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Abstract

This paper analyses the structure of foreign direct equity investments in Croatia and econometrically tests the existence of a foreign ownership premium among Croatian non-financial corporations. With the use of a novel dataset generated by the merger of two firm-level databases, it is found that in the 2002-2017 period foreign equity investments in non-financial corporations were relatively modest and that the motivation of most of the investments was to expand into the local market (market-seeking FDI), and only partly to increase the efficiency of the investor's business group. As for the mode of entry, most investments were greenfield projects, although brownfield investments were also significant, reflecting the large scale privatization of state-owned enterprises. However, it is found that the industry structure of investments was unfavourable as only a smaller part went into tradable sectors and high-tech industries. Compared to domestically-owned companies, regression analysis has firmly established the existence of an organizational, technological and financial premium of foreign ownership among Croatian non-financial corporations, which differs depending on the size of the company, industrial and regional affiliations, business orientation on local or foreign markets, type of foreign ownership, mode of entry, as well as the origin of the foreign investor. Actually, the foreign ownership premium is higher in small and medium-sized enterprises and those that are oriented towards the local market, and when the concentration of foreign ownership is higher. Also, the premium is higher when the foreign investor originates from a more developed country.

Keywords:
foreign direct equity investments, foreign ownership premium

JEL:
F21, F23, L20, C21

Contents

1 Introduction

During the last almost three decades, many of the less developed European countries have tried to attract foreign investment, recognizing its potential in accelerating economic growth and smoothing the transition from planned to market economy. Indeed, foreign investment brings numerous benefits to the host economy, both at a macroeconomic and at a microeconomic level. Apart from being a relatively stable form of capital inflow, which is particularly important for countries with inadequate domestic savings and accumulated macroeconomic imbalances, foreign direct investment brings abundant macroeconomic benefits, the most important being job creation, increasing tax revenues, widening the export base and increasing the competitiveness of the economy. At the microeconomic level, foreign ownership results in a surge in the transfer of superior knowledge and technology, creates opportunities for faster involvement in global value chains, and often provides access to more stable and affordable sources of funding.

Although policy makers often take the benefits of foreign direct equity investments for granted, the empirical findings on their true impact are not that straightforward. Specifically, empirical studies are often based on aggregate macroeconomic data on inflows or stocks of foreign investments, almost completely neglecting the fact that behind the aggregate variables there are numerous investment projects, heterogeneous in nature, that can ultimately affect the recipient country in different ways, depending on the motives behind each investment as well as on the mode of entry of foreign investors into the local market. In that context, with the increased availability of micro data, the newer literature increasingly places companies at the very centre of their research of the effects of foreign investments. The basic assumption of this type of research is that foreign investors invest in other countries in order to capitalise on the advantages of having resources that are not necessarily available to local entrepreneurs (Dunning, 1993).

Following the same assumption, this research seeks to examine the benefits of foreign ownership taking Croatian companies over the 2002-2017 period as an example through the estimation of the foreign ownership premium reflected in different organizational, technological or financial aspects of non-financial corporations. Premiums are estimated for different types of foreign investments, depending on the motivation of investors (expansion into the local market or increasing the efficiency of the investors' business group), mode of entry (independent venture, joint venture, privatization or takeover), size of the company, industry field, country of foreign investor and so on.

The paper is structured as follows. After the introduction, the second chapter provides a brief overview of empirical literature, with an emphasis on the contribution from this particular research. Then, in the third chapter, the data sources used in the descriptive and empirical part of the research are described. The fourth chapter presents a detailed descriptive analysis of foreign direct equity investments in Croatia based on data collected by the Croatian National Bank and the Financial Agency directly from companies, which, according to the authors' best knowledge, have not been used so far in such a structural analysis of foreign direct equity investment. Based on the same data, the fifth chapter econometrically evaluates the foreign ownership premium with regard to different criteria (industry and region in which the company operates, its business orientation, relation with the foreign investors, as well as the mode in which the investment was carried out).

2 Literature overview and research contribution

Empirical literature dealing with the effects of foreign direct equity investment on the recipient country is quite rich. However, most of the literature consists of multi-country macroeconomic studies that only partly take into account the specifics of each national economy, and thus cannot be widely applied. By contrast, microeconomic studies that rely on firm-level data and thus take into account the heterogeneity of individual investment projects (Wang et al., 2012), allow for a more precise measurement of the effects of foreign investment on the business performance of individual companies, as well as the measurement of spillover effects on other companies and consequently on overall macroeconomic activity. Thanks to the increasing availability and quality of the data, the number of micro-based studies is on the rise at the global level.

Methodologically speaking, in microeconomic studies, the effects of foreign investment are most often measured by the direct comparison of foreign and domestically-owned companies through the calculation of the so-called foreign ownership premium using various firm characteristics and performance indicators. Expectedly, most such studies confirm the generally accepted assumption that foreign-owned companies have better characteristics and performance than domestically-owned companies (this was confirmed by Doms and Jensen in 1995, taking the example of US companies; Goethals and Ooghe in 1997 for Belgian companies; Conyon et al. in 2002 for British companies; Aydin et al. in 2007 for Turkish companies; and Gelübcke in 2012 for German companies). Most of these authors point to higher productivity and wages in foreign-owned companies, their greater capital and technological intensity as well as their better financial performance, primarily the higher profitability and lower financing costs. They attribute these findings to the fact that foreign-owned companies possess specific advantages that enable them to use scarce resources more efficiently than domestically-owned companies, primarily in terms of more advanced technology, better financial conditions and higher-quality human capital (Caves, 2007; Shiu, 2009). The explanation may also be in the positive selection by foreign investors when choosing the domestic companies in which to

invest, i.e. in their tendency to invest in companies with above-average performance (Bentivogli and Mirenda, 2016).

However, there are exceptions. For example, Konings (2001) did not find any positive effects of foreign ownership in a sample of Bulgarian and Romanian companies, as did not Khawar (2003) with a sample of Mexican companies. Likewise, Barbosa and Louri (2005) found almost no difference between foreign-owned and domestically-owned companies in Portugal and Greece. According to these studies, better knowledge of local markets and established distribution channels are some of the advantages that can be better capitalized on by domestic owners rather than foreigners. Whereas most of the mentioned studies did not distinguish between different levels of foreign ownership, Azzam et al. (2013) have shown with Egyptian companies as an example that foreign ownership may have non-linear effects, i.e. that its positive effects decrease after a certain level of foreign ownership and have also shown that the effects differ depending on the sector of the economy. Similarly, Hintošova and Kubikova (2016), taking Slovak companies as examples, confirmed that a company's performance improves with a higher level of foreign ownership, but only up to the level of about 60%, after which it deteriorates compared to peer companies.

In most studies examining the case of Croatia, the effects of foreign direct equity investment are analysed from a macroeconomic perspective (Vukšić, 2005; Derado et al., 2011; Derado, 2013; Kersan-Škrabić and Tijanić, 2014). Only a few studies have been carried out at the microeconomic level, and these are relatively outdated studies focusing on the manufacturing sector. Using descriptive analysis, Škudar (2004) confirmed the positive effects of direct equity investment, both greenfield and brownfield, taking the example of Croatian manufacturing companies in the period from 1998 to 2002. These positive effects are reflected in faster income and capital as well as productivity growth of foreign-owned companies. The same author pointed out that positive effects of direct investment on the firm-level did not translate into macroeconomic benefits, at least not as much as in other transition European countries, due to the relatively small volume of foreign investment in relation to other sectors, primarily the services sector. Another significant piece of research, Marić (2008), using a sample of about 2,400 companies in the period from 1999 to 2005 also confirmed the positive effects of foreign ownership on the productivity of companies that are the object of foreign investment as well as spillover effects on the productivity of other companies in the manufacturing industry.

