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# The usefulness of State trade missions for the internationalization of firms: an econometric analysis

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## Abstract

Empirical studies on the usefulness of official visits (OVs) as a way to promote the internationalization of firms are scarce and it is often assumed from the political point of view that such visits have impacts that are as positive as they are immensurable. This study is centred on a relatively unexplored case (Portugal), in which OVs have become more and more visible to firms and to the public in general. By applying an econometric model, we seek to evaluate the importance regarding the structural characteristics of firms versus the characteristics of OVs, as to the way participants perceive the usefulness of official visits for promoting their firms and business in the markets visited. Based on 136 participations in 12 official visits which took place between 2005 and 2008, results indicate that the size of firms, foreign capital, export intensity, innovation intensity and experience in the market visited are statistically relevant variables in the assessment of the results and objectives of OVs. The proactive attitude of firms is particularly emphasized here – on the one hand, establishing contacts within the scope of OVs presumes a few prior capacities/competences on the part of firms, namely at the level of innovation; on the other hand, preparing for market entry is directly and positively related with the fact that the firms export to that market, that is, more experienced firms admit to take greater advantage of OVs as mechanisms for preparing a successful entry into the markets. Thus, we stress that it is not enough to invest on the simple organization of OVs; in order for these to achieve the desired efficiency, it is necessary, in the short term, to select the most competent firms and, in the long term, it is necessary to add more structured programmes to mission organization programmes in order to create and/or improve firms' competences, namely in terms of innovation.

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## 1. Introduction

The main objective of trade missions is to improve the bilateral trade flow between two countries (Hibbert, 1990). Therefore, official visits (OVs) fulfil the underlying objectives of trade missions when they have a clear economic or trade purpose, or even when the economic and trade directions are not exclusive but there are national businesspeople in the delegations (Jaramillo, 1992).

At academic level, there are few studies on the usefulness of OVs. It is clear from the existing literature, mainly focused on Export Promotion Programmes (EPP) and not directly on OVs, that the effectiveness and efficiency of Export Promotion Programmes (EPP) have been increasingly called into question, highlighting the need to assess the application of public funds in this area (Francis and Collins-Dodd, 2004). This pressure to assess the usefulness of the use of public funds in EPPs is intensified due to scarcity of resources (Spence, 2003). Although Wilkinson *et al*. (2005) suggested a positive impact of State expenditure on export promotion, the usefulness of the application of public funds to official visits has not been analyzed. To the best of our knowledge, with the exception of the study by Caiado *et al*. (2009), there are no studies that assess the perception of businesspeople taking part in OVs on the usefulness of those trips for promoting their firms and business in foreign markets.

Within this framework, the current study goes beyond the exploratory statistical analysis found in Caiado *et al*. (2009) by resorting to multivariable econometric techniques aiming to gauge the determinants underlying the perceptions of Portuguese business representatives on the usefulness of the OVs in which they have taken part. The survey includes 136 Portuguese business representatives that took part in 12 official visits between 2005 and 2008. Based on the data directly gathered from this survey, we analyze the perception the representatives have of the usefulness of OVs regarding a set of objectives related to their businesses in foreign markets (e.g., obtaining relevant information about the market, developing networks of contacts, gaining export experience, preparing for entry into the market).

This article is structured as follows. The next section is a brief survey of the literature, focusing in particular on the determinants of the perceived usefulness of OVs. Section 3 presents methodological considerations focusing on the data collection process and briefly characterizing the sample. Section 4 discusses the results of the logistic analysis. Lastly, in Conclusion, the main results of the study are summarized.

## 2. Determinants of the perceived usefulness of OVs

Internationalization poses multiple difficulties for firms which represent real barriers both to the beginning of their export activity and to the entry into new markets. The most widely mentioned are: added distances, greater complexity of operations, different legal frameworks and financial risks such as currency exchange rates and greater uncertainty regarding the profitability of the business (Kotabe and Czinkota, 1992).

In the literature, expressions like “export promotion”, “export assistance” or “export incentives” (Diamantopoulos *et al*., 1993) have been used interchangeably to refer to the set of activities, programmes or services that aim to encourage firms to export, thus contributing to the promotion of national exports. Trade missions, a type of Export Promotion Programme (EPP), are widely used to help firms enter into markets for export and are an integral part of the governmental trade policies which aim to develop exports in many industrialized countries and in some developing countries (Seringhaus, 1987). Spence (2000) suggests that trade missions are used by firms as an ‘ice-breaker’ in unknown markets. Caiado *et al*. (2009) argue that

Official Visits (OVs), when characterized by a clear economic or trade purpose, tend to fulfil objectives similar to those associated to EPPs, namely of trade missions.

Seringhaus and Rosson (1989) suggest a set of measures to assess the usefulness of trade missions which include: 1) fulfilment of the objectives of the missions; 2) the value of sales; 3) the number of contacts obtained; 4) the number of agents nominated during the missions; 5) and follow-up activities. Similarly, Spence (2000) puts forward, as measures to assess the performance of the missions, the following variables: 1) quality of the contacts established; 2) quality of the information received; 3) the type of information collected on the market; 4) opportunity to strengthen existing relationships; 5) achievement of the stated objectives of that trade mission; 6) and more tangible measures, such as sales and profitability. Therefore, the same criteria have not been used to assess trade missions.

The exploratory study by Caiado *et al.* (2009) demonstrates that the business representatives' perception of usefulness seems to depend on a set of structural characteristics associated to firms – size; capital (national capital versus foreign capital); export intensity; innovation intensity; sector (industry versus services) – and characteristics associated to the OVs in which the firms have participated – experience in the market visited; whether it is the first time the firm visits the market or not; type of visit (regarding the entity responsible for organizing the visit – Prime-Minister versus President of the Republic); quality of the contacts and information associated to the visit.

