Global and local corporate social responsibility: A study of foreign entry mode choice in Spanish quoted firms

STRUCTURED ABSTRACT

Purpose-This study examines the relationships between the foreign entry mode (FEM) used by a company, its global corporate social responsibility (CSR) and the host country’s local CSR environment in Spanish quoted firms. Additionally, it seeks to explore the moderating role of the host country’s CSR in the relationship between firm’s global CSR and FEM.

Design/methodology/approach-To test the proposed hypotheses, binary logistic regression is used with a sample of 418 foreign direct investment (FDI) operations between 2002-2008. This period is chosen with the aim of knowing what happened during the boom in Spanish investments abroad in the early 2000s.

Findings-The results reveal firm patterns of behavior regarding FEM of companies and the two types of CSR according to the proposed hypotheses. Furthermore, it is found that the host country’s local CSR may not only have a direct influence on the FEM decision but may also moderate the relationship between firm’s global CSR and firm’s entry mode in a host country.

Originality/value-This is one of the first studies to propose as explanatory variables of FEM two types of CSR (firm’s global CSR and host country’s local CSR). This has been possible by the creation of an ad-hoc database with data from different information sources of FDI (ICEX) and CSR (Eikon™ and AccountAbility NCRI).

Keywords (JEL code): Social Responsibility (M140); Foreign Direct Investment (M160); Reputation (L140); Empirical Studies of Trade (F140); Trade and the Environment (F18); Binary Choice Model (C250).

Management Area: Corporate Social Responsibility.
Responsabilidad social corporativa global y local: un estudio de la elección del modo de entrada en el extranjero en empresas cotizadas españolas

RESUMEN ESTRUCTURADO

Propósito: Se examina las relaciones entre el modo de entrada en el exterior (MEE) de una empresa, su responsabilidad social corporativa (RSC) global y el entorno de RSC local del país de destino en empresas cotizadas en España. Además, analiza el papel moderador de la RSC del país de destino en la relación entre la RSC global de la empresa y el MEE.

Diseño/metodología/enfoque- Se utiliza la regresión logística binaria con una muestra de 418 operaciones de inversión directa exterior (IED) entre 2002-2008. Este período se elige para conocer qué sucedió durante el auge de las inversiones españolas en el exterior a principios de 2000.

Hallazgos- Los resultados revelan patrones de comportamiento en relación al MEE de las empresas y los dos tipos de RSC según las hipótesis propuestas. Además, se encuentra que la RSC local del país de destino puede también moderar la relación entre la RSC global de la empresa y el MEE.

Originalidad/valor: Este es uno de los primeros estudios en proponer como variables explicativas del MEE, dos tipos de RSC (RSC global de la empresa y RSC local del país de destino), gracias a la creación de una base de datos ad-hoc con datos de diferentes fuentes de información de IED (ICEX) y RSC (Eikon™ y AccountAbility NCRI).

Palabras clave (código JEL): Responsabilidad Social (M140); Inversión Extranjera Directa (M160); Reputación (L140); Estudios Empíricos de Comercio (F140); Comercio y Medio Ambiente (F18); Modelo de Elección Binaria (C250).

Área de Gestión: Responsabilidad Social Corporativa.
1. Introduction

Foreign entry mode (FEM) choice is a critical component of the internationalisation strategy of multinational enterprises (MNEs) that compete globally (Kao et al., 2013). FEM has traditionally been analysed using international risk (Ahmed et al., 2002) and transaction costs theories (Yiu and Makino, 2002), among others. Past research has also made substantial progress by applying institutional theory (DiMaggio and Powell, 1983) to explain imitation in FEM (Guillén, 2003; Mas-Ruiz et al., 2018; Schellenberg et al., 2018). Scholars have shown that companies imitate the FEM decisions of other companies from the same institutional environment (i.e. home country). The idea is that firms from the same institutional environment become a reference that legitimating actors in the host country refer to when making judgements about the entry decisions of a specific firm. In fact, the legitimating actors in the host country (local government, labour unions, national trade associations, local activist groups, customers, and supplier groups) state their own demands on organisational structures and practices that subsidiaries must adopt to gain legitimacy (Marquis et al., 2007; Claassen and Roloff, 2012). However, firms may do more than just imitate prevalent organisational practices when facing major challenges to their legitimacy.

We consider that the legitimacy of a company in a host country can be achieved by its own CSR strategy, which affects its FEM choice. We build on the idea proposed by Yang and Rivers (2009) that CSR can act as an important tool through which MNEs can show social commitment and improve their external legitimacy in host countries. Moreover, an interesting question that has emerged from research is whether legitimating actors in a host country exert pressure for social engagement (Crilly, 2011), which could affect companies’ FEM decisions. We extend these ideas to analyse whether a company’s choice of FEM is related to that company’s own global corporate social responsibility (CSR) and the host country’s local CSR environment.
CSR is key for MNEs (Husted and Allen, 2006) since it plays a crucial role in the consolidation of corporate reputation (Perez-Cornejo et al., 2020; Bruno et al., 2020). Company’s global CSR relates to a company’s obligations based on standards to which all societies are held (e.g. environmental concerns and human rights protection) (Husted and Allen, 2006). It can be measured by ESG (environmental, social and governance) metrics (Thompson Reuters). However, a country’s CSR environment has been proxied by AccountAbility’s National Corporate Responsibility Index (NCRI) (MacGillivray et al., 2004), which captures the scope of a country’s CSR environment and the outcomes of the CSR practices of companies in that country.

Regarding global CSR, we combine institutional and MNE theories (Kostova and Zaheer, 1999) to provide a sound explanation of FEM. A host country’s environment and stakeholders often lack information about a foreign firm, which could even lead to costly delays in conferring legitimacy and to a continued distrust of foreign entrants (Campbell et al., 2012). Firms could tackle these situations by using resources to build their reputation and goodwill through global CSR, and they would improve their external legitimacy in host countries (Yang and Rivers, 2009). This legitimacy would facilitate the choice of a foreign full ownership structure. We expect therefore fully-control entry to be related to high levels of firm global CSR.

