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**Working Paper** 

Corporate Governance Structures and Financial Constraints in Multinational Enterprises – An Analysis in Selected European Transition Economies on the Basis of the IWH FDI Micro Database 2013 –

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Corporate Governance Structures and Financial Constraints in Multinational Enterprises – An Analysis in Selected European Transition Economies on the Basis of the IWH FDI Micro Database 2013 –

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## Abstract

In our analysis, we consider the distribution of decision power over financing and investment between MNEs' headquarters and foreign subsidiaries and its influence on the foreign affiliates' financial restrictions. Our research results show that headquarters of multinational enterprises have not (yet) moved much decision power to their foreign subsidiaries at all. We use data from the IWH FDI Micro Database which contains information on corporate governance structures and financial restrictions of 609 enterprises with a foreign investor in Hungary, Poland, the Czech Republic, Slovakia, Romania and East Germany. We match data from Bureau van Dijk's AMADEUS database on financial characteristics. We find that a high concentration of decision power within the MNE's headquarter implicates high financial restrictions within the subsidiary. Square term results show, however, that the effect of financial constraints within the subsidiary decreases and finally turns insignificant when decision power moves from headquarter to subsidiary. Thus, economic policy should encourage foreign investors in the case of foreign acquisition of local enterprises to leave decision power within the enterprise and in the case of Greenfield investment to provide the newly established subsidiaries with as much power over corporate governance structures as possible.

**Constraints in Multinational Enterprises** 

Keywords: corporate governance, financial restrictions, multinational firms, European post-transition economies

JEL Classification: F23, G11, G34, R11

## Entscheidungsstrukturen und Finanzierungsrestriktionen in multinationalen Unternehmen

### Zusammenfassung

In unserer Untersuchung befassen wir uns mit der Verteilung der Verantwortung über die Unternehmensfunktionen "Finanzierung" und "Investitionen" zwischen Mutter- und Tochterunternehmen. Wir untersuchen den Einfluss der Verteilung dieser Entscheidungsbefugnisse auf die Finanzierungsrestriktionen im Tochterunternehmen. Die Ergebnisse unserer Analyse zeigen, dass die Headquarter multinationaler Unternehmen (bisher) wenig Verantwortung an ihre ausländischen Tochterunternehmen abgegeben haben. Wir verwenden Unternehmensdaten der IWH-FDI-Mikrodatenbank, die Informationen über die Verteilung der Verantwortung über mehrere Unternehmensfunktionen sowie Informationen über Finanzierungsrestriktionen in 609 Unternehmen mit ausländischem Investor in Ungarn, Polen, der Tschechischen Republik, der Slowakei, Rumänien und Ostdeutschland enthält. Diesen Daten haben wir Finanzkennziffern aus der AMADEUS-Datenbank des Bureau van Dijk hinzugespielt. Es zeigt sich, dass Finanzkennziffern eine hohe Konzentration von Verantwortung in den Mutterkonzernen der multinationalen Unternehmen mit großen Finanzierungsrestriktionen im Tochterunternehmen einhergeht. Der Effekt der Finanzierungsrestriktionen im Tochterunternehmen nimmt jedoch ab und wird schließlich insignifikant, wenn sich die Entscheidungsbefugnisse vom Mutter- zum Tochterunternehmen verschieben. Wirtschaftspolitisches Ziel sollte es also sein, Anreize zu schaffen, möglichst viel Verantwortung im Tochterunternehmen zu belassen (im Falle der Übernahme durch einen ausländischen Investor) bzw. (im Falle der Neugründung durch einen ausländischen Investor) das Tochterunternehmen von vornherein mit möglichst vielen Entscheidungsbefugnissen auszustatten, um Investitionen nicht zu gefährden.