The exploratory analysis carried out by Caiado *et al*. (2009), although useful, lacks a more thorough and methodologically more substantial assessment of the relative importance of the characteristics or determinants of the firms' perception as to the usefulness of OVs. Therefore, it is important to analyze the extent to which the differences found in a univariable context are the same when assessed in a multivariable context, that is, resorting to more solid and sophisticated econometric methods.

## 3. Methodological considerations

In order to directly gauge the perception of business representatives who took part in Official Visits organized by the Portuguese Heads of State and Government regarding the usefulness of those trips, and in line with studies in the area, a decision was made to collect data by means of a direct survey.

The target-population was firms/businesspeople involved in 12 Official Visits that took place between January 2005 and May 2008[1], which included business delegations and were led by the President of the Republic and by the Prime-Minister. The information regarding the representatives of the firms that took part in the Official Visits is not public and was requested from the AICEP,[2] which provided access to the Travel Books where all of the participants in the above mentioned trips are listed. Given the objective of this study, the sample was constructed using only company representatives, excluding representatives of various entities such as trade and industrial associations, chambers of commerce, institutional representatives, representatives of associations or universities. Therefore, from a universe of 616 participations in the 12 official visits under analysis, the target-population with an initial size of 562 participations in official visits was identified. It is important to point out that the unit of analysis of this study is 'participation in the official visit', and not the 'company'.

[1] Further details of the visits considered in this analysis can be found in our related study (Caiado *et al*., 2009).
2 AICEP Portugal Global is a public business entity, created in 2007, which promotes foreign investment in Portugal and the internationalization and the exports of the portuguese firms.

**Table 1: Theoretical Foundation of the Research Variables**

| Usefulness | Issues surveyed | Theoretical Foundation |
|---|---|---|
| Market Research | Identifying business leads | Seringhaus (1987); Seringhaus and Mayer (1988); Francis and Collins-Dodd (2004) |
| | Opportunity to carry out market research | Hibbert (1985); Seringhaus and Mayer (1988); Gençtürk and Kotabe (2001); Spence and Crick (2001); Wilkinson and Brouthers (2006) |
| | Obtaining information on competitors | Seringhaus (1987); Kotabe and Czinkota (1992) |
| | Acquiring knowledge about the market(e.g., legal framework, labour regulations, competition law, restrictions on trade) | Seringhaus, (1987); Seringhaus (1989); Spence (2000); Spence (2003) |
| Establishing contacts | Establishing a network of contacts more quickly | Hibbert (1985); Seringhaus (1987); Francis and Collins-Dodd (2004); Wilkinson and Brouthers (2006) |
| | Establishing contacts with potential clients in the market | Spence and Crick, 2001; Wilkinson and Brouthers, 2006 |
| | Establishing contacts with potential agents/distributors in the market | Seringhaus (1987); Seringhaus (1989); Spence and Crick, (2001); Wilkinson and Brouthers (2006) |
| | Accessing high level government and business contacts | Hibbert (1985); Seringhaus (1987); Seringhaus and Mayer (1988); Spence and Crick (2001); Spence, (2003) |
| Establishing agreements/contracts | Establishing partnerships (e.g., R&D; joint ventures; other forms of investment) | |
| | Awarding contracts (e.g., sales and purchase agreements; award of tenders) | Nitsch (2007) |
| Gaining export experience | Gaining experience in export markets | Hibbert (1985); Seringhaus and Mayer (1988); Seringhaus and Rosson (1989); Alvarez (2004); Francis and Collins-Dodd (2004) |
| | Creating *business networks* with other participants in the official visit (i.e., exchange of experience, knowledge and contacts) | Hibbert (1985); Seringhaus (1987); Seringhaus and Mayer (1988); Wilkinson and Brouthers (2006) |
| | Taking advantage of the contribution of the government/State in export marketing | Seringhaus (1987); Seringhaus and Mayer (1988) |
| Preparing for market entry | Identifying the most appropriate way to enter into the market visited | Seringhaus (1989); Francis and Collins-Dodd (2004) |
| | Way to overcome barriers to entry into the market visited | Seringhaus (1987); Seringhaus and Rosson (1989); Smith et. al. (2006) |
| | Planning the development of new products/services for the market visited | Seringaus (1987); Seringhaus and Rosson (1989); Spence (2000); Francis and Collins-Dodd (2004) |
| | Adapting products/services for the market visited | Spence and Crick (2001) |
| | Assessing the marketing work required to enter into and operate in the market visited | Seringhaus and Mayer (1988); Seringhaus (1989); Spence and Crick (2001) |
| | Generate a greater promotional impact of your company and your products/services | Hibbert (1985); Kotabe and Czinkota (1992) |
| Quality of the contacts and information | Quality of the contacts established | Hibbert (1985); Seringhaus (1987); Wilkinson and Brouthers (2000a) |
| | Quality of the information obtained about the market | |
| Results of participating in the visit | Expanding your activities in the market to new networks of contacts | Spence and Crick, 2001 |
| | Strengthening your presence in the market in established networks of contacts | Spence and Crick, 2001 |
| | Strengthening your presence in the market(e.g., sales, market shares) | Seringhaus (1987); Francis and Collins-Dodd (2004). |
| | Strengthening previous marketing work (e.g., promotion of the company, publicity) | Spence and Crick, 2001 |
| | Introduction or identification of new products/services | Spence and Crick, 2001 |

The questionnaire was developed with the aim of gauging the perception of business representatives regarding a set of statements associated with the usefulness of the trade missions and official visits, defined based on the theoretical and empirical foundations found in the literature (Table 1). The questionnaires were personalized and included information on the visit being analyzed – destination, sponsoring entity (President of the Republic or Prime-Minister) and date – and also the name of the company and the name and position of the representative of the company on that trip. Firstly, this procedure facilitated the delivery of the questionnaire to the potential respondent and secondly allowed the respondent to quickly identify the official visit that was being analyzed. The questionnaires were sent together with an introduction letter, describing the goal of the study and appealing to potential respondents to participate in the study.