Research questions raised by these authors are still very important for Croatia, especially in the context of low potential growth of the domestic economy and the possible positive impact of equity investment in that respect. The present research complements the existing empirical knowledge on the link between foreign ownership and business performance at the micro level, which is the basis for understanding the impact of FDI at the macroeconomic level. Actually, from the empirical point of view, the contribution of our research is significant in many ways. Primarily, using a newly created data set, the paper disaggregates the foreign direct equity investment in Croatia by new criteria, perhaps the most interesting being the motives of foreign investors and the mode of their entry on the local market, thus shedding new light on aggregate FDI developments in Croatia. At the microeconomic level, the main contribution of this research is in the estimation of the foreign ownership premium using a considerably broader set of structural and performance indicators that have not been used previously, while using a much larger sample of companies over a longer period of time (2002-2017). Namely, for the first time, according to the best of our knowledge, the regression model is used to estimate the foreign ownership premium in various organizational, technological and financial aspects of business performance of Croatian non-financial corporations. The model takes into account the heterogeneity among companies in terms of size, industry field and regional affiliation, business orientation, modality of foreign ownership and so on. The differentiation of the foreign ownership premium with respect to all of these aspects significantly contributes to a better understanding of the behaviour of foreign investors and can be used by economic policy makers in creating measures to stimulate foreign investment with a view to improving the country's macroeconomic outlook.

3 Data sources

For the purposes of this study, data from two firm-level databases were used. The first one is the Croatian National Bank (CNB) database containing detailed information on foreign direct equity investment[1] from 1990 to 2018. Namely, legal entities in Croatia are obliged to report to the CNB prescribed data on foreign direct equity investment for the purpose of monitoring external sector developments, i.e. the compilation of the balance of payments. The advantage of the CNB database is that it is the only source that includes specific information related to each investment, such as the type of equity investment, method of payment, country of investor and acquired share in the company. This database is than merged with the annual financial statements of non-financial corporations reported to the Financial Agency (FINA) during the 2002-2017 period based on the identification number as company identifier. Companies operating in Croatia are obliged to submit their annual financial statements to FINA for statistical and other purposes, which are then examined and aggregated and made available to other institutions and users. The FINA database contains several hundreds of information items from companies' balance sheets and profit and loss accounts. By merging these two databases, or pairing companies with their

1 In this paper the definition of foreign direct equity investment refers to those investments where a foreign owner acquires at least 10% of the share in the company's share capital.

characteristics from each of the two databases, a unique data set is created, enabling a much more detailed disaggregation of total foreign direct investment as well as a deeper insight into the microeconomic aspects of foreign investments.

Based on this newly created data set, in Chapter 4 total foreign direct equity investment in non-financial corporations during 2002-2017 period is disaggregated. The disaggregation analysis encompasses 9,717 non-financial corporations that received foreign investment at different years during the observed period. These are companies for which complete data are available, i.e. those that have properly reported the data on foreign investment to the CNB and have also submitted annual financial statements to FINA. The analysis does not include 456 companies that did not submit annual financial statements to FINA, but their importance in the total value of foreign direct equity investment is not significant, as they are mostly inactive companies[2].

The sample of companies in foreign ownership used in the calculation of the foreign ownership premium in Chapter 5 is considerably smaller than that used in Chapter 4. Namely, in the period from 2002 to 2017, over 100 thousand companies operated in Croatia, of which 9,717 analysed in Chapter 4 were foreign owned. This number was reduced by "cleaning" performed on the basis of several criteria. Out of the total population, first were excluded companies operating in those activities where no foreign investments were recorded in the observed period (at the fifth level of the NACE Classification). Then, companies having fewer than 10 employees on average during the observed period were excluded. Thus, to calculate the foreign ownership premium in Chapter 5, a sample of 35,324 companies was used, of which 2,185 were foreign owned and 33,139 were domestically owned. A detailed overview of the sample structure according to different criteria is given in Table 1 in the Appendix of the Paper.

4 Analysis of the structure of foreign direct equity investments

Looking at aggregate indicators of foreign direct investments, such as the percentage of the stock of FDI in GDP, Croatia stands out as one of the best performers among new EU member states, which is somewhat surprising given that Croatia lags behind peer countries when it comes to overall macroeconomic performance. Firm-level data used in the analysis below shows a somewhat different picture of the seemingly favourable performance of the Croatian economy when it comes to attracting FDI, as it allows for detailed insight into the composition of the realized inflows of foreign investments.

First of all, total inflow of foreign direct equity investment in Croatia is to a large extent related to equity investments in the financial sector, which is to be expected in view of the bank-centric financial system and the high share of foreign ownership in the domestic banking sector[3]. As indicated in Figure 1 (left), during the period of excessive credit activity before the global financial crisis, there was a noticeable inflow of direct equity investments associated with banks and insurance companies, while after the crisis and the collapse of credit activity these inflows almost completely dried up. Secondly, there are also significant foreign investments that have been realized by converting debt to affiliated companies into equity (debt-to-equity swaps). Such transactions intensified with the outbreak of the crisis, creating an appearance of a higher level of foreign equity investments, while in fact, these foreign-owned companies got into difficulties and their debt to their parents was converted into equity as part of their restructuring program. Furthermore, in Croatia there are so-called round-tripping transactions that increase the level of direct equity investments on both assets and liabilities sides of the FDI account (such investments were realized in quite a large amount by several companies in 2008, 2009, 2010 and 2014).

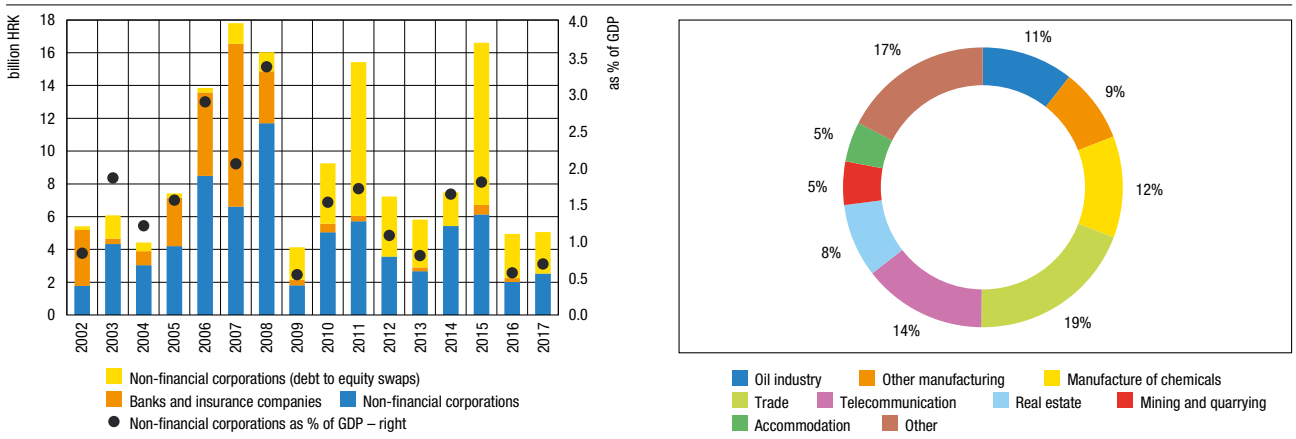
When these three categories of investments are excluded, the remaining foreign direct equity investments in non-financial corporations (excluding debt-to-equity swaps) in Croatia show a different picture. The average value of the narrower aggregate of foreign direct equity investment over the 2002-2017 period halved from 3.1% of GDP to 1.5% of GDP. Nevertheless, although relatively modest, the inflow of investments in non-financial corporations was quite stable throughout the observed period (ranging from 1 to 2% of GDP), which supports the theoretical assumptions that foreign direct investments are a relatively stable form of capital flows (Loungani and Razin, 2001; Lipsey, 2001; Sula and Willet, 2006). The only exceptions were in 2006 and 2008, when somewhat larger investments were recorded, almost exclusively reflecting one-off effects associated with large scale privatizations of two state-owned enterprises in the manufacture of chemicals and oil industry.

Not only are foreign direct equity investments in non-financial corporations relatively modest, their structure is also quite unfavourable, as can be seen in Figure 1 (right). Namely, investments in non-tradable sectors such as trade, telecommunication and real estate are most represented. At the same time, the tradable industries are underrepresented, with most foreign investments realized in the oil industry and the manufacture of chemicals and tobacco, where the total value of foreign equity investments is again dominated by several companies and the associated privatisation and takeover transactions involving companies in domestic private or state ownership. Apart from these industries, the other manufacturing industries and accommodation services stand out as activities with a somewhat greater export potential. In addition to the prevalence of investments in the non-tradable sector, the structure of investments

2 Because of the adjustments made by authors for analytical purposes and other methodological differences, aggregate data on foreign direct equity investment may differ from official CNB data.