Considering the host country’s local CSR environment and building on the concept of social adaptation (Zhao et al., 2014) and the institutional approach (Meyer et al., 2014), we also posit that a high level of local CSR may lead a company to opt for a shared-control FEM. In an institutional environment where social and environmental regulation is extensively promoted by the government, stakeholders are encouraged to challenge the misdeeds of companies (Zhao et al., 2014). To gain legitimacy to meet local institutional pressures, a company may exchange a major part of its subsidiary’s shareholding in the host country to conform to the local identity.
In this study, we also analyse the interaction effect of the host country’s CSR environment and the firm’s global CSR on FEM. By examining this interaction effect, we explore what happens when firms with low global CSR try to enter environments dominated by high CSR. Using a combination of institutional and MNE theories (Kostova and Zaheer, 1999), we predict that one possibility would be for entrants to share ownership with a local company with high legitimacy in the host country, thereby transferring that partner’s legitimacy to their own operations. If the host country has highly socially conscious stakeholders and consumers (high CSR environment), they will be more sensitive to the performance of the company, exerting high pressure in terms of expectations (Campbell et al., 2012; Park and Cave, 2018). In this context, stakeholders would not support the legitimacy of the company nor a full-control FEM. We therefore expect that high CSR environment would weaken the relationship between a company’s global CSR and a full-control FEM. Notably, attempts by companies to exchange ownership for legitimacy have received little attention (Chan and Makino, 2007; Meyer et al., 2014).

The objectives of this research are to understand how a company’s choice of FEM is related to that company’s global CSR and the host country’s CSR and to explore the moderating role of the host country’s CSR in the relationship between a firm’s global CSR and FEM. We consider 418 foreign direct investments (FDIs) by 24 Spanish MNEs in 56 countries between 2002 and 2008.

2. Theoretical framework

2.1. The relationship between a firm’s global CSR and FEM

Conventional institutional explanations consider that the subsidiaries of multinationals highly visible are subject to the scrutiny of the global stakeholders. When this occurs, legitimacy can imply to fit with a global pressure to maintaining their corporate reputation. Thus, according to the Stakeholder Theory in MNEs (Freeman, 1984), subsidiaries of large
multinational companies in emerging markets face substantial pressure for social engagement due to global pressures (Ioannou and Serafeim, 2012). Specifically, multinationals may be under growing scrutiny of active stakeholders globally, found in North America and Europe, including social rating agencies and campaign groups (Crilly, 2011). In these cases, CSR performance is about meeting the expectations of the global stakeholders, and pressures of global stakeholders for the legitimacy can focus on the CSR in the process of globalization. From a global CSR point of view, although some research has focused on global institutional pressures to which multinationals face to achieve social engagement (see Crilly, 2011), to the best of our knowledge research has not paid attention to its influence on the FEM.

Until now, the importance of legitimacy for foreign entry of MNEs has been argued by combining institutional and MNE theories (Kostova and Zaheer, 1999). A host country’s environment and stakeholders often lack information about a foreign firm and might use stereotypes and other criteria to judge MNEs. This approach could even lead to costly delays in conferring legitimacy and to a continued distrust of foreign entrants (Campbell et al., 2012). Firms can tackle these situations by using resources to build their reputation and goodwill through global CSR. Global CSR can therefore act as an important tool through which MNEs can show social commitment and improve their external legitimacy in host countries (Yang and Rivers, 2009). We also consider legitimacy as a determinant of a company’s ownership structure choice.

Basically, the relationship between MNEs and the state of host country can evolve from conflicting to cooperative when residents perceive foreign subsidiaries to contribute to the economic growth of the host country (Luo, 2001). Moreover, socially desirable contributions, in the form of global CSR, can be useful to establish a symbolic image and to promote local support of foreign entrants (Kostova et al., 2008). A favourable reputation affects the willingness of buyers and suppliers to transact with the foreign firm (Fombrun, 1996). Thus, building and preserving a good reputation is crucial for foreign subsidiaries because of the
negative effects of liability of foreignness on firm legitimacy (Campbell et al., 2012). Moreover, the company's investments in global CSR can be associated with a foreign full ownership structure because local stakeholders would not be skeptical of its behavior since they have information about the company's CSR investment level and the social and environmental footprint of its products. Accordingly, multinationals can solve the liability of foreignness and improve its social legitimacy in a host country.

In contrast, companies without a high global CSR or that make low levels of investment in CSR should use other means to gain legitimacy. Building on the idea of Chan and Makino (2007), we consider that one mean whereby these multinational companies with less CSR can gain legitimacy in their institutional environment is exchanging ownership for legitimacy. The legitimating actors may lack the information necessary to judge the appropriateness of the MNE's external operations (Dobrev, 2001). Since communication between companies and their legitimating actors is central to legitimacy management (Dobrev, 2001), MNEs need to demonstrate to legitimating actors that their foreign subsidiaries conform to legitimating requirements. A way to show this conformity is exchanging subsidiary ownership for legitimacy (Chan and Makino, 2007).

Given the above, an extension of institutional and MNE theories may explain why a company’s decision about FEM is conditioned by global CSR of this company. As such, we assume that MNEs will choose a dominant-control FEM as its own global CSR increases, and hence we propose the following hypothesis:

H1: The greater a firm’s global CSR is, the higher the probability will be that the firm uses a full-control FEM (and the lower the probability of shared control).

2.2. The relationship between a host country’s CSR environment and FEM

The importance of ‘social acceptability and credibility’ has been traditionally highlighted by institutional theorists (e.g. Scott, 1995). It is often based on compliance with local regulations, norms and ways of doing business that have been assumed (Crilly, 2011;
Husted and Allen, 2006). Essentially, local institutional pressures for legitimacy target subsidiaries to make them meet local requirements (Park et al., 2014). Managers note pressures for social engagement when local stakeholders penalise the company’s possible non-compliance. In addition, Crilly (2011) has suggested that pressures for social engagement build in parallel to the increase of a country’s level of development. For example, when living standards are higher, people are more careful with their long-term health and the environment. Thus, long-term health and the environment seem to be a social requirement for the community. However, even in host countries with low development, weak institutions and low regulatory pressures, normative pressures may play a dominant role. Despite the absence or weakness of institutions (i.e. institutional voids) in such countries, local stakeholder expectations might evolve according to economic growth (Zhao et al., 2014). Crucially, the CSR environment in host countries is a proxy of the host country’s broader institutional context, as noted earlier (Peng and Beamish, 2008).

