Varieties of FDI and Institutional Determinants

Evidence from Norwegian FDI, 1998-2006

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Abstract

While the empirical literature on host-country institutional determinants of foreign direct investment (FDI) has grown voluminous, researchers often fail to agree upon the net effect of institutions on FDI. This black box of incongruousness is assessed by theoretically and empirically acknowledging FDI and multinational enterprise (MNE) heterogeneity. Two contributions are made to the field of research.

The *theoretical contribution* consists of a basic framework developed for generating expectations around the institutional determinants of FDI at a disaggregated level. Therein, institutional mechanisms are unbundled into four categories: personal freedoms; political governance; economic interaction; economic regulation. The four categories account for seven institutional concepts: human rights protection; labor standards upholding, political preference aggregation; control of corruption; property rights protection; contract enforceability; quality of banks and credit. Second, FDI is disaggregated on the basis of the three sectors of economic activity: natural resources; manufacturing; services. Third, expectations as to the relative salience of the seven institutional concepts across FDI from the different sectors are formulated. The variations in expectations are formed as a function of sector-specific idiosyncrasies in production and host-country integration by MNEs. This I label *The Varieties of FDI framework*.

The *empirical contribution* is an analysis of FDI and MNE heterogeneity, using data on Norwegian outward FDI across sectors from 1998 to 2006. To investigate if working with aggregate numbers conceal unaccounted for diversity, FDI from the three sectors are regressed on a set of baseline variables, and benchmarked up against estimates from regressing total FDI on the same variables. Next, the expectations developed in the theoretical framework are assessed in sector-specific models. I find that the institutional determinants of FDI in different sectors are highly diverse, except for control of corruption which seems to impede FDI in all sectors. Control of corruption is also the only robust determinant of natural resources FDI. For manufacturers, on average found most attentive to policy climates, robust relationships are found between indicators of political governance, economic interaction, and economic regulation and FDI. The only robust predictor of services FDI, apart from control of corruption, is human rights protection.

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Acknowledgements

"Anyone can be a fisherman in May" Ernest Hemingway (1952, 14) once wrote. Well, May has come about, and at last I am ready to unload my catch – or rather, my creation. The sea of formation has been rough at times, but as four seasons have passed a number of people have been important in weathering storms arising. First, thanks to my supervisor Carl-Henrik Knutsen for always being attentive and constructive as regards important and not so important ponderings. Asmund Rygh also deserves credit for being available for questions at all times, and for commenting on my manuscript.

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Chapter 1

Introduction

Commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice, in which the people do not feel themselves secure in the possession of their property, in which the faith of contracts is not supported by law, and in which the authority of the state is not supposed to be regularly employed in enforcing the payment of debts from all those who are able to pay. Commerce and manufactures, in short, can seldom flourish in any state in which there is not a certain degree of confidence in the justice of government.

– Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1791, 546).[1]

Conflict over politics is static – it is about what happens today. Rational actors also care about the future. This is where political institutions – which are durable and, consequently, have the capacity to influence political actions and political equilibria in the future – come in.

– Daron Acemoglu and James A. Robinson, *Economic Origins of Dictatorship and Democracy* (2006*a*, 173).

Few would disagree with Adam Smith's claim of how private business growth depends on property rights protection and the fairness of political government. Nor with Acemoglu and Robinson's highlighting of how actors in the marketplace care about the future of their business and whether the political sphere is tuned to support their strives. Both stances are arguably even more relevant to investors producing goods in unsure foreign markets. However, as the ensuing pages both theoretically and empirically inquire into, the argument can be made that *how* institutional structures are weighted by multinational producers is liable to differ depending on what type of foreign production they engage in. As such, this endeavor commences with a contemporary anecdote portraying the complexity of the issue at hand.

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[1] Quoted from the 2010 reprint.

In the twilight hours of the Myanmar (formerly Burma) military regime, Asian extractive enterprises started showing interest in accessing the country's natural resources.[2] Ever since General Ne Win in 1962 took control of Myanmar through a coup, the government has retained power by use of military force. With the country in 2008 still exhibiting key traits of an autocracy, extensive direct investments in extraction and processing of Myanmar's vast reserves of oil, natural gas, timber, and hydropower, gemstones, and cash crops were conducted. The industrial identities of these investing firms mirrored the general structure of Myanmar's economy at the time – between forty and fifty percent of domestic production was in primary sector activity (Htun et al., 2011, 154). For foreign investors, Myanmar had long been, and still was, considered a highly uncertain destination for direct investments due to unstable financial markets, inconsistent policy measures, an uncooperative polity, and endemic corruption.[3]

Very recently however, Myanmar has made a significant turn from military administration to quasi-civil government, publicly manifested after the 2010 national elections held under the umbrella of a new constitution. Since elections, the government has embarked on a series of reforms, hopefully culminating in a more mixed structure of the economy. Chaperoning political reform are national efforts toward clarifying economic policy and securing rule of law and economic regulation.[4] Since the start of the democratic reformation, Myanmar officials have repeatedly called attention to the country's underdeveloped manufacturing and service sectors. By attempting to craft a sound institutional framework, they are hoping to catch the attention of foreign investors willing to move capital into these industries.[5]

In February 2012, as part of an official delegation consisting of amongst others the Norwegian Minister of Foreign Affairs, Sigve Brekke, a senior executive from the Norwegian telecom giant Telenor, already heavily invested in the South-East Asian region, visited Myanmar. After roundtable discussions with representatives from the Myanmar Investment Commission, Brekke was asked by Norwegian media whether his company would be interested in committing to the Burmese telecom market. His reply went: "All international actors like Telenor need a set of laws and rules. We need regulations and investment protection. All these aspects are still lacking in Myanmar".[6]

1.1   Varieties of FDI and institutional determinants

This then begs the question: Why do multinational resource extractors dare venture into Myanmar's precarious market, while telecommunications investors and manufacturers so far have refrained from investing? This disparateness of multinational investor behavior is often assumed by researchers, even commented on in-depth by some. But very rarely is divergent behavior the object of thorough empirical assessment. The question of what drives the foreign investment decision frequently assume foreign direct

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[2]"The Scramble For A Piece of Burma", Time Magazine, March 19, 2009.