Schlagwörter: innerbetriebliche Strukturen, Finanzrestriktionen, multinationale Firmen, europäische Post-Transitionsökonomien

JEL-Klassifikation: F23, G11, G34, R11

#### Introduction

Most empirical research on corporate governance structures is concentrated on advanced economies. However, the institutional and economic changes in Central and Eastern Europe (CEE) and East Germany call for an investigation of the patterns of corporate governance structures in this particular region. Even though the post-transition phase is no longer characterized by institutional change, there are still functional weaknesses and economic differences which arise directly from the former political and economic system and the transition period (Transition Report 2009). In Central Eastern Europe the transition to market economy and capitalism significantly influenced the emergence of current institutional and legal structures (Hardi and Buti 2011) – the financial crisis in the years following 2008 caused only a temporary setback in this process.

In dependent market economies, as the transitional CEE economies, these institutional as well as many inter-firm structures and the overall integration in the global economy were decisively influenced by the large amount of foreign investment (FDI). Since the CEEC's capital stock vanished dramatically in the course of the economic crisis of the late 1980s, the transition process of the last two decades had to be accompanied by a vast amount of FDI (Rugraff 2008; Gauselmann et al. 2011).

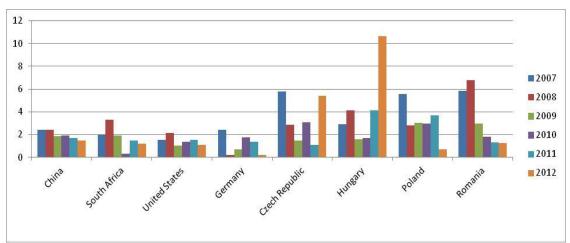


Figure 1: Inward FDI flow, share of GDP per year (2207-2012)

Source: Unctad 2013.

To identify the impact of FDI in the selected CEE countries we consider the share of inward FDI flow in GDP in the recent past. We find that foreign investment plays a comparatively important role in these economies, as figure 1 demonstrates. Results of research on foreign owned enterprises in the CEE region and East Germany are likely to be meaningful for a significant part of each country's economy, thus. Although one of the most important objectives which FDI contributed to in this region was the alleviation of capital shortage (Welfens and Borbély 2009; Stephan 2003; Stephan 2013), capital markets have economies remained relatively underdeveloped in CEE in comparison to other transitional economies (Oszvald 2014). Investment decisions of firms – disregarding their ownership structure – depend on financial factors such as internal finance and access to new finance, however (Črnigoj and Verbič 2013; Hubbard 1998; Francis et al. 2013).

From a theoretical perspective, the model of extended varieties of capitalism by Nölke and Vliegenhart's (2009) going back to Hall and Soskice (2001) suggests that financial systems and corporate governance structures have a high explanatory power when explaining the differences in market economies. And, as this approach assumes, these two aspects are tightly interlinked (Ozsvald, 2014).

Looking at foreign owned firms in European post-transition economies we address the research question whether foreign ownership and in particular its impact on internal corporate governance structures has an effect on financial constraints of firms in the CEE countries and Eastern Germany. Using information about the division of decision power within firms between the multinational firm's headquarter and the foreign subsidiary we investigate whether those subsidiaries that posses more power over their business decisions locally – and are therefore more independent from the headquarter – are more likely to face financial constraints.

The paper proceeds as follows: Section 2 reviews the current literature. Section 3 describes the IWH FDI Micro Database 2013 from which we draw data on financial constraints and decision power of firms in our sample. Section 4 explains the data we use for our analysis and describes the methodology. Section 5 shows our results. The last section gives a conclusion and policy implications.

