A Tale of Two Theories: Market Entry Decisions from the Perspectives of Industrial Economics and Institutional Theory
- Why do Firms Enter Eastern European Markets?

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October 30, 2008

Abstract

Our study aims at comparing and integrating traditional research on FDI with the more recently emerging institutional perspective on foreign market entry. We use a theoretical model on FDI to develop hypotheses for both perspectives. We empirically test our predictions by studying the entry moves of German firms into Eastern European markets. Our results provide strong evidence that both approaches simultaneously have a share in explaining entry patterns. Thus, the economic perspective and the institutional perspective offer complementary explanations for foreign market entry decisions.

1 Introduction

Expansion into new market offers chances, but is fraught with much uncertainty and risk. Traditional FDI theory predicts that firms will invest in foreign markets in order to generate economic rents by exploiting firm-specific capabilities (e.g. products and knowledge), and to strengthen the firm's strategic position by gaining better access to scarce resources like labor, knowledge etc. (Hitt et al., 2006; Chen & Chen, 1998). Especially emerging markets can lure with cheap resources and unsaturated demand. Firms that consider entering foreign markets have to cope with uncertainty, due to a lack of information, uncertainty about the reliability of information, and a general liability of foreignness (Johanson & Vahlne, 1977). So far, traditional FDI theory and the more recently emerging institutional perspective have been explored almost independently. We believe, however, that both perspectives provide valuable insights into different characteristics of the same decision problem. In order to get a more fine-grained picture of market entry decisions, a joint treatment of both perspectives is needed. Thus, our aim is to promote an integrating view. We combine and compare the arguments of both perspectives theoretically as well as empirically. As a first step, we offer a basic model that allows us to analyze both perspectives. Second, and equally important, we study market entry decisions of German stock corporations into Eastern European markets after the fall of the Iron Curtain. Our empirical results strongly support the notion that bridging the two strands of literature towards an integrative view is the route one needs to take. We provide evidence that indeed both theoretical approaches provide complementary explanations for foreign market entry.

Historically, FDI was approached from the economic perspective emphasizing the potential gains. Traditional FDI theory predicts that firms will invest in foreign markets in order to generate rents by exploiting firm-specific capabilities (e.g. products and knowledge), or to strengthen the firm's strategic position by gaining more favorable access to scarce resources like labor, knowledge etc. (Chen & Chen, 1998).[1] Whereas manufacturing firms typically seek to exploit advantages with respect to production costs and superior access to scarce resources, firms in other industries may be attracted by high rates of yet unsaturated demand (Gripsrud & Benito, 2005). Consequently, the attractiveness of the labor market, the attractiveness of the product market, and transport costs are economic factors influencing a foreign market entry decision.

In contrast to an economic approach, research on foreign market entries from an institutional perspective has lagged behind. A few recent studies

[1] See for example the survey by Rugman (1986), or the classical paper by Caves (1971).

have shown that the social context of firms plays an important role for foreign direct investment. Martin, Swaminathan, and Mitchell (1998) find that the relationships of suppliers with domestic buyers, competitors and non-competing suppliers influence the occurrence and timing of foreign market entries. Henisz and Delios (2001) and Guillen (2002) have illustrated that firms imitate risky international expansion moves of other firms in the same domestic industry or of partners in the same business group. These papers represent additions to traditional explanations of FDI as they shed light on the influence of mimetic behavior within a firm's social context. According to research in institutional theory, this type of context-related behavior is rather aimed at gaining legitimacy than at increasing economic rents (DiMaggio & Powell, 1983).

***** place Figure 1 about here *****

Further, we show that one important effect is common to both perspectives (middle segment of figure 1). Research on FDI theory as well as on the institutional perspective predicts that firms behave alike although for very different reasons. From an economic viewpoint, an attractive foreign market may entice a number of firms to engage in FDI. As a result, the economic perspective expects patterns of firms' parallel behavior. The institutional perspective emphasizes the risk surrounding important strategic decisions like foreign market entry. Firms that consider entering foreign markets must cope with uncertainty from various sources: the lack of information, uncertain reliability of available information, and general foreignness. According to an institutional view, firms try to mitigate the risk surrounding uncertain decisions and to gain legitimacy for their actions by imitating the decisions of their peers (DiMaggio & Powell, 1983). Again, firms will seemingly engage in parallel behavior. However, in this case, the behavior is not based on a firm's individual assessment of the foreign market's attractiveness, but on the imitation of prior market entry decisions by other firms in the social context.

Although research in FDI theory and in the institutional perspective expects firms to behave alike, we attempt at isolating effects that are specific to the latter perspective (see bottom of figure 1). In order to do so, we concentrate on a certain class of actors in the firms' social context, i.e. large and successful firms. Entry decisions by these prestigious firms are especially likely to increase legitimacy and to decrease the risk surrounding these decisions (Haveman, 1993). Consequently, the imitation of entry decisions by prestigious peers is more likely to be based on an institutional logic than on economic parallel behavior.

Obviously, it is not a straightforward exercise to draw the border line between these two perspectives for real world decisions. Nevertheless, the

interplay between these mechanisms can be studied surprisingly simply if we take a common baseline setting which we then supplement by assumptions such that one or the other kind of mechanism drops out as the result of the model. Out of the same baseline setting, two models are developed as our first step. One model depicts the economics' perspective while the second model picks up the institutional perspective. The models' results directly allow us to deduct the above mentioned hypothesis for empirical testing.

The setting of our study provides a powerful context to analyze the economic and institutional perspective on market entry. We examine German firm foreign direct investments into 21 Eastern European countries between 1990 and 2003. After the fall of communism in 1990, a whole new set of markets was made available to foreign investors. A number of these markets offered cheap resources and unsaturated demand and seemed, therefore, highly attractive for FDI. However, uncertainty regarding the viability of such investments was particularly high because FDI by Western firms was virtually non-existent in these markets under the communist regime. While some information regarding the general environment (political, economic, and social) of these markets was probably available during the period of the study, it was very difficult to find individuals or entities with rich, first-hand experience operating foreign businesses in those countries.

Our study contributes to research on international expansion moves in a number of ways. In contrast to prior literature, we combine a firm's economic rationale for foreign market entry with influence factors in the firm's social context. We show that both perspectives point to different characteristics of the same strategic decision. Whereas traditional FDI research addresses the economic rationale of (risky) foreign market entry decisions, the institutional perspective refers to ways of reducing this risk. Moreover, both perspectives share a common effect the mimetic behavior firms. However, the reasons for this similarity are either rooted in an economic rationale or in the firm's institutional environment. By combining a theoretical analysis with empirical tests we are able to explore the explanatory power of the economic and institutional reasons for FDI. We provide evidence that both approaches have a complementary share in explaining entry decisions of German firms into Eastern European markets. With respect to economic reasons, especially the attractiveness of labor markets is an important trigger for market entry decisions. With respect to the institutional perspective, prior market entries by large and successful firms play an important role. Thus, any theoretical or empirical contribution that ignores one or the other perspective suffers from a serious omission.

2 Theoretical foundations

2.1 The common structure

There are n firms in the home country. Firms need not to be identical. Without loss of generality, let there be two types of firms, prestigious and non-prestigious firm. We comment on this distinction later on in more detail. Let i denote a host countries, $i \in I$ where I is the set of all potential host countries.

Not all firms decide simultaneously at the very first second after the new market has opened up whether or not to enter. Not much can be said about the order and timing of these decisions on a priori grounds. Someone has to be the first. We depict this unknown process by the following stylized setting. Let there be m decision periods, for example years. A random mechanism assigns firms to decision periods. The number of firms that decide each period does not need to be equal, but it is common knowledge at least at the end of each respective period. Rumors are one of the fastest things in an economy. Thus, all entry and non-entry decisions are commonly observable across all firms. Whenever the order of decisions plays an important role, we denote the first firm that has to decide by A, the second by B and so on. Otherwise, firms are indexed by $j = 1, \ldots, n$.

Once the idea of market entry has emerged within the firm, the top management team has to decide in favor or against entry. Rarely, the same decision is on the agenda repeatedly. Therefore, we assume that each firm decides once and for all whether or not to enter the market. Decisions are made to maximize firm profits. Let Π^h_{jt} denote operating profits of firm j in period t if j is active only in the home country. Similarly, let Π^i_{jt} denote operating profits of firm j in period t if it is active in the home country and in country i.

Potential increases in operating profits have to be traded off against entry costs. Let Z_{ji} denote entry costs that firm j faces if it decides to enter country i. Parts of these costs might be sunk. Let entry costs be time invariant. The focal firm prefers to enter country i if

$$\sum_{t=0}^{\infty} \Pi^h_{jt} \delta^t < \sum_{t=0}^{\infty} \Pi^i_{jt} \delta^t - Z_{ji} \tag{1}$$

where δ is the discount factor, equal across all firms. Thus, profit gains due to the entry move must overcompensate entry costs,

$$Z_{ji} < \sum_{t=0}^{\infty} \delta^t \left[\Pi^i_{jt} - \Pi^h_{jt} \right]. \tag{2}$$

In our population of firms, firms differ. They differ with respect to the respective production technology, their individual revenue function, and they may differ with respect to entry costs. As any function can be approximated by a polynomial of appropriately high order, let there exist a common (approximating) revenue function, a common cost function, and a common entry cost function, identical for all firms. All differences across firms are captured by differences in the coefficients of these functions. Let a_j be firm j's vector of coefficients of the revenue function. Similarly, let b_j describes the parameters of the cost function, and let z_j denote the vector of parameters that determines the entry cost function of firm j. For the population of firms, there exists a distribution of these parameter values in a k dimensional space. This distribution is unknown. If we would know the distribution, we could calculate the fraction of firms for which entry would be profitable.