3 According to CNB data, the share of foreign-owned banks' assets in total banks' assets at end-2018 stood at 90.1%, and was similar to the structure witnessed for almost two decades (available at https://www.hnb.hr/-/pokazatelji-poslovanja-kreditnih-institucija).

Figure 1 Foreign direct equity investment in Croatia (left) and the structure of foreign direct equity investments in non-financial corporations by activities (right)



Note: The left panel excludes round-tripping transactions, the right panel excludes also debt-to-equity swaps and equity investments associated with banks and insurance companies.
Source: Authors' calculation based on FINA and CNB data.

in terms of technological intensity is also unfavourable; nearly four-fifths of foreign investments made in the manufacturing industry (excluding oil, tobacco and chemical industry) are related to low-tech or medium-low-tech activities[4].

Figure 2 (left) shows foreign direct equity investments in non-financial corporations by the mode of entry of foreign investors into the local market. Any foreign investment is preceded by a decision on the mode of entry, i.e. whether the investor will start the business from the very beginning by establishing a new company or by taking over an existing company in the ownership of residents or the government. In this context, one can distinguish between[5] greenfield investments, which imply the establishment of a new company, and brownfield investments which imply the takeover of an existing company from a private resident or the privatization of a state-owned enterprise. If the investor decides to establish a new company, the next decision is whether to do it independently or in the form of a joint venture with a local or foreign investor, where the key difference is that a joint venture, along with its potential advantages, also entails certain risks for the foreign investor due to a lower degree of control. In this connection, it should be noted that in the context of a positive contribution of foreign investments to the host country, the literature generally gives a preference to greenfield investments (for example, Bayar, 2017; Neto et al., 2010; Luu, 2016). On the other hand, significant brownfield investments are not uncommon in transition and post-transition countries which went through the process of privatization and accelerated external liberalization of the economy, often pressed by insufficient domestic savings and accumulated macroeconomic imbalances.

This is also the case in Croatia, where brownfield investments were significant in the years before the crisis (they amounted to around 53% of total foreign equity investments in the 2002-2008 period), when large privatization projects took place. However, after the crisis, the importance of brownfield investments declined (accounting for around 35% of total foreign equity investments in the 2009-2017 period), as there were no significant privatizations of state-owned enterprises by foreign investors. However, the amount of transactions related to companies that were acquired from domestic private owners increased notably, primarily due to the later recapitalization of earlier takeovers, while the value of new takeovers started recovering only in 2012 (Figure 2 left). However, this structure is partly to be expected, given that acquisitions are often larger in value than greenfield projects. Looking at the number of new projects[6], greenfield investments are much more frequent than brownfield projects, although the number of new projects, both greenfield and brownfield, has been severely reduced since the outbreak of the crisis. The number of new projects increased briefly after Croatia's accession to the European Union, but soon returned to the level recorded immediately before the EU entry.

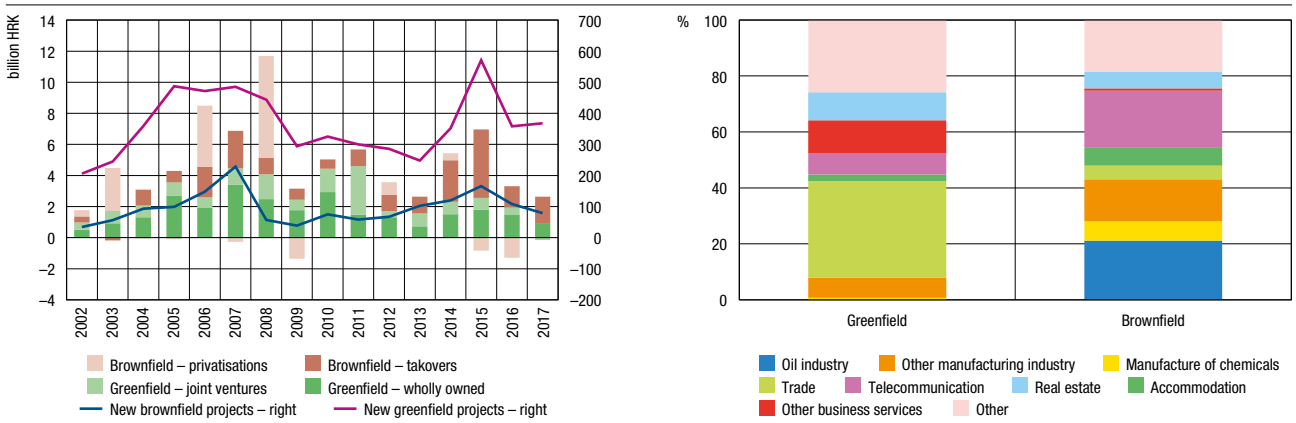
Looking at greenfield investments in more detail, in Figure 2 (left) it can be noticed that a joint venture as a modality of direct investment is highly represented, mostly as joint ventures with local entrepreneurs. There are numerous motives for a foreign investor to engage in a joint business venture with a local entrepreneur, but there are usually two reasons. First and foremost, a foreign investor associates with a domestic entrepreneur to share technology, know-how and resources, and to use local knowledge of business practices and established distribution channels, which significantly increases the likelihood

4 Sectoral division of manufacturing industry according to the degree of technological intensity is made according to Eurostat classification (investing in research and development / added value). http://ec.europa.eu/eurostat/statisticsexplained/index.php/Glossary:Hightech_classification_of_manufacturing_industries

5 The division by type of investment shown in Figure 2 (left) is based on the initial status of the company / project and any later recapitalization of the same company is attributed to the same investment type. In this way, the time dimension of the investment project is taken into account, which is especially relevant for the newly established companies, as the realization of greenfield projects can last for several years, and foreign investors often pay the minimum founding capital at the very beginning and later recapitalize the company.

6 The number of new greenfield projects refers to the number of new companies established in the observed year, with real estate business being excluded. Prior to Croatia's joining the European Union, it was difficult for non-residents to purchase real estate in Croatia, so it was often a practice to set up companies that served only for the acquisition of the real estate and kept out of business thereafter.

Figure 2 Greenfield and brownfield investments in non-financial corporations by mode of entry of foreign investor (left) and structure of investment values by activity (right)



Notes: Data excludes round-tripping transactions, debt-to-equity swaps and equity investments associated with banks and insurance companies. Brownfield project data refers to the number of new acquisitions from private residents and privatizations per year, while data on the number of greenfield projects refer to the number of new companies being established by foreign investors (whether individually or jointly with other investors) in the observed year.
Source: Authors' calculation based on FINA and CNB data.

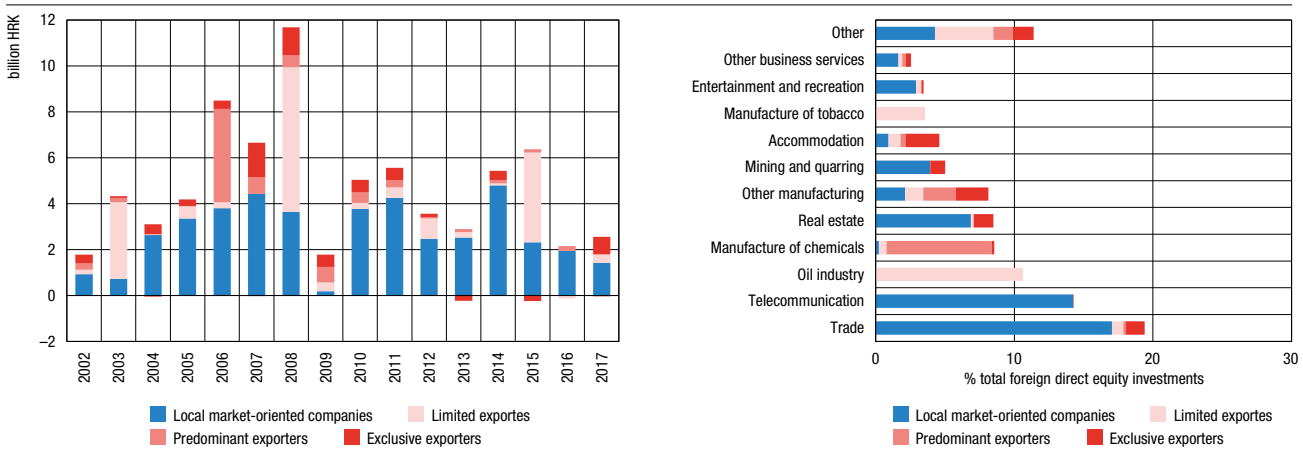
of positive spillovers from foreign investments. On the other hand, there are also cases when the reason for the joint venture is the high level of administrative and other barriers to doing business (for example, a high level of corruption), joint ventures with local companies reducing the investment risks. The reasons why in fact foreign investors in Croatia associate with local entrepreneurs are difficult to establish and are not best explored, with the existing literature mainly dealing with the motives of local entrepreneurs, not foreign investors (for example, Matić and Ćenan, 2007 and Bilas et al. 2012).