[3]"Beware the bubble talk of a business friendly Myanmar", Financial Times, February 21, 2012.

[4]"Når Burma blir Myanmar", Morgenbladet, March 23, 2012.

[5]"Myanmar officials call for more FDI", Myanmar Times, October 31, 2011.

[6]See Norwegian TV2, February 2012: http://www.tv2.no/nyheter/utenriks/telenor-lukter-paa-investeringer-i-myanmar-3693470.html. *Author's own translation.*

investment (FDI), and its enactor, the multinational enterprise (MNE), to be homogenous entities.

Coupled with this assumption, political and economic institutions have in the last couple of decades gained increased attention as drivers of societal and economic change.[7] Both from a general point of view (see e.g. North, 1990; Acemoglu and Robinson, 2006*a*), but also as regards investment in particular (see e.g. Feng, 2003; Cohen, 2007; Dunning and Lundan, 2008) the importance of the governance structures of our society has been investigated. The idea is that institutions affect the costs to both transact and produce, and the more sound and predictable policy climates national institutions create, the more capital will be attracted into production of goods or services there. The vast array of empirical studies on the link between foreign direct investments and host-country institutional setup has however proved incapable to agree on the most basic of relationships. Conclusions over whether policy climates associated with regime type, control of corruption, or human rights protection pull or impede the entrance of foreign investors are divergent. This thesis concerns itself with how a proper embrace of FDI and MNE complexity might aide the lack of empirical conciliation. The research question accordingly reads:

> ***Research question***: *Does the relationship between foreign direct investment and institutional concepts differ across varieties of foreign production?*

Let me illustrate the matter by juxtaposing the two industries from the Myanmar anecdote. Envisage an MNE setting up large scale petroleum extraction in a foreign economy. The initial capital transfer in building extractive facilities is tremendous. Heavy and specialized machinery needs construction and set-up costs are sunk from the get-go. In the case of turmoil or forced productive shut down, natural resource MNEs will most likely have problems liquefying their equity in the sense that oil rigs are not moved in a day, nor are they likely to be applicable in other extraction locations without extensive conversion.

Petroleum extraction has come to involve advanced technology both in seismic surveying and in the extraction and refining processes of petroleum over the years. The development of necessary technologies has come about through considerable research and development efforts, but also this know-how is very specific to individual extraction locations. Working in oil extraction is no longer a blue collar job, and as such the likelihood of petroleum MNEs employing locally when drilling abroad has fallen, depending on education levels in the host-country. Moreover, global scarcity of energy resources has made value-added from petroleum extraction very high. So high in fact that many governments depend on realizing their petroleum rents to balance national accounts.[8] A further trait of petroleum industries is that they are usually located far away from the general population, either offshore or in the hinterlands. As such, extraction locations often function as non-integrated stand-alone production enclaves.

Consider next a telecommunications MNE, supplying telephone and internet services abroad. The

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[7]See for example the collection of essays in Rhodes, Binder and Rockman (2008).

[8]Some have labelled such countries "rentier states", deriving substantial portions of their national budgets from natural resource extraction carried out by external agents, thwarting the rise of strong domestic productive sectors (see e.g. Beblawi, 1990, 87-8).

initial capital transfers are also here likely to be substantial. There are costs associated with the setting up of business such as acquiring licenses and company registration fees, and rental fees associated with acquiring office space. Getting business involves obtaining knowledge on the target market and implementation of marketing efforts on the basis of such, also representing considerable disbursements. However, a smaller share of the total equity should be sunk than for petroleum extraction. Leasing contracts can be terminated, and marketing knowledge is often applicable elsewhere.

Most telecom services involve contracting. In turn, negotiations with the use of third party enforcement that oversees and secure the validity of contracts are frequently applied. Access to multiple sources of trustworthy credit is also important in these industries, as day-to-day running expenses often are considerable. In general, the exposure to the host-country market is large and governed by various contracts, including those giving access to credit. The fact that services are produced for individual consumers and corporations necessitate close customer contact. Therefore main offices are often located in urban areas, near the clients. The labor force of the subsidiary, perhaps after an initial "learning period" where experts from the principal trains local personnel, should in the long run be recruited locally. This both to maintain grip on host-market mores, but also to reduce transportation fees associated with using expatriates.

Now consider the institutional preferences these two MNEs are likely to exhibit. Petroleum extractors should care more for protection of physical properties than would telecom providers, having considerable capital sunk in physical holdings. The service provided by the telecom MNE is on the other hand more prone to patent right violation, as technical solutions are more easily emulated and put to use than oil extraction technology. To a much larger degree than petroleum extraction, telecom business is based on contracts and will thus rely heavily on the day-to-day enforcement of such. Similarly, the telecom MNE should be more sensitive to strikes and labor force instability than would the petroleum MNE, as its workforce more likely is hired locally. Telecom providers would also be more sensitive to societal instability than petroleum MNEs, as their main offices are situated where most social upheavals take place: in urban areas. As regards the host-country dependence on the MNE, especially technology-scarce developing nations are more likely to rely on foreign resource extractors than on telecommunications providers, the former contributing substantially more to their Exchequers (at least directly and in the short run). Petroleum extractors might therefore experience less of the negative externalities arising from malfunctioning institutions than does the telecom provider, as hosts may go at lengths to create enclaves in which resource extraction is shielded from potentially dilapidated and derelict policy climates.

In short, there is reason to believe that MNEs investing in different sectors will respond differently to host-country institutions and policy climates. Assuming MNE homogeneity might obscure this varied set of relations between institutions and FDI. The purpose of this thesis is in first instance to shed light on *whether* there might be something in this claim of empirical simplicity. Are there differences in the institutional drivers of investors across varieties of FDI? Secondly, it offers an inquiry into *how* different mechanisms tying institutional concepts to FDI decisions function across the varieties of FDI.

