

# The Use of Public Support in Internationalization Activities, Firms' Competencies and Internationalization Requirements

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**Abstract.** In particularly in times of budget constraints governments should analyze in detail all aspects related to the implementation of their public support to enterprises. With an Heckman selection model and data collected through a survey to Portuguese firms, we test which variables may affect awareness and use of the public support to internationalization. The results show that firms' competencies positively affect awareness and negatively affect use of public support. Otherwise, the requirements of internationalization positively affect both the awareness and the use of public support.

**Keywords:** use, awareness, public support, internationalization, Heckman selection model, Portugal

## 1. Introduction

Despite the advantages of embracing internationalization and the risks of not doing so, many firms, small and medium enterprises (SMEs) in particular, still remain focused on their domestic markets [1]. Internationalization is a complex process. Firms need strategic resources to deal with the barriers, uncertainties, and complexities of international expansion [2, 3]. During the last decade, several economies have applied public resources to assist in the internationalization of their firms, not only through exports but also through outward foreign direct investments. The engagement of domestic companies in international business is a determinant of competitiveness in developed and developing countries. The literature often indicates that internationalization stimulates foreign exchange revenues, employment, innovatory capacity and the economic development of home economies in general [4, 5, 6].

The importance of internationalization to the home country's competitiveness along with the difficulties that firms experience in international involvement may justify the participation of governments by means of public support [7, 8, 9].

The effects on the home country's competitiveness will not be analyzed. We will focus on the difficulties experienced during the process of internationalization. These difficulties may depend on firms' competencies and on the internationalization requirements. The active promotion of internationalization through public support seeks to alleviate any shortfalls in competencies when a company embarks on entering environments often distant in geographical, cultural and institutional terms. Information provision, technical assistance, financial support, investment insurance schemes, fiscal benefits, and measures related to the trade and transfer of technology encompass the main types of measures used to promote or otherwise affect exports and foreign direct investment (FDI) [10, 11, 12].

Despite their range and importance, some studies have found low levels of use in several measures [7, 13]. In fact, notwithstanding the advantages of embracing internationalization and the risks of not doing so, many firms still remain focused on their domestic markets and do not use any public support for internationalization. Beyond the ineligibility issue, which excludes firms without internationalization activities, the use of public support depends on two conditions: "awareness of public support," a necessary condition of use; and "perceived importance of public support," a sufficient condition of use.

The present study establishes and tests with a Heckman selection model a general framework to explain the use and awareness of public support directed towards internationalization activities based on the firms' competencies and the requirements of internationalization.

Following the introduction, this paper has the following structure: the next section explains the determinants of the awareness and use of public support for internationalization activities. Sections 3 and 4 describe the methodology and results. Finally, we report the conclusions in section 5.

## **2. The Use of Public Support in Activities of Internationalization**

### **2.1. Awareness: A Necessary Condition of Use**

Firms with higher competencies (e.g. international experience, age, size, and human capital) as well as firms that meet higher internationalization requirements (in particular, a large number of export and being present abroad through FDI) have a higher probability of being aware of public support through internationalization activities. Awareness regarding public support for internationalization depends on flows of information, that arrive for example through mailing lists of governmental agencies, business associations, and other contacts already established. Larger and older firms, as well as firms with larger experience in international markets have a larger number of contacts and hence may benefit from an intense flow of information. Hence, larger and older firms have a higher probability of being aware of public support [14, 15, 16].

At least three additional reasons support this idea: first, larger and older firms have more interfaces with the external environment; second, these firms have more resources to deal with the complexity and pluralistic pattern of promotion programs; third, size confers information advantages that arise from the epidemiological characteristics of information transmission: larger firms are less numerous and thus easier for governmental agencies to reach (directly) and inform. Additionally, larger firms may have a greater number of professional managers and relationships with professional networks, which can produce fewer difficulties regarding access (indirectly) by governmental agencies [17].

The existence of financial constraints may lead firms to develop strategies to overcome such difficulties. These strategies include screening external sources of funds, not only private sources (banks) with which the negotiation may be more difficult, but also public sources (governmental agencies). The greater the need (which means the greater the financial constraints), the greater the awareness of public sources of external support will be [25].