#### Literature

In our empirical analysis we focus on the effect of foreign owned firms' internal corporate governance structures and its impact on financial constraints. The question how to measure financial constraints of firms and whether the resulting measures really measure financial constraints has received a lot of attention in the literature and is still highly discussed (e.g., Farre-Mensa and Ljungqvist, 2013). Usually, the literature uses two ways to calculate financial constraints. On the one hand, studies by Kaplan and Zingales (1997), Cleary (1999), Whited and Wu (2006) or Hadlock and Pierce (2010) use statements from firms' financial reporting that indicate financial constraints and then use financial variables to explain the occurrences of financial constraints for these firms. The resulting sensitivities of financial constraints to variables like sales or profitability make is possible to

create financial constraints indices to sort firms along this continuous variable and further, make these sensitive available for other samples where information about financial constraints via firms' reports is not available. An alternative way to measure financial constraints is to estimate the sensitivity of investments to cash flows. Therefore, studies by, for example, Fazzari et al. (1988), Almeida et al. (2004), Almeida and Campello (2007) or Behr et al. (2013) use a regression in which investment to capital ratios are explained by cash flow to capital ratios and a measure that indicates future prospects of the company, usually Tobin's q. If the coefficient for cash flow is positive and signficant, this is regarded as an indication that firms are financial constrained because invesments are very sensitive to internally generated funds while controlling for firms' future prospects. In our study we follow the first way to measure financial constraints and use survey information that indicates whether the management regards the firm as financial constrained or not.

A vast amount of empirical literature deals with macro-level of corporate governance. It focuses on the interaction between law and finance and the impact of institutional structures in (Eastern European) transition economies. It deals with the influence of FDI laws and a country's general legal framework on the peculiarity of the financial system, the cost of capital, accounting for the changes of these national corporate governance structures during transition and economic development (e.g. Hardi and Buti 2011; Aguilera and Jackson 2010; Pistor et al. 2003; Berglöf and von Thadden, 1999; LaPorta et al. 1997, 1998, 1999). Most outcomes show that the national law variable has a significant effect and the necessity to access finance is linked to the corporate governance structure within the firm. Thus, there are a number of studies which focus on inter-firm structures.

Firm internal corporate governance structure in multinational enterprises has not been widely discussed in IB literature yet. Mueller and Peev (2007) compare the investment performance of East European firms with that of EU-15 countries. They take the asymmetric information theory as a basis and calculate the returns on investment in transition and non-transition economies (Eastern Europe, Continental Europe and UK/Ireland) using 2005 enterprise data of pan-European datasets provided by Bureau van Dijk. Regarding the effect of ownership structures they find that enterprises with foreign investor have a relatively better investment performance than firm in other possession. Gugler and Peev (2010) analyze investment-cash flow sensitivity in due consideration of ownership criteria of enterprises in 13 Eastern European transition economies in the period 1993-2003. They apply an investment accelerator-cash flow model, linking cash flow, investment possibilities, and ownership structure to investment. The database is a set of samples of the 1997-2005 versions of AMADEUS. Their results indicate that foreign owned enterprises show a smaller investment-cash-flow sensitivity than domestic enterprises. Regarding financial constraints in particular, Hutchinson and Xavier (2006) compare the role of internal finance on firm performance in Slovenia and Belgium using individual firm level data for the period 1993-2000 from Slovenian Central Statistical office and

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Bureau van Dijk. Estimation results of their analysis suggest that Slovenian firms are more sensitive to internal cash than Belgian ones and that those foreign owned firms in Slovenia seem to be less dependent on internal cash-flow than firms with other ownership structures. The authors derive from these results the need for an improved access to finance in Slovenia. Considering a sample of Ukranian firms in the period 2003-2007 Mykhaykiv and Zauner (2013) investigate the effect of ownership and corporate governance structures on investments and financing. Results show that foreign owned enterprises are confronted with financial constraints partly depending on private benefits of control and that these financial constraints cause an underinvestment within the firms. Controlling also for country-level legal structures, Francis et al. (2013) analyze how inter-firm corporate governance characteristics effects financial constraints in 14 emerging economies with data published by Credit Lyonnais Securities Asia in 2000. They find that firms' financial restrictions are more severe if inter-firm corporate governance is poor and become less important with the improvement of firm-level managerial actions.

In summary, the literature finds that foreign ownership and good corporate governance structures tend to alleviate financial constraints. We therefore extent the literature by focusing on a particular part of the corporate governance structure between headquarter and subsidiary: the balance of decision power.