1.2 Outline of the thesis

Chapter 2 represents the conceptual and theoretical fundament of this thesis. As a point of departure the developmental potential in FDI is touched upon. It is highlighted how gains may depend on which sector of activity FDI is conducted in. Next, foreign direct investment and multinational enterprises are discussed as analytical concepts. Then, the *eclectic paradigm* of Dunning (see e.g. 1977, 1981, 1988, 1993) is presented as the basic theoretical framework for developing expectations. In discussing what Dunning labels the "locational determinants" of FDI, I draw upon the understanding of formal institutions in *new institutional economics* (see e.g. North, 1981, 1990, 2005; Williamson, 1985, 2000).

The remainder of Chapter 2 develop what I label *The Varieties of FDI framework*. As a starting point, institutional concepts are unbundled with reference to the burgeoning literature on the renewed role of the state in economic upgrading in the 21st century (see e.g. Rondinelli and Cheema, 2003; Grosse, 2005). Next, the mechanisms through which outcomes of the institutional configurations affect investors is discussed. To be able to predict how the particular mechanisms differ in their affect across the varieties of FDI, a scheme mapping key traits of different types of foreign production is presented. The disaggregation of FDI is conducted on the basis of the three traditional sectors of economic activity: natural resources (primary); manufacturing (secondary); services (tertiary). The traits assessed for each sector are: relative size; sunkenness; expected profit margin; degree of local labor market integration; closeness of contact with end users; relative complexity of operations. A set of theoretical expectations based on the traits of the three varieties of FDI is lastly put forth.

Chapter 3 presents the research design fitted to assess the expectations developed in chapter 2. First, it makes the case for why a statistical analysis is appropriate at this level of investigation. Next, a general discussion of the dependent variable, FDI, is followed by a presentation of the Norwegian investment data. The potential for generalization from these data is debated by touching on potential biases inherent to Norwegian FDI behavior. Then, operationalizations of the explanatory factors discussed in Chapter 2 are carried out by drawing on the vast array of indices measuring institutions and institutional performance. Thereunder a set of macroeconomic and cultural factors thought to affect the FDI decision is also conceptualized. At last, the statistical model most apt to analyze the data is defined, followed by some short discussions of important statistical issues.

Chapter 4 is the analysis of the expectations developed in Chapter 2, based on the research design developed in Chapter 3. It consists of three main parts. First, a comparative discussion of the results from four sets of baseline models estimated for all three sectors of FDI as well as total FDI numbers is conducted. This is to assess *whether* there are differences in how policy climates drives FDI across sectors, and to what extent the results from the model regressing the totality of FDI diverges from the sector-divided results. Next, sector-specific models are run to assess *The Varieties of FDI* expectations. These models incorporate sector-specific controls. At last, a series of robustness checks are presented and considered. Results are substantiated and summarized towards the end of the chapter.

1.3   Review of the findings

The empirical analysis of the expectations formulated in *The Varieties of FDI framework* first of all support the claim that effects diverge across economic sectors. Baseline models indicate that not only are estimations based on total FDI numbers more sensitive to model specification, they also seem misleading as to how effects function at a lower level of aggregation.

The expectations developed in the theoretical framework were corroborated in some instances, and disapproves in other. There were two major tendencies in the estimates. First, manufacturing producers on the balance seemed more attentive to policy environments associated with sound institutions than both natural resource extractors and service suppliers. Second, control of corruption seemed to affect investors from all sectors positively, the results robust to most checks. As for the specific relationships found: natural resource extractors seem impervious to everything but corruption control; manufacturers were found to value most indicators of political governance, economic interaction, and economic regulation; service suppliers were at the most robust level only found to be attracted by host-country environments controlling corruption and protecting human rights.

The general conclusion is that disaggregating FDI is advantageous as opposed to estimating effects on total FDI numbers as it yields more relevant information. Future research should investigate this heterogeneity further, both with data from other source-countries than Norway, but also at lower levels of disaggregation such as individual industries.

Chapter 2

Literature, concepts and theory

*Economists "should" concentrate their attention on a particular form of human activity,
and upon the various institutional arrangements that arise as a result of this form of activity.
Man's behavior in the market relationship, reflecting the propensity to truck and to barter,
and the manifold variations in structure that this relationship can take; these are the proper
subjects for the economist's study.*
– James M. Buchanan, *What Should Ecnomists Do?* (1964, 214)

*By neglecting the institutional foundations of market structure, the conventional tools of
economic analysis are rendered impotent before many strategic management problems.*
– David J. Teece, *Economic Analysis and Strategic Management*, (1984, 91)

*We have at least the mental equipment to foster our long-term selfish interests rather than
merely our short-term selfish interests. [...] We have the power to defy the selfish genes of
our birth and, if necessary, the selfish memes of our indoctrination.*
– Richard Dawkins, *The Selfish Gene*, (1976, 200)

The intention of this section is to clarify key concepts and contribute to theory development. Focus is on
what Buchanan and Teece both emphasize: the institutional underpinnings of economic bargaining and
the variations of market relations arising from such. First, the potential developmental impacts of FDI
are briefly discussed. Secondly, foreign direct investment and its enactor, the multinational enterprise,
are discussed as analytical concepts. Next John H. Dunning's (see e.g. 1977; 1981; 1988; 1993) *eclectic
paradigm* for foreign production is discussed, and thereunder the importance of institutions as drivers
of FDI. The understanding of institutions is derived from that in *new institutional economics* (see e.g.
North, 1981, 1990, 2005; Williamson, 1985, 2000). Finally, the framework I label *The Varieties of
FDI* is presented. To formulate theoretical expectations, relevant institutional concepts are unbundled,
connective mechanisms are discussed, FDI is disaggregated on the basis of economic sector of activity,
and sectors are stylized on the back of their divergent properties. These properties are in turn interacted

with the connective mechanisms to form a matrix of assumptions as to how MNEs are likely to diverge in their fostering of long-term selfishness, as put so eloquently by Richard Dawkins.