The questionnaire has 3 separate parts. The first part includes questions related to the description and economic and financial indicators of the company needed to characterize the responding firms: SIC (standard industrial classification), number of workers, total exports, exports to the market visited, % of foreign capital and R&D expenditure. The second part aims to gauge the experience of interviewees who participated in official visits and the level of knowledge and involvement in the market visited. The third part, which comprises 25 closed answer questions and 1 open answer question, gauges the perception of respondents regarding the usefulness of the official visits in which they took part for the promotion of their firms and business in the market visited. Respondents were asked to indicate the degree of importance of a set of hypotheses related to the usefulness of their participation in the official visit on a 5-point Likert scale, which has parallels with similar studies. The 26 questions covered the usefulness of participating in the visit for achieving a set of objectives, organized into 5 sub-groups of analysis: (1) market research, (2) establishing contacts, (3) establishing agreements/contracts, (4) gaining export experience, (5) preparing for market entry. An attempt was also made to assess the perception of respondents regarding the quality and importance of the contacts and information obtained on the visit, and lastly their perception of the results of taking part in the visit.

The data collection process was complex and slow, and extended over 3 months, from September to November 2008.[3] During this process, some firms contacted us to inform us that their representatives on the visits were no longer part of the company management. Additionally, 3 death notices were received, referring to company representatives that had taken part in the official visits. In total it was necessary to remove 39 participations from the initial population of 562 participations. Therefore the final size of the target population was 523 participations in official visits.[4]

136 valid answers were received (83 via fax and 53 via e-mail), distributed across the 12 Official Visits analyzed as shown in Figure 2, with an overall response rate of 26%, which is in line with similar studies (e.g., Kotabe and Czinkota, 1992; Gençtürk and Kotabe, 2001; Francis and Collins-Dodd, 2004; Diamantopoulos and Kakkos, 2007). In the majority of visits, the response rate varies between 20% and 40%. We highlight the very low response rate in the case of the visit to France, which may be explained by the fact that it was carried out in 2005.

[3] The questionnaires were sent out in 2 stages. Whenever possible, efforts were made to identify the direct contact details of the respondents in order to increase the response rate. In the first stage the questionnaires were sent by fax to the 562 participants in official visits which constituted the original sample, and confirmation of receipt was recorded for 529 faxes. In the second stage, started two weeks after the questionnaires had been sent by fax, the questionnaires were re-sent by e-mail to all firms (including those which it had not been possible to send the questionnaire by fax to in the 1st stage), with the exception of those that had in the meantime replied to the questionnaire. In this stage, whenever possible, an effort was made to identify the personal e-mail address of the person to be surveyed, in order to increase the response rate. At the same time, telephone contacts were established in order to appeal to the company representatives to take part in the study and to get the personal contact of the representatives to be surveyed, so the questionnaire could be sent to them directly.
[4] 5 due to the death of the representatives to be surveyed and 34 related to the fact that the company representative at the time of the official visit was no longer part of the company.

The vast majority of respondents held executive positions in their respective firms. Around 92.6% held positions in the top management of the company,[5] while the remainder (7.4%) held positions in middle management.[6]

Drawing up the lists of firms to be surveyed allowed us to confirm that many firms participated in various official visits, which corroborates one of the points in the study by Seringhaus (1987) which found a trend for firms to take part in trade missions continually. However, the vast majority of respondents claimed to have taken part in a small number of official visits. Around half of respondents (53.8%) stated they took part in 1 or 2 visits and only 22% stated they had taken part in more than 5 visits. This fact suggests that, although in the case of Portugal there is also a trend for ongoing participation of firms in official visits, their respective representatives vary from time to time; this could mostly be explained by the mobility of individuals between posts (within the same firm) and firms.

The sample includes a balanced representation of the industrial and services sectors. The absence of firms in the primary sector is not surprising, given that these are scarce in the total population. The economic sectors "Services provided to firms" (e.g., business and management consultancy; market studies; management of holding companies) (14%) and "Food and drinks" (13%) are the most represented in the sample.

Regarding the size of the firms, the sample has a balanced participation of SMEs (51.4%) and medium and large enterprises (48.6%). We should however highlight that large firms with over 500 workers are the most represented group – 35.8% of respondents followed by medium-small firms with 50 to 249 workers with 32.8% of responses.

The vast majority of responding firms are Portuguese-owned – 86% stated that 100% of their capital was held by Portuguese entities. The remaining 14% are firms with foreign capital with share holdings ranging from 11% to 100% of the share capital. Of these, 5 firms (3.7% of respondents) were entirely foreign-owned.