2.2 Building Block One: The economics perspective of international market entry

Historically, FDI was first approached from the economic perspective. The literature on international trade looks like the natural starting point. Helpman (1984) and Helpman / Krugman (1985) consider cost-saving geographical distributions of firm activities across several given locations, named vertical FDI. Parallel, models of horizontal FDI where firms want to get access to new and not yet saturated markets were developed for example by Markusen (1984) and Markusen / Venables (2000). The knowledge-capital model provides a synthesis of both aspects (Markusen, 2002). Several empirical studies exist that test these approaches,[2] but they do not offer a clear cut picture, probably since a mixture of both explanations is present in reality. Nevertheless, this international trade literature does not focus on the market entry decision itself, but depicts behavior of already multinational firms once entry has occurred.

There are only a few economics papers considering the market entry decision more directly.[3] Barrell and Pain (1996) offer a small micro-model considering FDI to realize cost advantages as well as gaining market access, which they test using time-series analysis on macro-level data of the amount of US foreign direct investment. Similarly, Mody and Srinivasan (1998) consider and compare macro data for US and Japan.[4]

[2] Brainard (1997); Carr et al. (2001, 2003); Blonigen et al. (2003); Braconier et al. (2005)

[3] For a historical review of the Industrial Economics oriented literature see the survey by Rugman (1986), or the classical paper by Caves (1971).

[4] Timing and sequential entry patterns have been topics within the economics based

Beside this theoretical background, there are several empirical papers that are based on economics arguments but without developing the basic model of market entry in detail. Gripsrud and Benito (2005) study market entry of retail companies, where they use several measures of market attractiveness, distance and firm experience to explain entry moves. Rothaermel et al. (2006) consider the international expansion of Internet firms. Beside several country specific characteristics of customers, they emphasize country risk, cultural difference and market size as important variables. Tan and Vertinsky (1996) consider Japanese electronics companies and their entry movers to the US and Canada. Due to their narrow focus on a specific industry, they are able to employ more detailed data on industry characteristics like market concentration, advertising activities and R&D intensity, which are rarely available in studies covering all industries.

All these papers contribute to our knowledge about market entry decision, but without offering a suitable and testable theoretical model that allows us to compare the explanatory power of this explanatory mechanism compared to imitation. Thus, we have to return to the fundamental trade-off between costs and benefits of market entry for the case of vertical and horizontal FDI to develop a tractable and comparable model.

From the many answers firms offer to the question of why they have entered a foreign market, three major groups of motivations can be identified.

1. Efficiency seeking FDI: Firms shift production to exploit lower costs of essential resources and therefore to cut production costs. Almost always, labor cost is the decisive driver.
2. Market seeking FDI: Firms enter a foreign market to gain access to new customers since there is new and not yet saturated demand or they follow the offshore move of the largest customers or suppliers.[5]
3. Resource seeking FDI: Firms move to a new country to get access to natural resources.

All three arguments already in insolation provide strong rationales for market entry, and the effects are even stronger if firms follow a combined

literature. Gulamhussen (2004) offers a real-option model of entry timing for banks. He depicts the size and different type of outlet as decision variables. Benito and Gripsrud (1992) consider sequential entries of the same firm, Chang (1995) depicts sequential entry by the same firm in different product markets of the same host country to highlight the role of experience. Andersen (1993) analyzes sequential entry patterns where firms start with exporting products, later on establish an own sales subsidiary and finally shift production. A survey on studies about different entry modes without such a sequential structure is given in Datta et al. (2002).

[5]Martin et al. (1998) provided evidence that the desire to follow the move of current or potential buyer into a new country can be an explanation for international moves.

strategy with their entry decision. Nevertheless, for the ease of presentation, we start to develop the arguments about efficiency seeking and market seeking FDI separately, one after the other. As resource seeking FDI did not play an important role in our empirical sample, we exclude this topic from our analysis. In our presentation of efficiency seeking and market seeking FDI, we do not strive for a full treatment of all potentially relevant aspects, but we look for those aspects and hypothesis which will help us to identify the industrial economic's perspective in contrast to the institutional perspective. Nevertheless, several non-discriminating, but important common effects exists and we briefly discuss them in subsection 2.4.

2.2.1 Efficiency seeking FDI and production shifts

Suppose firms consider the possibility of shifting production[6] to some host country $i \in I$. For such a production shift to make sense, there must be some cost advantage the firm wants to and can exploit. Thus, there are three necessary conditions. First, we need to have an incomplete resource market. As labor is largely immobile, wage differentials and availability of labor via unemployment are important parameters of labor market attractiveness. Second, there must be firm specific knowledge or assets. Finally, the firm must be able to move its technology, expressed by the production function, to a new country.

Suppose all these three conditions hold and all input goods except labor are traded on perfectly competitive international markets. Input prices for the competitively traded inputs are equal across all countries. Labor is traded at regional markets at local wage rates. Let w_{ht} denote the wage rate in the home country in period t, and let w_{it} stand for the respective wage rate in country i. If labor markets would be perfect markets, w_{it} would be a market clearing wage rate and there would be no unemployment above a standard fluctuation rate. Nevertheless, unemployment rates l_{it} above this natural fluctuation rate indicate market imperfections.

Consider the entry decision of an individual firm. Let y_t^h denote the profit maximizing quantity in the case of home production. Similarly, let $\tilde{y}_t^h$ denote the optimal quantity if production takes place in country i. Operating profits are then given by

$$\Pi_{jt}^k = R_{jt}^h(y) - C_{jt}^k(y),$$

[6]Even though such a production shift can be fully or partially, we restrict our theoretical arguments to the case of a full production shift without loss of generality. Additionally, for the ease of presentation only, we assume that firms do not become active in the product market of the host country.

where $k = i, h$, $y \in \{y_t^h, \tilde{y}_t^h\}$ and $R_t^h(y)$ denote revenues generated by selling y in the home country. If $w_{it} < w_{ht}$ for all $t \leq T$, production in the target country is less costly than in the home country, $C_t^i(y) < C_t^h(y)$. Similarly, marginal production costs are lower too, $\frac{\partial C_t^i(y)}{\partial y} < \frac{\partial C_t^h(y)}{\partial y}$ for all $t \leq T$.[7] These cost differences increase as the wage differential increases, $\frac{\partial C_t^i(y)}{\partial w_{it}} > 0$ and $\frac{\partial^2 C_t^i(y)}{\partial y \partial w_{it}} > 0$.

As wages are determined by labor supply and demand (and market imperfections), the wage differential depends on two aspects, that is the wage rate before market entry and the unemployment rate. The lower the wage rate before entry, the lower is c.p. the wage rate after market entry. Additionally, the unemployment rate plays an important role. Suppose there is no unemployment above the natural fluctuation rate. Market entry will increase demand in the labor market and therefore the equilibrium wage rate (if labor supply is an increasing function of the wage rate). Contrary, if unemployment is sufficiently large to cover the additional demand, the increase in demand would not influence the wage rate. As a result, larger unemployment rates imply less increase in wages due to additional demand. But since any increases in the wage rate would reduce the wage differential the firm can exploit, larger wage increases due to low unemployment would make entry less attractive. Therefore, ceteris paribus, the larger the unemployment rate, the more attractive is entry into this country.

Given the wage differential and an arbitrary production quantity y, operating profits under home production are lower than profits after a production shift, $\Pi_{jt}^i > \Pi_{jt}^h$. According to condition (2), if the profit difference is sufficient to cover entry costs, the firm will enter the new market. Thus, our two aspects of labor market attractiveness are decisive for the entry decision of an individual form and for the entry decision of all firms in the population. Since Π_{jt}^i is decreasing in w_{it} and (weakly) increasing in l_{it}, the share of firms with profitable entry possibility decreases with the current wage level and is increasing in the unemployment rate.

Hypothesis 1 *A firm's propensity to enter a foreign market is positively associated with attractiveness of the foreign country's labor market.*

[7] Example: Suppose the production technology is described by a Cobb Douglas function, $y = Ax_1^a x_2^b$ where y denotes total production, A is a given constant, x_1 denotes labor input, and x_2 captures all other input goods. By calculating the respective cost function, we get

$$C_t^j(y) = K(a,b) \cdot w_{jt}^{\frac{a}{a+b}} \cdot p_{x_2}^{\frac{b}{a+b}} y^{\frac{1}{a+b}}$$

where $j \in I \cup h$ and $K(a,b)$ depends on a and b only. Now, it is easy to verify that production costs and marginal production costs are decreasing in the wage rate. Similar results hold for example for CES function or Leontief functions.