2.1   The relevance of the puzzle: FDI and development

There is in the institutions and growth literature a fairly strong consensus on the importance of institutions for economic growth. Rodrik (2000, 4) states that it is no longer a question of "'do institutions matter?' but 'which institutions matter and how does one acquire them?'"[1] Writings on the relationship between institutions and growth very much underline the importance of private initiatives: "All instances of successful development are ultimately the collective result of individual decisions by entrepreneurs to invest in risky new ventures and try out new things" (Rodrik, 2000, 3). The main way through which institutions spur private investment is through affecting transaction and production costs (North, 1990).

FDI however is only one of many types of private incentives that play a role in stimulating aggregate investment rates. Although domestic investment still accounts for most of the investment in developing and transition economies (see e.g. UNCTAD, 2010, 2011*a*), FDI might complement the picture. No single type of investment can alone meet developing countries investment needs. Attracting FDI may increase the leverage, sustainability and potentially the effect of private investment on economic development. However, inquiries into the FDI-economic growth relationship are less settled than those examining the link between institutions and growth.[2] One explanation might be that FDI-incurred growth depend on host-country trade policy (see e.g. Bhagwati, 1978). Empirically, some find that homegrown capital outperforms foreign capital in creating growth (Firebaugh, 1992), some suggest that there is no reason to believe one dollar worth of FDI contributes more (or less) to an economy's productive activity than any one dollar of domestic investment (Rodrik, 1999*a*, 37). The most extreme again hold that a lack of FDI contributes to the decline of economies (Amirahmadi and Wu, 1994). What seems to be generally accepted is that FDI has a significant growth potential in a subset of countries in the developing world, although often dependent on complementary initiatives such as host-country investments in human and physical infrastructure (see e.g. Blomström, Lipsey and Zejan, 1994; Balasubramanyam, Salisu and Sapsford, 1996; Borensztein, Gregorio and Lee, 1998).[3]

FDI might influence host-country development through other channels than formation of capital. A number of studies have for example shown that MNEs pay higher wages than domestic firms, especially when the relationship is a developed country MNE investing in a developing country (see e.g. Haddad and Harrison, 1993; Aitken, Harrison and Lipsey, 1996). Others suggest that the presence of MNEs also

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[1]Insightful accounts of the link between institutions and growth are those of Rodrik, Subramanian and Trebbi (2002) on institutions as deeper determinants of growth, Acemoglu, Johnson and Robinson (2001) on the legacy of early day institution-building, Hall and Jones (1999) on social infrastructure, Knack and Keefer (1995) on social capital and bureaucratic quality, Knutsen (2011) on the economic effects of political regimes, and Rodrik (1999*b*) on institutions and conflict management. Lin and Nugent (1995) provide an excellent review of literature on institutions and economic development.

[2]For an excellent survey of the empirical literature on FDI and development, see Lipsey (2004).

[3]A related discussion is that of *absorptive capacity*, concerning whether host-countries need a minimum level of technological capacity to benefit from MNEs stock of knowledge or not (see e.g. Lapan and Bardhan, 1973).

raises wages in domestic firms (see e.g. Feliciano and Lipsey, 1999; Lipsey and Sjöholm, 2004),[4] and that MNEs might raise average wage levels in host-economies (see e.g. Aitken, Harrison and Lipsey, 1996; Figlio and Blonigen, 2000). As for productivity gains, comparative investigations of MNEs' and domestic firms' productivity levels almost always find that MNEs produce more efficiently than domestic firms (see e.g. Chuang and Lin, 1999; Kokko, Zejan and Tansini, 2001), and that technology producing the superior productivity might spill over to host-country parallel sectors (see e.g. Blomström and Wolff, 1994; Javorcik, 2004*b*).[5] MNE presence might also introduce new industries in the host-economy, either through greenfield initiatives or through tighter linking of the host-country to the global marketplace. The general idea is that MNEs bring with them knowledge of demand in the world market, and how the host country might find its place in chains of global production (see e.g. Lipsey, 1998).[6]

Intriguing to an analysis of FDI determinants assuming MNE heterogeneity is the diversity of development impacts different types of FDI might have. The below disaggregation of FDI is conducted on the basis of economic sector of activity. Natural resource extraction, especially petroleum activity, has often been associated with carpetbagger MNEs controlling income streams of developing countries. Although developing country governments have increased their share of the resource royalties after the Organization of Petroleum Export Countries was established, MNEs still control most of the volume and pace of drilling. The low integration of natural resource MNEs in host-countries result in minimal local linkages through which non-economic spillovers might occur. Local procurement is also scarce in resource extraction. Moreover, processing and refining oil or gemstones is capital- and skill-intensive, both factors scarcely supplied in developing countries. The chief indirect gains from FDI, the upswings in industrialization and increased productivity, are thus less associated with natural resource investments than other forms of production. The benefit from MNEs is often constrained to the provision of (often much-needed) foreign capital (Cohen, 2007, 78-9).

Manufacturing and services industries on the other hand are assumed to be more beneficial to hosts due to their generally high local integration. The former normally brings with it more local procurement and employment, although criticism has been raised concerning these industries potential for crowding out domestic business, exploiting cheap labor, polluting, and monopolizing sectors of the market. Host-governments still seem to find manufacturing MNEs appealing due to their greater inclination to reinvest profits, expand operations, and increase local hiring after the initial FDI though (Cohen, 2007, 80-1).

Until recently, services FDI have not been assumed to have the same positive effect on host-countries as manufacturing, depicted by host-governments' restrictive policies towards service MNEs. The economic reasoning is that services FDI was not seen capable of providing advanced technologies, export opportunities, or links with local firms. This perception has slowly changed with increased acknowl-

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[4]But see Görg and Greenaway (2001).

[5]But see Blomström, Kokko and Globerman (2001).

[6]See also the collection of essays in Moran, Graham and Blomström (2005) and Alschuler (1998) for more (critical) discussions around whether and how FDI promote development, and Blomström and Kokko (1998) for a comprehensive review of the mechanisms through which FDI has been investigated to impact development.

edgment of FDI in services as a way of acquiring broader forms of technology such as organizational expertise, managerial know-how, information processing systems and so forth (UNCTAD, 2004, 124).

