Journal of Applied Finance & Banking, vol.2, no.4, 2012, 167-184
ISSN: 1792-6580 (print version), 1792-6599 (online)
Scienpress Ltd, 2012

Foreign Direct Investment and Export Decision Relationship in the Large Turkish Firms

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Abstract

Foreign direct investment (FDI) attracts more appeal than ever for Turkey with a high current account deficit. In firm level, incoming FDI has effects on various factors in which we mainly focus on export decision. In this respect, we explore large Turkish firms in order to reveal the relationship between foreign ownership and decision to export. The data of the top 500 Turkish manufacturing firms is gathered from the Istanbul Chamber of Industry for the period of 1993-2009. We have used probit model to analyze the effect of FDI on the export decision with 6842 observations in total. Findings lead us to conclude that high foreign ownership has a positive effect on firm's decision to export.

JEL classification numbers: F10, F14, L60
Keywords: Foreign direct investment, Foreign ownership, Multinational enterprises, Export decision

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Article Info: *Received* : May 23, 2012. *Revised* : June 19, 2012
Published online : August 31, 2012

1 Introduction

Foreign Direct Investment (FDI) is an investment to gain lasting interest in enterprises operating outside of the investor's country. As a key element in international economic integration, it establishes direct, stable and long-lasting bounds between economies. FDI not only allows the host economy promote its products in international markets more extensively but also stands as an additional source of funding for investment. Besides, it encourages the transfer of technology and know-how between countries which could turn out to be an important tool for enterprise development under appropriate policy implementations [35]. Beyond its integration role, FDI attracts even more appeal than ever for Turkey with its role of financing the high current account deficit.

In the firm level, FDI has drastic influence on firm's competitiveness, ownership structure, corporate governance scheme and other direct or indirect business dynamics. Since foreign investors prefer gaining control or at least having a position to influence the governance mechanisms of the local firm, corporate governance culture in the national level evolves through time and intensity of FDI inflows.

Not only the number of multinational enterprises (MNEs) as the leading actors of the global world increase through FDIs, but also their importance continues to grow around the world. Vernon [40] asserts that MNE is an institution, which tries "to carry out its activities on an international scale as though there were no national boundaries, on the basis of a common strategy directed from a corporate center" [34]. MNEs tend to have higher competitiveness levels with their various advantages such as technological know-how superiority, easier access to capital, wider distribution channels and modern management practices [36]. Some authorities claim that MNEs with their enormous technical managerial and financial capabilities are becoming an indispensable source of wealth for host nations.

The increased role of FDI in developing and emerging economies has raised expectations about the potential contribution of FDI to the country's development. In order to benefit from the inward FDI, governments of host countries use many tools such as financial incentives, duty drawbacks and grants due to the value FDI would create. As a consequence of these efforts, in 2008, developing countries account for almost one-third of the global stock of inward FDI, compared to slightly more than one fifth in 1990s [36]. Numerous studies have examined the role played by FDI in stimulating innovation and leading to increased trade, such as Ghirmay et al. [51], Bayoumi and Lipworth [50] and Balasubramanyam et al. [55]. The results indicate a stronger impact of FDI by trade orientation namely the export oriented FDI and import-substituting FDI [1]. According to the World Investment Report 2011, global FDI inflows in 2010 reached to an estimated USD 1,244 billion, with a small increase from 2009's level of USD 1,185 billion. However, there was an uneven pattern between regions and between sub-regions. There is a further contraction in FDI inflows to developed countries and transition

economies in 2010. On the contrary, FDI flows to developing economies increased by 12% (to USD 574 billion) in 2010, thanks to their relatively fast economic recovery, the strength of domestic demand and developing flows [54].