#### The IWH FDI Micro Database 2013

Given the constraints on the availability of enterprise-level data for East Germany and CEE economies, the IWH opted for a collection of primary data. The IWH FDI Micro database provides a total population drawn from the MARKUS data base, in the case of East Germany, and from the AMADEUS database in the case of the selected transition economies. Both commercial datasets are compatible and allow for a uniform identification of the population through complex ownership information and are provided by Bureau van Dijk. This serves as a basis for an annual survey in East Germany and a bi-annual survey in selected transition economies. The 2013 survey of the IWH FDI Micro Database was co-founded by the EU 7<sup>th</sup> Framework Programme RTD research project "Growth-Innovation-Competitiveness: Fostering Cohesion in Central and Eastern Europe (GRINCOH)".

In 2013 the thematic focus of the survey was financial sources and financial restrictions for investment and the foreign enterprises' position in the global value chain. The corresponding 2013

questionnaire<sup>1</sup> includes 52 questions and is divided into nine sections<sup>2</sup>. The sample stratification for the survey in East Germany based on the MARKUS data was proportionally differentiated for ownership, by differentiating between producing industries (NACE REV.2: 05 to 39) and the selected services (NACE Rev.2: 46, 49-53, 58-64, 66, 68-74, 78 and 82) and according to enterprise size in terms of number of employees (under 10, 10-49, 50-249, more than 250). The sample stratification for the survey in the CEE countries based on the AMADEUS data was broken down by ownership for each country, by enterprise size in terms of number of employees (10-49, 50-249, more than 250) and by the sectoral classification according to NaceRev. 2 (see above). The population of enterprises with one or more foreign investor is defined as all enterprises belonging to the selected sectors and countries in 2012, in which at least one foreign investor holds either a minimum of 10% direct shares/voting rights or a minimum of 25% indirect shares/voting rights.

The contact addresses and the sample stratification were transferred to *infas Institute for Applied Social Sciences* (infas). The survey was implemented by means of computer assisted telephone interviews (CATI). CATI was chosen as the appropriate method because the survey of the IWH FDI Micro Database requires a special design for highly standardised surveys, involves complex target groups, and has substantial filtering in the questionnaire. Between 6 November 2013 and 17 March 2014 *infas Institute for Applied Social Sciences* completed the required interviews in line with the respective sample stratification.

An overall response rate of 16.4% was generated. In Table 1 and 2 the response rates in relation to the total population are displayed. The following section summarises the results of various tests on the representativeness of the samples for East Germany and the CEE countries in comparison with the respective basic population. For a more detailed description, please see the corresponding methodological note (IWH 2013)<sup>3</sup>. For the sample of multinational investors in East Germany, we find a distribution that differs significantly from the underlying population with regard to the employment size, the ownership structure (full, majority or minority multinational-owned), the sectoral classification measured by NaceRev.2 2-digit codes and the regional distribution at the level of the federal states as well as at the level of 'Raumordnungsregionen' (see Table 1).

<sup>&</sup>lt;sup>1</sup> The conceptional background of the survey questionnaire was developed in cooperation with the IEHAS (Magdolna Sass, Andrea Szalavetz), IER (Matija Rojec) and UCL (Slavo Radosevic) as project participants of GRINCOH.

<sup>&</sup>lt;sup>2</sup> The questionnaire for East German enterprises has 3 additional questions. Since the principal content is the same for both questionnaires, a differentiation is omitted in the following description.

<sup>&</sup>lt;sup>3</sup> See Jindra et al. (2014) and http://www.iwh-halle.de/projects/2010/fdi/d/DatenundMethoden.asp for further information.

	Response Rate*	Federal States	Regional Level ROR	Sectors	NACE (Industries)	Size of Employment	Ownership structure**	
East German enterprises with a multinational investor								
Total	9.7%	yes	yes	yes	yes	yes	yes	

Table 1: Significant differences in the distribution between the basic population and sample in East Germany

\*Ratio between the number of enterprises in the population and sample; \*\*Ownership structure refers to full, majority, or minority.