The fact that 21.6% of firms do not have any investment in R&D is not surprising, given that the population of this study is composed of firms in all economic sectors and is not based on any criteria related to R&D indicators. However the remaining firms (74.4%) recorded spending on R&D. The majority of firms, 69.3%, have an R&D Intensity below 3%, and 5.7% of firms recorded values above 20% (Figure 5). In the study by Teixeira and Tavares-Lehmann (2007), the figures for the same values were 72.1% and 6.8%, respectively. Given that this study involves a sample of "highly technological and knowledge-intensive firms", we can state that the firms in our sample have a considerably high R&D Intensity. This statement is also supported by the average value of R&D Intensity presented by the firms in the sample, 3.8%, which is significantly above the value recorded by the CIS III Survey for Portugal, 0.8% (Bóia, 2003).[7]

In summary, the responding firms have 625 workers, 8.8% of Foreign Capital and spend the equivalent of 3.8% of their sales on Research & Development (R&D) (average values, cf. Table 2). In terms of indicators

[5] Respondents used a different set of functions to indicate the position they held in the firm which we felt should not be categorised. These were: President; President of the Management Board; CEO; Director General; Executive Director; Delegated Manager; President of the Executive Board; Vice-President; Vice-President of the Management Board; Director-Shareholder; Administrator; or Member of the Board.
[6] These were: Commercial Director; Director of International Sales; International Manager; Operations Manager; Product Consultant; Manager of the Design Centre; President of the General Council and of Supervision.
[7] CIS III is the 3rd Community Innovation Survey which analyzed the innovation processes in firms. The survey covered over 60 000 firms in the EU15, which included 1 875 Portuguese firms. The data for Portugal were analyzed in a study by Bóia (2003).

more related to the internationalization process, the analysis of the descriptive statistics shows that responding firms have, on average, 17 export markets and 46.7% of their total sales are destined for foreign markets. The firms in the sample appear to be at a significant stage of internationalization according to the indicator of export intensity (the ratio between the value of total exports and the value of total sales for each company), with over half of the firms (55.5%) exporting to more than 10 markets.

For most firms the market visited is not important for exports, representing on average only 7.5% of total exports. We should stress that at the time of the visit, 52.3% of firms did not export to the market visited. However, the market visited was not unknown to the firms given that 79.7% already had contacts or business in the market, and 71.4% stated that before the visit, a representative of their company had already visited the market. From this it is possible to infer that the majority of participants, although they do not have any export activities, reveals a potential interest in the market visited.

**Table 2: Some descriptive statistics of responding firms (characterization of the sample)**

| | Mean | Minimum | Maximum | Standard deviation |
|---|---|---|---|---|
| Workers (no.) [1] | 625 | 3 | 6500 | 1092 |
| Foreign Capital (%) | 8.8 | 0 | 100 | 25.1 |
| Total exports in total sales (%) | 46.7 | 0 | 100 | 33.5 |
| Exports to the visited Market in total exports (%) | 7.5 | 0 | 94 | 18.2 |
| R&D in the total of total sales (%) | 3.8 | 0 | 27 | 6.4 |
| Export markets (no.) | 17 | 0 | 112 | 19 |
| Ratio of sales per worker | 245757 | 117 | 5063500 | 515840 |

*Note*: [1] two outlier firms were not included.

From the exploratory results obtained in our previous study (Caiado *et al*., 2009), also based on the sample of representatives used in the present study, we can conclude that the perception of the usefulness of participating in official visits is generally positive, given that 98.5% of respondents state that they would take part in an official visit again. More specifically, we find that the most highly rated areas in the perception of firms taking part in OVs are 'establishing contacts' and 'gaining export experience'.

The results in the differences in means suggest that certain structural characteristics of the firms and characteristics associated with the visit, namely ' foreign capital' and 'knowledge of the market visited', affect the manner in which firms perceive the usefulness of official visits for achieving certain objectives. At the level of the size of the firms, the results show that SMEs (when compared with large firms) perceive OVs as playing a larger role at the level of preparing for market entry, namely with a view to adapting products/services for the market visited and planning the development of new products/services for that market. In addition, firms in the Services sector perceive OVs to be more important than their counterparts in the industrial sector for establishing contacts (governmental and a faster development of contact networks) and agreements (namely partnerships).

Quite contrary to firms with foreign capital, firms with national capital consider OVs (much) more important both at the level of market research and establishing contacts, and in the possibility of gaining export experience and preparing for entry into the market visited. In this last aspect, firms with national capital rate OVs particularly highly (and more highly than firms with foreign capital) at the level of identifying the most suitable way to enter into the market visited, as a means to overcome barriers to entry in the market visited, helping in the assessment of the marketing work required to enter and operate in the market visited and

contributing to the planning of the development of new products/services for the market visited. Therefore, from the firms' point of view, OVs seem to play a huge role in increasing the level of knowledge they have about processes for entering into and exploring foreign markets.

The more innovative firms (i.e., with a high R&D intensity) appear to rate the usefulness of OVs more highly in establishing contacts (namely with potential agents, distributors and clients) and in preparing for entry into the market visited, via the adaptation of products/services for that same market. This difference suggests that firms that are more dynamic in terms of innovation may have a more pro-active stance when taking part in OVs.

We should emphasize that it is firms with little export experience (in global terms) that rate the contribution of OVs at the level of market research and preparing for entry into the market visited more highly. Similarly, it is firms with no knowledge of the market visited and firms with no business or contacts in that market which, on average, rate OVs most highly both at the level of market research and as a way to overcome barriers to enter that market and to acquire and increase their export experience. This seems to corroborate the finding by Spence and Crick (2001) that firms visiting a market for the first time use the trade mission to access business networks.

Given that the exploratory results seem to indicate differences among participants, both at the level of the structural characteristics and concerning the characteristics of the OVs in which they took part, we consider it important in this phase to analyze the extent to which these differences are the same when assessed in a multivariable context, that is, resorting to more sophisticated econometric analyses. The following section describes such efforts of analysis.