Using both market attractiveness variables simultaneously in an empirical estimation would be problematic as they are directly related. For given labor demand and supply functions and market imperfections, the larger the wage rate, the larger is unemployment. Thus, we should incorporate only one of these two variables and we should use the variable that is more revealing about labor market attractiveness from the firm's perspective. Since it is labor market incompleteness that restricts the downward flexibility of the wage rate, labor market reactions are more closely depicted by changes in the unemployment rate than in the wage rate. Our empirical model will therefore measure labor market attractiveness by the unemployment rate.

2.2.2 Market seeking FDI

Let us now turn to the situation where the firm enters the host country to serve customers there. To keep sufficient control over the firms marketing strategy, product margins, internal know-how and reputation, firms enter the market by opening up a subsidiary. For the sake of simplicity of the presentation only, we assume that the firm leaves all production in the home country.

If firm j serves the home country only, operating profits are given by $\Pi^h_{jt} = R^h_{jt}(y_t) - C^h_{jt}(y_t)$. Contrary, if the firms enters the new target market, operating profits are given by $\hat{\Pi}^{h+i}_{jt} = R^h_{jt}(y^h_t) + R^i_{jt}(y^i_t) - C^h_{jt}(y^h_t + y^i_t)$, where y^i_t is the sales quantity in the new market, and R^k_{jt} denotes revenues in country k in period t; $k = i, h$. According to condition (2), entry will occur if the additionally generated profits are sufficient to cover entry costs.

What are the fundamental influences on this relation of costs and revenues this time? Under market seeking FDI, revenues of the host country are the most important point.[8] Ceteris paribus, larger markets lead to larger marginal revenues and therefore to larger profits. Similarly, growing markets promise that tomorrow's marginal revenues will increase such that higher profits can be realized in the future. These arguments not only hold for our focal firm, but also translate to our population of firms. The propensity of a randomly selected firm to enter a market is positively associated with the attractiveness of the market.

Hypothesis 2 *A firm's propensity to enter a foreign market is positively associated with the attractiveness of its product market, measured by market size and market growth.*

[8] If marginal costs are constant, no change in the home country profit will occur as we see from $\frac{\partial R^h_t(y^h_t)}{\partial y} = \frac{\partial R^i_t(y^i_t)}{\partial y} = \frac{\partial C^h_t(y^h_t + y^i_t)}{\partial y}$. For increasing marginal costs, entering the host country will reduce home country profits, and this reduction needs to be overcompensated by the additional profits in the host country.

Before we proceed to our next building block, let us briefly discuss why economically driven parallel behavior and imitation are so commonly confused. Consider one specific country i and our population of n firms. Given (a_j, b_j, z_j) n_1 firms will find entry attractive, or the ex-ante entry probability is $\frac{n_1}{N}$. Nevertheless, n_1 is unknown to the researcher and to any outside observer. There is a sequential entry process where in period 1 lets say K_1 firms decide about entry. Let k_1 be the number of entries that have occurred at the end of period 1. Given that a random process allocated firms to the decision sequence, our best estimate for the share of firms that will find entry profitable is just k_1/K_1. Moreover, the probability that the next randomly chosen firm will enter the market is k_1/K_1. The more firms have decided for entry today, the larger is tomorrow's expected entry probability. If we include the number of entrants in an empirical estimation of the entry probability, we will find a positive relation.

Hypothesis 3 *A firm's propensity to enter a foreign market is positively associated with the number of firms that have already entered the same foreign market.*

Note that this positive relation does not rest on any notion of imitation so far, but is just a consequence of our own ignorance about the true share of firms that will find entry profitable. Nevertheless, by turning the perspective, we will now provide a second, completely different and competing explanation for this relation.

2.3 Building Block Two: The Institutional Perspective

We now turn to a second approach to deal with market entry, which seems to have developed almost unrelated to the first. It is the aim of this section to briefly summarize the contributions within the literature that deal with the influence of the social context on international expansion. Moreover, we expand these results towards a more differentiated picture of selective imitation.

Once enough firms do things a certain way, these specific decisions and actions become taken-for-granted (Meyer & Rowan, 1977). Resulting from this form of institutionalization, more and more firms will follow the same course of action without thinking. Imitation may therefore be a result of a social-constructionist role following. Empirical evidence is provided by a wide array of studies, examining for instance the adoption of civil-service reform (Tolbert & Zucker, 1983), the diffusion of the multidivisional form (Fliegstein, 1985) and the imitation of changes by hospitals (Burns & Wholey, 1993). However, when we look at rather new decisions like entry in

Eastern European markets, firms cannot rely on taken-for-granted rules and courses of action. In the contrary, these decisions are fraught with risk. In order to mitigate these risks and to acquire legitimacy, firms are expected to imitate the decisions of other companies (DiMaggio & Powell, 1983). Under conditions of uncertainty, firms tend to economize on search costs (Cyert & March, 1963) by imitating the decisions and actions of other firms. Based on this logic, Henisz and Delios (2001) and Guillen (2002) have illustrated that firms imitate risky international expansion moves of other firms in the same domestic industry and of partners within the same business group. Moreover, institutional research in related fields has illustrated that prestigious firms serve as role models and are often imitated by less prestigious peers (Burns & Wholey, 1993; Haveman 1993). It can therefore be expected that firms do not only imitate market entry decisions within their own industry but also of prestigious prior movers in the domestic market.

Still unanswered is the question of why and how large firms or successful firms or similar firms do provide legitimacy. If imitation is more than self deception, the advantage the firm believes to get from imitation must really occur at least on average. Thus, the strategy must be rational and an equilibrium phenomenon. Imitation in this now more strict sense means that the observation of other firms' behavior has an effect on the outcome of the focal firm's optimization problem. The change has to be such that situations can emerge where the firm finds a different kind of behavior optimal after the observation compared to what the firms would have done without the observation. This rationality check makes us look at the micro foundation of imitation behavior by informational cascades like it is offered for example by Bikhchandani, Hirshleifer and Welch (1998) and Scharfstein and Stein (1990). They provide models of rational imitation if all firms are identical. Nevertheless, we want to merge the economic perspective of optimizing behavior with the sociological view of imitation of prestigious firms into a model of rational selective imitation. We need to figure out under which conditions it is rational to copy the behavior of some type of firm, and under which conditions it is not rational to do so.

To follow these ideas with our model[9], we assumed that firms are not identical. We split firms into two groups which we either call *prestigious* or *non-prestigious*. Prestigious firms can either be more successful or greater than the average. The type of each firm is common knowledge.

All market entry decisions must be taken under uncertainty about the profitability of doing business in the new country. In the previous section, uncertainty did not play a prominent role. We assumed that firms are able to predict profits under different entry decisions or they are at least able to

[9]For the basic structure of the model, compare Scharfstein and Stein (1990).

calculate expected profits and to decide on the basis of these values. Now, uncertainty plays a more fundamental role. Let us apply the most simple stylized version of the decision problem here. Suppose that two states of the world are possible. If firm j enters a new market, the uncertain state of the world can either turn out to be good, which leads to additional profits[10] $\overline{\Pi} > 0$, or bad, which leads to $\underline{\Pi} < 0$. For the moment and without loss of generality, we assume that these payoffs are identical for all firms (we will relax this assumption later on). A priori, both states of the world are equally likely. For simplicity, let's assume that expected profits based on the a-priori probabilities are equal to zero such that the firm is indifferent between entering or not.[11] If firm j does not enter the new market, there are no additional profits, $\Pi = 0$, and there is no uncertainty. As time goes buy, the uncertainty resolves anyway and profits become common knowledge.

Prestigious firms have some leader position in the economy. Other firms may believe that these firms are better informed or that their strategic abilities are superior. These believes have to be rational. As a company's success is more than just luck, either the employed human capital or the organizational structures or both must have been better at a successful company compared to a less successful firm. But at least some of these features should persist and should have a positive effect on future decisions. Similarly, a large firm must have had a long period of successful growth, again driven by success factors like the human capital employed or superior organizational structures. Based on this, it seems natural to assume that some of this success factors are still present in the company and the successful or large company will on average come to better decisions. Putting it otherwise, comparing a successful or large company to a less successful or small company, the probability of making the right decision should be higher for the large or successful firm. Nevertheless, even the most successful companies sometimes make mistakes. We allow for this as we do not claim that their decisions are always right, but assuming that their probability of making the right decision is higher.

We embed these assumptions in the following structural framework. Important decisions like market entry are usually thoroughly prepared for example by a project team. Let's assume that the project team that prepares the entry decision can either be successful, *(m)*, or diligent, but unsuccessful, *(c)*. Prestigious firms do have a successful project team with a higher probability than non-prestigious firms. Let θ_p be the probability that the project team of a prestigious firm is successful, while the project team of

[10] To simplify the notation, we suppress any time and firm indexation here.

[11] We can modify these assumption by allowing for positive or negative expected a-priori profits. As long as different signals have different consequences, the main results of the model still go through. If the decision no longer depends on the signal as entry is always profitable or always unprofitable, there is no real decision problem.

a non-prestigious firm is successful only with an a-priori probability of θ, $\theta < \theta_p$. The team itself knows the success of the company in its day-to-day business, but it does not know whether it will be successful or unsuccessful with respect to this unusual decision of entering a new market, which means that the team does not know its own type. What the team knows is the a-priory probability of the type which is dependent of the firm's type.