Far too little attention has been paid to the relationship between the local CSR environment and FEM. We probe further into this relationship by considering the evolutionary model of stakeholder pressures on MNEs (Zhao et al., 2014). This model includes social adaptation concept and integrates ideas from stakeholder theory and the CSR literature (Freeman, 1984; Husted and Allen, 2006). We extend these approaches by also considering the logic of institutional theory (Brouthers, 2002) as a factor of FEM choice.

The few early social and environmental regulations that are introduced during the embryonic and growth stages of emerging countries do not become stakeholder challenges until the MNE-stakeholder interaction is enhanced and awareness of the protection of rights is widely disseminated (Zhao et al., 2014). In fact, local civil society organisations tend to be inactive in these early stages and do not protest over the misconduct of the MNE. Specifically, these scarce early regulations on social issues and the inactivity of local civil society (low local CSR of the host country) may lead a company to opt for a full-control FEM. In theory, local
governments can loosen the enforcement of environmental regulations to attract foreign investment (Vanhonacker, 1997), and MNEs are usually early adopters of social and environmental activities, introducing CSR practices to local firms in emerging markets (Holtbrügge and Dögl, 2012). For example, at a time when CSR was still a new concept in China, MNEs were already engaging in social auditing of local suppliers (Zhou, 2006). Thus, as Torres et al. (2012) noted, MNEs are seen as organisations that engage in appropriate behaviour because they consider the needs of weaker and poorer societies in the countries where they operate. Hence, according to institutional theory (Brouthers, 2002), these firms have the legitimacy to deal with local institutional pressures and would choose a full-control FEM. For example, there is evidence that MNEs create fully owned subsidiaries in these early stages and engage in direct competition with domestic companies in the mass market (see Farrell et al., 2004).

However, social and environmental regulation is extensively promoted by governments as a country’s economy matures. Thanks to this promotion, stakeholders become aware of CSR practices and are encouraged by new regulations to tackle companies’ transgressions (Zhao et al., 2014). In these contexts, MNEs are unable to avoid the growth of stakeholder accusations of social wrongdoings (e.g. product quality flaws, environmental pollution and abusive labour). These complaints turn into public crises that cause lasting reputational damage. The new stakeholder dynamics would reflect a broad gap between the MNE’s strategies and higher local expectations about the social role of the MNE (Zhao et al., 2014). Consequently, firms need credibility to ensure effectiveness in the implementation of their policies (Torres et al., 2012). Therefore, according to institutional theory (Brouthers, 2002), to gain the legitimacy that enables them to deal with local institutional pressures, MNEs can exchange some of the shares in the subsidiary with local partners to conform to local identity (Peng, 2012). Previous research even suggests that the institutional structure of the host economy is a key factor of the entry strategy of foreign investors (Brouthers 2002). Thus, MNEs could respond to institutional
pressures in the host country by adapting their entry strategies to enhance their legitimacy through shared ownership with local partners.

Considering these ideas, the institutional environment where the FDI takes place may explain the relationship between an entrant company’s FEM and the host country’s CSR environment. Therefore, we assume that an MNE will choose a shared-control mode of entry when it enters a country with high levels of local CSR. Accordingly, we propose the following hypothesis:

\[ H2: \text{The greater a host country’s CSR environment is, the lower the probability will be that the firm uses a full-control FEM (and the greater the probability of shared control).} \]

2.3. The moderating role of the host country’s local CSR environment in the relationship between a firm’s global CSR and FEM

After hypothesising the direct association of local CSR with mode of entry, we also predict that this local CSR can moderate the relationship between global CSR and full-control mode of entry (\( H1 \)), as explained in the following paragraphs.

As mentioned earlier, the importance of legitimacy for entry of MNEs in a host country has been argued by combining institutional and MNE theories (Kostova and Zaheer, 1999). Accordingly, socially desirable contributions, in the form of global CSR, can be useful to establish a symbolic image and promote local support of foreign entrants (Kostova et al., 2008). A favourable firm reputation is also related to higher customer expectations about the quality of the firm’s products and services (Rhee and Haunschild, 2006). These customer expectations reflect an implicit agreement (‘a promise’) between a company and potential customers. Here, a defect (i.e. an action that deviates from actions leading to a good reputation) could be seen as a breach of this promise and would result in loss of legitimacy (Sullivan et al., 2007). In this sense, if the host country has highly socially conscious stakeholders and customers (a high local CSR environment), they will be more sensitive to the performance of the company, with this greater sensitivity exerting considerable pressure on their expectations (Campbell et al.,
2012). Under such circumstances, the host country’s local CSR would condition the relationship between the firm’s global CSR and the firm’s FEM choice to gain legitimacy. As Kim et al. (2005) have noted, one of the fundamental strategic roles of foreign subsidiaries is that of ‘world mandates’ – that is, to manage local responsiveness and global integration simultaneously.

We propose that, to the extent that an MNE must simultaneously meet global and local expectations (Aguilera-Caracuel et al., 2015), a company with a specific level of global CSR may face two different situations depending on the country where the FDI takes place. In host countries with high local CSR, an MNE risks not being sensitive enough to some stakeholders’ interests or underperforming with respect to local standards, increasing the company’s reputational risk. In this situation, meeting local stakeholders’ expectations and achieving legitimacy is harder for the company to do on its own, and joining with a local partner with expertise might be advantageous (i.e. shared-control FEM). Conversely, in host countries with low local CSR, an MNE can easily meet local stakeholders’ expectations on its own. In this context, the MNE would focus on the expectations of global stakeholders, which would be more demanding than local ones, and would thereby minimise reputational risk. Consequently, the firm could gain legitimacy from local stakeholders and will choose a full-control entry.