## 4. Determinants of the perceptions on the 'usefulness' of OVs. A multivariable model

### 4.1. Model description

This section aims to empirically analyze, by means of a multivariable model, the most relevant determinant factors in each official visit regarding business representatives' perception as to the importance of these visits for certain results and objectives. Thus, our dependent or explanatory variable is the higher perception of results/objectives (above versus below average perception).

The binary nature of the observed data related to the dependent variable [perception above average? (1) Yes; (2) No] confines the choice of an estimation model. Moreover, the assumptions required to test hypotheses in a conventional regression analysis are necessarily violated (for example, it does not seem feasible to assume that the error distribution is normal). Expected values in a multiple regression model cannot be interpreted as probabilities because they do not limit the predicted value, falling between 0 and 1. Therefore, conventional estimation techniques in the context of a discrete dependent variable are not a valid option. Based on the limitations mentioned above, the analysis in this study will be carried out within the context of the general framework for probabilistic models.

*Prob (event j occurs) = Prob (Y=j) = F [relevant effects: parameters].*

where

*Y* = 1 if, in relation to a given visit, business representatives' perception concerning a given result/objective is above average

*Y* = 0, otherwise

Therefore, in order to explain the perception of business representatives concerning a given result/objective, it is necessary to include a set of required factors to explain the results, as follows:

*Prob (Y=1) = F(X , β)*
*Prob (Y=0) = 1 - F(X , β)*

Partly based on the brief review of the literature carried out in Section 2[8], the **X** vector includes a set of factors, such as the size of firms, capital (foreign versus national), export intensity, innovation intensity, experience in the market visited, whether it is the first time the firm visits the market or not; type of visit (regarding the entity responsible for organizing the visit – Prime-Minister versus President of the Republic); quality of the contacts and information, and sector (manufacturing versus services).

The set of *β* parameters reflects the impact of the changes in **X** on the probability of the visit being perceived as associated to a result/objective above average.

According to Johnston and Dinardo (1997), the logit model is a functional model that is convenient for binary endogenous variables. The shape of the model ensures that the predicted probabilities remain between 0 and 1. The main difference between normal distribution and logistic distribution is that the latter has longer tails. According to Greene (1993), in some cases for purposes of mathematical convenience, there are practical reasons for preferring one over the other, but it is difficult to explain the choice of a given distribution and not the other based on theoretical reasons. Therefore, in most cases where this applies, choosing either one does not seem to make much difference.

To better explain the result, we calculate the coefficients that facilitate the interpretation of the calculations on the model. Therefore, in the logistic regression model, parameters are calculated using the maximum probability (MP) method. In other words, given the assumptions made in light of the distribution of errors, we select the coefficients to make the results easier to observe.

However, to test whether the variables specific to the firm and those associated to the visits or sector are significant explanatory variables of the perception (above average) of results/objectives, we use the general logistic regression estimation with the following specifications:

$$P(Perception\ above\ average) = \frac{1}{1+e^{-Z}}$$

$$Z = \beta_0 + \underbrace{\beta_1 Size + \beta_2 ForeignCap + \beta_3 XInt + \beta_4 RDInt}_{Firm-Specific\ Variables} +$$

$$+ \underbrace{\beta_5 ExpMarkVis + \beta_6 FirstVis + \beta_7 OrgEntity + \beta_8 QualCont}_{Variables\ Associated\ to\ Visits} + \beta_9 Sector$$

We opted to proceed with an adjustment of the equation of the logistic model to a rewritten model in terms of the odds of an event occurring, which facilitated a clear and direct interpretation of the coefficients of the logistic function.

[8] A more detailed review of the conditions and theoretical support of OVs can be found in Caiado *et al*. (2009).

In that case, the logit model is achieved by:

$$\log\left(\frac{\Pr obPerc\ Above\ Average}{\Pr ob.Perc\ Below\ Average}\right) = \beta_0 + \underbrace{\beta_1 Size + \beta_2 ForeignCap + \beta_3 XInt + \beta_4 RDInt}_{Firm-specific\ Variables} +$$

$$+ \underbrace{\beta_5 ExpMarkVis + \beta_6 FirstVis + \beta_7 OrgEntity + \beta_8 QualCont}_{Variables\ Associated\ to\ Visits} + \beta_9 Sector$$

One way of interpreting the logistic coefficient would be to change the odds ratio associated to a unitary change in the independent variable:

$$\frac{\Pr ob.Perc\ Above\ Average}{\Pr ob.Perc\ Below\ Average} = e^{\left(\beta_0 + \underbrace{\beta_1 Size + \beta_2 ForeignCap + \beta_3 XInt + \beta_4 RDInt}_{Firm-specific\ Variables} + + \underbrace{\beta_5 ExpMarkVis + \beta_6 FirstVis + \beta_7 OrgEntity + \beta_8 QualCont}_{Variables\ Associated\ to\ Visits} + \beta_9 Sector\right)}$$

In this case, ***e*** elevated to $\beta_i$ is the factor by which the odds change when the independent variable $i^{th}$ increases by a unit. Where $\beta_i$ is positive, this factor will be greater than 1, which means the odds increased and the factor influences the perception on the result/objective in a positive way; if $\beta_i$ is negative, this factor will be less than 1, which means the odds decreased, thus the factor influences the perception on the result/objective in a negative manner; where $\beta_i$ is equal to 0, the factor is equal to 1, meaning that the odds remain unchanged, therefore, the factor has an impact on the perception on the result/objective.

