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Article

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FDI entry mode choice and ownership structure in Turkish market: A firm-level analysis

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Abstract: The choice of a foreign firm's entry mode into a host country is a strategic decision which impacts its future survival and success in other countries. By employing multinomial logit regression, this study aims to investigate the impact of the firm's level of financial data on the entry mode decisions of investors and their ownership structure in Turkey from 2005 to 2012. The empirical findings have revealed that larger firms with high rate of profitability ratios are more likely to choose the full-ownership mode over others. On the other hand, a higher rate of return on equity increases the probability of investors choosing the shared-ownership mode.

Subjects: Microeconomics; Econometrics; International Economics

Keywords: multinational corporations; entry mode; mergers and acquisitions; foreign direct investment, joint venture companies

JEL classification codes: C25; F21; F23; F24; F29

1. Introduction

The firm's choice of market entry mode has attracted the growing interest of researchers in the foreign direct investment (FDI) literature and has received considerable attention from academic scholars. The firm's entry mode decision is one of the most critical issues for the firm's future survival and success in overseas countries as each mode involves various degrees of risk, control, return, and strategic commitment.

The modes of entry are mainly classified into two groups: non-equity-based and equity-based. Broadly speaking, non-equity modes are contractual agreements such as licensing and franchising that provide investors with less control and risk-sharing than equity modes do. Conversely, the

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PUBLIC INTEREST STATEMENT

A key decision faced by multinational firms (MNFs) regarding the level of ownership, control, and risk-sharing is to determine which mode of entry will be pursued by investors. First, due to the unavailability of firm-level financial data of investing multinationals in Turkey, previous studies tried to measure ownership advantages of foreign affiliates by conducting questionnaires rather than employing raw data. This study attempts to determine the impact of firms' financial strengths/weakness on the investors' entry mode choice in Turkey by employing firm-level data. By doing so, four types of entry-modes have been analyzed that provide varying degree of control over investments.

equity mode is associated with irreversible investments requiring significant resource commitments and, thus, has long-term implications for the firm's integration level in the local (host) market.

A key decision faced by multinational firms (MNFs) regarding the level of ownership, control, and risk-sharing is to determine which mode of entry will be pursued by investors. When a firm enters a foreign market through equity mode investments, it has five different well-known alternatives to choose from: merger/acquisition, joint venture (JV), institutional buyout, minority stake, and wholly owned subsidiaries (WOSs). As noted earlier, each entry mode has varying characteristic degrees of ownership relations and voting rights which oblige the firm to bear different degrees of risk exposure and resource commitment. The entry mode for opening up a new business (WOSs or greenfield investment) or acquiring all shares of a foreign company (full acquisition) dictates that the firm bear all the costs, benefits, and risks associated with the new investment. However, the remaining entry modes allow affiliates to engage in shared-ownership investments and allocate the risks and returns among its partners.

The choice of entry mode by MNFs is so complex that it may be explained by many concomitant requirements. The Dunning (1980, 1988a, 1988b) ownership-locational-internalization (OLI) paradigm specifies that firm-specific factors, host country-specific (locational) factors, and product/industry factors may play a crucial role in determining a firm's first entry choice. Accordingly, the main objective of this study is to explore the impact of the firm-specific factors on the first entry choice of investors by employing a multivariate logit model. The study covers firm-level financial data including 224 firms engaged in foreign business activities in Turkey from 2005 to 2012.

The study of the determinants of first-entry preferences of direct investors in Turkey can be justified in two ways. First, Turkey is the one of the largest emerging markets in Eastern Europe, the Balkans, and the Middle East. Additionally, it is the European Union's sixth largest trading partner. Second, despite government efforts to promote Turkey as an ideal destination for foreign investments, FDI growth in Turkey remains low compared to other emerging markets of similar size and development such as Argentina, Mexico, and Poland. Market competition and potential economic, political, and financial uncertainties complicate the evaluation of equity-based contracts and increase the uncertainty. Thus, from a managerial perspective, it is of strategic importance for foreign firms in Turkey to choose the best fit entry choice to avoid unexpected developments.