Source: own calculations, IWH FDI Micro database 2013.

In the CEE survey, we find significant differences in the distribution across the five countries for the FDI Inward due to underrepresentation of Romanian and Czech firms and corresponding overrepresentation of Hungarian, Slovakian and Polish firms (see Table 2). These differences result from the sample stratification, which aims to achieve a minimum size for each country sample. The FDI Inward sample is representative with respect to the NaceRev.2 distribution as well as for the company size measured by employment figures. The Slovakian and the Hungarian sample do not significantly differ from the underlying population with regard to the regional distribution within the countries. Furthermore, all other national FDI Inward samples show significant differences from their corresponding populations. Except for the regional distribution, the national FDI Outward samples are predominantly representative for the corresponding populations. Only the Czech sample with a distinction between industries and services differs significantly from its population's distribution.

	Response Rate	Regional Distribution	Sectors	NACE (Industries)	Size of Employment
CEE enterprises with a foreign investor					
Poland	7.3%	yes	no	no	no
Romania	5.0%	yes	yes	no	no
Slovakia	8.5%	no	yes	no	no
Czech Republic	6.6%	yes	yes	no	no
Hungary	15.4%	no	yes	no	no
Total	6.9%	yes	yes	no	no

Table 2: Significant differences in the distribution between the basic population and sample in CEE countries

\*Ratio between the number of enterprises in the population and sample.

Source: own calculations, IWH FDI Micro database 2013.

#### **Data and Methodology**

We use the IWH FDI Micro Database 2013 for our analysis and match financial data from the Amadeus database. The full IWH FDI Micro Database 2013 counts 1202 firms for 2013. We only keep firms with a foreign owner which shrinks the sample to 915 firms. We further drop missing variables and firms form the financial service industry. Thereby, we end up with a sample that comprises 609 firms in 2013.

To answer the question whether different corporate governance structures with respect to the decision making within firms in CEE countries and Eastern Germany matter for financial constraints of these firms, we use a probit model to explain the occurrence of financial constraints at the subsidiary level.

$$Pr(FC=1|X)=F(X'b)$$
(1)

The dependent variable in this regression shows whether a subsidiary report financial constraints (FC=1) or not (FC=0) in 2013.<sup>4</sup> Table 3 shows the share of firms per country that experienced financial constraints in 2013. We find that on average 13% of firms were financially constrained ranging from only 4% in Slovakia to roughly 32% in Romania.

Country	Constrained				
	0	1			
DE	87.80	12.20			
CZ	93.94	6.06			
Нυ	92.68	7.32			
PL	91.47	8.53			
RO	68.53	31.47			
SK	95.92	4.08			
Total	87.03	12.97			

Table 3: Constrained firms per country

Source: own calculations, IWH FDI Micro database 2013.

Our main explanatory variable for firms' financial constraints is the division of decision power between headquarter and subsidiary. We construct this variable as follows: question 19 of the IWH FDI Micro Database 2013 asks "Who takes the following decisions? Please choose between (1) only

<sup>&</sup>lt;sup>4</sup> We get this information from question 10: "Between 2011 and 2013, did a lack of finance influence your business operations and/or growth of your enterprise?" A: "Yes" / "No". See also table 1 in the Annex.

your enterprise, (2) mainly your enterprise, (3) equally your enterprise and your foreign investor, (4) mainly your foreign investor, or (5) only your foreign investor" for 8 (production, research and development location, research and development direction, introduction of new technology, sales and marketing, suppliers, investments, financing) business functions (see also table 2 in the Annex). If the answer to this question for a specific business function is either 1 or 2, we note a 1 for that firm and a 0 if the answer is either 3, 4 or 5. The power variable is then the sum of all ones. For example, if the subsidiary has decision power over all business functions, the power variable is 8. Contrary, if the decision power for all the functions is with the headquarters the power variable is 0. Table 6 shows the distribution of the power variables for each country separately. We find that around 8% of subsidiaries hold all the decision power while in 30%, the decision power is only with the headquarter. We find the highest concentration of decision power within the headquarters for firms in Romania and Slovakia.