As a developing country, Turkey, in the 1960s and 1970s, adopted an import-substituting industrialization strategy, which led to a considerable but unfortunately unstable economic growth [9]. Capital flows have controlled through foreign exchange regulations until 1980, as Decree No: 28 (put into force in December 1983) and Decree No: 30 (put into force in December 1984) have initiated the capital account liberalization process. This period is accepted as the first breaking point for the Turkish economy in respect of FDI. Integration to the world markets has started with the complete liberalization of capital movements in August 1989 backed by a motivation to attract foreign portfolio investment and provide enough financing for the public sector deficit [47]. Customs Union (CU) Agreement signed between the European Union (EU) and Turkey and became effective on January 1, 1996, is the second breaking point in the trade regime of Turkey. Through this agreement, Turkey got the opportunity to access the large EU market. The 2000-2001 crises of Turkey initiated the revitalization period of banking and financial system and long-lasting major fiscal consolidation. This period is the third breaking point in the Turkish trade system. Finally, global financial crisis in 2008 is the last breaking point in the trade system of Turkey. While the crisis reverberated around the world with its destructive effects, Turkey managed to be one of the countries least affected from the crisis, thanks to the restructuring especially in the Turkish banking system and in public finance as well. By this year, liquidity heaven has ended. This “enlightenment period” brought a new challenge for Turkey to explore new export targets. Export became a major part in sales portfolio in order to mitigate business risk. Export behavior of 2001 and 2008 also support this view. While the share of sectors had a declining trend in export portfolio during 2001, the juncture in the global crisis era is on the contrary. Increase in the sectoral diversification in export activities led to an ease in export adaptation. Besides, the diversification in respect of the importing counterparties support the adaptation period positively [10].

In another perspective, it could be pointed out that as of 1980s the transformation process of exports got started in Turkey. The target of rotating from agricultural products to manufacturing products was almost achieved as of 1990s. Second phase initiated with an aim of exporting medium and high-tech manufacturing products rather than low-tech products. This process has launched as of the years of 2000-2001 crises. However, ambiguous crisis conjuncture, competition-related shortcomings, legal and judicial constraints kept away the multinational corporations from Turkish firms for the following three years after 2001 [25]. In 2003, a new FDI law was introduced to ease the obstacles faced in FDI operations [30]. EU accession negotiations started in December 17, 2004, encouraged international investors and multinational enterprises that Turkey would be included to EU [48]. They convinced that remaining problematic issues would be resolved eventually. Thus, being the first Muslim country applied to EU,

Turkey witnessed the rebounded FDI inflows as of this year. Moreover, Investment Promotion and Support Agency was structured to promote Greenfield investments that have a position of priority within the FDI composition, as an important step with a long-term perspective [25].

Although, Turkey ranks as the world's 13th most attractive destination for FDI in 2012, according to the A.T. Kearney[3] FDI Confidence Index, FDI inflows into Turkey remained modest, averaging USD 9.5 billion for the period 1995 and 2002. A peak in FDI inflows was reached in 2007 by USD 22 billion. It has decreased to USD 20 billion in 2008 and USD 8.4 billion in 2009. After a slight increase to USD 9 billion in 2010, FDI inflows are recorded as USD 15.9 billion in 2011, meaning an increase by 76% compared to 2010 [52]. FDI inflows from EU countries amounted to USD 11.3 billion which were 71% of the total inflows in 2011. The first three origin countries for FDI inflows were Austria with 14%, Spain with 14% and the Netherlands with 10% in 2011. Austria is the leading country that provides FDI inflows to Turkey in both 2010 and 2011. FDI inflows to industrial sector accounted for 49% of the total inflows in 2011, while the services sector had 51% share. In 2011, finance and energy sectors got the major share in FDI inflows with 38% and 27% share in total inflows respectively [16].

In this paper, we try to explore the effects of FDI on the largest 500 manufacturing firms' decision to export. The study is organized as respectively: literature review will be introduced, methodology and data will be presented, findings and results will be discussed and finally conclusion will be shared.

2 Literature Review

Export-oriented FDI requires different handling when compared to domestic market seeking FDI [32]. As asserted by Blomstrom [28] and Dunning [18], the swift growth of exports witnessed in the newly industrializing countries in the 1970s, was predominantly due to their ability to attract export-oriented investments from MNEs. Therefore, export-oriented FDI exists when rationalizing the production process towards internationally differing factor prices. Affirmative role of export-oriented FDI, especially in development wise, has been well documented [46]. Therefore, UNCTAD [53] has suggested the developing countries to be actively search for the "right FDI". In parallel to this suggestion, an increasing number of countries try to attract MNEs to set up export-oriented units in the host countries by various trade-policy initiatives to benefit from its positive consequences [33].

Vernon [39], Kojima [24], Dunning [17], [18], Frobel et al. [11], Bloomstrom

[3] Global management consulting firm.