However, the biggest differences between greenfield and brownfield investments in non-financial corporations in Croatia are visible from the structure by activities (Figure 2 right). Most greenfield investments relate to trade and, to a lesser extent, other business services, real estate and other manufacturing industries (excluding oil industry and the manufacture of pharmaceuticals). By contrast, the majority of brownfield investments were realized in the manufacturing industry, which was greatly affected by the privatizations of the oil and pharmaceutical industries, as well as significant takeovers in other manufacturing industries, while only a small part of the investment relates to trade, which makes the structure of investments in the two observed groups greatly different. Nevertheless, it is not surprising that takeovers are more frequent in sectors with somewhat greater entry barriers and greater technological and capital intensity, such as the manufacturing industry, while the establishment of a new business is certainly more suitable in sectors such as trade.

Although it is difficult to go beyond determining the value and the number of projects when looking at the mode of entry, somewhat more precise conclusions can be drawn when looking at investments differentiated according to the motives of foreign investors to invest in Croatia. The literature generally recognizes three motives for investing abroad (Dunning, 1993), and these are: market-seeking, efficiency-seeking and resource-seeking. While it is quite difficult to determine when foreign investment is motivated by the expectation of gaining strategic resources, the share of exports in total sales revenues of a company can be a pretty good indicator of whether the motive of the foreign investor for taking over or establishing a new company in a foreign country was only expanding on the local market or increasing the business efficiency of its own business group. Namely, given that the Croatian market is relatively small, the higher share of export revenues in foreign-owned companies suggests that such company was taken over or established in order to increase the efficiency of the whole business group (lowering operating costs, using the proximity to foreign markets, exploiting strategic resources) while producing goods and services that are mainly not intended for the domestic but the export market. Thus, according to the share of exports in total revenues, one can distinguish between: local market-oriented companies that are mostly not exporting or are occasional exporters, with the share of sales on foreign markets in total sales revenues under 20%; limited exporters with this share between 20% and 50%; predominant exporters with export revenues accounting for between 50% and 75% of total revenues, and exclusive exporters whose export revenues make up more than 75% of total revenues.

In Figure 3 (left) foreign direct equity investments are divided according to the export intensity of the company that is the object of foreign investment. In this context, the export intensity is used as an indicator of the company's predominant business orientation (local vs. foreign market) and thus points to the motivation behind each foreign investment project. In almost all the observed years, foreign direct equity investments in companies that were oriented towards the local market are dominant. The only exceptions are the years 2003, 2006, 2008 and 2015 when transactions related to the previously mentioned privatizations of two major exporting companies (in the oil industry and the manufacture of chemicals) as well as one large takeover of an exporting company (in the tobacco industry) took place. Therefore, it can be concluded that extremely low inflow of direct equity investments during the observed period was related to the motive of increased efficiency of the investor's group, which points to the lack of competitiveness of the domestic economy in attracting export-oriented investments. More investments of this type would certainly contribute to stronger trade integration and greater involvement in global value chains, as well as the strengthening of the overall Croatian export sector.

Figure 3 Foreign direct equity investment in non-financial corporations by export intensity (left) and the structure of investments by activities (right)



Note: Data excludes round-tripping transactions, debt-to-equity swaps and equity investments associated with banks and insurance companies.
Source: Authors' calculation based on FINA and CNB data.

Croatia took little advantage of the surge of foreign direct equity investments in Central and Eastern Europe at the very beginning of the transition process in the 1990s, due to specific economic and political circumstances as well the legal and economic uncertainty. The analysis shows that this remained the case also during the later, post-transition period from 2002 to 2017, especially with respect to export-oriented investments. Actually, the lack of significant export-oriented foreign investments during that period can be explained by a number of reasons, a few of which are worth mentioning here. Croatia was accepted into full EU membership much later than other new member states, in 2013, while most of the other new member states joined the EU in 2004 and used their access to the common market as a comparative advantage in attracting export-oriented investments. In addition, it is well known that one of the key motives behind export-oriented investments is to increase the cost efficiency of the group by reducing the cost of labour, and Croatia is not among the countries that based their policy of attracting foreign investment on cheap labour. Also, other structural obstacles that make doing business difficult, such as an unpredictable tax policy and the legal uncertainty, could be at play, as indicated by Croatia's low ranking in the World Bank's Doing Business and the World Economic Forum's World Competitiveness Report. The low inflow of export-oriented investments could not be compensated for by local market-oriented investments because of the relatively small size and low purchasing power of the Croatian market, which ultimately explains why the total inflow of foreign direct equity investments in the observed period was so modest and why Croatia lags behind other new EU member states in terms of real convergence.

5 Foreign ownership premiums in Croatian non-financial corporations

In the text below, using a sample of Croatian non-financial corporations, the hypothesis of the existence of a foreign ownership premium, i.e. the difference in features and performance between foreign-owned and domestically-owned companies, is econometrically tested. As already described in Chapter 3, a sample of 35,324 non-financial corporations is used, out of which 2,185 are foreign-owned enterprises. Despite "cleaning" of the data, the sample remained representative and appropriate for econometric estimation.

The features and performance indicators on which the existence of a foreign ownership premium is tested are defined in the Appendix (Table 2) and they can be grouped into several categories. The existence of organizational and technological premiums (representing the advantages arising from more developed management practices and the use of sophisticated knowledge and advanced technology) are tested using the following indicators: labour productivity, unit labour cost, added value, capital intensity and R&D intensity. Capital intensity and R&D intensity are exclusive indicators of a technological premium while differences in labour productivity, unit labour costs and the level of value added may arise equally from organisational and technological premiums. Because of that, organisational and technological premiums are observed together. The financial premium, i.e. the superiority in financial operations is tested using the indicators of indebtedness, the cost of financing of the long-term debt and the financial stability indicator. In addition, the possibility that these advantages resulted in a premium for company stakeholders, primarily owners and employees, is examined using indicators of profitability and level of wages. Finally, we examine the existence of a country of origin effect, i.e. the difference in the premium of foreign ownership depending on the country of the investor.

Just as the empirical literature often estimates the export premium (comparing exporters with non-exporters), as in

Valdec and Zrnc (2017), here the foreign ownership premium (comparing foreign-owned and domestically-owned companies) is estimated by a simple regression OLS model, such that selected features and performance indicators are regressed on multiple dummy variables. In the focus of this research is the dummy variable of the company's ownership status, while other dummy variables (over 20 of them) are included in the regression model only to control for differences in other features among companies. In the case in point, the foreign ownership premium is estimated by the following regression model:

$$(\ln) X_i = \alpha + \beta \cdot ownership_i + \gamma \cdot control_i + \varepsilon_i \qquad (1)$$

where i is the index of the company; X_i represents the vector of various features and performance indicators on which the premium is calculated (see Table 2 in the Appendix); *ownership* is a dummy variable of the company's ownership status (1 if the company is foreign-owned, otherwise 0); *control* is a vector of control dummy variables that relate to other characteristics of the company (activity at 2 digit-level of the NACE classification, size, region and business orientation); and ε is the error term. From the estimated β coefficients, the foreign ownership premium is calculated as $100 \cdot (\exp(\beta) - 1)$, showing the average percentage difference between foreign-owned and domestically-owned companies after controlling for other company characteristics included in the vector of control variables. A list of the variables used in regression models is given in Table 3 of the Appendix. The model was estimated on the full sample and sub-samples broken down by size, region, predominant business orientation, mode of entry and the country of origin of foreign investor (sub-sample specifications are given in Table 4 of the Appendix). The econometric estimation does not take into account the time dimension of the data, the indicators and features of each company being expressed as the average values over the whole observed period (cross-section data)[7].