The task of the project team is to prepare the entry decision or to give a judgement about the state of the world. Thus, they provide a report or signal about the profitability of entry. This signal could either be good, s_h, which is equivalent to suggesting entry to the top management team, or bad, s_l. We want to assume that unsuccessful project teams create a purely random signal, which means it recommends entry and non-entry with probability $\frac{1}{2}$, independent of what the true state of the world is.

$$prob(s_h|x_h, m) = prob(s_h|x_l, m) = prob(s_l|x_h, m) = prob(s_l|x_l, m) = \frac{1}{2},$$

where for example $prob(s_h|x_h, m)$ denotes the probability that an unsuccessful team sends out the good signal if the true state of the world is good.

Successful teams provide more reliable information, which means that they correctly predict the true state of the world in more than 50% of all cases,

$$prob(s_h|x_h, c) = prob(s_l|x_l, c) = p > \frac{1}{2} > 1-p = prob(s_h|x_l, c) = prob(s_l|x_h, c).$$

If there are two firms with successful project teams, they will judge all available information in a similar way and therefore come to the same prediction.[12] By assumption, the signal of an unsuccessful team is purely random. Thus, we want to assume that signals are independent if two unsuccessful teams or one successful and one unsuccessful team are considered.

When deciding against or in favor of market entry, the top management team therefore knows the following:

- They know whether or not the own company is prestigious.
- They know the report of the project team; the signal.
- They can judge the reliability of the signal.
- They know the decision of all successor firms and their types.

[12]Note, that the signal may still not be true. Anyway, successful teams will focus on the same sources and information bits such that they end up with the same prediction.

The signal technology is such that the management team cannot learn something about the type of the own project team or the reliability of the signal from the signal's realization; $prob(s_h|c) = prob(s_h|m)$. Nevertheless, the prediction of the own project team plus potential observations of decisions made by other firms will allow to up-date the probabilities for the two states of the world.

To close the game we need to place some assumptions on how to deal with possible indifference at subsequent decision stages. Suppose some company later on in the sequence is just indifferent between entering and not entering as updated probabilities make both states of the world equally likely. Now, we follow the imitation idea and assume that the first entry of a prestigious firm will have some influence. If a prestigious firm has decided before, the indifferent firm gives a marginally stronger weight to the signal of the prestigious firm. If only non-prestigious firm have decided before, the indifferent firm gives a marginally stronger weight to the own signal. Moreover, let two identical predictions of non-prestigious be sufficient to overrule one opposing prediction of a prestigious firm which means that the difference in reliability is not too large.[13]

Consider firm A first. Let $prob(x_h|s_h;\theta_j)$ denote the updated probability of the good state of the world after a good signal if firm A is of type θ, while $prob(x_l|s_h;\theta_j)$ stands for the respective probability of the bad state of the world,

$$prob(x_i|s_i;\theta_j) = \frac{1}{2} + \theta_j \left(p - \frac{1}{2}\right) \text{ and } prob(x_i|s_j;\theta_j) = \frac{1}{2} - \theta_j \left(p - \frac{1}{2}\right),$$

$i, j = h, l,\ i \neq j$ and $\theta_j \in \{\theta_p, \theta\}$.

Since $\frac{1}{2}\overline{\Pi} + \frac{1}{2}\underline{\Pi} = 0$ and $prob(x_h|s_h;\theta_j) = prob(x_l|s_l;\theta_j) > \frac{1}{2} > prob(x_h|s_l;\theta_j) = prob(x_l|s_h;\theta_j)$, entry looks profitable if A's project team has provided a positive report s_h, while staying outside looks as the superior decision after a bad signal s_l. Note that this decision rule is independent of the firm's type.

The next decision has to be made by firm B. Firm B observes the decision of firm A and can infer the prediction that A's project team must have given. Compared to firm A, B's top management team has the advantage of having a second signal. Suppose firm A has decided to enter the market. If B top managers have received a good signal too, firm B will enter the market too. Similarly, if firm A has decided against market entry and B has

[13] We have chosen this assumption to give imitation the widest possible scope. Modifications of these assumptions still induce qualitatively similar results, but implies much more case distinctions and less imitation.

received a bad signal, B will not enter too. B's own type does not play a role here.

The situation becomes more delicate if the two firms have received different signals. Suppose A has decided for market entry and B has received the bad signal. Now, the outcome depends on the prestige of the two firms. If both are of the same type, two equally reliable signals are present. Then, two opposing signals do not provide additional information compared to the a-priori situation. The probabilities remains unchanged at $\frac{1}{2}$. Now, the prestigious firm is copied, while B will follow the own signal if A is non-prestigious.

Let's stick to the situation that A has decided for market entry and B has received the bad signal, but there is one prestigious firm and one non-prestigious firm. The up-dated probabilities are

$$\begin{aligned} prob(x_h|s_h, s_l) &= \frac{1}{2} + \frac{2p-1}{2}\frac{\theta_A - \theta_B}{1-\theta_A\theta_B} \qquad \text{and} \\ prob(x_l|s_h, s_l) &= 1 - prob(x_h|s_h, s_l). \end{aligned}$$

Since $p > \frac{1}{2}$, we have $prob(x_h|s_h, s_l) > \frac{1}{2}$ if $\theta_A > \theta_B$ and $prob(x_h|s_h, s_l) < \frac{1}{2}$ if $\theta_A < \theta_B$. Thus, market entry looks profitable to firm B if firm A is more prestigious than firm B, or $\theta_A > \theta_B$.

In the opposite case where firm A did not enter and B has received a good signal[14] B will rely more on the own signal if it is a prestigious firm while the predecessor is not prestigious. We summarize the decision rule of firm B in Table 1.

***** place Table 1 about here*****

If firm A is more prestigious than B, B will always show the same behavior as firm A, which in some cases means that the prediction of the own project team will be ignored. The firm decides in this way even though there is some chance that A made a mistake. Less or equally prestigious firms are not copied in the case of contradicting signals as the own signal now plays a stronger role.

Consider firm C next. If firm A is prestigious, A's decision is copied by firm B. Therefore, the decision of firm B does not reveal information about the prediction of B's project team. Firm C is just in the same situation as firm B. As the result, firm C will imitate the behavior of A too, independent of its own type, and so will all subsequent firms.

[14] We get $prob(x_h|s_l, s_h) = \frac{1}{2} + \frac{2p-1}{2}\frac{\theta_B - \theta_A}{1-\theta_A\theta_B}$, $prob(x_l|s_l, s_h) = 1 - prob(x_h|s_h, s_l)$ with $prob(x_h|s_l, s_h) > \frac{1}{2}$ if $\theta_B > \theta_A$.

If firm A is non-prestigious, they situation is more complex. As firm B's decision is signal dependent, C can infer the prediction B's project team must have given. Now, firm C has three signals to base the own decision on. Technically, we can update the probabilities for the two different states of the world analogously to the case of firm B. Entry decision are straightforward in most situations. Table 2 shows the decision rule of the third firm if the first firm was non-prestigious. Again, decisions of firm C do not depend on C's own type, but on the types of the successors and the signals.

***** place Table 2 about here*****

The final column of Table 2 also gives some hints about the decision rules for subsequent firms and the occurrence of imitation waves. In those cases where no prediction is offered, the subsequent development depends on the signal of firm D. It is a tedious but straightforward exercise to show that the decisions of firm D again depends only on the signals and the types of predecessors, but not on D's own type.

Before we start to derive empirically testable prediction, let us relate the model more explicitly to the imitation literature. Models of imitation usually start with the presumption that firms imitate because they believe that other, more prestigious firms are better informed or have superior strategic abilities. For imitation to be rational in equilibrium,[15] we need to have that this believe is indeed correct or that prestigious firms are indeed superior somehow. Otherwise, no firm should believe that way. We closed this gap by letting project teams of prestigious firms be successful in extracting the right signal with a higher probability. Nevertheless, we leave some fundamental doubts to all parties whether the own project team is again as successful in this uncommon decision problem as the firm was historically. Doubts and self criticism is what we translated by uncertainty about the project team's type. However, by letting project teams of successful firms be successful again with a higher probability due to the internal organization of the firm, we provide a convincing rational for the believe and therefore closed the gap.

These extreme cases of imitation waves where all subsequent firms decides exactly the same way, are partially driven by the model's simplifying assumption of identical payoffs to all firms. Profits under the different states of the world will vary strongly across industries, and even across firms within one industry. Since payoffs vary, there will be no full imitation waves. For an empirical test, we thus have to look for shares of firms for which the probability shift leads to a positive expected profit after entry. At the level of a single firm, this translates into an entry probability. Now, our model predicts that the entry of any kind of firm will have a positive effect on the

[15] In the tradition of Bikhchandani & Hirshleifer & Welch (1992 and 1998), or Scharfstein & Stein (1990).

entry probability of a focal firm. The more firms have entered, the more positive signals must have occurred. Therefore, the probability that the focal firm will enter should be increasing in the number of firms that have already entered the market. This is exactly the same hypothesis we derived under economically driven parallel behavior in the previous subsection, but with a completely different rational now.