Country	Power division								
	0	1	2	3	4	5	6	7	8
DE	12.20	19.51	19.51	4.88	12.20	9.76	7.32	7.32	7.32
CZ	25.45	23.64	10.91	8.48	7.88	4.24	6.67	6.06	6.67
HU	34.15	24.39	18.29	4.88	7.32	3.66	2.44	0.00	4.88
PL	24.81	22.48	12.40	6.20	5.43	5.43	9.30	4.65	9.30
RO	41.26	16.08	8.39	9.09	4.20	4.20	2.80	2.10	11.89
SK	38.78	26.53	8.16	8.16	6.12	2.04	4.08	0.00	6.12
Total	30.38	21.67	11.99	7.39	6.57	4.60	5.58	3.61	8.21

#### Table 6: Power division

Source: own calculations, IWH FDI Micro database 2013.

We further control for financial variables as the literature on financial constraints (e.g., Altman, 1968; Kaplan and Zingales 1997; Cleary, 1999; Whited and Wu, 2006) recommend. We use a firm's 2012 cash, working capital, sales, profits and equity ratio (all to total assets) as variables that are commonly regarded as major determinants for financial constraints. We took the variables from the Amadeus database and report descriptive statistics in Table 5. We finally control for industry and country effects via dummy variables in all regression to control for potential industry specific dependencies on external finance (Rajan and Zingales, 1995) and country differences with respect to corporate governance structures and legal differences.

Variable	Mean	SD
Cash	0.11	0.16
Working		
capital	0.18	0.45
Sales	1.91	1.63
Profits	0.07	0.20
Equity	0.19	0.32

#### Table 5: Financial variables

Source: own calculations, AMADEUS database 2012.

#### Results

Table 6 presents our results and show marginal effects from regressions of Equation (1). Clustered standard errors are reported in parentheses in all regressions. Column 1 shows results for the baseline setup in which we only control for firm and country fixed effects and firms' corporate governance structure, the division of decision power between the headquarter and the subsidiary, on the right-hand side. Our results show that a unit shift in the balance of decision power towards the subsidiary leads to a significant increase in financial constraints of about 77 basis points. This rather rudimentary regression explains 14.5% of the variation in financial constraints.

The second column controls for the financial conditions of the firms in 2012. By including common determinants of financial constraints like cash, working capital, sales, profits and equity<sup>5</sup> we find that the effect of the division of power does not change significantly. Again, a shift towards more decision power to the subsidiary leads to a significant increase of financial constraints. This result is corroborated in column 3 in which we exclude firms in (Eastern) Germany which may be special in our case.

Overall, columns 1 to 3 indicate that financial constraints tighten if decision power is increased towards subsidiaries. An explanation might be that providers of finance demand higher standards for projects supervised and controlled solely by local management.

<sup>&</sup>lt;sup>5</sup> All standardized by total assets.

			W/o	IV-	Power	Power
	Base	Financials	Germany	Regressions	(Investment)	(Financing)
Power division	0.0077*	0.0082*	0.0083*	0.3185**		
	(0.0045)	(0.0043)	(0.0044)	(0.1273)		
Cash		-0.2228**	-0.1931*	-0.7573	-0.2154**	-0.2327**
		(0.1070)	(0.1040)	(0.7151)	(0.1036)	(0.1081)
Working capital		-0.0004	-0.0036	-0.0951	-0.0022	-0.0028
		(0.0315)	(0.0326)	(0.1516)	(0.0313)	(0.0313)
Sales		-0.0005	-0.0026	0.0390	-0.0015	-0.0012
		(0.0067)	(0.0074)	(0.0441)	(0.0068)	(0.0068)
Profits		-0.2485***	- 0.2209***	-0.8287	-0.2444***	-0.2439***
		(0.0782)	(0.0839)	(0.7412)	(0.0783)	(0.0787)
Equity		0.0004	0.0045	0.0745	-0.0017	0.0027
		(0.0327)	(0.0329)	(0.1315)	(0.0335)	(0.0339)
Power (Investment)					0.0255	
					(0.0303)	
Power (Financing)						0.0494*
						(0.0287)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Country	Yes	Yes	Yes	Yes	Yes	Yes
Observations	609	609	568	609	609	609
Pseudo R2	0.1417	0.1913	0.1876		0.1864	0.1909
Log Likelihood	-201.68	-190.03	-178.54		-191.19	-190.12
Wald test (first stage) Median Power (first				241.17		
stage)				0.9741**		
				(0.3882)		
Wald test						
(exogeneity)				1.44		
		na databasa 201		(0.2304)		