The present study will focus on the five merger and acquisition (M&A) deal types: full acquisition, joint venture companies (JVCs), merger, institutional buyout, and minority stake. The study's contribution to the existing literature can be explained as follows: First, due to the unavailability of firm-level financial data of investing multinationals in Turkey, previous studies tried to measure ownership advantages of foreign affiliates by conducting questionnaires rather than employing raw data. Thus, according to our knowledge, this study is the first empirical attempt that employs firm-level financial data to determine the impact of firms' financial strengths/weakness on the investors' entry mode choice in Turkey. Second, while previous studies considered only WOS's and JV's type of investments to determine the factors affect the decisions on the ownership structure, this study concerns four types of investment as modes that differ each other to what degree they provide control and risk-sharing among investors. Third, the study is able to provide a number of empirical implications that could facilitate MNFs in choosing the best fit entry choice relevant to their firm-specific financial characteristics in Turkey.

The remainder of the paper is organized as follows: The second and third section present historical FDI background for Turkey, and a literature review for the determinants of the FDI entry mode choice in a foreign market; the fourth section provides the data and the empirical model; following the fourth section, empirical results are presented; and the last section concludes the study and presents important implications, and offers suggestions for practicing managers.

2. Country background

While the importance of multinational firms and FDI flows became more of an issue for two decades, Turkey could not succeed in attracting FDI inflows into the country. Turkey's stock of FDI was just 300 million USD in 1971, and it received annual FDI inflows of 90 million USD until 1980. When compared to Turkey's performance attracting FDI inflows with other comparable countries that have similar GDP growth, it is obvious that Turkey was unsuccessful in receiving FDI inflows. As Erdilek (2005, p. 8) stated in his study, "Turkeys' inward FDI performance has been disappointing by all measures based on UNCTAD data." After the implementation of export-oriented policies in the mid-1980s, the Turkish economy shifted from a protectionist trade regime to export-oriented economic liberalization, and then FDI inflows started to increase rapidly in this period. However, in the 1990s, when the global FDI flows exceeded the growth in world trade, FDI inflows did not increase much and remained stagnant in Turkey. The average FDI stock was not more than 1 million dollars between 1990 and 2004. The main reason behind the failure was economic and political uncertainties that started in the latter half of the 1980s and continued until the 2001 economic crises. The years between 1987 and 2002 are particularly seen as a "down the drain" period for the Turkish economy.

Following the 2001 crisis, the new FDI, Law 4875, on 5 June 2003 was legislated to promote FDI inflows into the country. This new FDI law removed the restrictive conditions in previous FDI Law 6224. The legislation of a new FDI law added a new dimension to the FDI environment in Turkey. According to this new FDI law, FDI is not restricted in any sectors and the new law extinguishes the old minimum capital limit, allows foreigners to own any property with no barriers, and it does not require any performance limit to invest in Turkey and takes into account foreign investors' right to international arbitration, provides foreign investors with full convertibility in their transfers of capital and earnings. Moreover, after the achievement of macroeconomic policies following the 2001 crisis, the Council of the EU made the decision to start negotiating with the Turkey as a candidate of a member state at the end of 2004. The EU's vote in the name of Turkey attracted foreign investors to invest in Turkey that current year. FDI inflows reached 9.7billion dollars in 2005 and accounted for almost 2.8% of Turkey's GNP.

According to the UNCTAD data, Turkey became the 9th country to pull FDI inflows among other developing countries such as China, Mexico, Brazil, Russia, Bermuda, the United Arab Emirates, Colombia, and the Cayman Islands. In 2005 and 2006, FDI has increased rapidly; resulting from the privatization of companies in Turkey, and most of the FDI was in the form of M&As in 2005 and 2006. After the global economic crisis got off the ground in 2008 and continued to be felt in 2009, FDI inflows started to decrease in Turkey. In parallel with the global economic crisis, the new incentive system was effectuated by The Council of Ministers on July of 2009. With this new incentive system, foreign investors were encouraged to invest in Turkey with comprehensive regional and sectoral support provided by the government. In other words, this new incentive system gave favorable tax and administrative treatment to foreign companies based on regional and sectoral levels. Moreover, Turkey also signed Bilateral Investment Treatments with the countries that have strong investment relationships with Turkey or have the potential in this sense to increase the capital flows and technology and protect foreign investors in the framework of the legal system of the host contracting state. The BITS were signed among 82 countries and remain the fundamental agreements that accelerate and facilitate FDI inflows into Turkey. Turkeys' realized FDI inflows from 1970 to 2015 is summarized in Figure 1.