The essence is that there are different types of gains available from having different types of foreign producers in ones economy. One particularly interesting assertion in the prolongation of the "infant industry" argument, is that by knowing where your economy lacks capital or know-how, information on what institutions attract what types FDI may be used to entice foreign investments in those sectors not receiving infant protection.[7] Industry policies aimed at strengthening selective sectors in the economy is paramount to create sustainable industrial upturns, Chang (2003, 263-9) argues. The policy-implication is that policy measures should target opening of sectors where technology or knowledge is missing – to reap the gains from FDI, understanding how the diversity of MNEs behave might therefore be paramount.

2.2 FDI and the MNE

All producers face the fundamental decision of whether to "make or buy" – a choice between conducting activities in-house or contracting activities out to another firm (UNCTAD, 2011*b*, 124). If activity is kept within the boundaries of the firm, production is internalized. If not, it is externalized. Internalization conducted on a global scale is what this section is concerned with.

2.2.1 Foreign direct investment

Foreign direct investment is a special case of internalization, involving the purchase or setting up of physical production facilities in a foreign country. When conducting FDI, a firm decides to maintain production in-house while stretching the bounds of their organization across borders. There are other potential forms of international economic interaction as well. *Arm's-length trade* in assets is one. Another, one that has gained attention in the aftermath of the 2008 financial meltdown, is *foreign portfolio investment* (FPI).[8] FPI is usually conducted with a short time horizon and is often speculative.

FDI differs from FPI and arm's-length trade in at least four respects (see e.g. Dunning and Dilyard, 1999; Dunning and Lundan, 2008). First, FDI involves the consign of non-financial assets such as technology, organizational expertise, entrepreneurship, incentive structures, values and cultural norms between the MNE and the subsidiary. Second, FDI does not involve a direct change in ownership of the asset acquired, it is rather a transfer of control. While arm's-length trade and FPI are organized through the market, FDI is administered by and within investment hierarchies. Third, in conducting FDI, MNEs control the deployment of a bundle assets transferred, rather than individuals or small firms normally resorting to simple trade. FDI is thus more complex than especially trade in the sense that multiple transfers are enacted simultaneously when investing.[9] Fourth, FDI is not only prompted by higher foreign

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[7]The "infant industry" argument justifies government intervention through trade protection or subsidies in key industries as a first-best policy measures to make them competitive in the global marketplace (see e.g. Kemp, 1960; Mayer, 1984).

[8]FPI entails entering foreign economies through purchases on stock and bond markets, or by acquiring other financial devices or derivatives in foreign public and private sectors or in general money markets (Dunning and Dilyard, 1999, 4-6).

[9]It should be noted that FPI might be even more nebulous than FDI, as witnessed through the sales of loan bundles in the bloating of the pre-2008 housing bubble. However, such investments are usually carried out by financial entities such as hedge

interest rates, the main driver behind FPI and trade. FDI is motivated by the opportunity to improve performance relative to competitors' or the former entity in control of the investment objective.

In essence, FDI is about influencing production. The International Monetary Fund (IMF) and the Organization for Economic Co-operation and Development (OECD) both recommend a ten per cent stake for identifying FDI.[10] The formal recognition of FDI is that it "reflect[s] the objective of establishing a lasting interest by a resident enterprise in one economy (direct investor) in an enterprise (direct investment enterprise) that is resident in an economy other than that of the direct investor. The lasting interest implies the existence of a long-term relationship between the direct investor and the direct investment enterprise and a significant degree of influence on the management of the enterprise" (OECD, 2008, 48).

After the initial FDI, the stock change through equity adjunct or debt instruments.[11] Calculating FDI is manifested in OECDs general methodology, and includes the "initial equity transaction that meets the 10% threshold and all subsequent financial transactions and positions between the direct investor and the direct investment enterprise, as well as qualifying FDI transactions and positions between incorporated and unincorporated fellow enterprises" (2008, 27).

The most analytically noteworthy properties of FDI are persistence and stability. MNEs search for some degree of lasting strategic control over the investment object. The high degree of commitment in FDI makes MNEs more vulnerable to political and economic changes in host-countries as they cannot as easily as a FPI investor withdraw investments in the face of unexpected change. MNEs have to "live with" host-country policy environments. Institutions should therefore matter more.

2.2.2 The multinational enterprise

This study mainly concerns itself with two sets of actors. On the one side there are host-countries, supplying institutions and public policy. On the other side there is the multinational enterprise.[12] MNEs are multinational by virtue of owning controlling shares in productive activity in more than one economy – they are multinational through conducting FDI. The United Nations Committee for Trade and Development (UNCTAD) defines an MNE as "an enterprise, irrespective of its country of origin and its ownership, including private, public or mixed, comprising entities in two or more countries, regardless of

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funds, not firms engaged in physical production.

[10]There are deviations to this norm. Germany (twenty percent), France (twenty percent), and New Zealand (twenty-five percent) classify FDI by MNEs in or out of their economies based on other thresholds (Dunning and Lundan, 2008, 766). The differences in how data is collected nationally are important to be aware of as global FDI data are based on national reporting. The 10 per cent threshold is meant to capture the moment when ownership in terms of voting power allows for real influence. Some claim that ownership only a tenth of share holdings in some cases do not lead to significant influence. On the other hand, it is not a given that the board voting share equals the ownership share (OECD, 2008, 23).

[11]*Equity* includes shares, capital reserves, capital contributions beyond the inceptive transfer, and reinvested earnings. The *debt* component encompass a broad range of instruments such as bonds, debentures, commercial papers, trade credit and loans between subsidiary and principal (OECD, 2008, 60).