Given this reasoning, institutional and MNE theories may explain why the relationship between a firm’s global CSR and that firm’s FEM is moderated by the host country’s local CSR. Therefore, we propose the following hypothesis:

\[ H3: \text{A host country’s high CSR environment weakens the positive relationship between a firm’s global CSR and a full-control FEM.} \]
3. Research methodology

3.1 Sample

The international expansion of Spanish companies provides an interesting setting to study the relationships between a company’s mode of foreign entry, that company’s global CSR and the host country’s local CSR. There has been major growth in the number of CSR activities by Spanish companies in recent decades (Pucheta-Martínez and López-Zamora 2018), which has accompanied their international expansion through the FEMs of wholly owned subsidiaries, full acquisitions, joint ventures, and partial acquisitions (Guillén and García 2007; Myro and Fernández-Otheo 2012). Specifically, we focus on the period 2002-2008 because it is characterized by a great expansion of Spanish FDI. It is a period of economic expansion in Spain, which is explained, among other reasons, because the adoption of the euro consolidated the expectation of low interest rates and the elimination of country risk (Correa-López and Doménech, 2012). In fact, the creation of the single European market promoted deregulation and internationalization towards Europe and Latin America. However, as from 2008, the financial crisis took place, which sharply retracted Spanish FDI to 1997 levels. This evolution of foreign direct investment (strong growth in expansion and retraction in the crisis) is part of the trend occurred in direct investment worldwide (García and Crecente, 2014). The present study aims to study all Spanish FDIs between 2002 and 2008 to better understand what happened during the boom in Spanish investments abroad in the early 2000s.

To achieve these objectives, we created a multiyear data set on Spanish FDI between 2002 and 2008. We included indicators of (firm-level) global CSR and (host-country-level) local CSR. The FDI operation information indicated whether the FEM was full control (full acquisition or a wholly owned subsidiary) or shared control (partial acquisition or joint venture). The final sample comprised 418 FDI operations by 24 Spanish quoted companies (in the Spanish stock market) in 56 countries between 2002 and 2008. The firms were from 12 sectors, the most relevant of which were Utilities (Electric, IPPs & Gas; 21.5%), Banking &
Investment (21.3%), Industrial & Commercial Services (14.1%), Telecommunications (10.4%), Retailing (10.2%) and Insurance (6.13%). The main host countries of these FDI operations were the United States (13.5%), Italy (9.4%), Portugal (7.6%), Mexico (6.5%), France (5.3%) and the United Kingdom (5.1%).

3.2 Measurements and analysis

The model to analyse the relationships between FEM, a firm’s global CSR and the host country’s local CSR is now specified. The dependent variable is FEM, which is a dummy variable that takes value 1 for a full-control FEM (total acquisition or a wholly owned subsidiary) and 0 for a shared-control FEM (partial acquisition or joint venture). FDI information was gathered from the ICEX (Spanish Institute for Foreign Trade) database. As Anderson and Gatignon (1986) have noted, entry into foreign markets requires in-depth analysis of future operations and of the volume of resources allocated to these operations. This analysis entails deciding whether managers want entry with full or shared control.

The explanatory variables (see Table 1) measured CSR at two levels: global CSR and local CSR. Global CSR of the firm captures several firm dimensions related to CSR requirements (environmental, social and governance issues), which are measured by ESG (environmental, social and governance) metrics from Eikon™ (Thompson Reuters). We analysed both the overall CSR performance effect and the impact of each dimension to avoid hidden heterogeneous dimension effects within the overall result. The Thomson Reuters Eikon™ database houses comprehensive ESG data, providing more than 400 ESG metrics for more than 6,000 public companies worldwide. Eikon™ ESG scores have been employed in recent studies (e.g. Garcia et al., 2017; Jitmaneeroj, 2017; Gandullia and Piserà, 2019; Pérez Cornejo et al., 2020). Thomson Reuters Eikon™ ESG scores enhance and replace the ASSET4 ratings that have been widely used in previous research (e.g. Cheng et al., 2014; Luo et al., 2015). More than 150 analysts process the ESG measures manually for each company to guarantee that data are comparable across the entire range of companies. The ESG score is a
combination of 10 categories composing the three single pillars that reflect the company's CSR performance and commitment. ESG score can take a value from 0 (worst corporate performance) to 100 (best corporate performance). This ESG score is composed of three dimensions (social, environmental and governance), which aggregated conform ESG score. The social dimension is based on four categories (workforce, human rights, community and product responsibility) that, in turn, are built on 65 indicators (see Table 1). The environmental dimension is based in three categories (resource use, emission and innovation), that break down in 61 indicators. Finally, the governance dimension includes three categories (management, shareholders and CSR strategy) based on 54 indicators (for more details, see Ioannou and Serafeim, 2012). The social, environmental and governance performance score is a weighted average basis per the number or indicators in each category.

<Insert Table 1>

The host country’s local CSR environment captures the compliance degree by firms in the host country with several indicators such as ISO 140001 (Environmental Management Certification), OHSAS 18001 (Occupational Health & Safety Assessment Series), and human and labour rights. This indicator is globally measured by the AccountAbility NCRI and provides a good indicator of the institutional environment in a given host country (e.g. Boulouta and Pitelis, 2014). Thus, the index aggregates company-level data into national scores by dividing the number of firms complying with a specific indicator for a given country (e.g. country A) by the total number of companies complying with that indicator from all sampled countries, corrected by the relative GDP PPP of country A (for more details, see Gjølberg, 2009). The indicators included in the NCRI index are corporate governance, ethical business practice, progressive policy formulation, building human capital, engagement with civil society, contribution to public finance and environmental management (see Peng and Beamish, 2008).
The model includes two firm-level control variables derived from the literature review. The first is the FDI experience of the FDI entrant, which is measured as the number of years since the first FDI operation of the parent firm, regardless of the host country (Lu, 2002). This variable indicates the experience of the MNE with FDI operations and so the accumulated knowledge the MNE could have related to foreign expansion operations (Guillén, 2003). The second control variable is firm size, which is measured as the natural logarithm of the firm’s total assets based on SABI data (Bureau van Dijk Financial & Accounting database for Spain).