The results of the econometric analysis presented in Tables 1 to 4 show that foreign-owned non-financial corporations in Croatia undoubtedly have superior features and performance compared to domestically-owned companies, i.e. that there is an obvious foreign ownership premium among Croatian non-financial corporations, which is expected and consistent with most of the empirical literature. What is less expected is that this premium varies strongly when looking at different features and performance indicators (organizational, technological and financial), and depends on the size of the company, industry field, region, predominant business orientation and the mode of foreign ownership.

Table 1 clearly shows a strong and statistically significant foreign ownership premium in all features and performance indicators used in the analysis and also reveals differences depending on the size and region of the company. Specifically, the organizational and technological premium of foreign ownership is higher in small and medium-sized enterprises, according to all indicators except unit labour costs. Actually, while foreign-owned companies, regardless of their size, are generally more productive than their domestically-owned peers, there is nevertheless much smaller difference in wages among large companies, which ensures them a more competitive position in terms of unit labour costs. It is difficult to establish the reasons why the technological and organizational premium is more significant and stronger for small and medium-sized enterprises. It is possible that large companies, regardless of the ownership, have sufficient financial resources and higher quality human capital, which enables them to improve their business organization and acquire and implement advanced technology, and by doing so make foreign ownership less important. This is also supported by the financial premium which is significant only

Table 1 Foreign ownership premiums, by size and regional affiliation of the company

Sample	Labour productivity	Unit labour costs	Value added	Capital intensity	R&D intensity	Indebted-ness	Debt cost	Financial stability	Wage level	Profitability
All companies	0.63***	–0.14***	0.60***	0.58***	0.42***	0.30***	–0.19***	–0.14***	0.49***	0.12**
	87.8	–9.5	82.2	78.6	52.2	35.0	–9.5	–9.5	63.2	12.7
Small and medium-sized enterprises	0.65***	–0.11***	0.61***	0.70***	0.41***	0.33***	–0.17***	–0.10***	0.53***	0.06
	91.6	–9.5	84.0	101.4	50.7	39.1	–9.5	–9.5	69.9	6.2
Large enterprises	0.51***	–0.28***	0.51***	0.46**	0.35	–0.05	0.10	0.02	0.23***	0.25
	66.5	–18.1	66.5	58.4	41.9	0.0	10.5	2.0	25.9	28.4
Zagreb	0.79***	–0.13***	0.73***	0.35***	0.47***	0.17***	–0.01	–0.27***	0.60***	0.09
	120.3	–9.5	107.5	41.9	60.0	18.5	0.0	–18.1	82.2	9.4
Northern Croatia	0.62***	–0.22***	0.60***	0.75***	0.34	0.23**	–0.17	–0.03	0.35***	–0.01
	85.9	–18.1	82.2	111.7	40.5	25.9	–9.5	0.0	41.9	0.0
Adriatic Coast	0.37***	–0.14***	0.38***	0.98***	0.38***	0.58***	–0.56***	0.04	0.33***	0.18*
	44.8	–9.5	46.2	166.4	46.2	78.6	–39.3	4.1	39.1	19.7
Slavonia	0.47***	–0.05	0.36***	0.44**	0.19	0.13	0.1	–0.06	0.33***	–0.02
	60.0	0.0	43.3	55.3	20.9	13.9	10.5	0.0	39.1	0.0

Notes: *, ** and *** refer to significance levels of 10%, 5% and 1%. Below the estimated regression coefficient, foreign ownership premiums are presented as the percentage difference between foreign and domestic companies, calculated as $100 \cdot (\exp(\beta) - 1)$.
Source: Authors' calculations based on FINA and CNB data.

7 All econometric calculations were made in the Stata 15 program and are available upon request.

for small and medium-sized enterprises, suggesting that in this group of companies, foreign ownership allows for better access to direct foreign financing, under more favourable conditions. This is evident from the fact that, although they are obviously more indebted[8], small and medium-sized foreign-owned enterprises have a significantly lower cost of financing of long-term debt than peer domestically-owned companies. Although small and medium-sized foreign-owned enterprises rely more on debt financing, they are more financially stable[9] as they have more working capital[10] than peer companies. This stems from the more favourable maturity structure of the debt of foreign-owned small and medium-sized enterprises, stemming from the larger share of long-term debt to affiliated foreign companies or banks than that of domestically-owned enterprises due to likely higher credibility of foreign owners among banking groups operating in countries of foreign investors, as well as in Croatia. That is, most foreign investments in Croatia come from Italy and Austria, and it is likely that Austrian and Italian banks finance the parent companies, while their subsidiary banks in Croatia are financing the operations of Croatian branches.

Such a significant foreign ownership premium in the financing of small and medium-sized enterprises and the absence of the same premium in large companies is not surprising, for the financial market in Croatia is still quite underdeveloped and there is almost no significant alternative to bank financing. This particularly affects small and medium-sized enterprises that have limited access to bank financing as they usually lack sufficient collateral to meet banks' credit requirements (Ljubaj and Martinis, 2017). In the segment of small and medium-sized enterprises, foreign-owned firms are often in a position to ensure significant financial resources from parent companies, enabling them to alleviate financial limitations. In addition to the financial premium, for small and medium-sized foreign-owned enterprises a substantial premium for employees in the form of higher wages is confirmed, but not for owners in the form of higher profitability. This is because foreign-owned companies have higher wages than comparable domestically-owned companies, and the reasons are multiple. As Gelübcke (2012) suggests, it is possible that foreign-owned companies are seeking to retain their employees with higher wages, thereby preserving their competitive advantage, but there is also a possibility that foreign companies are less familiar with domestic labour market conditions, which weakens their position in the wage negotiation process. It is also not to be excluded that there is a positive selection by the investors, whereby only the best companies with a better and more expensive workforce are the object of foreign investments. However, the Croatian case may be more related to the fact that foreign-owned companies are more capital- and technology-intensive than their peer companies, as confirmed by the estimated premiums in Table 1, and this requires a more trained, educated and thus a more expensive workforce.

Looking at the econometric results for individual regions, Table 1 shows that the foreign ownership premium is widespread, but largest in Zagreb where the business environment is most competitive. Organizational and technological premiums of foreign ownership are present in all parts of the country, especially in terms of higher labour productivity, value added per employee and capital intensity, while noticeable differences between regions exist only when looking at R&D intensity. The latter is present only among companies operating in Zagreb and in the coastal region, which is expected as companies with significant research and development activities are concentrated in large cities.

Table 2 presents the foreign ownership premiums in different economic activities, with five of the most important activities being singled out: manufacturing, trade, tourism (mainly hotels and other accommodation), information technology and various professional services. Furthermore, in order to take into account its heterogeneity, the manufacturing industry is divided by technological intensity into low-tech and high-tech industries[11].

The results in Table 2 show that there are organizational and technological premiums of foreign ownership in all economic fields except tourism. The absence of foreign ownership premium in tourism can be explained by the fact that the Croatian hotel industry is dominated by domestic hotel chains, which are highly competitive and capitalized, and are considered market leaders in the sector and the Croatian economy as a whole. Since domestic tourism companies have a long tradition dating back to the times before the economic transition and have no problems with access to quality financing, it is not surprising that foreign ownership has little significance in tourism. When it comes to other activities, there is a significant foreign ownership premium in terms of higher productivity, value added, and R&D intensity. The results are somewhat different in terms of unit labour costs, which is negative and statistically significant only in trade, services and low-tech manufacturing industries. The absence of this premium in the high-tech manufacturing industry and information technology, as well as in tourism, can be attributed to the fact that these are mostly export-oriented industries in which domestic companies are also exposed to international competition, pushing them to be more efficient. As far as the financial premium of foreign ownership is concerned, the lower cost of long-term debt is most pronounced in the manufacturing industry, while the financial stability premium is most evident in trade and professional services. It is again shown that the higher wages premium is widespread across industries, while the premium of profitability is present only in the low-tech manufacturing industry and trade.