Hypothesis 3* *A firm's propensity to enter a foreign market is positively associated with the number of firms that have already entered the same foreign market.*

Similarly, the number of entries by prestigious firms will have a positive effect on the entry probability of the focal firm.

Hypothesis 4 *A firm's propensity to enter a foreign market is positively associated with the number of prestigious firms that have already entered the same foreign market.*

Haunschild and Miner (1997) have already provided evidence of such a dependency. Nevertheless, without an economic foundation of parallel behavior and strict imitation, they cannot go beyond postulating the existence of such a dependency. Based on our theoretical arguments, we are able to provide some comparative statics results. Under imitation in the strict sense, the entry of a prestigious firm should have a stronger influence on the entry probability than the entry of a non-prestigious or average firm. If only economically driven parallel behavior would exists, no such difference should emerge. Economic fundamentals are essential in whether or not the firm is able to cover entry costs, and this does not depend on the prestige of the firm. For a given proportion of firms in our population, entry is profitable. Since the sequencing in entry decisions is driven by a random process, no difference in the probability shift effect of entry by prestigious and non-prestigious firms will exist if the firm's behavior would be solely economically driven parallel behavior. Any differences in the parameter estimates we will find later on therefore can be attributed to imitation in the strict sense.

2.4 Effects common to both building blocks

So far, we have drawn a very selective picture only of those aspects that are fundamental or specific to one or the other building block. Nevertheless, far more influences on entry decisions exists and some of these aspects are too important to be neglected. We now discuss some of this common effects and how they are incorporated in the empirical analysis.

Empirical studies of market entry commonly use a wide set of firm specific and country specific control variables. Contrary to most other market entry studies, we have already included market size, growth rate and the wage level as independent variables. We follow the literature and include several firm specific control variables, that is firm size, the firm's performance, the firm's export share (Tan & Vertinsky, 1996), and the firm's experience in the region. Moreover, we include country specific variables[16] like the physical distance between the home and the host country and the political risk of the target country.

Return to the case of efficiency seeking FDI. Production cost advantages must be traded off against additional costs associated with market entry. Additional costs the firm has to bear in the case of market entry are mainly sunk costs of entry and transportation cost. Once the firm has shifted production of components or final products to a low cost country, it has to transport back these products or components to the home country. Thus, transportation costs will emerge. Similarly, in the case of market seeking FDI, the final products must be shipped to the host country and transportation costs arise. These costs will vary strongly across firms and their products. Nevertheless, independent of the products, transportation costs are increasing in the distance between the home and the host country. Therefore, a larger distance will have a negative effect on the entry profitability which implies that the probability of entry by a focal firm will be reduced.

Additionally, the physical distance between the home and the host country may serves as a substitute for cultural differences. The further apart two countries are, the more different are their cultures. The larger the cultural differences between the two countries, the more complex is the task of establishing and successfully running the subsidiary for the focal firm. For example, the firm has to acquire knowledge about legal aspects, cultural specialties, labor market habits or to establish a network of local suppliers. The larger the cultural differences are, the more the firm has to invest here. So again, these managerial costs are increasing in the cultural or physical distance.[17] Moreover, the further away the new subsidiary, the larger are control problems. Thus, the risk associated with FDI increases such that entry will become less likely. In summary, the distance between the home and the host country will have a negative effect on entry probabilities due to both building blocks.

[16] As we study a large population of firms from all industries, we cannot fully control for competitive effects by the domestic market structure as it is done for example in Makino and Delios (2002).

[17] There is mixed evidence on this dimension, see for example Benito and Grisprud (1992) or Mitra and Goldner (2002) where explicit measures of cultural distance are used.

The cultural distance and the associated increase in managerial costs is counteracted by the firms experience in the region as some knowledge transfer becomes possible. Having created some in-house expertise about Eastern European markets makes entering another Eastern European country much easier. Thus, the likelihood of market entry will increase with the firm's experience in the region, (Kogut, 1983; Chang, 1995; Makino & Delios, 2002; Mitra & Golder, 2002; Gripsrud & Benito, 2005). Experience on the one hand reduces entry costs as lower investments are necessary to establish the subsidiary, ont he other hand it allows for self imitation.

3 Empirical Analysis

3.1 Data and Methods

Sample: To test our hypotheses, we analyzed the decisions of large publicly listed German firms to enter one or more emerging markets in Eastern Europe during a fourteen year period between 1990 and 2003. Prior to 1990 only very few firms in our sample engaged in foreign direct investment in Eastern Europe. This situation changed dramatically after the fall of the Iron Curtain in 1990. As a consequence, the time frame of our study helped us to avoid left censoring.

Our sample is comprised of firms that are listed in the index of the 100 largest stock corporations in Germany (DAX 100). We removed firms from our sample that were subsidiaries of other firms in our sample or of foreign firms. For the remaining firms, we followed a three-step procedure to obtain data on the market entry decisions in the following 21 former Warsaw Pact countries: Armenia, Azerbaijan, Belarus, Bulgaria, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Romania, Poland, Russia, Slovakia, Tadzhikistan, Turkmenistan, Ukraine, and Uzbekistan.

Our first step was to check the "list of share properties" in each firm's annual report. Although some of the firms in our sample publish detailed information on their investment decisions in the countries under study, others restrict the information in the "list of share properties" to those foreign direct investments that exceed a certain threshold. To account for this, our second step was to contact the firms' IR department. We asked to provide additional information on the market entries in the countries under study and/or to send a more detailed "list of share properties" for the period from 1989 through 2003. In cases where the firm's IR department couldn't help, we referred to the "Handbook of German Listed Companies" for further information on the firms' market-entry decisions. Furthermore, we searched

the LexisNexis database for press reports that contained the name of the company under study combined with terms related to market entry. With this data at hand, we contacted the firms a second time and asked them to confirm or correct our information on their FDI in the countries under study. Third, we made use of the fact that German firms are required to file a detailed "list of share properties" with the registration office of the responsible district court each year. In order to correct inconsistencies and to reduce missing data, we contacted the respective registration offices and looked at the firms' original filings. The data collection effort resulted in complete data for 82 firms.

For data on economic and demographic characteristics of the 21 Eastern European markets under study, we referred to statistics published by the United Nations, the International Labor Organization, and the Statistical Office of the European Community. Data on the political risk of the countries in our sample was obtained from BERI S.A. - a company that analyzes the political risk and operating risk of markets worldwide. Firm-level characteristics were retrieved from annual reports. Information on the firms' industry classification stems from the Deutsche Börse Group.

Variables

Dependent variable: The dependent variable in our study is foreign market entry. In our empirical model, entry is an indicator coded as 1 if a firm entered a particular East European market in any given year. Following the definition of foreign direct investment by the Organization for Economic Cooperation and Development (OECD) and the International Monetary Fund (IMF), market entry was ascertained if a firm established a wholly owned facility or acquired at least 10 % of the ordinary shares of a host country firm. The same measure has been used in a number of prior studies on international market entry decisions (Hennart & Park, 1993; Chang, 1995; Barkema et al., 1996; Chang & Rosenzweig, 2001; Delios & Henisz, 2003; Gimeno et al., 2005).

Independent variables: Concerning the economic factors of market entry, we are interested in the attractiveness of the foreign firm's labor market. One potential indicator for the attractiveness of Eastern European labor markets is the average wage rate of the respective host countries. For some of the markets under study, we were not able to collect concise data of average wage rates for all years under study. Therefore, we decided to follow Coughlin et al. (1991) and used the *rate of unemployment* as an alternative indicator for labor market attractiveness. Our reasoning is in line with Billington (1999) who argues that the workforce in countries with a comparatively high rate of unemployment has a high appreciation for their jobs and is, thus, willing to accept lower wages and longer hours of work.

We use market size and market growth to measure the attractiveness of the market conditions in a host country. Market size is captured by the variable *GDP per capita*. As revealed by prior empirical studies, there is a positive correlation between the market size of a host country and a firm's propensity for market entry (Davidson, 1980; Coughlin et al., 1991). Firms prefer to invest in countries with larger market size in order to compensate for the risks and resource requirements associated with foreign market entry. In addition, per capita GDP provides information on the overall quality of the host country's infrastructure (Ford & Strange, 1999). *Growth in GDP* per capita serves a proxy for market growth in a host country. Both, size and growth of a foreign market provide information on the host country's market potential. Consequently, both indicators capture the attractiveness of a host country for market-seeking foreign direct investment (Grubaugh, 1987).

In line with prior studies we assume that decisions of the focal firm are positively affected by the number of similar decisions of other firms in our sample (e.g. Katz & Shapiro, 1985; Haunschild & Miner, 1997; Sanders & Tuschke, 2007). However, a firm's consideration to follow the foreign market entry decision of their peers in the domestic market may be based on economic reasons (e.g. economic parallel behavior) as well as on mimetic forces. To capture both notions, we include the *sum of prior market entries* in a specific host country for each country-year combination under study.