[12]The multinational nomenclature of Dunning (1993) is used throughout this thesis. However, the United Nations Centre on Transnational Corporations in 1974 adopted the concept of firm *transnationality* at the request of a group of Latin-American countries. They wished to distinguish investments stemming from outside the region from those of their continental peers. In time, transnationality has come to be associated with the model of Bartlett and Ghoshal (2002), prescribing to an understanding of transnationality that implies a fully integrated and multidimensional corporate strategy.

the legal form and fields of activity of these entities, which operates under a system of decision-making, permitting coherent policies and a common strategy through one or more decision-making centres, in which the entities are so linked, by ownership or otherwise, that one or more of them may be able to exercise significant influence over the activities of others and, in particular, to share knowledge, resources and responsibilities with the others" (UNCTAD 1994, cited in Bellak 1998, 228).

However, theoretical perceptions of firms are multifarious.[13] In *microeconomics* and *international business* literature, firms are usually assumed to function as profit-maximizing unitary rational actors, capable of calculating risk probabilities and conducting strategic choices (see e.g. Dunning, 1958; Becker, 1976; Moe, 1984). *Behavioral theories* of the firm postulate actions as outcomes of a bundle of routines enacted by individuals filling roles within an organization.[14] Environmental complexity and boundaries of human cognition requires informational shortcuts and routine based systems of behavior. Change is considered an incremental response to external shocks and new routines are internalized when the threat is reduced to an acceptable level (see e.g. Cyert and March, 1963; Nelson and Winter, 1982).[15]

The complexity of firm organization, functioning, and motivation has important implications for analysis. There are diametrical differences in firm configuration both vertically (between firms of varying sizes) and horizontally (between firms from different industries and regions). As *The Varieties of FDI framework* expand on, these specific characteristics should create divergences in investment behavior. Economic gains are still acknowledged as the main driver of international expansion however. The willingness to invest abroad in the first place is a signal of production expansion or cost controlling. These are motives that are inherently economic. Recognizing a broader sense of firm motivation entails viewing profit-maximization in complex global markets as driven by uncertainty.

The main correction to the traditional view of MNEs as unitary rational actors lies in the contradistinction between *risk* and *uncertainty*, not in the economic motivation of firms *per se*. While risk implies a known probability distribution of possible outcomes, uncertainty suggest no knowledge of probabilities (see the seminal work of Knight, 1921).[16] In essence, uncertainty is a function of cognitive limitations and gives rise to transaction costs as firms spend more resources on measuring the values of what is being exchanged (see especially Coase, 1960; Williamson, 1985, 2000; North, 1990).[17] Institutions and transaction costs are discussed later in Section 2.3.2. The point is that that the cognitive limitations underlined by behaviorists are very much real, especially when investing abroad. Uncertainty arising from

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[13]See Hart (2010) for an elaboration on this discussion.

[14]See also Cyert and March's (1963, 27) concept of "coalitions" within organizations.

[15]See also Kahneman's (2011) distinction between fast and instinctive, and slow and logical systems of behavior.

[16]In latter years, *risk* and *uncertainty* has come to be treated as synonyms (see e.g. Alvarez and Barney, 2005; Liesch, Welch and Buckley, 2011) and in other instances undergone semantic alterations (see e.g. Davidson, 1991; Manski, 1996).

[17]A distinction between *external* an *internal uncertainty* is sometimes made. *External uncertainty* results from volatility and unpredictability, expressed trough political instability, currency changes, labour disputes and infrastructural strains in foreign markets. *Internal uncertainty* in contrast, arises when a firm lacks necessary market-related knowledge upon entering a specific overseas market, stemming from for example lack of experience in investing abroad or cultural distance (Anderson and Gatignon, 1986; Erramilli and D'Souza, 1995; Mascharenas, 1982). The host country institutional constructs that form the basis for the below modeling of FDI, effectively corresponds with the external concept of uncertainty.

these limitations should in turn yield MNE profit-maximizing strategies that are more multifaceted than assumed in microeconomic theory and international business literature.

Traditionally non-economic factors can in this context be perceived to affect profit calculuses of firms. The growing interest in corporate social responsibility (CSR) is illustrative (see e.g. Vogel, 2005). Managers and executive boards, still motivated by profit, might be induced to behave socially responsible as "spotlight regimes" driven by amongst others non-governmental organizations (NGOs) and global media impel market sanctions against firms caugth misbehaving (see e.g. Spar, 1998; van Tulder and van der Zwart, 2006). For example, research has linked CSR-strategies to better impact mitigation in the wake of the 2008 economic meltdown (van Tulder, 2011, 254-5). The profit-potential in social responsibleness is incorporated in *The Varieties of FDI framework*.

2.3 Theory on FDI decision-making

There are very few, if any, theories of FDI that are all-encompassing.[18] At the one extreme are political economists in the *marxist tradition*, viewing internalization of the firm as an inevitable outcome of the capitalist system and as a means to increase firm monopoly power relative to states (see e.g. Baran and Sweezy, 1968). At the opposite end of the spectrum are *business analysts*, seeking to identify the micro-level factors that affect investment processes (see e.g. Aharoni, 1966). Some *macro-economic trade theorists* have occupied themselves with how FDI is a response to differences in relative factor supplies between countries (see e.g. Helpman, 1984; Markusen, 1984). Others have focused on transport costs and trade barriers as drivers of FDI relative to trade (see e.g. Brainard, 1993; Krugman, 1983; Markusen and Venables, 1998, 2000). However, none of these form an operationally testable theory that can explain all FDI. In fact, this would be a very complicated task, but there is one theory, or rather a paradigm, that at least identify clusters of variables explaining MNEs' FDI behavior. This is the *eclectic paradigm* of international production, generally considered to be the preeminent framework for analyzing FDI.

2.3.1 The eclectic paradigm

Dunning's (see e.g. 1977; 1981; 1988; 1993) *eclectic paradigm* (or the *OLI paradigm*), was initially formed as a rationalist explanation of international internalization of production (see e.g. Dunning, 1958).[19] It offers a general framework for explaining both the extent and patterns of foreign-owned production. As a theory it stands at the intersection between macroeconomic trade theory and microeconomic theories of the firm. The rise of spatially dispersed production is a function of two types of market imperfections, the paradigm proposes. *Structural market failures* that discriminate between firms in their ability to gain or sustain control over geographically dispersed activities, and *intrinsic failures of inter-*

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[18]For a comprehensive review of theory on FDI, see Dunning and Lundan (2008, 70-115).