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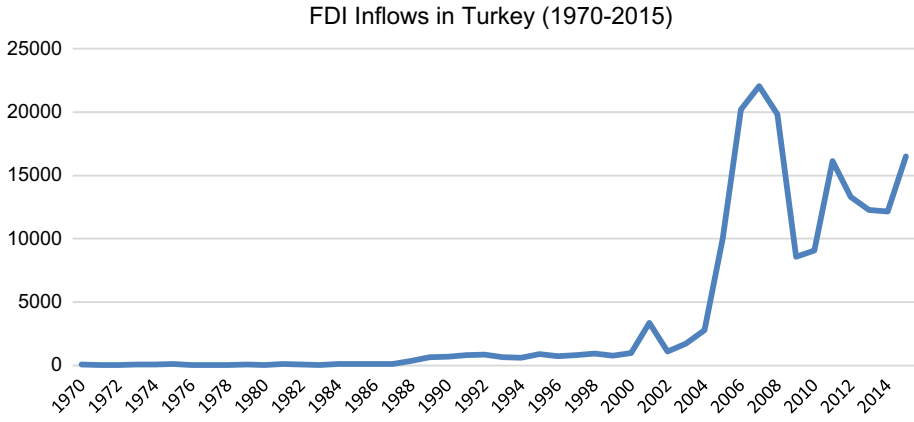

Figure 1. FDI inflows into Turkey from 1970 to 2015.

Source: Derived from the UNCTAD Statistics (www.unctad.org).

3. Literature review

An analysis of the previous research reveals that the majority of studies have merely focused on the factors that influence the foreign investor's choice between full WOSs and part-ownership JVs (see Agarwal & Ramaswami, 1992; Bhaumic & Gelb, 2005; Brouthers, 1995; Erramilli, 1991; Gatignon & Anderson, 1998; Gomes-Casseres, 1989; Kim & Hwang, 1992; Madhok, 1998; Smarzynska & Wei, 2002; Tatoglu, Glaister, & Fuat, 2003; Zhang, Luo, & Toppinen, 2015).

The primary conspectus, which includes four theories, guides the researchers in identifying a large number of variables that appear to have an effect on the choice of investors between JVs and WOSs. These theories are the following: (i) transaction cost theory; (ii) the eclectic model of international production; (iii) bargaining theory; and (iv) organizational capability theory.

According to the transaction cost theory, the choice between full-ownership and part-ownership indicates the willingness of MNFs to the extent transaction cost burden to bear (see Anderson & Gatignon, 1986; Erramilli & Rao, 1993; Gatignon & Anderson, 1988; Gomes-Casseres, 1989; Hennart, 1991; Pan & Tse, 2000). Based on the transaction cost theory, specific entry mode, and particularly the JV entry mode, would be preferred when the host country risks and cultural distance are high (Erramilli & Rao, 1993; Jung, 2004; Zhang et al., 2015).

The second stream of research structures the choice of ownership under the general category of the eclectic model of international production (Dunning, 1988a, 1988b). Dunning (1993) introduced the "ownership advantages" to the locational and internalization advantage and determined two kinds of ownership advantages: asset advantage (O_a) and transaction cost minimizing advantage (O_t). The O_a is the point of origin for firm-specific ownership advantages that arise particularly from a firm's possession of tangible and intangible assets, such as financial strength, size, management, patents, and trademarks. The value of O_t determines the benefits arising from the ability of a firm's integration in multiple and geographically dispersed value-added activities.

The third stream of research falls under the bargaining power of MNFs and the host governments. Previous studies have argued that the bargaining power of an MNF depends on the firm's possession of technology, product differentiation, product diversity, and size (Bhaumic & Gelb, 2005; Gomes-Casseres, 1989).

Madhok (1997, 1998) introduced an alternative model, the organizational capability theory, to explain the ownership structure identifying the entry mode of MNFs. Organizational capability theory claims that the competitive advantage of an MNF emerges due to the development and exploitation capabilities of the firm rather than the efficient management of transactions.