The existence of skilled human capital may lead to advantages of knowledge that become relevant to increasing the level of awareness of public support. The greater qualification of human resources may represent a greater capacity to deal with challenges and greater pro-activeness. Thus, it is expected that more skilled firms have more awareness of public support. According to these lines of reasoning, we formulate the following hypothesis:

**Hypothesis 1A:** The awareness of public support (related to internationalization activities) is more noticeable in firms with high competencies.

Along the same line of reasoning, a greater involvement in internationalization activities, through a large number of export markets or FDI locations, may increase the number of contacts and the chance of being verified to be aware of public support for internationalization.

**Hypothesis 1B:** The awareness of public support (related to internationalization activities) is more noticeable in firms that face more demanding conditions (requirements) of internationalization.

In addition to the above-mentioned issues, other variables may affect the awareness of public support. Innovative intensity, ownership and location may be some of these variables.

Governments of several countries have traditionally supported more innovative firms. Thus, more innovative firms that were also more involved with public support in the past may have higher probability of being awareness of other forms of public support in the present and future.

In terms of ownership, we consider the foreign and family property. Foreign-owned firms (FFs) are more distant culturally and institutionally from national governmental agencies (which analyze the requests for

support) than domestic firms (DFs). Such distance may result in less awareness of public support in the host economy.

Family-owned firms are largely SMEs (and size is expected to be negatively related to awareness) that keep the business under the control of family members and avoid external interference. This behavior, besides resulting in low levels of use, may have an important role in reducing awareness.

Finally, firms located in central areas benefit from economies of agglomeration that may increase their awareness of public support for internationalization activities.

## **2.2. The Importance of Public Support: A Sufficient Condition of Use**

Taking into consideration all the hazards associated with international involvement, firms with higher competencies and involved in less riskier strategies are expected to depend on public support in a lower extent. More specifically, firms with greater international experience are more likely to have the relevant competencies to follow international opportunities autonomously [5]. Hence, it is expected (overall) that firms with greater international experience use their own competencies (some acquired during this process) instead of public support.

Older and larger firms use smaller amounts of public support than younger and smaller firms. In fact, since Penrose [18] it has been well accepted by international business scholars that larger and older firms have competitive advantages over smaller and younger firms, regardless of how skilled the management of the latter can be. The market connections of larger and older firms tend to be more extensive, their standing in the capital market better and their internal funds larger. These firms accumulate valuable experience and, by virtue of their size, 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 firms is the access to capital. In fact, as a result of the higher risk of lending, these firms pay a relatively higher rate of interest and face a lower absolute limit to the amount of capital they can obtain at any rate.

When internal finance is insufficient, firms (especially small and young ones) find it difficult to attract funds to conduct their activities abroad. Excessive collateral requirements, high interest rates or an underdeveloped banking system may preclude bank finance for international projects. Banks are often not capable of evaluating the risk of exports or FDI well and suffer from a home bias orientation. Furthermore, banks are frequently only willing to finance fixed assets and base credit decisions on a capital gearing approach. Typically, FDI assets cannot serve as collateral. External equity may be unavailable or too expensive or require the company to give up control. Venture capitalists are reported to offer unattractive investment terms. Firms often rely on government grants to alleviate the private market failures to finance their exports and FDI projects. Next to a direct positive effect, government support provides a positive signal to private financiers. Partnerships, with both domestic and local firms, are repeatedly utilized and facilitate the access to finance [19].

In line with the difficulties involved in financing internationalization projects, firms with greater financial constraints no longer have internal funds. In order to solve the financial constraints, more indebted firms have a higher probability of using external support, in particular public support.

Firms with a higher level of qualifications of their human capital have more competencies to embark on internationalization activities than firms with lower qualified employees. The higher qualified firms can use their own competencies instead of external resources, like public support. Therefore, firms with more skilled human capital may use less public support.

Hypothesis 2A: Public support for internationalization is used more by firms with low competencies.

Along the same line of reasoning, a greater involvement in internationalization activities, through a large number of export markets and FDI locations, may increase the effort and difficulties of firms in external environments, increasing the chance that some firms will rely on public support for internationalization.

Hypothesis 2B: Public support for internationalization is used more by firms that face more demanding conditions (requirements) during their internationalization.