To get a more fine-grained picture of the mimetic forces surrounding market entry decisions, we analyze the impact of prior market entries by prestigious domestic firms on the focal firm's decision to enter the same market(s). As indicators for prestige, we use firm size (log of number of employees) and firm success (Return on Assets). For each year under study, firms were ranked according to their size and success. Firms ranging in the top quartile of the respective indicator were identified as large and/or successful. The investments of these firms in specific Eastern European markets were then computed as market *entries of large firms* or as market *entries of successful firms* respectively.

Control variables: We controlled for a number of additional factors at the country, industry, and firm level that have been ascertained to affect foreign market entry decision by prior research. To capture the *political risk* of the 21 host countries under study, we used the political risk index that is provided by BERI S.A. The index is based on the rating of causes and symptoms of political risk by a group of experts. Examples for the causes of political risk are corruption, nepotism, the strength of forces for a radical government, and the influence of regional political forces. Symptoms of political risk are captured by indicators for societal conflict - involving strikes and street violence - and by indicators for the perceived instability

of a country. In the original BERI index, political risk scores range from 0 to 100, with increasing scores indicating a decrease in risk. For ease of interpretation, we calculated 100 minus the respective risk score so that risk increases as the index increases. Analogous to BERI S.A. we identify four risk levels-low (0-30), moderate (31-45), high (46-60), and prohibitive (61-100). The political risk is computed for each country and each year in our sample.

The second country level control variable is the *geographic distance* between the focal firm's headquarters in Germany and the capital of the host country (measured as log of kilometers). Prior literature has used geographic distance as an indicator for the riskiness of an investment decision (Davidson, 1980; Terpstra & Yu, 1988). With increasing geographical distance, the logistical challenges of entering a new market and of monitoring operations increase (Terpstra & Yu, 1988; Ito & Rose, 2002). Moreover, managers tend to exhibit a higher cultural as well as informational unfamiliarity with former Warsaw Pact countries that are more distant.

Furthermore, we included a dummy variable to control whether the propensity of a firm to enter a specific foreign emerging market is influenced by the market's steps toward accession to the European Union. The indicator *EU Accession* is coded as 1 if a country had signed a treaty to announce its intention to join the EU in any given year. It takes the value 2 if negotiations concerning an accession had already been started. A value of 3 was assigned if the European Commission recommended accession of the country. If no steps towards EU accession had been taken, the variable is coded as 0.

To control for unobserved industry effects, we used a dummy variable for each of the ten broad industry categories represented in our study. We used the classification created by the Deutsche Börse Group. We also controlled for time unobserved effects by including a dummy for each year in our sample. The effects of the industry and year dummies are not reported in our tables to save space, but they were included in all our models.

At the firm-level, we controlled for firm size by including the log of the number of *employees*. Firm size is related to factors that affect the ability to enter foreign markets because larger firms tend to have greater financial and social resources, which influence the propensity to enter foreign markets (Delacroix & Swaminathan, 1991).

Additionally, we controlled for prior performance by including the firm's *ROA* prior to the year in which foreign entry was measured. Profitable firms are deemed to be more capable of absorbing the costs and risks involved with entering a foreign emerging market.

Johanson and Vahlne (1977) described the importance of experience and knowledge in foreign operations. The accumulation of experience reduces the degree of foreignness a firm is confronted with when entering a new geographic market (Terpstra & Yu, 1988; Agarwal & Ramaswami, 1992; Delios & Henisz, 2000). We use two control variables to capture a firm's experience with entering and running operations in foreign markets. Our first control for experience is the firm's *export intensity*, measured as the ratio of foreign sales to total sales. The export intensity indicates an organization's underlying international orientation and may, thus, affect the propensity to engage in international expansion moves. With increasing experience in Eastern European markets, the firm learns to cope with challenges resulting from the political, economic or cultural environment of the particular host countries. As a consequence, further market entries in a similar cultural context may become more likely (Barkema et al., 1996; Delios & Henisz, 2003). To capture this notion, we controlled for a firm's *prior experience* in the region under study. The variable was computed as the number of years that a firm had already been operating in any of the host countries under study. As such, the indicator captures a firm's experience with market entries in a similar cultural context

3.2 Analysis

To analyze our hypotheses, we use an event history analysis with time-varying covariates. This methodology allows us to estimate the propensity of foreign entry for the same organization at multiple intervals and accounts for censored observations for firms that never engaged in foreign entry in a specific country in the period under consideration. We used a discrete-time event history analysis (Allison, 1984), with each spell corresponding to one year. For the time period between 1990 and 2003, we have a total of 14 spells. The model has the following form:

$$\log \frac{P(jit)}{1 - P(jit)} = a(t) + b_1 X_1(ji) + b_2 X_2(jit),$$

where $\log \frac{P(jit)}{1-P(jit)}$ represents the logarithmic odds that firm j will enter foreign market i's entry in a specific host country at any point during time t; a represents the baseline hazard rate of entry occurring at any time t; b_1 denotes the change in the log-odds for each one-unit increase in a time-invariant covariate $X_1(ji)$; and b_2 represents the change in the log-odds for each one-unit increase in a time-varying covariate $X_2(jit)$.

The unit of analysis in our study is the unique firm-country combination. Our sample included 1,659 combinations (79 firms $\cdot$ 21 countries), of which 407 ended with an entry move. The spell for each firm-country combination

starts in 1990. If a firm did not enter a particular foreign emerging market under study, the spell was right censored by the end of 2003. Spells were updated at the end of each year to accommodate the annual time-varying covariates. To account for the possible non-independence of firm-country-spells, we used a robust variance estimator (Lin & Wei, 1989). In addition, we clustered our data by firm-country combinations to account for the autocorrelation between investment decisions by the same firm in the same country across different years.

In order to compare the explanatory power of variables based on industrial economics with variables based on institutional theory, we restrict our analysis to a firm's first entry in each of the markets under study. Once a firm enters a specific country in any given year, the next year's risk set is diminished by the firm-country spells for which a market entry has already occurred. This yielded a total of 19,902 firm-country-year spells.

3.3 Results

Table 4 presents descriptive statistics and correlations among variables. There is a considerable high correlation between the independent variables "sum of prior market entries", "entries by large firms", and "entries by successful firms". If a problem with multicollinearity should exist, it would work against our predictions. As multicollinearity inflates standard errors it reduces therefore the chance of finding significant effects (Kennedy, 2003). However, to avoid problems with multicollinearity we analyzed the effects of these variables in separate models.

********Insert Table 4 about here********

Table 4 contains the results of our estimation of hypotheses 1 through 4. The table does not include the dummy variables for the years (1990 -2003) or for the ten broad industry categories. However, these controls were included in all of our models. Most of the industry dummies were not significant. However, firms in the automobile industry and in the building sector were more likely to enter Eastern Europe than firms in other industries.

********Insert Table 4 about here********

Consistent with the logistic transformation of the dependent variable, the coefficients resulting from the estimation represent the effect of each variable on the log-odds of foreign entry in any of the Eastern European markets under study. The problem with log-odds is that they cannot be interpreted straightforwardly (Hoetker, 2007). Instead, the literature suggests to calculate marginal effects or the slope of $P(jit)$ with respect to the

respective exogenous variables like the sum of prior entries for example. As $P(jit)$ is a non-linear function, these slopes are not constant but value dependent. Overall, there are two common methods to state marginal effects: First, all exogenous variables can be held constant at their respective mean (Long, 1997), or, second, the values of the slope across all observation can be calculated at average (Train, 1986). However, these marginal effects depend on the scaling of the respective variable and can therefore not be compared. For ease of interpretation, we report our results as elasticities at the mean. Specifically, we report the change in entry probability that is caused by a 1% increase of the focal variable above the mean (while all other variables are held constant at their mean).[18] Table 5 shows the elasticities.

********Insert Table 5 about here********

Model 1 reveals the results for the control variables. At the country level, political risk ($p < 0.001$), accession to EU ($p < 0.01$), and geographic distance ($p < 0.001$) show a significant influence on market entry decisions. Whereas a country's accession to EU fostered market entry, the entry decision was impeded by political risk as well as by an increasing geographic distance between the market under study and the domestic headquarters of the firm. On the firm level, FDI is increased by firm size ($p < 0.001$) and prior experience in the region under study ($p < 0.001$). A firm's prior export intensity ($p < 0.1$) and its prior performance ($p < 0.001$) are negatively related to market entry.

Interpreting the elasticities of the variables in the control model, we find that the political risk of a specific Eastern European market has the highest impact on foreign market entry, followed by firm size, geographic distance between the firm's headquarter and the capital of the foreign market, and, finally, the firm's own prior experience in Eastern Europe. Please note that the mean of the political risk in the countries under study amounts to 59.7 and is, therefore, close to a risk level that is labeled as "prohibitively high". Consequently, the high negative impact of a 1% increase of the political risk on market entry does not come as a surprise. The strong impact of size, distance, and prior experience is at least partly due to the log transformation of these variables. Any 1% increase of these log transformed variables above their average values implies a quite stark increase of the underlying value of these variables.

[18] These elasticities can easily be calculated as

$$\varepsilon_{P,x_k} = \frac{\partial P(jit)}{\partial x_k} \frac{\overline{x}_k}{\hat{P}} = (1 - \hat{P})\hat{b}_k \overline{x}_k \tag{3}$$

where $\hat{P}$ denotes the predicted probability of entry if all exogenous variables are set at their mean, $\overline{x}_k$ is the sample mean of x_k and $\hat{b}_k$ is the respective regression coefficient.