Table 1. Summary for deal type statistics

Deal type	Frequency	Percent	Cumulative
Full acquisition	160	71.43	71.28
Institutional buyout	4	1.79	73.21
JV	18	8.04	81.25
Merger	3	1.34	82.59
Minority stake	39	17.41	100
Total	224	100	

The study of Erdilek (1982) was a leading guide for firm-level analysis to determine the motives and characteristics of foreign investments in Turkey. He analyzed the microeconomic reasons of foreign investments in manufacturing sector by interviewing senior executives of 46 firms in 1980s. He concluded that the foreign firms disregard the efficiency rather serve the Turkish market as the investing firms. Demirbag, Mirza, and Weir (1995) examined the determinants of JV type of investments in manufacturing sector by conducting a survey over 47 multinational parent firms. She found main motives behind the JV type of investments are "to acquire a direct share in the local market", "to establish a local identity". The study of Tatoglu and Glaister (1998) was one of the most comprehensive works that investigate the main determinants of Western multinationals that engage in FDI in Turkey. They have investigated the main motives of multinationals based on Dunning's (OLI) paradigm for a sample of 98 firms invested in WOS's or JVs by using binomial logit regression. They have concluded that firms that have higher ownership advantages tend to select WOS over a JV entry mode.

4. Data and methodology

This study examines the entry mode choice of MNFs, particularly from European countries, engaged in M&A activities in Turkey. Thus, the target population of MNFs is recorded as acquirer companies and listed in the Zephyr database of M&A deals and rumors. Firm-level data corresponding to each deal type are obtained from the Zephyr database dissemination server (https://zephyr.bvdinfo.com).

4.1. Dependent variable

Our dependent variable is determined based on the type of entry mode preferred by the acquirer (parent) company. This variable will be represented by deal type, and it will take the following outcomes for each case. A value of 0 will be assigned to the deal type if the MNF chooses the full acquisition entry mode, that is, buying all shares (100%) of a host company. Values of 1, 2, 3, and 4 will be assigned to the deal type if the MNF prefers the institutional buyout, JV, merger, or minority stake, respectively. Table 1 presents the summary statistics of deal types.

As seen in Table 1, 71% of M&A activities exist in the form of full acquisitions of Turkish companies by foreign affiliates. Thus, one may argue that the majority of M&A activity comes from the acquisition deal type. This is followed by minority stake and JV deal types at 17.41 and 8.04%, respectively. Only four companies chose the institutional buyout, and three companies chose merger as the mode of entry over the studied period.

4.2. Independent variables

The firm-level financial data that are used to explain the probability of discrete outcome of entry mode choice are described below.

4.2.1. Category

Economies of scale is one of the most cited motives that determine the entry mode choice by investors. Since large firms are able to realize more revenue because of economies of scale, one can safely assume that smaller firms are more likely to engage in part-ownership M&A activity as a means to attain lower costs (Jensen & Ruback, 1983; Maloney & McCormick, 1988). Therefore, this

study included category variables that represent the size of the acquirer firms engaged in M&A activity in Turkey. The category is classified into four groups: very large, large, medium, and small-sized acquirer firms.

4.2.2. Return on equity (ROE)

ROE is the amount of net income returned as a percentage of shareholders' equity. It indicates a corporation's profitability by revealing how much profit a company produces with the money shareholders have invested. This variable is included in the model to estimate the impact of the shareholders' contributions to the revenue on ownership preferences (full acquisition, that is, full-ownership, or the remaining entry mode preferences which are part-ownership) by foreign affiliates in Turkey. Danzon, Epstein, and Nicholson (2007) claimed that a firm will engage in M&A activity or not, based on pre-merger characteristics. Thus, one may assume that higher ROE is an indicator of higher profitability of pre-merger activities which then induce investors to choose part-ownership entry modes rather than fully owned JV.

4.2.3. Profit margin

Profit margin is expressed as net profit divided by sales, and it measures how much of every dollar of sales a company actually retains as earnings. Historically, a large percentage of acquisitions are financed by cash. Therefore, one may simply assume that firms with higher financial capacity will prefer fully owned JVs over part-ownership modes (see the study of Abzahd, Meyerson, & Sahagun, 2009). Thus, this variable is incorporated into the model to find out how the profitability of a firm affects its decision for corporate control, thus the ownership structure.