[28], Bloomstrom and Kokko [27] are among the ones provided theoretical approaches explaining the export-oriented investments. Vernon [39], by his product cycle theory suggested that through FDI, a product could be produced in a developing country in order to minimize the cost of production. In such a case, the production cost of the matured and standardized product would decrease in favor of the host country to create competitive advantage. On the other hand, shift in the production place would be an opportunity for the low-income recipients. In his next work, Vernon [41] suggested that by the widespread access of MNEs, even new product development could be undertaken in relatively under-developed industrial countries. Kojima [24] structured a model to explain the pattern of Japanese FDIs based on the proposed theory of international division of labour. According to this model, FDI is used by industrialized countries for creating manufacturing capacity in the host developing countries in areas where the industrialized one lost its comparative advantage. These investments are export-oriented and designed to feed the home county demand. Frobel et al. [11] assert that MNEs relocate some of their manufacturing activities especially to developing countries in order to benefit from abundant skilled and low-cost labour. Improved facilities and standardization make the rationalization of production and matching process of best combinations of production factors possible. The rationalization is said to ease the access to high growth and profit and enable to sustain it even when there is period of distress over the world. Dunning (see [17], [18], [19], [20]) in his “eclectic paradigm” suggests that FDI depends on three factors namely the ownership, location and internalization opportunities. A firm would be in search of ownership advantages such as patents, production technologies and marketing systems in order to undertake export-oriented FDIs besides the other factors for cross border activities. These advantages would enable the foreign firms to compete with the domestic ones. Another opportunity that would lead the firm to realize export-oriented FDI in a host country would be location specific advantages such as availability of natural recourses, low labour cost or incentives by host governments to diminish cost of production. The last factor that would affect the export-oriented FDI would be internalization advantages addressing the entry mode of FDI. Through internalization, a foreign firm can substantially increase the return on its investment [42].

As modeled by Ekholm et al. [23], export decision modeling process is based on two components: Export-platform FDI, the first component, is defined as the establishment of production facilities in a foreign country and the use of part or all of the output from those facilities to serve a third country. Complementarity, the second component, between exports and FDI, refers instead to the case of a multi-product firm and to the export and FDI flows from the home country to foreign countries. Exports and FDI become positively correlated if there are horizontal or vertical complementarities across product lines [38].

So far, most of the studies have examined the export decision of firms from developed countries (see [2], [3], [6], [8], [12], [44]). But still there are others studied on the developing country experiences (see [29], [45], [14], [37], [21]).

The empirical literature for the relation between foreign ownership and export decision are mixed. Aitken et al. [5] were the first to test a firm's decision of whether to serve the domestic market or to export by using a panel data on 4104 Mexican manufacturing plants for the period 1986–1990. They use a probit model to test the impact of MNEs on the domestic firm's decision to export, controlling for the local concentration of MNEs' export activity, sectoral concentration of export activity in general and the overall geographic concentration of economic activity. Their results support the hypothesis that spillovers from both MNE export activity and export activity in general are important. Kokko et al. [4] also investigate export spillovers using a cross section of 1243 manufacturing firms in Uruguay in 1988. They estimate a probit model using firm-level as well as sector-level variables as regressors, including a measure of the impact of foreign MNEs at the sector level. Their results suggest that the likelihood of exporting increases with the presence of foreign MNEs established after 1973, the more outward-oriented period in Uruguay.

Greenaway et al. [8], using a panel of United Kingdom (UK) firms, confirm positive spillover effects from MNEs on the decision to export of UK-owned firms as well as on their export propensity. Kneller and Pisu [38] test the export decision of foreign affiliates in the UK relative to indigenous firms. Their findings show that foreign firms are more likely to export, and when they do so they are more export intensive and overall contribute disproportionately to total manufacturing exports from the UK. While firm-level advantages explain some of these differences in export behavior, strategic considerations dominate including the differential in costs, productivity and market size between the UK and foreign countries. Ruane and Sutherland [13] using an enterprise-level data for the manufacturing sector in Ireland, investigate how export decisions of host-country enterprises are associated with the presence and export intensity of foreign-owned enterprises in an export-platform economy. They find that the decision by host-country enterprises to enter the export market is positively associated with the presence of foreign owned enterprises in their sector.