In addition to the above-mentioned aspects, other variables may affect the use of public support. Specifically, aspects related to firm ownership (the share of foreign capital and family ownership) are bound

to affect the use of public support. Family-owned firms pursue more independent strategies than more diversely held private firms [20]. There are three main business characteristics of family-owned firms that may influence their internationalization strategies and practices: first, a strong desire to keep control and influence; second, a specific attitude toward risk; and third, a specific form of governance [12]. Regarding these characteristics, family-owned businesses may be willing to utilize the financial resources of family members for internationalization instead of using public resources [22].

Moreover, FFs are more distant culturally and institutionally from national governmental agencies than DFs and FFs suffer more than DFs from the bureaucratic process of access to public support and benefit from the external knowledge and resources supplied by parent firms. Based on these issues, we assume that public support is less used by FFs.

Another issue of interest relates to firm location. Firms located in central areas benefit from economies of agglomeration, specifically from the flow of knowledge between peers, making the imitation and knowledge diffusion regarding international processes easier [24]. Hence, it is expected that firms located in the periphery may use more public support than firms located in central areas.

### **3. Methodology**

The econometric logic behind the Heckman selection model fits our theoretical problem. It reflects well the firms' awareness process in the first stage and also assumes that the probability of a firm's unawareness influences the likelihood of use in the second stage. However, since our dependent variable in the first and second steps is binary, a standard Heckman model would be inconsistent and biased. We employ a modified Heckman selection model. As in the original approach, it consists of two steps. While the original Heckman selection model employs a probit estimator in the selection equation and an ordinary least squares estimator in the second step, we run a probit estimator in both steps. In the first step, we analyze all possible firms; in the second step, we consider the sample of firms that used public support because they were aware of it.

The model was tested on data collected from a survey of recently developed Portuguese firms. In this survey we contacted 4637 firms distributed proportionately all over the country resulting in information being obtained from 441 firms, 104 of them with FDI. This represents almost 1% of Portuguese firms in 2009 and 10% of the firms contacted.

Two groups of information compose the data obtained: first, information concerning the firms' competencies and the requirements of internationalization; second, information concerning the use and awareness of four internationalization support measures launched in the last decade in this country.

## **4. Results**

### **4.1. Support for Participation in Trade Fairs and State Missions**

We found that firms' competencies, in particular their export experience and dimensions, are negatively associated with the use of this measure. Additionally, foreign-owned firms have a lower probability of using public support than domestic-owned firms. Otherwise, firms' competencies seem to be positively related to awareness. Firms with a high level of export and FDI experience present a high probability of being aware of this support.

### **4.2. Support Through Training and Consulting Services**

Firms' competencies, in particular the export experience and dimensions, are negatively associated with the use of public support through training and consulting services. The model also shows that FFs have a lower probability of using public support than DFs. Otherwise, firms' competencies seem to be positively related to awareness. Firms with a high level of export experience and human capital present a high probability of being aware of this support.

### **4.3. Support Through Informational Services**

Firms' competencies, in particular their export experience, are negatively associated with the use of public support through informational services. Otherwise, the model shows a positive relation between the number of FDI locations, which proxy for the internationalization requirements, and the use of public

support through informational services. Additionally, the model shows that FFs have a lower probability of using public support than DFs.

#### **4.4. Support Through Programs for Exchanging Human Resources**

Firms' competencies, in particular their export experience, seems to be negatively associated with the use of public support through programs for exchanging human resources. However, for this measure, the qualification of human resources seems to be related to their use, not least because the most qualified employees see in this initiative an opportunity to develop their competencies.

### **5. Conclusion**

This paper has examined the role of firms' competencies and requirements of internationalization in the awareness and use of public support directed towards internationalization activities, which had not been covered previously. An interesting result was that competencies may increase the awareness (an essential condition of use) but reduce the (perceived) importance of public support (a sufficient condition of use). Hence, the existence of firms' competencies reduces the need for public support. In terms of the requirements of internationalization, the results are not so strong; however, they confirm our hypotheses. Thus, the requirements of internationalization have a positive effect on the awareness and use of public support. Firms that face more demanding conditions in their activities of internationalization reveal a higher level of use and awareness of external support.