When the manufacturing industry is considered in more detail, Table 2 reveals significant differences in the foreign ownership premium in specific industries. In general, the benefits of foreign ownership are more widespread in low-tech industries than in the high-tech sector, confirming that the positive effects of foreign ownership are not only transmitted through the transfer of advanced technology that plays a key role in technologically highly intensive industries but also through

8 Based on the share of debt and equity in total sources of funding.

9 Looking at the financial stability indicator that relates long-term assets and long-term sources of financing (equity and long-term liabilities).

10 Working capital refers to the difference between short-term assets and short-term liabilities of a company.

11 According to the above-mentioned Eurostat methodology. See footnote 3.

Table 2 Foreign ownership premiums, by business activity

Sample	Labour productivity	Unit labour cost	Value added	Capital intensity	R&D intensity	Indebted-ness	Debt cost	Financial stability	Wage level	Profitability
All companies	0.63***	–0.14***	0.60***	0.58***	0.42***	0.30***	–0.19***	–0.14***	0.49***	0.12**
	87.8	–9.5	82.2	78.6	52.2	35.0	–9.5	–9.5	63.2	12.7
Manufacturing industry	0.51***	–0.10***	0.40***	0.61***	0.54***	0.09	–0.33***	–0.05	0.31***	0.07
	66.5	–9.5	49.2	84.0	71.6	9.4	–25.9	0.0	36.3	7.3
High-tech industry	0.58***	–0.08	0.43***	0.39*	0.62**	–0.06	–0.38*	–0.12	0.35***	–0.21
	78.6	0.0	53.7	47.7	85.9	0.0	–25.9	–9.5	41.9	–18.1
Manufacture of machinery and equipment	0.59***	0.1	0.36**	0.2	–0.1	–0.1	–0.1	–0.3	0.41***	–0.1
	80.4	5.1	43.3	22.1	–9.5	–9.5	–9.5	–18.1	50.7	0.0
Manufacture of electrical equipment	0.61***	–0.2	0.48***	0.2	0.87*	–0.1	–0.4	–0.3	0.33***	–0.2
	84.0	–9.5	61.6	20.9	138.7	0.0	–33.0	–18.1	39.1	–9.5
Manufacture of chemicals and chemical products	0.52*	–0.1	0.42*	0.3	0.7	0.2	–0.1	0.0	0.27**	–0.3
	68.2	–9.5	52.2	31.0	99.4	18.5	–9.5	0.0	31.0	–25.9
Low-tech industry	0.47***	–0.11**	0.39***	0.70***	0.47**	0.16*	–0.30**	0.0	0.29***	0.25*
	60.0	–9.5	47.7	101.4	60.0	17.4	–25.9	0.0	33.6	28.4
Manufacture of textiles	0.73***	–0.35***	0.50***	0.91***	0.4	–0.3	–0.48*	0.0	0.21***	0.76**
	107.5	–25.9	64.9	148.4	49.2	–18.1	–33.0	4.1	23.4	113.8
Manufacture of wood and products of wood and cork, except furniture	0.3	–0.1	0.3	0.56*	0.2	0.2	–0.89*	–0.1	0.21*	0.0
	28.4	–9.5	33.6	75.1	17.4	22.1	–55.1	–9.5	23.4	3.0
Manufacture of other non-metallic mineral products	0.99***	–0.41***	0.97***	1.03***	1.47**	–0.1	0.2	–0.36*	0.58***	0.59*
	169.1	–33.0	163.8	180.1	334.9	–9.5	24.6	–25.9	78.6	80.4
Manufacture of basic metals	0.34***	0.13*	0.16	0.76**	0.62*	0.37**	–0.50*	0.1	0.31***	0.09
	40.5	13.9	17.4	113.8	85.9	44.8	–39.3	10.5	36.3	9.4
Trade	0.69***	–0.14***	0.72***	0.27***	0.48***	0.11**	0.02	–0.26***	0.60***	0.17*
	99.4	–9.5	105.4	31.0	61.6	11.6	2.0	–18.1	82.2	18.5
Tourism	0.03	0.21	–0.43	0.79	0.24	0.62	0.14	0.06	0.36***	–0.34
	3.0	23.4	–33.0	120.3	27.1	85.9	15.0	6.2	43.3	–25.9
Information technology	0.35***	0.0	0.44***	0.2	0.75**	0.38***	–0.2	0.1	0.37***	–0.3
	41.9	0.0	55.3	18.5	111.7	46.2	–9.5	6.2	44.8	–18.1
Services	0.62***	–0.16***	0.62***	0.29*	0.50**	0.40***	–0.1	–0.24**	0.47***	0.01
	85.9	–9.5	85.9	33.6	64.9	49.2	–9.5	–18.1	60.0	1.0

Notes: *, ** and *** refer to significance levels of 10%, 5% and 1%. Below the estimated regression coefficient, foreign ownership premiums are presented as the percentage difference between foreign and domestic companies, calculated as $100 \cdot (\exp(\beta) - 1)$. **High-tech industries** in this paper mean groups of high-technology and medium-high-technology industries according to the Eurostat classification, which include the following activities according to NACE at the 2-digit level: manufacture of chemicals and chemical products, basic pharmaceutical products and pharmaceutical preparations, computer, electronic and optical products, electrical equipment, machinery and equipment, motor vehicles, trailers and semi-trailers. **Low-tech industries** in this paper mean groups of low-technology and medium-low-technology industries according to Eurostat classification, which include the following activities according to NACE at the 2-digit level: manufacture of food products, beverages, tobacco products, textiles, wearing apparel, leather and related products, wood and products of wood and cork, except furniture, paper and paper products, printing and reproduction of recorded media, manufacture of coke and refined petroleum products, rubber and plastic products, other non-metallic mineral products, basic metals, fabricated metal products, furniture and other manufacturing.
Source: Authors' calculations based on FINA and CNB data.

other channels (management skills and better financing). In the high-tech sector, the biggest premium is in the manufacture of machinery and equipment and the manufacture of electrical equipment, notably looking at the indicators of labour productivity, level of added value, R&D intensity and the level of wages. At the same time, in the pharmaceutical industry, the premium of foreign ownership is less pronounced. On the other hand, in the low-tech sector, the premium is visible in a

Table 3 Foreign ownership premiums, by the mode of entry and business orientation

Sample	Labour productivity	Unit labour cost	Value added	Capital intensity	R&D intensity	Indebtedness	Debt cost	Financial stability	Wage level	Profitability
All companies	0.63***	–0.14***	0.60***	0.58***	0.42***	0.30***	–0.19***	–0.14***	0.49***	0.12**
		–9.5	82.2	78.6	52.2	35.0	–9.5	–9.5	63.2	12.7
Greenfield	0.61***	–0.15***	0.59***	0.39***	0.49***	0.23***	–0.25***	–0.18***	0.49***	0.08
	84.0	–9.5	80.4	47.7	63.2	25.9	–18.1	–9.5	63.2	8.3
Independently established companies	0.61***	–0.14***	0.60***	0.23***	0.46***	0.20***	–0.33***	–0.24***	0.51***	0.03
	84.0	–9.5	82.2	25.9	58.4	22.1	–25.9	–18.1	66.5	3.0
Joint venture companies	0.54***	–0.15***	0.50***	0.71***	0.47***	0.26***	–0.06	–0.02	0.37***	0.18*
	71.6	–9.5	64.9	103.4	60.0	29.7	0.0	0.0	44.8	19.7
Brownfield	0.54***	–0.08**	0.48***	0.98***	0.13	0.43***	0.01	–0.01	0.41***	0.21**
	71.6	0.0	61.6	166.4	13.9	53.7	1.0	0.0	50.7	23.4
Market-oriented companies	0.69***	–0.20***	0.66***	0.67***	0.39***	0.43***	–0.13*	–0.14***	0.51***	0.19***
	99.4	–18.1	93.5	95.4	47.7	53.7	–9.5	–9.5	66.5	20.9
Limited exporters	0.69***	–0.11*	0.63***	0.33**	0.40*	0.1	0.1	–0.29***	0.52***	–0.1
	99.4	–9.5	87.8	39.1	49.2	11.6	13.9	–18.1	68.2	–9.5
Predominant and exclusive exporters	0.46***	0.0	0.41***	0.54***	0.39**	0.1	–0.46***	–0.1	0.42***	0.0
	58.4	0.0	50.7	71.6	47.7	8.3	–33.0	0.0	52.2	0.0