In Models 2 and 3 we examined economic reasons why firms enter Eastern European markets. In line with the first hypothesis, Model 2 shows that a country's unemployment rate had a positive impact on the firms' decision to enter a specific market ($p < 0.001$). A 1 % increase of the independent variable enhanced the probability of market entry by 0.41 percent.

In Model 3, we included the two indicators for the attractiveness of specific Eastern European product markets, i.e. market size and market growth. As predicted in H 2, a host country's market attractiveness has a positive impact on a firm's decision to enter this market. Whereas a 1% increase in market size positively affected the probability of market entry by 0.18 percent, the effect was only 0.03 percent for a one percent change in market growth.[19] It has to be noted, however, that the significance of both indicators is rather weak ($p < 0.1$). Moreover, in line with Henisz and Delios (2001), the direction of the influence of market size changed as we added additional variables to our models.

H 3 assumed that the focal firm's decision to enter a market will be influenced by the total sum of domestic firms that have already entered the same market. We found that - at average - each 1% increase in the number of prior domestic entries in a specific foreign market enlarged the focal firm's probability to enter the same market by 0.11%. Put differently: each additional entry in a specific market increased the focal firm's probability to follow suit by 15.4% ($p < 0.001$). As noted above, the positive impact of other firms' prior market entry decisions is grounded in industrial economics as well as in institutional theory. To shed additional light on the institutional explanations for foreign market entry, we also analyzed the influence of prior market entries of large firms (Model 5) and of successful firms (Model 6). In line with H 4, we found a strong positive and significant association between the focal firm's decision to enter a foreign market and prior market entries by large and successful domestic firms. A 1% increase in the number of large prior entrants leads to a 0.48 % increase in the entry probability of the focal firm. Less strong, a 1% increase in the number of successful domestic entrants increased the entry probability of the focal firm by 0.22 %. Expressed as an integer effect, the focal firm's entry probability increased by 19.6% for each additional entry of a large firm ($p < 0.001$) and by 20.0 percent for each additional entry of a successful firm ($p < 0.001$).

Sensitivity analyses: To ensure the consistency of our findings, we accounted for alternative variable measurements. First, we included a measure of wages instead of unemployment to capture the attractiveness of European markets for efficiency seeking FDI. As noted before, the variable for

[19]Note that the negative sign of the elasticity comes from a negative average value. Due to transition processes, the majority of countries in our sample experienced shrinking GDP per capita in the time period after the fall of the Iron curtain.

wages is rather imperfect and the results are not significant. Second, we exchanged the political risk index with a respective measure for operational risk in the markets under study (also provided by BERI S.A.). The direction and significance of our results remain unchanged. Third, we used different specifications for a market's accession towards EU membership. Again, our results remained unchanged.

3.4 Discussion

The objective of this research was to study and compare the arguments of industrial economics and of institutional theory with respect to international expansion moves. To get a more fine-grained picture of why firms engage in FDI, we explicitly modeled the economic as well as the institutional line of reasoning and tested both approaches empirically. Our empirical sample - comprised of the entry moves of German firms into 21 Eastern European countries in the time period between 1990 and 2003 - allows us to test efficiency seeking FDI (especially with respect to working conditions and wage rates), market seeking FDI, as well as mimetic behavior.

In order to compare the explanatory power of industrial economics and institutional theory, we focused on variables that provide either an economic or an institutional foundation of FDI. Our study extends prior research by taking into account that both, industrial economics and institutional theory claim a positive association between the number of prior market entries by domestic firms and the focal firm's decision to enter the same specific market. In order to shed additional light on the competing theoretical explanations for the same practical phenomenon, we also analyzed prior market entries of large firms and of successful firms. Our data reveals that the sheer number of prior entrants in a specific market has a lower impact on the focal firm to follow suit than the number of large and/or successful prior entrants. Consequently, firms do not only engage in "parallel behavior" but imitate the entry strategies of a certain class of actors in their social context, i.e. of large and successful peers.

Prior research on foreign market entry either concentrates on theoretical models of FDI (Caves, 1971; Markusen, 1984; Markusen & Venables, 2000) or on respective empirical analyses (Henisz & Delios, 2001; Guillen, 2002). By complementing our theoretical models with empirical tests, we are not only able to demonstrate two different theoretical perspectives on FDI but we are also able test the explanatory power of both perspectives empirically. As a consequence, we significantly extend prior literature and help to path the way towards an integrated approach of analyzing strategic decisions. As expected, we found support for industrial economics as well as for institutional theory.

In line with our assumptions, our empirical results reveal that firms seek to generate economic rents by engaging in efficiency seeking FDI and in market seeking FDI. From an economic perspective, the firms in our sample may have hoped to boost their bottom line results by relocating parts of their production to markets with lower wages. Alternately, these firms may have sought to gain market share in the up-coming Eastern European countries. Moreover, the firms in our sample showed a strong propensity to imitate foreign market entry decisions of prior movers. Interestingly, the impact of large and/or successful prior movers on the focal firm's decision to enter the same specific market was especially high. We interpret these results as evidence that the choice of location in Eastern Europe is not only guided by economic and industry-specific considerations but is also strongly influenced by a firm's quest for legitimacy and for a reduction of risk. This result is noteworthy but cannot be generalized for other markets. Eastern European markets show a considerably high risk that dampens their overall attractiveness. Additionally, prior research has shown that uncertainty increases a firm's tendency to engage in mimetic behavior (DiMaggio & Powell, 1983). Consequently, we may find a stronger impact of economic factors and a lesser impact of respective institutional factors in settings that are less risky.

The relative high impact of prior entry moves on subsequent entry decisions by other firms has implications for countries (with considerably high risk levels) that want to attract foreign direct investment. Because firms tend to imitate prior market choices of prestigious peers, countries can profit from well directed efforts to attract foreign direct investment by large and successful companies. Entry decisions of these prestigious prior movers send a signal about a market's attractiveness to other firms within and outside the same domestic industry. These market signals might be even stronger than the actual market attractiveness that is hard to assess correctly.

The empirical support for both types of hypotheses - those grounded in the industrial economics perspective and those tied to the institutional perspective - has implications for future research on foreign market entry decisions. Our results provide evidence that both perspectives provide complementing rather than substituting views on FDI. As a consequence, researchers of both streams of literature should be open to alternative explanations and take them into consideration.

An unexpected empirical result regarding one of our control variables deserves mentioning. Across all models, we found a negative association between firm performance and the probability to enter a specific foreign market. Put differently, firms with a rather weak performance were more likely to engage in risky and costly international expansion moves than well performing firms. Prior research has assumed that economic reasons, like

resource scarcity, are a driver of change whereas a firm's legitimacy, i.e. its strong performance, serves as an enabler of change (Sherer & Lee, 2002). In our sample, economic reasons are an important driver of market entry decisions in Eastern Europe. However, in contrast to prior findings, especially firms with a weaker performance are those who engage in these new and up-coming markets. Based on our findings, we assume that firms exhibiting a weaker performance seek to reduce costs by relocating parts of their production to Eastern Europe. Further, these firms may be especially likely to imitate the entry decisions of their more successful peers. Again, this effect may be caused by an interplay between economic reasons and an institutional logic.

Finally, some robust patterns in our elasticity estimates should be mentioned. Across all models, the elasticities with respect to a firm's own experience are quite large and significant. Based on these results, we believe that the "liability of foreignness" (Johanson & Vahlne, 1977) decreases as firms gain experience with running operations in foreign markets. Future research is needed to determine in how far firms use similarities between foreign markets to economize on their own prior experience. Further, it would be interesting to learn more about the type of risk (market-based risk or decision-based risk) that causes firms to imitate the entry strategies of their large and/or successful peers.

4 Concluding Remarks

We recognize that this study has some limitations which present opportunities for further research. One limitation is related to the confined availability of longitudinal data on market conditions in Eastern Europe. Ideally, we would have been able to use a larger number of indicators for efficiency-seeking as well as for market-seeking FDI. Although data availability is much better for later years of our study, we decided to use a 14 year time period that allows us to capture the first entry moves of German firms in Eastern Europe after the fall of the "Iron Curtain" in 1990. Future research may gain additional insights by comparing the international expansion moves of firms from different countries as well as by using varying time frames for the analysis of foreign market entry decisions.

Our study showed that economic as well as institutional reasons trigger foreign market entry decisions. However, we did not provide conclusive evidence which of these two perspectives is a stronger driver for FDI. Future research may address this issue and may, for instance, analyze imitation under varying degrees of market risk. Furthermore, research on FDI may profit from a qualitative approach to analyzing a firm's decision to enter

foreign markets. Learning more about managements' reasons for or against entering specific markets would help us to come to a more fine-grained understanding of the interaction between the economic and the institutional perspective on international expansion moves.