Iwasaki et al. [15], empirically examine the impact of FDI on the export decision of domestic firms using a large-scale panel data from Hungary. Their analysis suggests a statistically significant positive effect of FDI on the entry of domestic firms into export markets. Cole et al. [26], analyzing a detailed firm-level dataset for Thailand between 2001 and 2004 find that US, UK, Singaporean, Japanese and Chinese ownership results in an increased propensity to export, whilst Korean and other Southeast Asian ownership has a negative impact.

Although others like Barrios et al. [43] and Wolf [49] find a negative relation of foreign ownership on export decision, most studies in literature suggest a positive relationship between foreign ownership and exports.

3 Methodology and Data

The data of the top 500 Turkish manufacturing firms is from the Istanbul Chamber of Industry dataset for the period of 1993-2009. Following the previous literature we have used probit model to analyze the effect of FDI on the export decision with 6842 observations in total. We employ a probit model because of the discrete choice nature of the dependent variable.

The model is stated as:

$$P(Export:1) = \phi(X\beta) \quad (1)$$

where

P is the outcome probability,

ϕ is a normal cumulative distribution function of the error term, which is assumed to be between 0 and 1,

X is a vector of explanatory variables (ownership, profit margin, firm size, sector, location and exchange rate),

β is the set of estimated coefficients,

$X\beta$ is the probit score/index, and

Export dummy is 1 if export occurs, otherwise 0.

The explanatory variables of the model are presented in Table 1 below.

4 Findings and Results

Table 2 below presents the descriptive summary statistics. Approximately 37% of the selected firms sampled export. The means of foreign ownership indicate that on average, the high foreign ownership represents approximately 13% of the sampled firms where low ownership represents 8%. The average level of profit margin is 6%. The mean of Marmara Region is 58% while the mean of Eastern Anatolia Region is 1%. The mean of textile is 20% while the mean of machinery is 4%.

Table 1: The explanatory variables of the model

Variable		Description
Ownership	:	Percentage of foreign ownership High Foreign ownership, FDI= >50% Low Foreign ownership, 50% > FDI > 10%
Profit margin	:	Profit / sales revenue
Firm Size	:	Small and Medium, size < 500 Large, size = > 500
Sector	:	Sectors identified according to NACE Rev.2 Codes which is the latest European industrial activity classification approved by the European Commission. Below are the sectors used as reference: Forestry Metal Machinery Electricity Construction Textile Automotive Chemicals Food
Location	:	Below are the regions used as reference: Marmara Region Aegean Region Mediterranean Region Black sea Region Central Anatolia Region Southeastern Anatolia Region
Exchange rate	:	Year-end USD

Table 2: Descriptive Statistics

Variable	Mean	Std. Dev.	Min.	Max.	Obs.
Export Dummy	0.374	0.484	0	1	6842
Exchange rate	0.841	0.614	0,011	1,55	6842
Profit margin	0.055	0.191	-2,85	1,37	6842
Small and Medium- Sized Firms	0.15	0.356	0	1	6842
Large-Sized Firms	0.29	0.455	0	1	6842
Region					
Marmara	0.58	0.493	0	1	6842
Aegean	0.17	0.371	0	1	6842
Mediterranean	0.06	0.235	0	1	6842
Eastern Anatolia	0.01	0.105	0	1	6842
Southeastern Anatolia	0.03	0.165	0	1	6842
Central Anatolia	0.12	0.322	0	1	6842
Black sea	0.03	0.172	0	1	6842
Sectors					
Forestry	0.05	0.224	0	1	6842
Metal	0.15	0.354	0	1	6842
Machinery	0.04	0.186	0	1	6842
Electricity	0.07	0.252	0	1	6842
Construction	0.08	0.266	0	1	6842
Automotive	0.09	0.281	0	1	6842
Textile	0.20	0.404	0	1	6842
Chemicals	0.16	0.365	0	1	6842
Food	0.16	0.365	0	1	6842
FDI					
High Ownership	0.13	0.340	0	1	6842
Low Ownership	0.08	0.269	0	1	6842

We report the probit regression results by the three models in Table 3.