While this study provides an increased understanding of the use and awareness of public support in activities of internationalization, it is not without its limitations. First, the study was narrowly focused in terms of the perceived importance and awareness, but other variables that have not yet been studied may play an important role in the explanation of the use of public support. Further, there are other important lines of research that remain unexplored: the impact of ineligibility, bureaucracy and the avoidance of external interferences are among them.

### **6. References**

- [1] European Commission. *Supporting the Internationalization of SMEs*. Final report of expert group. Technical report, Directorate-General for Enterprise and Industry, 2007.
- [2] European Commission. *Internationalization of European SMEs*. Final report. Technical report, Entrepreneurship Unit, Directorate-General, 2010.
- [3] P. Westhead, M. Wright. The internationalization of new and small firms: A resource based view. *Journal of Business Venturing* 2001, 16(4): 333-358.
- [4] M. Molnar, N. Pain, D. Taglioni. The internationalisation of production, international outsourcing and employment in the OECD. OECD Publishing, No. 561, 2007.
- [5] M. Koksal. Organizational and exporting determinants affecting export promotion program awareness, utilization, and usefulness level. *Journal of Euromarketing* 2009, 18: 219-232.
- [6] M. Falk, Y. Wolfmayr. *The Extent, Characteristics and Impacts of FDI and Multinational Firm Activities. A Firm Level Analysis*. Tech Rep 6, FIW, 2010.
- [7] D. Crick. UK SMEs' awareness, use, and perceptions of selected government export assistance programs: An investigation into the effect of the internationalization process. *The International Trade Journal* 1997, 11 (1): 135-167.
- [8] R. Krut, A. Moretz. *Home Country Measures for Encouraging Sustainable FDI*. Occasional Paper 8, Cross Border Environmental Management Project, Kbenhavn, 1999.
- [9] European Commission. *Observatory of European SMEs 2003, 4*. Technical report, KPMG Special Services and EIM Business and Policy Research in the Netherlands in co-operation with Eur. Network for SME Research and Intomart, 2004.
- [10] T. Brewer. Government policies, market imperfections, and foreign direct investment. *Journal of International Business Studies* 1993 24(1): 101-120.
- [11] J. Duran, F. Úbeda. The efficiency of government promotion for outward FDI. *Journal of International Business*

*Studies* 2001 24(1): 101-120.

- [12] T. Te Velde. Understanding developed country efforts to promote foreign direct investment to developing countries: The example of the UK. *Transnational Corporations* 2007, 16 (3): 83-104.
- [13] O. Ahmed, J. Mohamed, J. Johnson, L. Meng. Export promotion programs of Malaysian firms: International marketing perspective. *Journal of Business Research* 2002, 55(10): 831-843.
- [14] D. Demick, A. O'Reilly. Supporting SME internationalization. A collaborative project for accelerated export development. *Irish Marketing Review* 2000, 13: 34-45.
- [15] C. Martincus, J. Carballo, P. Garcia. Firm size and the impact of export promotion programs. *Applied Economic Letters* 2010, 18: 127-32.
- [16] C. Martincus, J. Carballo. Is Export Promotion Effective in Developing Countries? *Journal of International Economics* 2008, 76(1): 89-106.
- [17] A. Knott. Induced discrimination and firm size: Information vs incentive effects. *Small Business Economics* 2005, 25(4): 393-405.
- [18] E. Penrose. *The Theory of the Growth of the Firm*. Wiley, 1959.
- [19] W. Maeseneire, T. Clayes. SMEs, FDI and financial constraints. Vlerick Leuven Gent Working Paper Series, 25, 2007.
- [20] J. Dunning, S. Lundan. *Multinational Enterprises and the Global Economy*. Edward Elgar, 2008.
- [21] M. Gallo, J. Tapies, K. Cappuyns. Comparison of family and nonfamily business: Financial logic and personal preference. *Family Business Review* 2004, 17(4): 303-318.
- [22] T. Kontinen, A. Ojala. The internationalization of family businesses: A review of extant research. *Journal of Family Business Strategy* 2010, 1(2): 97-107.
- [23] J. Heckman, J. Smith. *The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program*. CIBC Working Paper Series, 4, 2003.
- [24] S. Bond, S. Harhoff, J. Van Reenen. *Investment, R&D and Financial Constraints in Britain and Germany*. Institute for Fiscal Studies Working Paper Series, W99r8, 1999.