Table 6: Baseline results

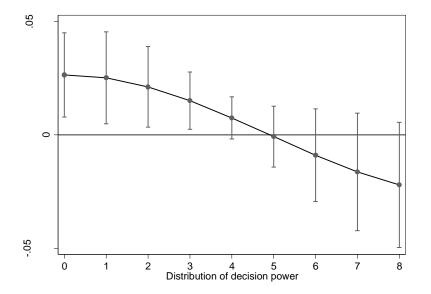
Source: own calculations, IWH FDI Micro database 2013, AMADEUS database 2012.

Column 4 addresses the potential identification problem that might arise due to the fact that financial constraints and the balance of decision power are determined simultaneously. We cannot rule out that firms that face higher financial constraints might end up having a different corporate governance structure with respect to the balance of decision power than firms that face fewer financial constraints. Put differently, columns 1 to 3 might measure correlations that are prone to biased estimates due to endogeneity issues rather than a causal link from corporate governance to financial constraints. To show that these issues are small and do not change our results we run an instrumental regression in the vein of Laeven and Levine (2009). Therefore, we calculate the median value of decision power in a country and use this variable as an instrument for the decision power within each firm. According to Laeven and Levine (2009) we assume that the median decision power

per country has explanatory power for the decision balance on the firm level, but that the median value per country is not significantly affected by a single firm's financial constraints. The results from column 4 corroborate the results from the first three columns. If the balance of decision power is shifted towards the subsidiary, financial constraints significantly increase. Compared to columns 1 to 3, the economic effect of around 32 percentage points is very high. Regarding the relevance of the instrument, column 4 shows that the median value per country significantly impacts the decision balance on the firm level in a positive way. Further, the Wald test from the first stage is larger than 10 and another Wald test that tests exogeneity is insignificant which proves our choice of instrument valid.

The last two columns of Table 6 investigate in more detail, the split of decision power in the business functions investment and financing. Therefore, the variables Power (Investment) and Power (Financing) are one, if the decision power in this business function is with the subsidiary alone and zero otherwise. Column 5 then shows that the distribution of decision power with respect to investment does not matter for firms' financial constraints. Put differently, the fact that a subsidiary can independently decide on its investments does not lead to problems in financing those investments. Contrary, column 6 shows that if the financing decision is concentrated on the subsidiary, then those firms experience more financial constraints. Economically, having the decision power over financing with the subsidiary leads to an increase of financial constraints of about 5 percentage points.

#### Figure 1: Squared term results



Source: own calculations, IWH FDI Micro database 2013.

Our results so far suggest that corporate governance structures that allow for more decision power of the local management of the subsidiary increase the likelihood of financial constraints for these firms. This is at odds with the literature that for example shows that foreign ownership in general decrease financial constraints (e.g., Gugler and Peev, 2010). On the other side, the results are similar to studies that find that control rights in foreign owned firms increase private benefits at the firm level and make underinvestment more likely. Also, our results might be explained by poor governance in firms with a more balanced division of decision power and are thereby similar to the study by Francis et al. (2013).