4.2.4. Net asset turnover

Net asset turnover is calculated as net sales divided by total assets. This ratio measures the access capacity that reduce asset efficiency therefore decrease the return on investments. Thus, firms facing excess capacity in their production at home country are more likely to be engaged in merger activity to avoid a reduction in their asset efficiency (Abzahd et al., 2009; Andrade, Mitchell, & Stafford, 2001; Danzon et al., 2007; Mclaughlin & Mehran, 1995). Thus, this variable is employed to measure the impact of the excess capacity motive for corporate control level.

4.2.5. Current ratio

The current ratio shows the liquidity of a company and measures the ability of a firm to pay its short- and long-term debts realized by cash; thus, the liquidity of the company may be one of the most important motives that determine the entry mode decisions of investors. Jensen (1986) and Andrade and Stafford (2004) suggest that firms with higher leverage tend to use their borrowing power as acquirers. Thus, one may simply assume that as the liquidity of a firm increases, this may also leads to the firms to use unused borrowing opportunity to finance the fully owned JVs entry mode.

5. Methodology

Binomial logit regression modes are used to measure the probability of an event occurring which is mostly performed frequently in entry-mode studies (Erramilli & Rao, 1993; Gomes-Casseres, 1989; Hennart, 1991; Tatoglu & Glaister, 1998). On the other hand, the multinomial logistic (MNL) model developed by McFadden (1973) is a classification method that generalizes logistic regression to multiclass problems with more than two possible discrete outcomes. That is, it is a model used to predict the probabilities of the different possible outcomes of a categorically distributed dependent variable, given a set of independent variables. This method is particularly an appropriate method for entry mode analysis when (i) the dependent variable outcome is multinomial distributed, (ii) underlying assumptions of multivariate normality are not met, (iii) dependent variable that can fall into one of several ordered or unordered categories (see the studies of Hernando, Nieto, & Wall, 2009; Sanfilippo Azofra, Garcia Olalla, & Torre Olmo, 2008; Wei, Liu, & Liu, 2005; Worthington, 2004). As noted earlier, there are five possible discrete outcomes of entry mode choices. Thus, the dependent variable takes multinomial discrete outcomes depending on whether

or not the investing firm prefers one entry mode out of the five different modes: full acquisition, institutional buyout, JV, merger, or minority stake.

The multinomial logit regression can be expressed as:

The probability that the outcome for individual i is alternative j, conditional on the regressors X_i is;

$P_{ij} = \Pr(Y_i = j) = F_j(X_i, \phi), \quad j = 1, ..., m, \quad i = 1, ..., N.$ $F_j(.)$ corresponds to different multinomial models.

In order to model a multinomial logistic regression, first, a reference group that most closely corresponds to the largest group is selected. This is the control group to which others are compared. In our study, the full acquisition entry mode type is the largest group chosen as the reference or control group to be compared to.

The entry choices/categories are alternatives and coded as $j = 1, 2, ..., m$. The dependent variable is $Y = j$ for each individual firm. The data for each firm are recorded on j rows, where j is the number of alternatives. The dependent variable:

$$Y_j = \begin{Bmatrix} 1 & if\ Y = j \\ 0 & if\ Y \neq j \end{Bmatrix}$$

$Y = j$ if the alternative j is the observed outcome and the remaining $Y_k = 0$. For each observation, only one of $Y_1, Y_2, ..., Y_m$ will be non-zero. The independent variables are alternative-variant or case-specific variables and can be represented as X_{ij}. The regressors X_{ij} vary over the individual firm, i, and the alternative outcome, j.

MNL model specification can be written as:

$$P_{ij} = \frac{\exp(X_i^{'}\beta_j)}{\sum_{l=1}^{m}\exp(X_i^{'}\beta_j)} \tag{1}$$

where X_i are case-specific regressors. Clearly the model ensures that the $0 < P_{ij} < 1$ and $\sum_{j=1}^{m} P_{ij} = 1$.

To ensure the model identification, β_j is set to zero for the base category (full acquisition) and coefficients are then interpreted with respect to that base category.