### 4.2. Estimation results

The theoretical specification underlying the econometric model adopted in this study aims to identify the most relevant factors in relation to the perception of business representatives regarding the importance of official visits in achieving certain results and objectives. As described above in the previous section, the following explanatory variables were taken into consideration:

- *Firm-specific variables*: size; foreign capital; export intensity and innovation intensity.
- *Variables associated to visits*: experience in the market visited; first visit to the market; organizing entity of the official visit; quality of the contacts and information obtained.
- Sector variable which distinguishes between manufacturing industry and services firms.

Six different specifications were considered for the model. Each specification differs from the rest by the dependent variable under analysis – specific results or objectives associated with the Official Visit – being that the explanatory variables are identical. Thus, Model 1 seeks to identify the determinant factors that lead firm representatives to rank the Overall results of the OV above average.[9] In the following models, the dependent variable is a compound variable and represents an above-average perception of firm representatives in relation to the following specific objectives: *market research* (Model 2);[10] *establishing contacts* (Model 3);[11]

[9] Model 1 is a compound variable that includes: expanding activities in the market visited to new networks of contacts; strengthening your presence in the market in established networks of contacts; strengthening your presence in the market; strengthening previous marketing work; and introduction/identification of new products and services.
[10] Model 2 is a compound variable that includes: identifying business leads; opportunities to carry out market research; obtain information about competitors; acquire knowledge about the market (e.g., legal framework, labour regulations, competition laws, restrictions on trade).
[11] Model 3 is a compound variable that includes: establishing a network of contacts more quickly; establishing contacts with potential clients in the market; establishing contacts with potential agents/distributors in the market; and accessing high-level government and business contacts.

*establishing contracts and agreements* (Model 4);[12] *gaining export experience* (Model 5);[13] *preparing for market entry* (Model 6).[14]

Table 3 shows that all models present goodness-of-fit. In fact, the statistics of the Hosmer and Lameshow test is revealed to be insignificant, which leads us to accept the null hypothesis in which the estimated model adequately represents 'reality'. In addition, the Nagelkerke R Square demonstrates that 30% to 50% of the variance of the dependent variable can be explained by the model. Finally, the proportion of estimated values that correspond to the observed values is quite high, roughly above ¾.

Upon observing the regressions of the several different models, we can conclude that the factors determining overall results differ from those that determine other objectives. Exceptionally, the *quality of the contacts and information* emerges as a strong determinant, positively and statistically significant in all the models, both for overall results and for all other objectives under analysis. In other words, in relation to visits in which firm representatives highly rank the quality of the contacts and information obtained, on average, all else constant, those very representatives also perceive an above-average importance regarding overall results and specific objectives.

In relation to the overall results, factors such as export intensity (general) and experience in the market visited are also positively and statistically significant. Therefore, we can see that the perception of the overall results associated to the OV is determined by global export experience and prior experience in the relevant market. On the contrary, when the firm representative visits the market for the first time, the general tendency is to generate below-average perceptions of the overall results. This result is not only consistent but also reinforces the previous finding, in which the existence of prior experience in the market visited is important to achieve results. It is important to emphasize however that the fact that it is the first visit is, generally speaking, irrelevant to the remaining objectives being analyzed.

It is interesting to note the heterogeneity found in the relevant factors to explain the perceptions concerning the overall results and the several objectives analyzed. For instance, being a firm with national capital (versus foreign capital) is generally associated with assigning a higher rank of importance to the contribution of OVs to the 'market research' objective. This result may reflect the lower internationalization experience and resources of Portuguese-based firms when compared to firms of foreign capital. On the other hand, the innovative character of firms emerges as positively and statistically significant in the case 'establishing contacts'. In other words, on average, all else constant, the perception on 'establishing contacts' is ranked above average by business representatives of innovative firms in terms of importance.
It should be noted that neither the entity responsible for organizing the OV nor the business sector of the firm are relevant. That is to say, if the visit is organized by the Portuguese Head of Government or by the Head of State, this does not seem to affect the perception of firm representatives regarding their importance in the objectives or results under analysis.

[12] Model 4 includes establishing partnerships (e.g., R&D; joint ventures; other forms of investment) and celebrating contracts (e.g., sales and purchase agreements; award of international tenders; contract award).
[13] Model 5 is a compound variable that includes: gaining experience in export markets; creating business networks with other participants in the official visit (i.e., exchange of experience, knowledge and contacts); and taking advantage of the contribution to the government/State in export marketing.
[14] Model 6 is a compound variable that includes: identifying the most appropriate way to enter into the market visited; way to overcome barriers to entry into the market visited; generating a greater promotional impact of your company and your products/services in the market visited; assessing the marketing work required to enter into and operate in the market visited.

Similarly, visits by business representatives from manufacturing industry or services firms do not seem to explain the different perceptions of the 'usefulness' of OVs.[15]

Finally, the objectives, *establishing contracts and agreements* on the one hand, and *gaining export experience* on the other, positively depend on the firm representatives' evaluation of the quality of contacts and information received during the OV. The importance of *preparing for market entry* tends to be ranked above average by business representatives generally of small-sized firms and firms with an effective experience in the market visited. The latter indicates that the relevant firms refer to an increase in the complexity of their presence in the market visited, evolving from mere exports to an effective presence with investments.
We proceeded with a second set of regressions (Table 4) in which the variable 'Prior Contacts or Business Relations' was used as an alternative to 'First Visit to the Market'. All previously observed results are confirmed so we can conclude that they are solid.

[15] Even dividing the sector by industries within Manufacturing and Services Industries does not affect this result.