Table 3: Probit Regression: Effect of foreign ownership on export decision

Variable	Model 1 β	Std. Error	Model 2 β	Std. Error	Model 3 β	Std. Error
Exchange rate	0,148	0,009***	0,144	0,009***	0,157	0,009***
Profit margin	0,148	0,032***	0,147	0,032***	0,188	0,036***
Small and Medium- Sized Firms	-0,096	0,017***	-0,102	0,018***	-0,141	0,020***
Large-Sized Firms	0,144	0,010***	0,139	0,011***	0,151	0,012***
Regions						
Marmara	0,101	0,041**			0,066	0,044*
Aegean	0,077	0,043*			0,069	0,046*
Mediterranian	0,185	0,044***			0,171	0,047***
Blacksea	0,119	0,049**			0,108	0,053**
Central Anatolia	0,020	0,0430			-0,033	0,047
Southeastern Anatolia	0,071	0,0500			0,083	0,053*
Sectors						
Forestry			0,171	0,108*	0,483	0,216**
Metal			0,552	0,102***	0,896	0,214***
Machinery			0,470	0,105***	0,832	0,214***
Electricity			0,510	0,103***	0,860	0,213***
Construction			0,382	0,104***	0,678	0,214***
Textile			0,423	0,102***	0,733	0,213***
Automotive			0,442	0,103***	0,792	0,213***
Chemicals			0,357	0,103***	0,692	0,213***
Food			0,365	0,103***	0,685	0,213***

Table 3 Continued

FDI High	0,0569	0,014***	0,066	0,014***	0,070	0,015***
FDI Low	0,0465	0,017***	0,049	0,018***	0,063	0,019***
Intercept	-4,1642	0,042***	-4,494	0,102***	-4,941	0,217***
X2	4208,256	1,000***	4148,803	1,000***	4367,241	1,000***
N	6829		6826		6280	

NOTE: *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Results of the three models indicate the positive effect of FDI on firm's export decision. Both the high and low foreign ownership firms have a strong tendency to export compared to the local ones. Additionally, results of the three models show a significantly positive relation between exchange rate and export decision. When the exchange rate increases, the depreciation in domestic currency positively affects the export decision. Results decouple in size wise. Results of the three models show that the large-sized firms are more likely to enter the export market while the small and medium-sized ones are unlikely to enter the export markets. This finding is not surprising when considering the financial structure of the small and medium-sized firms and inadequate financial supports provided to them. Concerning the positive effect of firm size, it is argued in literature that larger firms can, for instance, better absorb the risks associated with internationalization, have better opportunities to raise financing and that they have more resources to over-come the fixed or sunk costs associated with foreign market entry (see [31], [22], [2]). The relation between the profit margin and export decision is significantly positive in all three models suggesting that firms with high profitability are more likely to export due to their cost advantage, high standards and competitive status to enter into new markets. Results of Model 1 and Model 3 differ in region wise. Model 1 indicates that firms in Mediterranean Region is more likely to export compared to the firms in Marmara and Black Sea Region. The export decision is positive but not significant for the firms in Aegean Region. No significant effects were found for firms in Central Anatolia and Southeastern Anatolia Region. In Model 3, results show that firms in Mediterranean Region is more likely to export compared to firms in Black Sea Region. Export decision is positive but not significant for the firms in Marmara, Aegean and Southeastern Region. No significant effects were found for the export decision of firms operating in Central Anatolia Region. Results of Model 2 and Model 3 are similar with regard to export decision in terms of sector. Results of Model 2 indicate that firms operating in metal, machinery, electricity, construction, textile, automotive, chemicals and food sector are more likely to export compared to firms in forestry sector. Likewise, there is positively significant relation between export decision and metal, machinery, electricity, construction, textile, automotive, chemicals and food sector. The relation is still positively significant for the firms in forestry sector.

5 Conclusion

FDI refers to an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor. It affects the economic behavior of host countries through direct as well as indirect channels. As a key element in international economic integration, it establishes direct, stable and long-lasting bounds between economies. In the firm level, FDI has drastic influence on firm's competitiveness, ownership structure, corporate governance scheme and other

direct or indirect business dynamics. Since foreign investors prefer gaining control or at least having a position to influence the governance mechanisms of the local firm, corporate governance culture in the national level evolves through time and intensity of FDI inflows.

The increased role of FDI in developing and emerging economies has raised expectations about the potential contribution of FDI to the country's development. In order to benefit from the inward FDI, governments of host countries use many tools such as financial incentives, duty drawbacks and grants due to the value FDI would create. As a consequence of these efforts, in 2008, developing countries account for almost one-third of the global stock of inward FDI, compared to slightly more than one fifth in 1990s. FDI flows to developing economies increased by 12% (to USD 574 billion) in 2010, thanks to their relatively fast economic recovery, the strength of domestic demand and developing flows. FDI has a special importance in Turkey's position due to its role of financing the high current account deficit.