Two other country-specific control variables are included in the model. The first is gross domestic product (GDP) per capita (in constant 2005 Euros) of the host country in the year before the foreign entry (GDPpc). This variable captures the host country’s level of economic development. The second variable is CO₂ emissions per capita in the host country, which measured both industrial intensity and the level of environmental concern at the local level. Both country-level variables are based on World Bank data. Table 2 shows the descriptive statistics and correlations between the variables described in this section.

To test the proposed hypotheses, logistic regression was used because the dependent variable (FEM) was dichotomous and binary. Traditionally, logistic regression is the most commonly used method to analyse FEM (e.g., Canabal and White III, 2008). The probability of a full-control operation is related to a set of factors \( \text{prob}(\text{mode} = 1) = 1/(1 + \exp(-y)) \), where \( y \) is a linear function of all variables posited as affecting FEM. The regression coefficients in our logistic model estimated the impact of the explanatory variables on the probability that the FEM is a full-control entry mode. Specifically, we estimated the binary logistic models computing robust estimators provided by IBM-SPSS, assuming a cross-sectional data structure but including the year trend to control for the year of the operation.¹ Finally, to test the

¹ As mentioned earlier, the observations were specific FDI operations, such that a given firm X could perform many operations in the same year, potentially in the same host country. Therefore, the structure of our data set
predictive power and robustness of our results, a cross-sample validation test was performed by using the Machine Learning package provided by JASP Statistics (JASP, 2019). The procedure underlying this methodology is the following. The initial database conformed by 418 FDI operations is divided into three groups: i) the training sample (n = 268), ii) the validation sample (n = 67) and the test sample (83). So, a percentage of the data is used to train and to validate the algorithm (80% by default) and the rest of the sample (20% by default) is called holdout sample, and it is used to assess the predictive power of the models. The algorithm iteratively repeats the selection of the holdout sample K-times in order to compute the indicators.

4. Results

Table 3 shows the estimation of the logistic binomial regressions used to test the proposed hypotheses. The independent variables in Model 1 were the firm’s global CSR (Eikon™ overall score), the host country’s CSR (NCRI aggregate indicator) and the control variables. In Model 2, the three components of the firm’s global CSR (environmental, social and governance indicators) were disaggregated to analyse their individual relationships with full ownership. Model 3 included these three dimensions of global CSR and considered the host country’s CSR as a categorical variable. This categorisation enabled exploration of the differential effect of CSR in the destination of the FDI. Finally, Model 4 included the aggregate indicator of the firm’s global CSR, the indicator of the host country’s local CSR, and the interactions between the firm’s global CSR and the categorical variables of the local CSR. In this case, the objective was to assess the moderating role of the host country’s local CSR in the relationship between the firm’s global CSR and the mode of entry. In all cases, models were

cannot be considered a panel structure, as it could in previous studies (e.g. Campbell et al. 2012), where it was easier to control for the unobserved heterogeneity of the data.

2 Host countries were sorted into categories according to their local CSR NCRI indicator (4 quartiles): ‘1st Q’ comprised host countries with ‘very low’ CSR (below 25%), ‘2nd Q’ comprised host countries with ‘low’ CSR (25%–50%), ‘3rd Q’ comprised countries with ‘high’ CSR (50%–75%) and ‘4th Q’ comprised countries with ‘very high’ CSR (above 75%).
estimated by robust procedures to account for the potential heteroscedasticity derived from individual elements (in our case, the FDI operations). A trend variable was included to control for the unobserved heterogeneity between years in the sample.

As Table 3 shows, the four logistic regression models had acceptable overall fit indicators. The omnibus test, which is used to check that the model with explanatory variables is an improvement on the baseline model, was statistically significant in all cases. Similarly, the Hosmer and Lemeshow test, which measures how well the data fit the model, was non-significant in most cases, as expected (Peng and So, 2002). Finally, the two pseudo $R^2$ indicators explain 7%–11% of the variability of FEM, which is consistent with previous studies using this method (e.g. Chen, 2008; Wilkinson and Nguyen, 2003) given the binomial nature of the dependent variable (Gujarati, 2009).

As Table 3 shows, the coefficient for the relationship between global CSR and FEM was significant and positive in the models where the aggregate indicator was used (Models 1 and 4). In Models 2 and 3, the only significant component was the governance CSR indicator (environmental and social indicators were not statistically related to FEM). These results show that Spanish MNEs with greater global CSR are more likely to choose a full-control FEM. Moreover, when this indicator was divided into its components, the governance dimension of the global CSR was the most relevant in terms of FEM. The joint interpretation of both results supports Hypothesis 1. It seems therefore that the governance CSR global dimension provides relevant information to host country stakeholders about a foreign firm. This situation may generate local support for the foreign entrant and facilitates the legitimacy for the choice of a foreign full ownership structure.

Regarding the relationship between the host country’s local CSR and FEM, the coefficients were not statistically significant in most models, which leads to the rejection of Hypothesis 2. Model 3 showed the only significant and negative coefficient for FDI operations.
performed in host countries with very high local CSR. This lack of consistency regarding the direct relationship between local CSR and FEM suggests that the host country could act as a contingency variable in the model and therefore might moderate the relationship between global CSR and mode of entry. Model 4 results corroborate this moderating role of local CSR in the relationship between global CSR and FEM, only for host countries with very high local CSR. The negative sign of the interaction term could be interpreted as follows: In FDI operations performed in countries with very high CSR, the positive relationship between the entrant’s global CSR and full ownership would be small compared to the positive relationship for operations occurring in host countries with very low local CSR (the 1st quartile is the omitted group). Seemingly, if the host country has very socially conscious stakeholders and consumers (high local CSR environment), they are sensitive to a company’s failed promises (Campbell et al., 2012). So, stakeholders would not legitimise this company or a full-control entry mode.