**Table 3: Determinants of firms' perception on the results and objectives of official visits**

| | | Concrete Results | Objectives | | | | |
|---|---|---|---|---|---|---|---|
| | | **Model 1: Overall Results** | **Model 2: Market Research** | **Model 3: Establishing contacts** | **Model 4: Establishing contracts and agreements** | **Model 5: Gaining export experience** | **Model 6: Preparing for market entry** |
| Firm-specific variables | Size (ln) | -0.350 | -0.203 | -0.191 | -0.153 | 0.039 | -0.414** |
| | Foreign capital (dummy, for.cap=1) | -0.550 | -2.427* | -1.661 | -1.060 | 0.472 | -0.932 |
| | Export intensity | 1.918* | 0.715 | 0.479 | 1.247 | 1.451 | 1.367 |
| | Innovation intensity (dummy, R&D/sales above average) | -0.057 | 0.602 | 1.322** | 0.831 | 0.867 | -0.148 |
| Variables associated to visits | Experience in the Market visited (Exp to Market visited in total of exports) | 13.050** | 1.084 | -1.051 | 1.785 | 3.136 | 8.264* |
| | **First visit to the Market (dummy)** | -1.006* | 0.375 | 0.387 | 0.105 | 0.469 | -0.357 |
| | Entity (Dummy visit relative to Prime-Minister=1) | 0.542 | -0.780 | 0.415 | 0.356 | -0.884 | -0.197 |
| | Quality of the contacts and information (ln) | 6.109*** | 6.234*** | 5.129*** | 3.202*** | 5.173*** | 4.758*** |
| Sector | Manufacturing versus services industry (dummy=1 for MI) | -0.566 | -0.978 | -1.085 | -0.649 | -0.712 | 0.530 |
| Constant | | -8.387*** | -5.513*** | -5.547*** | -3.170** | -6.612*** | -4.043** |
| | N | 97 | 96 | 97 | 97 | 96 | 97 |
| | Result above average | 44 | 42 | 45 | 58 | 51 | 53 |
| | Other | 53 | 54 | 52 | 39 | 45 | 44 |
| *Goodness-of-fit of the Model* | | | | | | | |
| Hosmer and Lemeshow Test (significance) | | 6.370 (0.606) | 4.868 (0.772) | 6.337 (0.610) | 7.983 (0.435) | 7.865 (0.447) | 6.419 (0.600) |
| | Nagelkerke R Square | 0.485 | 0.508 | 0.456 | 0.299 | 0.443 | 0.453 |
| | % correct | 78.4 | 79.2 | 75.3 | 73.2 | 74.0 | 76.3 |

*Note: statistically significant at *** 1%; ** 5%; * 10**

The only difference refers to Model 3 and here the existence of prior contacts or business relations adversely affects the objective 'establishing contacts', which is still a consistent result. In other words, taking part in a visit does not contribute to the establishment of contacts, since they had already been established by the firm. Given the importance of the variable concerning the quality of the perception on the 'usefulness' of OVs, we seek to figure out to which extent the assessment of the quality of the visit is affected by the structural characteristics of the firms (Table A1, in Appendix). From the regression carried out, we conclude that the overall international experience, i.e., the export intensity, is relevant but the effect is highly negative. This means that the more international experience a firm has, the lower the quality of the OV tends to be rated. This indicated that the more international experience a firm has, the higher the level of demands will be when evaluating the official visit. Therefore, the results presented in Table 1 and 2 are not determined by the likely reduced experience or international exposure of the firm that could 'overrate' the importance, above average, given to results/objectives achieved in the OV.

## 5. Conclusion

This study aimed to gauge the perception of businesspeople who took part in official visits organized by Portuguese Heads of State and Government regarding the usefulness of those visits for the promotion of their firms and business in the markets visited. Given the lack of studies on these issues we decided, at a conceptual level, to take the similarities between trade missions and official visits involving business delegations as our starting point. Therefore, the research was developed assuming that official visits and trade missions can fulfil the same objectives and have the same usefulness for the businesspeople who take part in them (Caiado *et al*., 2009).

The study intended to provide an empirical contribution to the literature on the usefulness of official visits that has not dedicated much attention to this issue, except for the recent study by Cassey (2007). With such a contribution, based on the case of Portugal, we sought, in a relatively pioneering manner and by means of applying an econometric model, to demonstrate that certain structural characteristics of firms, such as innovation intensity, size, foreign capital or export intensity, tend to influence the way businesspeople taking part in official visits perceive the usefulness of such visits for promoting their firms and businesses in the markets visited.

The empirical research was based on data collected by means of a survey carried out specifically for this purpose of representatives of the firms who took part in 12 official visits during a 4-year reference period, between 2005 and 2008 (with a valid sample of 523 participations in official visits and 136 observations, which corresponds to a response rate of 26%).

The results of the logistic ratings suggest that certain structural characteristics of firms and the characteristics associated with the visit tend to affect the way firms perceive the usefulness of official visits to achieve certain objectives. Therefore, this study demonstrates that the size of firms, foreign capital, export intensity, innovation intensity and experience in market visited are statistically significant as they can explain how firms evaluate certain objectives of OVs. Thus, small-sized firms, on average, all else constant, give more value to the objectives associated with preparing for market entry. In addition, Portuguese-owned firms tend to assign more importance to the official visit for market research, a solid fact supported by a more exploratory analysis carried out by Caiado *et al*. (2009). The innovation intensity positively affects the establishment of contacts and the fact that a firm exports to the market positively affects the way it prepares for market entry. The fact that a firm exports to the market visited or other international markets is a factor that tends to positively affect the assessment of the overall results.