When we set the base category to the first category (full acquisition), then the MNL model defined in (1) implies that:

$$\Pr(Y_i = j/Yi = jor1) = \frac{\Pr(Yi = j)}{\Pr(Y_i = j) + \Pr(Y_i = 1)} = \frac{\exp(X_i^{'}\beta_j)}{1 + \exp(X_j^{'})} \tag{2}$$

using $\beta_1 = 0$ and cancellation of $\sum_{l=1}^{m}\exp(X_i^{'}\beta_l)$ in the numerator and denominator. As the positive coefficient of a regressor in the MNL model increases, we are more likely to choose alternative j than alternative 1. To interpret the outcome, it is also helpful to transform to odds ratios or relative risk ratios. The relative risk ratio of choosing alternative j rather than alternative 1 is given by:

$$\frac{\Pr(Y_i = j)}{\Pr(Y_i = 1)} = \exp(X_i^{'}\beta_j) \tag{3}$$

so that $e^{\beta_{jr}}$ gives the proportionate change in the relative risk of choosing alternative j rather than alternative 1 when X_{ir} changes by one unit.

For an MNL model, there is no single conditional mean of the dependent variable, *Y*. Instead, there are *m* alternatives and the MNL model predicts a change in the probabilities of these alternatives as the regressors change. One may also estimate the marginal effects (MEs) of the MNL model. The MEs can be shown as:

$$\frac{\partial P_{ij}}{\partial X_{ij}} = P_{ij}(\beta_j - \bar{\beta}_j) \tag{4}$$

where $\bar{\beta}_j = \sum P_{il}\beta_l$ is a probability weighted average of the β_l. The marginal effects change with the point of evaluation, X_i, because P_{ij} varies with X_i. The signs of the regression coefficients do not give the signs of the MEs. For a variable *X*, the ME is positive if $\beta_j > \bar{\beta}_i$.

6. Empirical results

To predict firm-specific factors affecting entry mode decisions of the foreign affiliates that engaged in M&A activity in Turkey from 2005 to 2012, we have specified the multinomial logistic regression model. In doing this, four comparisons are made: (1) comparing institutional buyout ownership structure to full acquisition; (2) comparing JV ownership structure to full acquisition; (3) comparing merger ownership structure to full acquisition; and (4) comparing a minority stake ownership structure to full acquisition. The estimation results are presented in Table 2.

As seen in Table 2, the estimated coefficients in each column indicate the utility of choosing one of the deal types (institutional buyout, JV, merger, or minority stake) over full acquisition (base mode). Thus, a positive coefficient for an independent variable implies that it increases the probability of one of the deal types compared to a full acquisition. A negative coefficient means that full acquisition is more likely than other deal types. The estimated model has an overall explanatory power with a significant χ^2 value, and a pseudo R^2 measure confirms that goodness of the model is well-fitted.

Comparison of institutional buyout ownership to the base category (full acquisition) reveals that profit margin and current ratio have significant negative coefficients. That means as the profit margin or current ratio increases by one unit, the full acquisition deal type is more likely than an institutional buyout. A possible interpretation of the result may be that, as the acquirer company's degree of profitability and liquidity increase, it may hold a significant amount of cash on hand to finance full acquisition deals which are cash deals.

Table 2. Estimation results of the MNL model

Full acquisition (base outcome)	Institutional buyout	JV	Merger	Minority stake
Category	−0.860 (0.264)	−0.5167 (0.143)	−1.2515 (0.024)*	−0.3304 (0.217)
ROE	0.025 (0.360)	0.0128 (0.070)	0.0345 (0.019)**	−0.0065 (0.097)
Profit margin	−0.0602 (0.008)**	−0.0297 (0.075)	−0.0927 (0.025)*	0.0410 (0.152)
Net asset turnover	0.0447 (0.328)	−0.3806 (0.163)	0.0585 (0.157)	−0.0722 (0.489)
Current ratio	−1.0373 (0.003)**	−0.2120 (0.420)	−2.8713 (0.029)*	0.2604 (0.162)
Observations	224			
Wald $\chi^2(20)$	78.01			
Pseudo R^2	0.1113			
Log likelihood	−174.50			

Note: Probability values of the coefficients are presented in the parentheses.

*Significance level at 5%.