Our variable that captures the balance of decision power between headquarter and subsidiary can take the values from 0 to 8. Given the previous results one might assume, that the effect form decision power on financial constraints might vary with the concentration of decision power over all eight business functions. We therefore rerun the regression from column 2 in Table 6 and include the squared term of the decision power variable and present marginal effects of this variable in Figure 1. We find that the level of overall decision power matter for the effect of the split of decision power between headquarter and subsidiary on firms' financial constraints. Our results show that the marginal effect is only significantly positive, our baseline results, if the subsidiary has decision power for less than 5 business functions. If the decision power is highly concentrated on the subsidiary, allocating more decision power to the subsidiary has no significant effect on financial constraints. Put differently, allocating more decision power to subsidiaries only increases financial constraints if the decision power is initially very concentrated with the headquarter which drives the baseline results in Table 6. This might lead to the conclusion that there are frictions that come with the allocation of decision power to the headquarter that are only healed if the corporate governance structure is changes significantly to a level where the subsidiary posses the decision power for most of the business functions. The main take away from our results therefore is, that, in order to alleviate financial frictions, one should think of allocating as much power as possible to the subsidiary.

#### **Conclusion and Policy Implication**

In our analysis we consider the distribution of decision power over financing and investment between MNEs' headquarters and foreign subsidiaries and its' influence on the foreign affiliates' financial restrictions. Our research results show that headquarters of multinational enterprises have not (yet) given much decision power to their foreign subsidiaries at all. We use data from the IWH FDI Micro database which contains information on corporate governance structures and financial restrictions of 609 enterprises with foreign investor. We match data from Bureau van Dijks AMADEUS database on financial characteristics in Hungary, Poland, the Czech Republic, Slovakia, Romania and East Germany. We find that a high concentration of decision power within the MNE's headquarter implicates high financial restrictions within the subsidiary. Square term results show, however, that the effect of financial constraints within the subsidiary decreases and finally turns insignificant when decision power moves from headquarter to subsidiary. Thus, economic policy should encourage foreign investors in the case of foreign acquisition of local enterprises to leave decision power within the enterprise and in the case of Greenfield investment to provide the newly establishes subsidiaries with as much power over corporate governance structures as possible.

Thus, economic policy objectives should take the importance of decision power over business functions within the subsidiary into consideration. Financial restriction can be attenuated when foreign owned enterprises are provided with as much decision power over internal business functions as possible. The access to finances is very important to allow further investment be it within the enterprise or the region of location. Thus, economic policy should encourage foreign investors in the case of foreign acquisition of local enterprises to leave decision power within the enterprise and in the case of Greenfield investment to provide the newly establishes subsidiaries with as much power over corporate governance structures as possible. Beyond that, it can be assumed that the extent of decision power and therewith the extent of financial restrictions also depend on the foreign owned enterprise's position in the global value chain of the MNE. Thus, economic policy and economic development promotion should not only consider the quantity but also the structure of incoming FDI. Value-adding FDI should be connected to subsidiaries endowed with more decision power over business function and less financial restriction and thus foster not only further investments in the region of location but also positive knowledge and technology spillovers to the investment site.

#### Annex

### Table 1: Question on financial restrictions, IWH FDI Micro database 2013

10. Between 2011 and 2013, did a lack of finance influence your business operations and/or growth of your enterprise?				
	Yes	No		
Lack of finance 2011 - 2013				

# Table 2: Question on distribution of decision power over business function between foreign investorand subsidiary, IWH FDI Micro database 2013

19. Who takes the following decisions? Please choose between (1) only your enterprise, (2) main	nly your enterprise, (3)
equally your enterprise and your foreign investor, (4) mainly your foreign investor, or (5) only your fo	oreign investor.
1: Location choice for production activities/service delivery	
2: Location choice for research and development	
3: Decisions on the focus of research and development	
4: Decisions on the adoption of major advanced technologies	
5: decisions related to sales and marketing	
6: Decisions on which suppliers will be used	
7: Decisions on investment	
8: Decisions on financing	

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