Lastly, a cross-sample validation test was performed (based on Machine Learning procedures) to assess the predictive power and robustness of our results. To this end, several complementary indicators are computed and presented in Table 4. Both overall accuracy indicators (validation and test) show acceptable levels between 0.542 and 0.672. Another interesting indicator is the percentage of values correctly classified provided by the confusion matrix. In this case, we see that between 53.3% and 68% of the full ownership FDI operations are correctly classified and between 50.1% and 63.8% of the non-full ownership FDI operations. Finally, four evaluation metrics (precision, recall, F1 score and AUC) are calculated for all four models. As can be seen in table 3, the average value of these indicators is around 60%, which is an acceptable level.

<Insert Table 4>
In sum, we have performed a cross-sample validation test based on Machine Learning procedures and the result show that the four proposed models show acceptable levels in the predictive power indicators.

5. Discussion and conclusions

This study examines patterns of corporate behaviour in terms of the FEM of MNEs and the relationships between this entry mode and global and local CSR. There is consensus in the literature that legitimating actors in the host country impose their demands on the organisational structures that subsidiaries must adopt to gain legitimacy (Yiu and Makino, 2002; Singh and Gaur, 2021). In this regard, our evidence suggests that legitimating actors also exert major pressure for social engagement, which could influence firm’s FEM decisions. This implies that firms use a range of reference points to make judgments about the perceived level of external institutional pressure to conform. Concretely, it seems that global corporate social responsibility of the company acts as a reference which exerts a direct influence on the choice of entry mode, compared to the moderating role of local social responsibility of the host country.

Previous research has paid insufficient attention to the relationship between the components of a firm’s global CSR and FEM. On the one hand, our results support the idea that global CSR may condition the parent firm’s choice of FEM. In this regard, global CSR provides relevant information to host country stakeholders and facilitates the legitimacy for the choice of a foreign full ownership structure. Therefore, managers should heed the implications for corporate reputation when deciding on the FEM. Specifically, our results suggest that the governance component of CSR can be viewed as a strategic investment for globalised companies. In other words, whereas the environmental and social dimensions of global CSR do not influence the choice of FEM, the governance dimension seems to play a prominent role. This finding could be explained by the fact that the governance component (governance codes, corporate philanthropy and so on) could be more easily identifiable before local operations are initiated than the environmental (energy used, water recycled, CO₂ emissions, waste recycled,
and spills and pollution controversies) and social (employee turnover, injury rate, accidents, training hours, women employees, donations, and health and safety controversies) components (see Ioannou and Serafeim, 2012; Eccles et al., 2014). In fact, stakeholders often give importance to institutionalized good governance practices (Yang and Rivers, 2009).

On the other hand, our results suggest that stakeholders of host countries with very high local CSR are encouraged by regulations to challenge the misconduct of firms, so foreign entrants feel the need to share the ownership of their subsidiaries with local counterparts to enhance their legitimacy. Non-compliance with local standards can entail not only problems in the legitimisation process (de Quevedo-Puente et al., 2007) but also reputational risk (Gatzert and Schmit, 2016).

Finally, our results also show that the host country’s local CSR may not only have a direct influence on the FEM decision but may also moderate the relationship between a firm’s global CSR and the firm’s entry mode in a host country. Companies must adapt their CSR behaviour to meet both global and local stakeholders’ expectations; otherwise, they expose themselves to reputational risk (Fombrun et al., 2000). Global and local social pressures generate social behavioural standards that shape stakeholders’ expectations regarding corporate behaviour. If a company fails to meet these expectations, it runs a reputational risk and faces the possibility of losing its reputational capital (Fombrun and Van Riel, 2003). Companies may therefore choose a certain FEM to help meet local and global stakeholders’ expectations. According to our data, this decision seems important when companies try to enter countries with high levels of local CSR. In this case, MNEs run the risk of not being sensitive enough to some stakeholders’ interests or underperforming with respect to local standards, which can increase the company’s reputational risk. In this situation, meeting local stakeholders’ expectations and achieving legitimacy is harder to do alone, and it might be advantageous to join with local partners with expertise (i.e. use a shared-control FEM).
Our results offer an alternative to the conventional view, which emphasises the predominance of economic considerations in ownership decisions (see Chan and Makino, 2007; Youssef and Teng, 2021). Instead, we consider institutional perspectives to explain the relationships between global and local CSR and FEM. The results suggest that this approach is consistent and highlights the need to be used in future studies of CSR and FEM. Building on the ideas of Yiu and Makino (2012), we propose that FEM choice, from the perspective of CSR, must account for the organisation’s responses to pressures for social engagement in the environment where the subsidiary will operate.

5.1. Managerial implications

On the light of our findings, it is possible to draw several important managerial implications that are related both to managers of MNEs and to local institutional authorities.

First, regarding the fact that legitimating actors exert major pressure for social engagement, which could influence firm’s FEM decisions. It seems clear that multinational firms use a range of reference points to make judgments about the perceived level of external institutional pressure to conform. In this case, the global corporate social responsibility of the company acts as a reference which exerts a direct influence on the choice of entry mode, compared to the moderating role of local social responsibility of the host country. This agrees with the findings of Pan et al. (2020) that suggests that the effectiveness of CSR practices in terms of differentiation, largely varies with the extent to which audiences appreciate the firm’s differentiation efforts.

Second, concerning the differential importance of the dimensions of firm’s global CSR on its FEM. The evidence suggests that the governance component of CSR should be viewed considered as a strategic tool for multinational companies. This highlights the strategic importance of governance codes and corporate philanthropy compared to other more tactical CSR activities such as the environmental or social ones. In practical terms, this means that managers must consider that stakeholders often give importance to institutionalized good
governance practices (Yang and Rivers, 2009). An example of this strategic role of the governance sustainability is also highlighted in the CSR toolkit provided by the Government of Canada regarding CSR governance (CBSR, 2011).

Third, regarding the role high local CSR level and foreign firm legitimacy, it seems key for managers of MNES to collaborate with local companies to ensure they meet local stakeholders’ expectations because non-compliance with local standards can entail both legitimisation problems and reputational risk. Therefore, there are important pressures by local institutions on MNEs to share ownership with local partners for gaining post-formation legitimacy. An example of these practices could be setting up international joint ventures to increase the survival of MNEs in China (Bai et al., 2019).