[19]For a comprehensive review of the evolution of the OLI paradigm, see Dunning (2001), and for an elaboration on its properties, see Dunning and Lundan (2008, 93-111). Whether it actually represents a *paradigm* in Kuhn's seminal understanding of such as "universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of researchers" (1962, x) could be discussed.

mediate product markets to transact goods and services at a lower net cost than than firms themselves might produce within internal investment hierarchies. The paradigm in short identifies how ownership-related factors, locational specifics and internalization advantages separately or in combination affect the geography of investment decisions made by MNEs. There must be something gained within one ore more of these categories for firms to venture abroad.

The logic of the OLI-advantages

FDI may be conducted to supply both foreign and domestic markets. The willingness to supply either from a foreign location hinges on the MNEs ability to acquire "Fisherian assets" not available at favorable terms to other enterprises in the economy at hand.[20] This ability is what the paradigm labels *ownership (O) advantages*. O-advantages involve: properties and/or intangible assets (Oa-advantages) such as technology and brand names; advantages of common governance (Ot-advantages) associated with organizing the Oa-advantages; institutional assets (Oi-advantages) in the sense of institutions internal to the firm such as corporate governance. O-advantages are specific to the firm.

"Fisherian assets" mights alternatively be embedded in specific locations, but available to all firms. These are what the paradigm labels *locational (L) advantages*. The L-advantages relate to factors making certain locations more attractive for investment than others. Dunning originally formulated his theory with an emphasis on Ricardian-type endowments (or "natural assets") such as market size, market growth, labour pool characteristics, et cetera. Later however, locational factors has come to encompass "created assets" such as national institutional environments.[21] Typical L-specific advantages are: transaction and communication costs; barriers to trade; infrastructure; political, ideological, cultural, language and business differences; economic systems; government strategies; legal and regulatory systems.

It is in the difference between international and domestic market failure that MNEs distinguish themselves from multi-activity uninational firms. The former contrive benefits from failures *between* national markets in the global marketplace, while the latter from failures *within* national markets. Remember, market failure might be either structural or intrinsic. Structural market failures give rise to value capture (or monopoly rents) resulting from entry barriers erected by constituent firms.[22] Intrinsic market failure reflects the inability of the market *qua* market to optimally organize transactions. There are three reasons why this might occur: buyers and sellers enter the market with asymmetrical information (facilitating opportunism); the market itself does not manage to take account of benefits and costs external to the transaction itself that arise from that specific transaction (exploitation of differences in exchange rates and national fiscal policies might follow); there is insufficient demand for specific products for producers to be able to capture economies of scale and scope arising from geographical dispersion.

These market deficiencies cause the need for diversification of MNEs' value-adding activity. In doing

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[20]Assets in a "Fisherian" sense are asset such as resources and capabilities apt to generate a future income streams, representing a broader view of such than most economic theories of foreign production (Johnson, 1968, 17).

[21]See Narula and Dunning (2000) for the distinction between "natural" and "created assets".

[22]Entry barriers may be erected indirectly through lobbying or directly through acquisition of competitor firms.

so, ownership and organization of productive activity is realigned. Common governance of production might lower transaction or production costs, and ensure maximum gain from firms' O-advantages. Such advantages arising from firms attempting to circumvent or exploit market failures are labelled *internalization (I) advantages* in the paradigm. They include: attempted avoidance of search and negotiation costs; avoidance of moral hazard and adverse selection; self-protection against non-contract enforceability; measures stemming from buyer uncertainty about nature and value of production inputs; protection of intermediate products properties; capturing economies of interdependent activities; compensation for absence of future markets; the control of supplies and conditions of inputs sales.

In short, the OLI-advantages are: *O-specific advantages* pertaining to the "whys" of FDI, they are distinct to the firm; *L-specific advantages* concerned with the "where" of FDI, they are particular to countries; and *I-specific advantages* explaining the "hows" of FDI, defining the mode of entry.

Does institutions have a place in this framework? There are indeed several reasons why political and economic organization of the society should (and in time has come to) have a place in the Dunning's paradigm. The dynamics of the global FDI growth constitute the basis for some of these arguments. The past three decades, the composition and significance of competitiveness-enhancing assets specific to FDI has changed.[23] The dramatic reduction in global transportation and, especially, communication costs (see e.g. Keohane and Nye, 1998), has lead to faster spread of market information and shorter time-lags in reacting to opportunities. Tangible resources and intangible capabilities available to MNEs have become more knowledge and information intensive (Dunning, 2004, 13). The increasingly complex structure and dispersion of MNEs warrant a focus on the factors affecting their perception of uncertainty – more specifically, a focus on what factors affect their decisions to commit to new markets. With more actors venturing abroad, competitive margins become smaller, and uncertainty-valuation may to a larger extent define potential profitability of investment *ex post*. Institutions at the national level may affect such profitability evaluations, and might therefore be an important determinant of FDI.

Dunning's own thinking has evolved from exploration of relational capital of the firm to attempts toward incorporating formal macro-level institutional factors into his paradigm (Dunning and Lundan, 2008, 130-1). Acknowledging the facilitating role of institutions is in essence to consider characteristics associated with wider structures of the society. It also encapsulates how maintenance or expansion of the initial FDI is affected by changes in relevant policy environments. All three aspects of the OLI-paradigm interact to explain the location decision of MNEs. The L-component is however of most interest to my study since it is the only component by definition specific to the host-country. The L-component is also very complex. It subsumes within it the industry-specific attractiveness of its domestic market. As such, the location decision and the industry of the MNE are closely interconnected and relative to specific host-country contexts (see e.g. Mudambi and Mudambi, 2002; McCann and Mudambi, 2004). That being said, the roles of institutions within the three advantage components of the paradigm are explored below.

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[23]As noted early by for example de Smidt and Wever (1990).

Before that however, the understanding of institutions in *new institutional economics* (North, 1981, 1990, 2005; Williamson, 1985, 2000) is presented. Thereunder the issues of transaction and production costs, path-dependency, inertia, interdependency, and complementarity are touched upon.