In our study, we analyzed and compared the influence of economic as well as of institutional reasons for foreign market entry decisions. To state our case, we provided theoretical models on both perspectives and tested them empirically using longitudinal data on the decisions of German firms to enter Eastern European markets. We revealed that both, the economic and the institutional perspective complement each other in explaining the entry moves of the firms in our sample. There is reason to expect that these two perspectives do not only complement each other regarding foreign market entry decisions but also with respective to other strategic decisions. Future research may well profit from including both theoretical perspectives simultaneously.

Figure 1: Market entry under the economics and institutional perspective

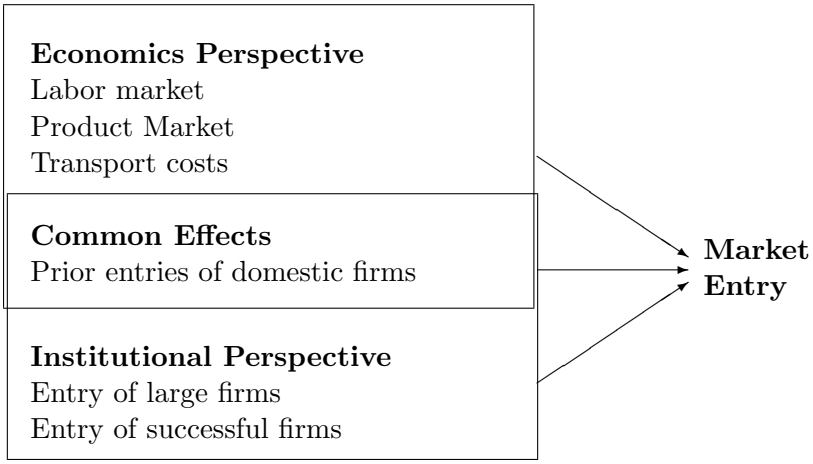

Table 1: Firm B's decision rule

firm A		firm B			
		prestigious		non-prestigious	
type	decision	s_h	s_l	s_h	s_l
prestigious	entry	entry	entry	entry	entry
prestigious	no entry	no entry	no entry	no entry	no entry
non-prestigious	entry	entry	no entry	entry	no entry
non-prestigious	no entry	entry	no entry	entry	no entry

Table 2: Firm C's decisions if A was non-prestigious

firm A		firm B		firm C			
type	decision	type	decision	type	signal	decision	prediction
non-p.	entry	prest.	entry	prest.	s_h	entry	entry wave
					s_l	entry	
				non-p.	s_h	entry	
					s_l	entry	
		prest.	not	prest.	s_h	entry	
					s_l	not	no-entry wave
				non-p.	s_h	entry	
					s_l	not	
		non-p.	entry	prest.	s_h	entry	entry wave
					s_l	entry	
				non-p.	s_h	entry	
					s_l	entry	
		non-p.	not	prest.	s_h	entry	entry wave
					s_l	not	no-entry wave
				non-p.	s_h	entry	
					s_l	not	

(continued on the next page)

Firm C's decisions if A was non-prestigious (Table 2 cont.)

firm A	firm B	firm C			
		type	signal	decision	prediction
non-p. not	prest. entry	prest.	s_h	entry	entry wave
			s_l	not	
		non-p.	s_h	entry	entry wave
			s_l	not	
	prest. not	prest.	s_h	not	no-entry wave
			s_l	not	
		non-p.	s_h	not	
			s_l	not	
	non-p. entry	prest.	s_h	entry	entry wave
			s_l	not	no-entry wave
		non-p.	s_h	entry	
			s_l	not	
	prest. not	prest.	s_h	not	no-entry wave
			s_l	not	
		non-p.	s_h	not	
			s_l	not	

Table 3: Descriptive Statistics and Correlations

	Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	(13)
1	Entry	0.02	0.14													
2	Unemployment	5.24	4.82	0.0926												
3	Market Size	1915.61	1728.58	0.0790	0.0022											
4	Market Growth	-1.33	10.10	0.0137	0.1420	0.2475										
5	Sum Prior Entries	6.08	12.18	0.1803	0.4626	0.3328	0.1558									
6	Entries Large Firms	2.45	4.07	0.1680	0.5077	0.2701	0.1727	0.9579								
7	Entries Succ. Firms	1.10	2.43	0.1752	0.4369	0.3265	0.1419	0.9545	0.9000							
8	Political Risk	59.70	4.85	-0.1065	-0.1343	-0.1673	-0.3440	-0.3544	-0.3550	-0.3448						
9	Geo. Distance	24.37	14.63	-0.1283	-0.2936	-0.4633	0.0189	-0.4214	-0.4408	-0.4075	0.2574					
10	EU Accession	0.29	0.59	0.1044	0.4963	0.3333	0.2388	0.6110	0.6408	0.5729	-0.3491	-0.4460				
11	Firm Size	9.54	1.48	0.0493	-0.0270	-0.0610	0.0033	-0.0804	-0.0762	-0.0759	0.0106	0.0537	-0.0404			
12	Performance	0.20	5.06	-0.0047	-0.0198	0.0369	0.0013	-0.0133	-0.0162	-0.0126	0.0124	-0.0011	-0.0160	0.0523		
13	Export Inten.	0.56	2.06	-0.0039	-0.0060	-0.0086	-0.0363	-0.0095	-0.0119	-0.0092	0.0117	0.0006	-0.0096	-0.0375	0.0041	
14	Experience	1.19	1.00	0.0163	0.1790	-0.3177	0.2456	0.0789	0.1364	0.0686	-0.2103	0.1027	0.1858	0.2170	-0.0388	
															-0.0097	

Table 4: Discrete Time Event History Analysis

Dependent variable: Log-odds of market entry. Coefficients reported with standard errors below in parenthesis

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	-0.125	-0.206	-0.752	-2.121 *	-4.029 ***	-3.38 **
	(1.046)	(1.039)	(1.021)	(1.035)	(1.03)	(1.05)
Pol. Risk	-0.123 ***	-0.131 ***	-0.125 ***	-0.104 ***	-0.082 ***	-0.087 ***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.014)	(0.015)
Geo. Distance	-0.084 ***	-0.08 ***	-0.078 ***	-0.073 ***	-0.069 ***	-0.068 ***
	(0.009)	(0.009)	(0.01)	(0.009)	(0.009)	(0.008)
EU Accession	0.47 ***	0.204	-0.005	0.09	-0.001	0.146
	(0.123)	(0.143)	(0.172)	(0.164)	(0.144)	(0.154)
Firm Size	0.287 ***	0.296 ***	0.297 ***	0.337 ***	0.331 ***	0.314 ***
	(0.042)	(0.042)	(0.042)	(0.043)	(0.045)	(0.044)
Performance	-0.027 ***	-0.028 ***	-0.028 ***	-0.027 ***	-0.028 ***	-0.028 ***
	(0.005)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)
Export Intens.	-0.022 +	-0.023 +	-0.023 +	-0.036 *	-0.017	-0.019
	(0.012)	(0.013)	(0.013)	(0.015)	(0.012)	(0.013)
Experience	0.381 ***	0.388 ***	0.399 ***	0.369 ***	0.49 ***	0.474 ***
	(0.069)	(0.07)	(0.069)	(0.07)	(0.07)	(0.07)
	year and industry dummies included in all models					
Unemployment		0.079 ***	0.082 ***	0.064 ***	0.019	0.049 ***
		(0.012)	(0.013)	(0.013)	(0.014)	(0.014)
Market Size			0.095 +	-0.04	-0.222 ***	-0.185 **
			(0.051)	(0.057)	(0.058)	(0.063)
Market Growth			0.019 +	0.026 **	0.043 ***	0.032 **
			(0.01)	(0.01)	(0.01)	(0.01)
Sum Prior Entries				0.155 ***		
				(0.027)		
Entries Large Firms					0.197 ***	
					(0.018)	
Entries Succ. Firms						0.201 ***
						(0.024)
N	19901	19901	19901	19901	19901	19901
Wald χ^2	575.377 ***	622.928 ***	644.458 ***	708.733 ***	805.564 ***	759.037 ***

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: Elasticities at the mean

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Pol. Risk	-7.280 ***	-7.785 ***	-7.408 ***	-6.194 ***	-4.856 ***	-5.161 ***
Geo. Distance	-2.032 ***	-1.929 ***	-1.890 ***	-1.773 ***	-1.675 ***	-1.638 ***
EU Accession	0.137 ***	0.060	-0.001	0.026	-0.000	0.043
Firm Size	2.725 ***	2.810 ***	2.815 ***	3.192 ***	3.138 ***	2.979 ***
Performance	-0.006 ***	-0.006 ***	-0.006 ***	-0.005 ***	-0.006 ***	-0.006 ***
Export Intens.	-0.012 +	-0.013 +	-0.013 +	-0.020 *	-0.009	-0.011
Experience	0.450 ***	0.458 ***	0.471 ***	0.436 ***	0.579 ***	0.560 ***
Unemployment		0.413 ***	0.429 ***	0.333 ***	0.100	0.258 ***
Market Size			0.181 +	-0.076	-0.423 ***	-0.352 **
Market Growth			-0.025 +	-0.034 **	-0.057 ***	0.042 **
Sum Prior Entries				0.111 ***		
Entries Large Firms					0.481 ***	
Entries Succ. Firms						0.220 ***

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Significance belonging to the regression coefficient

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