	-.000368	.0003765	-0.98	0.328	-.0011059; .0003699
Cut1	-6.713365	3.66475			-13.89614; .4694133
Cut2	-4.738444	3.509095			-11.61614; 2.139256
Cut3	-2.556408	3.470923			-9.359292; 4.246477
Cut4	-1.255774	3.501041			-8.117688; 5.60614

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Table 11: **Marginal effects in importance of ISM8H ordered probit model with interactions**

Variable	Unimportant	Of little importance	Important	Very important	Essential
FEXE	.0015848	.0024828	-.0019971	-.0016968	-.0003737
FAGE	.0044736	.0070083	-.0056374	-.0047897	-.0010547
FSIZE	**.0001131**	.0001771	-.0001425	-.000121	**-.0000267**
FRDI	-.0368826	-.0577799	.0464781	.0394885	.0086958
FFCS	.1478284	.2315867	-.1862881	-.1582733	-.0348536
FHRQ	-.3672697	-.5753615	.4628203	.3932195	.0865914
FMDE	.0016719	.0026191	-.0021068	-.00179	-.0003942
FFAM	-.0664053	-.1040299	.0836816	.0710972	.0156564
FLOC	-.0801946	-.1256321	.1010583	.0858608	.0189075
FIND	-.0011418	-.0017887	.0014388	.0012224	.0002692
ITYP	-.0344346	-.0539449	.0433933	.0368676	.0081187
IMOT	**.0087903**	.0137708	-.0110772	-.0094114	**-.0020725**
IGDPC	-.0000142	-.0000222	.0000179	.0000152	3.34e-06
IGDPG	.0502148	.0786661	-.0632789	-.0537628	-.0118392
IPRK	-.0324025	-.0507615	.0408325	.034692	.0076396
IKMS	-4.87e-06	-7.62e-06	6.13e-06	5.21e-06	1.15e-06

Source: own elaboration

5   Conclusion and Discussion of Results

The results of this study indicate a set of relevant findings about the importance of public support towards O-FDI.

First of all, it was found a low use of public support launched to promote the internationalisation of Portuguese firms. This finding to a certain extent goes in line with existing literature on the matter [8, 20, 14, 7]. Moreover, on average, the internationalisation support measures were considered by firms as having had relatively low importance for their outward foreign investments.

The econometric analysis focused on the four measures more frequently used by firms: support to participate in trade fairs and state missions, informational services, fiscal incentives and other financial support measures.

Overall, firm related variables, competencies in specific are the variables that contribute more to explain the variance in the degree of importance of the measures between firms. Firms with lower competencies (specifically, those without much export experience, younger and smaller firms, and those with lower human capital) probably face higher difficulties in their process of internationalisation and, apparently for them public support for O-FDI is relatively more important.

Regarding the effect of firm level R&D intensity, the results indicate that firms with higher innovative activity tend to give higher importance to the existing public measures towards internationalisation. These results indicates that further research must be conducted regarding the link between R&D and firms internationalisation.

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