Beyond the managerial implications about the FEM, the results presented may have also interesting implications for local institutional authorities. At this level if local institutional authorities want their local firms to be more prepared to collaborate (share ownership of multinational ventures) with global companies to raise their knowledge or technological resources, they must set a high CSR standard at national level. This is because, the higher the CSR local standards, the greater the likelihood for a MNE to choose collaborating with a local firm, which can improve its resources profile.

5.2. Limitations and future research

This study has several limitations. First, our results are specific to FDI by Spanish firms. Therefore, contextual influences might exist (see DiMaggio and Powell, 1983) that could affect the relationship between a firm’s global CSR and the firm’s FEM. More research on (firm-level) global CSR, (host-country-level) local CSR and the FEM of companies in other contexts (i.e. subsidiaries of non-Spanish parent firms) may corroborate our findings. Thus, it would be of interest to study other countries to generalise our findings. Second, our results are also constrained by the sectors included in the sample. It would be of interest to control for factors such as the industry of the entrant firm because, in some industries, the use of full-control FEM
is more common than in others. Moreover, the relative importance of each component of the global CSR (environmental, social and governance) might vary by industry (e.g. banking services vs. construction & engineering). Third, this research if centred on analysing the period between 2002 and 2008, which has been characterized by an important expansion of the Spanish FDI. It could be of interest to replicate the model with more updated data to analyse behavioural differences. Unfortunately, the ICEX (Spanish Institute for Foreign Trade) has discontinued gathering this type of information since 2008. Finally, our results provide interesting findings with respect to the FEM behaviour of socially engaged companies. However, managers should also analyse the consequences of this social engagement in terms of the FDI performance of these firms. Research to date has suggested that companies that conform to institutional pressures have a higher survival rate than those that do not (DiMaggio and Powell, 1983; Chan and Makino, 2007). It would be advisable to analyse whether MNEs with different FEM survive longer and achieve better performance, as a function of global and local CSR.

References


Freeman, R.E. (1984), Strategic management: A stakeholder approach, Pitman, Boston.


TABLE 1.
Global CSR of the firm, Thomson Reuters Eikon ESG scores:
Dimensions, categories, indicators, and weights

<table>
<thead>
<tr>
<th>Dimension/Pillar</th>
<th>Category</th>
<th>Indicators in Scoring</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental</strong></td>
<td>Resource Use</td>
<td>20</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Emissions</td>
<td>22</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Innovation</td>
<td>19</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td>Workforce</td>
<td>29</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>Human Rights</td>
<td>8</td>
<td>4.5%</td>
</tr>
<tr>
<td></td>
<td>Community</td>
<td>14</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Product Responsibility</td>
<td>12</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Governance</strong></td>
<td>Management</td>
<td>34</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>Shareholders</td>
<td>12</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>CSR Strategy</td>
<td>8</td>
<td>4.5%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td>178</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters Eikon TM
### TABLE 2.
Descriptive statistics of the variables included in the model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Correlations</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y- Dummy full ownership</td>
<td>50.78%</td>
<td>50.05%</td>
<td>1</td>
<td>.05</td>
<td>.04</td>
<td>.01</td>
<td>.07</td>
<td>.12**</td>
<td>.01</td>
<td>.09**</td>
<td>.14***</td>
<td>.14***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1. Focal firm CSR (Eikon overall score)</td>
<td>66.12</td>
<td>14.50</td>
<td>1</td>
<td>.79***</td>
<td>.84***</td>
<td>.68***</td>
<td>.01</td>
<td>.39***</td>
<td>.28***</td>
<td>.06</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1a. Environmental CSR (avg.)</td>
<td>66.92</td>
<td>17.67</td>
<td>1</td>
<td>.61***</td>
<td>.25***</td>
<td>.06</td>
<td>.37***</td>
<td>.21***</td>
<td>.06</td>
<td>-0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1b. Social CSR (avg.)</td>
<td>72.81</td>
<td>17.72</td>
<td>1</td>
<td>.39***</td>
<td>-.005</td>
<td>.46***</td>
<td>.17***</td>
<td>.01</td>
<td>-0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1c. Governance CSR (avg.)</td>
<td>57.63</td>
<td>15.62</td>
<td>1</td>
<td>.01</td>
<td>.09*</td>
<td>.32*</td>
<td>.06</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X2. Destination country CSR (NCRI)</td>
<td>61.54</td>
<td>7.91</td>
<td>1</td>
<td>.051</td>
<td>.12***</td>
<td>.87***</td>
<td>.58***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z3- Firm international experience (years)</td>
<td>16.95</td>
<td>3.29</td>
<td>1</td>
<td>.33***</td>
<td>.08*</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z6- Total Assets (in thousand €)</td>
<td>145,151,820</td>
<td>26,670</td>
<td>1</td>
<td>.13***</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1- GDP pc at destination (constant €)</td>
<td>15,605</td>
<td>11,515</td>
<td>1</td>
<td>.73***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2- CO2 pc emissions at destination</td>
<td>8.31</td>
<td>5.56</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.10; ** p < .05; *** p < .01. n = 418 FDI operations.
# TABLE 3

Relationship between entry mode in foreign markets and firm global CSR and host country local CSR: FDI of Spanish firms between 2002 and 2008