**Significance level at 1%.

Comparison of merger ownership to the full acquisition shows that, while category, profit margin, and current ratio variables have negative coefficients, the ROE variable has a positive coefficient. This means that as the size of the acquirer company increases, the full acquisition deal type is more likely than the merger deal type. Since larger firms enjoy more revenue through economies of scale, this result does not come as a surprise. So, as the firms become more profitable, they engage in full-ownership activities. Again, as the firm experiences a higher current ratio or profit margin, it tends to invest in full acquisitions rather than mergers that provide less control and ownership. However, an increase in ROE makes the probability of choosing merger deal types higher compared to full acquisition. As noted earlier, ROE measures the contributions of shareholders to the firms' revenue. Thus, as profitability of the firm increases by shareholder money invested, the acquirer firm may find more reasons for investing in merger deal types rather than investing in full acquisitions.

Furthermore, a comparison of JVs and minority stakes to full acquisitions reveals that none of the variables have a significant effect in determining the probability of choosing these types of investments over full acquisitions.

One may want to know the transformation of MNL coefficients to the relative risk ratios or odds ratios to interpret the relative risk of choosing the base category when a one unit increase in an independent variable is realized. Relative risk ratios can be obtained by exponentiating the multinomial logit coefficients, e^{coef}. The estimated relative risk ratios are presented in Table 3.

The relative risk ratios can be interpreted as follows. By holding other variables constant, a one unit increase in profit margin leads to relative odds of choosing full acquisitions rather than institutional buyouts that are 0.9415 times what they were prior to the change. In other words, an increase in profit margin by one unit leads to the relative risk for choosing an institutional buyout over a full acquisition and would be expected to decrease by a factor of 0.9415. Furthermore, an increase in the current ratio by one unit leads to the relative risk for choosing an institutional buyout over a full acquisition and would be expected to decrease by a factor of 0.3543.

With respect to the comparison of a merger deal type over a full acquisition, as the size of the company increases, it will lead to the relative risk of choosing mergers over full acquisitions to decrease by a factor of 0.2860. Again, by holding other variables constant, a one unit increase in ROE leads to the relative risk for choosing mergers over full acquisitions and would be expected to increase by a factor of 1.0351. Lastly, holding other variables constant, a one unit increase in profit margins or current ratios leads to the relative risk of choosing mergers over full acquisitions to decrease by a factor of 0.9114 and 0.0556, respectively.

Table 3. Relative risk ratios of MNL coefficients

Full acquisition (base outcome)	Institutional buyout	JV	Merger	Minority stake
Category	0.4231 (0.264)	0.5964 (0.143)	0.2860 (0.024)*	0.7186 (0.217)
ROE	1.0262 (0.360)	1.0129 (0.070)	1.0351 (0.019)**	0.9934 (0.097)
Profit margin	0.9415 (0.008)**	0.9706 (0.075)	0.9114 (0.025)*	1.0418 (0.152)
Net asset turnover	1.0457 (0.328)	0.6833 (0.163)	1.0603 (0.157)	0.9302 (0.489)
Current ratio	0.3543 (0.003)**	0.8088 (0.420)	0.0566 (0.029)*	1.2975 (0.162)
Observations	224			
Wald $\chi^2(20)$	78.01			
Pseudo R^2	0.1113			
Log likelihood	−174.50			

Note: Probability values of the coefficients are presented in the parentheses.

*Significance level at 5%.

**Significance level at 1%.

Table 4. Conditional marginal effects

Full acquisition (base outcome)	Institutional buyout	JV	Merger	Minority stake
Category	−0.0057 (0.443)	−0.0252 (0.169)	−0.0010 (0.591)	−0.0384 (0.282)
ROE	0.0001 (0.293)	0.0007 (0.064)	0.00003 (0.582)	−0.0110 (0.047)*
Profit margin	−0.0004 (0.056)*	−0.0020 (0.090)	−0.00008 (0.582)	0.0059 (0.120)
Net asset turnover	0.0005 (0.340)	−0.0206 (0.063)	0.00008 (0.620)	−0.0061 (0.661)
Current ratio	−0.0078 (0.103)	−0.0137 (0.347)	−0.0025 (0.576)	0.0388 (0.115)

Note: Probability values of the coefficients are presented in the parentheses.

*Significance level at 5%.

Moreover, one may also wonder how the probabilities of choosing one type of entry mode changes as the regressors change. In doing so, conditional marginal effects for each deal type are shown in Table 4.