**Table 4: Determinants of the firms' perception on the results and objectives of official visits**

| | | Concrete Results | | Objectives | | | |
|---|---|---|---|---|---|---|---|
| | | **Model 1: Overall Results** | **Model 2: Market Research** | **Model 3: Establishing contacts** | **Model 4: Establishing contracts and agreements** | **Model 5: Gaining export experience** | **Model 6: Preparing for market entry** |
| Firm-specific variables | Size (ln) | -0.149 | -0.193 | -0.060 | -0.133 | 0.050 | -0.401** |
| | Foreign capital (dummy, for.cap=1) | -1.180 | -2.348** | -1.783 | -1.138 | 0.545 | -1.094 |
| | Export intensity | 2.627** | 0.694 | 0.531 | 1.221 | 1.401 | 1.307 |
| | Innovation intensity (dummy, R&D/Sales above average) | 0.579 | 0.415 | 1.105* | 0.683 | 0.669 | -0.110 |
| Variables associated to visits | Experience in the Market visited (Exp to Market visited in total of exports) | 10.130* | 1.206 | -1.192 | 2.016 | 3.337 | 8.454* |
| | **Prior contacts or business (dummy)** | 2.992*** | -0.717 | -1.455** | -0.816 | -0.734 | -0.038 |
| | Entity (Dummy visit relative to Prime Minister=1) | 0.381 | -0.722 | 0.585 | 0.413 | -0.809 | -0.220 |
| | Quality of the contacts and information (ln) | 6.101*** | 6.287*** | 5.437*** | 3.200*** | 5.261*** | 4.580*** |
| Sector | Manufacturing versus services industry (dummy=1 for MI) | -0.941 | -0.916 | -1.183 | -0.651 | -0.641 | 0.518 |
| Constant | | -10.667*** | -4.960** | -4.809** | -2.551 | -6.066*** | -3.939** |
| | N | 97 | 96 | 97 | 97 | 96 | 97 |
| | Result above average | 44 | 54 | 45 | 58 | 51 | 53 |
| | Other | 53 | 42 | 52 | 39 | 45 | 44 |
| *Goodness-of-fit of the Model* | | | | | | | |
| Hosmer and Lemeshow Test (significance) | | 11.209 (0.190) | 1.161 (0.997) | 9.883 (0.272) | 3.935 (0.863) | 5.614 (0.690) | 7.067 (0.529) |
| | Nagelkerke R Square | 0.567 | 0.513 | 0.492 | 0.314 | 0.448 | 0.450 |
| | % correct | 81.4 | 79.2 | 76.3 | 75.3 | 75.0 | 77.3 |

*Note*: statistically significant at *** 1%; ** 5%; * 10*

The perception of firm representatives concerning the contribution of the official visit towards the analyzed objectives seems to depend on the quality of contacts and information obtained during that visit. Therefore, a good assessment of the quality of the contacts and information obtained is positively reflected in all objectives and results. Regarding the characteristics associated with the visit, the first time visiting the market is associated with a negative assessment of the overall results, and, in contrast, the existence of prior contacts or business relations is associated with a positive assessment of the overall results. On analyzing the regressions of the model, replacing the variable 'first visit to the market' with the existence of 'prior contacts or business relations' in the market visited, the results came out to be solid, which confirm the consistency of the answers and the validity of the model.

Given that the participation of businesspeople in official visits is seen by official entities as a means of promoting export and internationalization of national firms, the study outlined herein bears important political implications. First, the analysis shows that the quality of contacts provided to firms during the visits and the quality of the available information on the market visited are decisive factors in their assessment of the usefulness of their taking part in official visits. In this sense, we suggest that the relevant authorities responsible for organizing the visits should give priority to the quality of the contacts and information they provide to firms. Second, we found that certain structural characteristics of firms and certain characteristics of the visits influence the manner by which firms evaluate the usefulness of their participation in OVs. Therefore, it is necessary to plan the OVs and agendas of businesspeople during the visit more carefully and focus on each firm individually, since the firms visiting the same market may have different objectives, depending on their structural characteristics and the characteristics of the market. More specifically, taking into account the importance of the quality of the contacts and information provided, it is important that each firm is provided with the contacts and information that best fit their specific objectives for the market visited. Third, the findings of the analysis carried out suggest that the perception of firms with no experience or interest in the market, and not so dynamic in terms of innovation, does not discard the usefulness of the visit in terms of concrete results. Therefore, we suggest that the firms selected to integrate the official delegations should be firms with (some) innovative dynamics, either with an actual interest or already in the market, which can be mostly verified by the existence of sales/exports to the market or the existence of contacts or business relations already established in the market.

In brief, the results of this study support the idea that the participation of businesspeople in official visits is useful for firms to promote their business in international markets. Such an effort of economic diplomacy should thus be further encouraged and supported by public authorities.

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# Appendix

**Table 1: Determinants of the perception of contacts and information**

| | | |
|---|---|---|
| *Firm-specific variables* | *Size (ln)* | *-0.130* |
| | Foreign capital (dummy, for.cap=1) | -0.220 |
| | Export intensity | -1.544* |
| | Innovation intensity (dummy, R&D/sales above average) | 0.322 |
| Variables associated to visits | Experience in the Market visited (Exp to Market visited in total exports) | 1.807 |
| | **First visit to the Market (dummy)** | -0.360 |
| | Entity (Dummy visit relative to Prime Minister=1) | -0.066 |
| Sector | Manufacturing industry versus services (dummy=1 for MI) | 0.174 |
| Constant | | 1.935* |
| | N | 97 |
| | Result above average | 58 |
| | Other | 39 |
| *Goodness-for-fit of the model* | | |
| Hosmer and Lemeshow Test (significance) | | 7.520 (0.482) |
| | Nagelkerke R Square | 0.104 |
| | % correct | 60.8 |

*Note*: statistically significant at *** 1%; ** 5%; * 10*