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef. β</td>
<td>Exp. (B)</td>
<td>Coef. β</td>
<td>Exp. (B)</td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.930</td>
<td>.053</td>
<td>-.44.723</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>(.001)</td>
<td></td>
<td>(.106)</td>
<td></td>
</tr>
<tr>
<td><strong>Independent variables:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global firm CSR (Eikon overall score)</td>
<td>.024***</td>
<td>1.025***</td>
<td>(8.049)</td>
<td></td>
</tr>
<tr>
<td>Global environmental CSR (avg.)</td>
<td>.009</td>
<td>1.009</td>
<td>(1.171)</td>
<td>.008</td>
</tr>
<tr>
<td>Global social CSR (avg.)</td>
<td>.001</td>
<td>1.001</td>
<td>(0.003)</td>
<td>-.001</td>
</tr>
<tr>
<td>Global governance CSR (avg.)</td>
<td>.0210***</td>
<td>1.021***</td>
<td>(6.979)</td>
<td>.022***</td>
</tr>
<tr>
<td>Local country CSR (NCRI indicator)</td>
<td>.036</td>
<td>1.037</td>
<td>(2.138)</td>
<td>.034</td>
</tr>
<tr>
<td>Local CSR (categorical², 2nd quartile)</td>
<td>-0.943</td>
<td>.389</td>
<td>(2.458)</td>
<td></td>
</tr>
<tr>
<td>Local CSR (categorical², 3rd quartile)</td>
<td>-0.629</td>
<td>.533</td>
<td>(2.040)</td>
<td></td>
</tr>
<tr>
<td>Local CSR (categorical², 4th quartile)</td>
<td>-0.721**</td>
<td>.486**</td>
<td>(5.630)</td>
<td></td>
</tr>
<tr>
<td><strong>Interaction effects:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global firm CSR x Local CSRQ2</td>
<td></td>
<td></td>
<td></td>
<td>-0.012</td>
</tr>
<tr>
<td>Global firm CSR x Local CSRQ3</td>
<td></td>
<td></td>
<td></td>
<td>-0.008</td>
</tr>
<tr>
<td>Global firm CSR x Local CSRQ4</td>
<td></td>
<td></td>
<td></td>
<td>-0.010*</td>
</tr>
<tr>
<td><strong>Control variables:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm international experience</td>
<td>.026</td>
<td>1.026</td>
<td>(.301)</td>
<td>.047</td>
</tr>
<tr>
<td>Ln(total Assets)</td>
<td>- .252***</td>
<td>.777***</td>
<td>(12.609)</td>
<td>- .290***</td>
</tr>
<tr>
<td>Ln(GDP per capita) at destination</td>
<td>- .160</td>
<td>.852</td>
<td>(.679)</td>
<td>- .156</td>
</tr>
<tr>
<td>CO2 per capita emissions at destination</td>
<td>.043*</td>
<td>1.044*</td>
<td>(2.753)</td>
<td>.0380</td>
</tr>
<tr>
<td>FDI year (trend)</td>
<td>.002</td>
<td>1.002</td>
<td>(.011)</td>
<td>.023</td>
</tr>
<tr>
<td><strong>Global adjustment indicators:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>χ² Omnibus test:</td>
<td>30.243***</td>
<td>33.837***</td>
<td>38.079***</td>
<td></td>
</tr>
<tr>
<td>Pseudo R2 Cox &amp; Snell:</td>
<td>6.9%</td>
<td>7.8%</td>
<td>8.7%</td>
<td></td>
</tr>
<tr>
<td>Pseudo R2 Nagelkerke:</td>
<td>9.3%</td>
<td>10.4%</td>
<td>11.6%</td>
<td></td>
</tr>
<tr>
<td>-2 Log Likelihood</td>
<td>549.228</td>
<td>545.634</td>
<td>541.392</td>
<td></td>
</tr>
</tbody>
</table>

Note: Logistic binomial regression, Dep. variable = Dummy full ownership. n= 418 FDI operations. In parentheses Wald coefficients to test individual significance.

* Local country CSR is divided into 4 categories according to the quartiles, the 1st quartile is the omitted group.

* p < .10; ** p < .05; *** p < .01.
TABLE 4.
Cross-sample validation with Machine Learning procedures: Indicators assessing the predictive power of the proposed models

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validation accuracy</td>
<td>0.567</td>
<td>0.552</td>
<td>0.612</td>
<td>0.672</td>
</tr>
<tr>
<td>Test accuracy</td>
<td>0.627</td>
<td>0.590</td>
<td>0.554</td>
<td>0.542</td>
</tr>
<tr>
<td>Computed from confusion matrix:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of Y=1 properly predicted (over the test sample)</td>
<td>0.611</td>
<td>0.622</td>
<td>0.533</td>
<td>0.680</td>
</tr>
<tr>
<td>% of Y=0 properly predicted (over the test sample)</td>
<td>0.638</td>
<td>0.565</td>
<td>0.579</td>
<td>0.501</td>
</tr>
<tr>
<td>Evaluation metrics:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full ownership FDI (Y = 1)</td>
<td>0.638</td>
<td>0.565</td>
<td>0.579</td>
<td>0.483</td>
</tr>
<tr>
<td>Non-full ownership FDI (Y = 0)</td>
<td>0.611</td>
<td>0.622</td>
<td>0.533</td>
<td>0.680</td>
</tr>
<tr>
<td>Recall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full ownership FDI (Y = 1)</td>
<td>0.682</td>
<td>0.650</td>
<td>0.512</td>
<td>0.778</td>
</tr>
<tr>
<td>Non-full ownership FDI (Y = 0)</td>
<td>0.564</td>
<td>0.535</td>
<td>0.600</td>
<td>0.362</td>
</tr>
<tr>
<td>F1 Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full ownership FDI (Y = 1)</td>
<td>0.659</td>
<td>0.605</td>
<td>0.543</td>
<td>0.596</td>
</tr>
<tr>
<td>Non-full ownership FDI (Y = 0)</td>
<td>0.587</td>
<td>0.575</td>
<td>0.565</td>
<td>0.472</td>
</tr>
<tr>
<td>AUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full ownership FDI (Y = 1)</td>
<td>0.532</td>
<td>0.503</td>
<td>0.637</td>
<td>0.696</td>
</tr>
<tr>
<td>Non-full ownership FDI (Y = 0)</td>
<td>0.565</td>
<td>0.556</td>
<td>0.521</td>
<td>0.607</td>
</tr>
</tbody>
</table>

Dependent variable Y = 1 means FDI with full ownership. AUC = Area Under the ROC Curve (AUC). In all cases the shrinkage is 10% and the training, validation and test samples are 268, 67 and 83 respectively.