Notes: *, ** and *** refer to significance levels of 10%, 5% and 1%. Below the estimated regression coefficient, foreign ownership premiums are presented as the percentage difference between foreign and domestic companies, calculated as $100 \cdot (\exp(\beta) - 1)$.
Source: Authors' calculations based on FINA and CNB data.

much larger number of indicators, especially in the manufacture of textiles, non-metallic products and basic metals, while the differences between foreign and domestically-owned companies are not visible only in the manufacture of wood and wood products. Among different indicators, it can be pointed out that, unlike in the high technology sector, in low-tech industries, especially in the manufacture of textiles and non-metallic products, foreign ownership brings a premium in the form of lower unit labour costs, greater productivity, higher value added and higher profitability. Such strong and large differences can be partly explained by the greater capital intensity of foreign-owned companies, which may lead to the conclusion that their business is significantly more automated, even in traditionally labour-intensive industries.

Below are described the foreign ownership premiums according to the mode of entry of foreign investors. The results in Table 3 show that organizational / technological premium of foreign ownership is present in both greenfield and brownfield projects, the difference being that the R&D intensity premium has proved to be positively significant only in greenfield projects. This is not surprising as it is hard to expect that Croatian companies are the object of takeovers motivated by the expectation of gaining technological know-how (technology-seeking FDI). However, there are significant differences when the financial premium and the premium of profitability are involved. It has been shown that a strong and statistically significant premium of lower cost of long-term debt and higher working capital is only present in greenfield projects, and only those that are wholly foreign-owned, while these effects do not exist in joint venture companies. These findings can be explained by the different structure of liabilities of wholly foreign-owned companies, as they have a significantly lower share of long-term debt to banks and a significantly higher share of debt to foreign-affiliated creditors. The foreign-affiliated debt is cheaper than regular bank financing as indicated by a strong and statistically significant premium in terms of the lower cost of financing long-term debt. This represents a significant competitive advantage for foreign-owned companies, especially in the Croatian case, where direct access to external financing is limited, particularly for small and medium-sized enterprises.

On the other hand, the profitability premium is only present in brownfield investments and, to a lesser extent, in joint venture investments, which is rather unexpected given that the organizational, technological and financial premium of foreign ownership is largest in the case of independently established companies. So the absence of the profitability premium is surprising. The explanation may be that a high degree of control of foreign owners in independently established companies allows and facilitates the transfer of profits to a more favourable tax jurisdiction through transfer prices, as indicated by some other, similar research (Gelübcke, 2012). This is also supported by the fact that around one hundred investors in the sample of foreign-owned companies (out of more than two thousand) are registered in countries that are considered tax havens. In addition, the lack of a profitability premium in greenfield companies can partly be explained by the very nature of the project. As is apparent from the analysis in Chapter 4, the majority of foreign investments in Croatia are oriented towards the local market, so it is expected that such greenfield investments take a longer period of market positioning before they become profitable. On the other hand, the rationale behind brownfield investment is acquiring a company that is already profitable or needs a shorter restructuring time to achieve a satisfactory level of profitability.

Table 4 Foreign ownership premiums by investor country

Sample	Labour productivity	Unit labour cost	Value addes	Capital intensity	R&D intensity	Indebted-ness	Debt cost	Financial stability	Wage level	Profitability
All companies	0.63***	–0.14***	0.60***	0.58***	0.42***	0.30***	–0.19***	–0.14***	0.49***	0.12**
		–9.5	82.2	78.6	52.2	35.0	–9.5	–9.5	63.2	12.7
Old EU member states, Norway and Switzerland	0.68***	–0.12***	0.65***	0.74***	0.41***	0.24***	–0.16**	–0.14***	0.58***	0.13**
		–9.5	91.6	109.6	50.7	27.1	–9.5	–9.5	78.6	13.9
New EU member states	0.63***	–0.15***	0.55***	0.48***	0.43***	0.23***	0.08	–0.05	0.40***	–0.11
	87.8	–9.5	73.3	61.6	53.7	25.9	8.3	0.0	49.2	–9.5
Rest of Europe	0.41***	–0.15**	0.34***	0.57***	0.16	0.31***	–0.09	0.09	0.24***	0.02
	50.7	–9.5	40.5	76.8	17.4	36.3	0.0	9.4	27.1	2.0
United States of America	0.46***	0.0	0.50***	0.92***	0.55*	0.52***	–0.3	0.1	0.49***	–0.3
	58.4	0.0	64.9	150.9	73.3	68.2	–18.1	15.0	63.2	–18.1

Notes: *, ** and *** refer to significance levels of 10%, 5% and 1%. Below the estimated regression coefficient, foreign ownership premiums are presented as the percentage difference between foreign and domestic companies, calculated as $100 \cdot (\exp(\beta) - 1)$.
Source: Authors' calculations based on FINA and CNB data.

An additional, very important aspect of foreign ownership that can result in different premiums, is the motive of entering the local market, i.e. the degree of orientation towards the local vs. the foreign market. As expected, the size of the foreign ownership premium decreases with a higher export orientation, i.e. the internationalization of business, primarily in unit labour costs, given that with increased export intensity the exposure to international competition also grows, which compels both foreign and domestically-owned exporters to increase business efficiency. However, the results show that the foreign ownership premium does not entirely fade in the export sector, which is understandable since foreign owners have better knowledge and access to foreign market.

Table 4 shows the foreign ownership premium depending on the country of origin of foreign investor[12], indicating large differences in the significance and size of the premiums in different groups of countries. However, these finding should be taken with caution, as it is possible that the country from which the investment originates is only the administrative headquarters of the company for tax and other purposes, while the place of actual business is somewhere else. The premiums are the highest in companies whose owners come from old EU member states and Switzerland and Norway, while the premiums slightly drop in companies owned by investors from new EU member states. What is particularly worth mentioning is that the financial premium fades completely in companies whose investors originate from the new member states, which is not surprising given that these countries do not have a significantly more developed financial market and thus better financing opportunities for parent companies that could translate to their related companies in Croatia. Also, the profitability premium is only present in companies owned by investors from old EU member states and Norway and Switzerland. Furthermore, the technological and organizational premium is smaller and in certain cases completely non-existent for companies whose owners originate from non-EU European countries, which are on average less developed than Croatia. Also, in their case the R&D premium is non-existent, since it is difficult to expect that foreign investors from these countries would build their competitive advantage in this way. Among other countries, the United States stands out by the volume of investments in Croatia and also by positive organizational and technological premiums in terms of higher capital intensity, productivity and value added.

6 Conclusion

The research conducted has resulted in some new and very important findings that enable a better understanding of the factors driving foreign equity investments in Croatia as well as the microeconomic aspect of foreign ownership in Croatian non-financial corporations. The analysis, based on the new set of data compiled for the purpose of this research, has shown that most of the equity investments in Croatia between 2002 and 2017 were motivated by the intention to expand on the local market (market-seeking FDI), while investments aimed at increasing the efficiency of the investors' business group (efficiency-seeking FDI) were far less significant. This points to the lack of competitiveness of the domestic economy in attracting export-oriented investments, which combined with the limited potential of a relatively small local market with low

12 In nearly 61.0% cases of all foreign investment projects, the foreign investor came from the old EU member states, Norway and Switzerland. Investors from the new member states account for around 20.0% of all projects, and investors from non-EU European countries account for around 9.0%. Investors from the United States account for less than 4.0% of the total number of foreign investment projects observed.

purchasing power to attract significant local market-oriented investments, largely explains the modest inflow of total foreign direct equity investments in non-financial corporations in Croatia. Furthermore, the analysis has shown that greenfield investments prevailed compared to brownfield, which is positive, but their structure is unfavourable, as they have mainly been realized in non-tradable sectors and low-tech industries.