When we estimate conditional marginal effects of the predicted outcomes, we see that, while profit margin has a significant negative effect in choosing institutional buyout, ROE has a significant negative effect in choosing minority stakes over remaining deal types. That means that a one unit increase in the profit margin decreases by 0.0004 the probability of choosing the institutional buyout entry mode to the remaining entry mode choices. Similarly, a one unit increase in ROE decreases by 0.0110 the probability of choosing the minority stake over the remaining entry modes. Even though the conditional marginal negative effect of profit margin is minor, meaning that as the profitability of investors increase, they will be less likely to prefer institutional buyout and prefer to invest in any of the other deal types. A possible explanation is that the institutional buyout mode involves purchasing a controlling interest to take the advantage of target firm's growth potential. However, institutional investors are usually perceived as external venture capitalists; thus, they are not given a welcoming reception by most developing countries. Implementations of entry controls and heavy bureaucratic obligations may complicate the entry process and encourage investors to consider other entry modes as their profitability increases. Furthermore, a marginal negative effect of ROE on minority stakes may be expected also. Since a minority stake means a shareholding of less than 50% of a company's equity capital, this type of entry mode provides the least control and least ownership compared to the other entry modes. As the contributions of shareholders' money invested to the revenue increase, this mode would be less preferable than the other alternatives.

7. Summary and conclusions

The objective of this study was to determine the impact of foreign affiliates' financial accounting in their decisions regarding the entry mode type and ownership structure in Turkey from 2005 to 2012. To the best of our knowledge, this study is the first to employ the acquirer (parent) firms' financial data by using a multinomial logit model. In doing so, we have determined four shared-ownership modes (institutional buyout, JV, merger, and minority stake) to be compared to the full-ownership mode (full acquisition) that is set to the base category.

The results of our study prove that an increase in profit margins or current ratios leads to a reduction in the probability of choosing institutional buyouts or mergers over the full acquisitions. This means that, as the financial strength of a foreign affiliates improves, it is more likely to have a full-ownership structure rather than a shared-ownership structure. However, an increase in the ROE increases the probability of choosing mergers over the full acquisitions. This means that, as the profitability of money invested by shareholders increases, investors tended to choose shared-ownership modes in Turkey over the study period. Furthermore, as the size of a foreign affiliate increases, firms are less likely to choose mergers compared over full acquisitions. That is, firms ensuring the high rate of revenue through economies of scale prefer to have a full-ownership mode.

With regard to the relative risk ratios and marginal effects of the MNL model, we have found that a one unit increase in profit margins or current ratios decreases the risk of choosing institutional buyouts or mergers. Conversely, a one unit increase in ROE increases the risk of choosing mergers over the base category. Relative risk ratios of the estimated coefficients ensure the robustness of the MNL model. Furthermore, marginal effects of the estimated outcomes reveal that, while an increase in profit margins decreases the probability of choosing institutional buyout, an increase in ROE decreases the probability of the choosing minority stake over the other alternative entry modes.

The findings of this study introduce new insights and implications for practicing managers. From a managerial perspective, this study provides empirical information in choosing an acceptable level of ownership and control in their Turkish affiliates. A number of implications are worthy to note. Full acquisitions (full-ownership) should be an appropriate entry mode if the foreign affiliate is large enough and has high rate of profitability ratios ensuring the power to pay its short- and long-term debts. The shared-ownership mode (merger) would be more profitable for investors if the contributions of shareholders to the revenue are high. However, if the mode does not provide the adequate level of the shared ownership, as in the case of the minority stake, this scenario could change.

From economic perspective, entry-mode choice has a crucial role on the investors' satisfaction level from the foreign investments abroad. So that, investors' resource commitment based on the entry-mode choice determines to what extent foreign affiliates integrate into local (host) market. Since, higher control and ownership entry mode structure provides incentives for foreign firms to be integrated more into the local market, it may make foreign affiliates able to behave independent from the parent company. Thus, affiliate's entrepreneurial initiative may increase the corporate productivity and competitiveness in the foreign market. Furthermore, independency of subsidiary gives a rise to the productivity by reducing the control problems of parent company. On the other side, if foreign affiliate is not well-endowed by financial resources, they should choose domestic firms whose partnership adds to the productivity and thus profitability of investment in the market.

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