As of 1980s, the transformation process of exports got started in Turkey. The target of rotating from agricultural products to manufacturing products was almost achieved as of 1990s. Second phase initiated with an aim of exporting medium and high-tech manufacturing products rather than low-tech products. This process has launched as of the 2000-2001 crises. However, ambiguous crisis conjuncture, competition-related shortcomings, legal and judicial constraints kept away the multinational corporations from Turkish firms for the following three years after 2001. In 2003, a new FDI law was introduced to ease the obstacles faced in FDI operations. EU accession negotiations started in December 17, 2004, encouraged international investors and multinational enterprises that Turkey would be included to EU. They convinced that remaining problematic issues would be resolved eventually. Thus, being the first Muslim country applied to EU, Turkey witnessed the rebounded FDI inflows as of this year. Moreover, Investment Promotion and Support Agency was structured to promote Greenfield investments that have a position of priority within the FDI composition, as an important step with a long-term perspective.

After the two breaking points in her trade history, namely the Decree No: 28 and Decree No: 30 that have initiated the capital account liberalization process and Customs Union Agreement signed between the EU and Turkey on 1996, that gives the opportunity to access the large EU market, the third breaking point has started for Turkey by the 2000-2001 crises. Global financial crisis in 2008 is the last breaking point in the Turkish trade system. Since the liquidity heaven has ended this "enlightenment period" brought a new challenge for Turkey to explore new export targets. Export became a major part in sales portfolio in order to mitigate business risk.

Although, Turkey ranks as the world's 13th most attractive destination for FDI in 2012, according to the A.T. Kearney FDI Confidence Index, FDI inflows into Turkey remained modest, averaging USD 9.5 billion between 1995 and 2002. A peak in FDI inflows was reached in 2007 by USD 22 billion. It has decreased to

USD 20 billion in 2008 and USD 8.4 billion in 2009. After a slight increase to USD 9 billion in 2010, FDI inflows are recorded as USD 15.9 billion in 2011, meaning an increase by 76% compared to 2010. Having a crucial role in the economy, FDI is expected to surpass its current level in the coming years.

In this study, we try to explore the effects of FDI on the largest 500 manufacturing firms' export decisions. The data is from the Istanbul Chamber of Industry dataset for the period of 1993-2009. We have used probit model because of the discrete choice nature of the dependent variable. We differentiate the results by three models.

Results of the three models indicate the positive effect of FDI on firms' decision to export. Both the high and low foreign ownership firms have a strong tendency to export compared to the local ones. Additionally, results of the three models show a significantly positive relation between exchange rate and export decision. When the exchange rate increases, the depreciation in domestic currency positively affects the export decision. Results decouple in size wise. Results of the three models show that the large-sized firms are more likely to enter the export market while the small and medium-sized ones are unlikely to enter the export markets. This finding is not surprising when considering the financial structure of the small and medium-sized firms and inadequate financial supports provided to them. The relation between the profit margin and export decision is significantly positive in all three models suggesting that firms with high profitability are more likely to export due to their cost advantage, high standards and competitive status to enter into new markets.

Results of Model 1 and Model 3 differ in region wise. Model 1 indicates that firms in Mediterranean Region is more likely to export compared to the firms in Marmara and Black Sea Region. The export decision is positive but not significant for the firms in Aegean Region. No significant effects were found for firms in Central Anatolia and Southeastern Anatolia Region. In Model 3, results show that firms in Mediterranean Region is more likely to export compared to firms in Black Sea Region. Export decision is positive but not significant for the firms in Marmara, Aegean and Southeastern Region. No significant effects were found for the export decision of firms operating in Central Anatolia Region. Results of Model 2 and Model 3 are similar with regard to export decision in terms of sector. Results of Model 2 indicate that firms operating in metal, machinery, electricity, construction, textile, automotive, chemicals and food sector are more likely to export compared to firms in forestry sector. Likewise, there is positively significant relation between export decision and metal, machinery, electricity, construction, textile, automotive, chemicals and food sector. The relation is still positively significant for the firms in forestry sector.

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