In connection with the microeconomic aspects of this research, the results of econometric analysis have confirmed that foreign-owned non-financial corporations undoubtedly have characteristics and performance superior to those of domestically-owned companies, meaning that there is an apparent foreign ownership premium at the level of total population. However, the premium is not equally distributed in all aspects of business operations (organizational, technological and financial operations), its magnitude depending on the size of the company, its activity and regional affiliation, its predominant business orientation, the mode of entry of the foreign owner, as well as the origin of the foreign investor.

The organizational and technological premium of foreign ownership is the largest in the case of small and medium-sized enterprises, while it is noticeably smaller in large companies. In addition, the financial premium of foreign ownership is non-existent in large companies. This is understandable since large companies have greater market power, longer traditions, easier access to finance, and accumulated knowledge and technology, so foreign ownership does not necessarily make a significant difference in their business performance. Furthermore, the apparent differences in the foreign ownership premium were found depending on the predominant business orientation of the company (local market vs. export-orientation). As expected, the difference between foreign-owned and domestically-owned companies decreases with export orientation, i.e. internationalization of business operations, because the exposure to international competition compels both foreign and domestically-owned companies to increase their business efficiency. Nevertheless, the foreign ownership premium is not completely absent in the export sector, which is understandable since foreign ownership often ensures better access to foreign markets and greater participation in global value chains.

Also, the foreign ownership premium is confirmed in most NACE activities, except in tourism, which can be explained by the fact that domestic tourism companies have a long tradition of business dating back to the times before the economic transition; in addition, they do not have problems accessing quality financing, so foreign ownership should not bring significant benefits. As far as other activities are concerned, it is particularly worth mentioning the manufacturing industry, where the foreign ownership premium is widespread among high and low-tech industries, suggesting that benefits of foreign ownership are transmitted not only through the transfer of high technology but also through positive management practices and access to finance.

Looking from the mode-of-entry perspective, foreign ownership premiums are present in both greenfield and brownfield projects, whereas the premium of profitability exists only in brownfield investments. This can be attributed to the fact that greenfield investments usually imply a longer period of market positioning before they become profitable. In addition, the foreign ownership premium differs depending on the country of origin of the foreign investor. It is the biggest when investors come from more developed countries (old EU members). Only in that case is the profitability premium of foreign ownership present along with higher technological and organizational premiums. In addition, it can be pointed out that the financial premium completely vanishes in companies whose investors originate from the new EU member states, which is not surprising given that these countries do not have more developed financial markets and thus better financing opportunities for the parent companies.

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Appendix

Table 1 Structure of the sample of non-financial corporations

Sample	Foreign-owned companies						Domestic companies		Total
	Greenfield		Brownfield		Total				
Total	1,628	4.6%	557	1.6%	2,185	6.2%	33,139	93.8%	35,324
Small and medium-sized enterprises	1,518	4.4%	430	1.2%	1,948	5.6%	32,624	94.4%	34,572
Large enterprises	110	14.6%	127	16.9%	237	31.5%	515	68.5%	752
Zagreb	948	7.3%	241	1.9%	1,189	9.2%	11,709	90.8%	12,898
Northern Croatia	128	2.7%	54	1.2%	182	3.9%	4,473	96.1%	4,655
Adriatic Coast	420	3.7%	180	1.6%	600	5.2%	10,866	94.8%	11,466
Slavonia	97	2.1%	50	1.1%	147	3.2%	4,396	96.8%	4,543
Market-oriented	981	3.2%	316	1.0%	1,297	4.3%	28,909	95.7%	30,206
Limited exporters	203	9.5%	91	4.2%	294	13.7%	1,853	86.3%	2,147
Predominant exporters	103	9.4%	54	4.9%	594	54.0%	942	85.7%	1,099
Exclusive exporters	341	18.2%	96	5.1%	437	23.3%	1,435	76.7%	1,872
Manufacturing	334	5.8%	175	3.0%	509	8.8%	5,290	91.2%	5,799
Trade	513	5.8%	97	1.1%	610	6.9%	8,238	93.1%	8,848
Tourism	9	5.2%	12	6.9%	21	12.1%	152	87.9%	173
Information technology	94	10.5%	55	6.2%	149	16.7%	742	83.3%	891
Services	231	5.4%	29	0.7%	260	6.1%	4,013	93.9%	4,273

Note: Percentages refer to the share of each individual stratified sub-sample in the total sample of 35 324 companies.

Table 2 Definition of the variables used in the model

Indicator	Description of indicator and calculation	Criteria and interpretation of results (±)*
Labour productivity	operating income / number of employees	value increase (+) & value decrease (–)
Unit labour cost	employee expenses / value added	value increase (–) & value decrease (+)
Value added	sales revenues – costs of raw materials – costs of products sold	value increase (+) & value decrease (–)
Capital intensity	tangible fixed assets /number of employees	value increase (+) & value decrease (–)
R&D intensity	intangible assets / total assets	value increase (+) & value decrease (–)
Indebtedness	fixed liabilities / liabilities	value increase (–) & value decrease (+)
Debt cost	interest expense / fixed liabilities	value increase (–) & value decrease (+)
Financial stability	fixed assets / (capital and reserves + fixed liabilities)	value increase (–) & value decrease (+)
Wage level	employee expenses / number of employees	value increase (+) & value decrease (–)
Profitability	profit or loss before tax / total revenues	value increase (+) & value decrease (–)

* (+) is evaluated positive; (–) is evaluated negative.

Table 3 Variables used in regression equation

Dependent variables (X_i)	Independent variables (*ownership*$_i$)	Control variables (*control*)*
Labour productivity	*dummy* (foreign ownership)	*dummy* (size of company)
Unit labour cost		*dummy* (activities at 2 digit-lever of the NACE classification)
Value addes		*dummy* (region)
Capital intensity		*dummy* (predominant business orientation)
R&D intensity		
Indebtedness		
Debt cost		
Financial stability		
Wage level		
Profitability		

* In model specifications estimated on different sub-samples only the control variables not already determined by the same sub-sample were used (e.g. in the estimation of the equation on a sub-sample of small and medium-sized enterprises, the only dummy variable not used is that relating to small and medium-sized enterprises).

Table 4 Sample division criteria

Dummy variable	Sample	Description of sample
Size	Small and medium-sized enterprises	average number of employees in the observed period between 10 and 250
	Large enterprises	average number of employees in the observed period greater than 250
Regional affiliation	Zagreb	City of Zagreb and Zagreb County
	Northern Croatia	County of Međumurje, County of Varaždin, County of Krapina-Zagorje, County of Bjelovar-Bilogora and County of Koprivnica-Križevci
	Adriatic Coast	County of Istria, County of Primorje-Gorski Kotar, County of Šibenik-Knin, County of Split-Dalmatia, County of Dubrovnik-Neretva
	Slavonia	County of Virovitica-Podravina, County of Požega-Slavonia, County of Slavonski Brod-Posavina, County of Osijek-Baranja and County of Vukovar-Srijem
Predominant business orientation	Market-oriented companies	Share of sales on foreign markets in total sales revenues in the observed period under 20%
	Limited exporters	Share of sales on foreign markets in total sales revenues in the observed period between 20% and 50%
	Predominant exporters	Share of sales on foreign markets in total sales revenues in the observed period between 50% and 75%
	Exclusive exporters	Share of sales on foreign markets in total sales revenues in the observed period over 75%
Activity	Manufacturing	According to NACE at 1-digit level includes Manufacturing
	Trade	According to NACE at 1-digit level includes Wholesale and retail trade
	Tourism	According to NACE at 2-digit level includes Accommodation
	Information technology	According to NACE at 2-digit level includes IT and other information services
	Services	According to NACE 1-digit level includes Administrative and support service activities and Arts, entertainment and recreation

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