2.3.2   Institutions in new institutional economics

Institutions are important to economic activity and affect the changing patterns of economic development. This is the basic claim of *new institutional economics* (NIE), pioneered by Douglass C. North (see e.g. 1981, 1990, 2005). NIE in turn draws heavily on *transaction cost economics*, with its roots in Ronald Coase's assertions on the price mechanism (1937), and the costs of transacting in the market (1960).[24] On the one side, institutions might be *informal*, imposing constraints on actors through sanctions, taboos, customs, traditions, and other codes of conduct. On the other side they might be *formal*, constraining the choice set of actors through constitutional bounds, laws, and rights.[25] They are defined as "the humanly devised constraints that shape human interaction [...] [and] structure incentives in human exchange, whether political, social, or economic" (North, 1990, 3). Institutions define the interface between human beings by creating order – they "reduce uncertainty in exchange" (North, 1991, 97). By affecting transaction and production costs, institutions affect the profitability of production.

Formal institutions are in essence "created assets" devised incrementally through political activity, as opposed to "natural assets" such as raw materials and labor stocks naturally endowed and geographically defined in scope (Narula and Dunning, 2000). They might be related to the political order of society, or to the governance of economic actors.[26] Note however that both formal or informal institutions are "essential parts of an effective institutional matrix" (North, 1991, 98), a matrix in which economic performance is decided on the back of functional interdependence. The interplay of different institutions is elaborated on below.

One of North's (1990) main ideas is that institutions as drivers of FDI should be clearly demarcated from organizations such as MNEs. Institutions are structures devised through political action, whereas MNEs are organized entities created to take advantage of those structures. Institutions, together with their enforcement, set the rules of the game. MNEs are but one of many players adhering to them.[27] The degree to which the institutions reduce uncertainty in exchange impact the MNEs potential for value-added activity. The keywords are transaction and production costs.

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[24]The concept of transaction costs became widely known as Williamson called attention to frequency, specificity, uncertainty, limited rationality, and opportunistic behavior as main determinants of transaction costs (1989, 142-4).

[25]From hereon, the wording "institutions" refers to those of a formal nature operating at the national level. Note however that in the following empirical analysis, the institutional constructs assessed are not measures of institutions *per se*, but rather traces of institutional performance. These are sometimes referred to as "institutional concepts".

[26]Sometimes referred to as political institutions and economic institutions. The former manifested through democratic elections, constraints on the incumbent's power, the upholding of human rights and labor standards and so forth, and the latter through institutions protecting property rights, making contracts enforceable, controlling corruption, governing credit markets and so on. See Acemoglu, Johnson and Robinson (2005) for the typology of political and economic institutions.

[27]In reality however, MNEs may also affect host-country institutions. Endogeneity is discussed in Section 3.6.3.

Transaction and production costs

The most elementary task of business is to engage in production to create value. In value realization, firms engage in transactions with suppliers and demanders. These transactions are bound to occur outside the company's internalized value chain at some point.[28] These interfaces with external actors necessitates coordination. Coordination in turn is costly. As these transaction costs rise, the potential for external modalities accomplishing the transaction rise accordingly. "It is not transport costs but the costs of transacting that are the key obstacles that prevent economies from realizing well-being" (North, 1987, 420).[29] In the coordination of interfaces between actors, institutions prevail.

The chief way in which institutions affect economic change is twofold: they narrow or widen the choice set of economic actors, and they affect the efficacy of inputs used in production (North, 1990, 5). Neoclassical economics usually skirts the issue of *transaction costs*, assuming that using the market is costless and frictionless. Investigations into market failure and relational contracting has suggested that this not necessarily is the case (see e.g. Williamson, 1985, 2000).[30] Technically, transaction costs encompass the costs of control in an economy. They arise when individuals attempt to acquire new ownership rights, or defend their assets against transgression, theft, and other forms of opportunistic behavior in economic exchange (Eggertsson, 2005, 27). As such, they permeate all action in the marketplace.

It the prolongation of the standard transaction cost argument, it could be argued that institutions are *especially* important for MNEs. It takes substantial amounts of resources to identify, agree and enforce covenants between parties to an exchange. Lack of in-depth market understanding increases these costs furthermore. In the absence of formal institutions, MNEs would have to protect property rights and enforce contracts themselves. They might also have to oversee that production is in compliance with company line labor standards, and that general human rights are not violated. Self-enforcement would incur levies spent on the policing of ownership and agreements, in addition to uncertainty premiums "reflecting the degree of imperfection in the measurement and enforcement of the terms of the exchange" (North, 1990, 62). If there were to be formal institutions in place, the costs of these activities would be transferred to the national level, reducing transaction costs for MNEs.[31]

Second, institutions affect the *production costs*. The contention is that transforming inputs of labor, capital, and land into goods and services depend on technology. Level of technological development is in turn affected by institutions, amongst others through the protection of technological assets in industries intensive in research and development.[32] Institutions are in other words also a crucial determinant of

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[28]See Porter (1985, 36-52) for the concept of value chains in economic activity.

[29]The assertion is exemplified by the decline of the Roman Empire. The costs to transporting goods was the same after the Empire fell, but the unified political system and enforcement of rules over a large area had disappeared. The result was a dramatic drop in economic exchange between actors within the former Empire (North, 1987).

[30]The "problem of social cost" Coase (1960) holds, is that such are very much real – interaction is not costless.

[31]North summarizes it nicely: "Institutions in the aggregate define and determine the size of the discount, and the transaction costs that the buyer and seller incur reflect the institutional framework" (1990, 62).

[32]Allred and Park (2007) hold that protection of technological know-how through patent rights has a positive effect on R&D in developed countries, whereas the relationship in developing countries is unclear.

production costs, and the potential gains available through productivity increases (North, 1990, 64).

The direct implications of the two arguments is that institutional constraints affect the sets of opportunities that are available to individuals seeking to engage in economic interaction in any given society. If we accept that human nature is one of cognitive limitation, the constraining effect of institutions become even more salient.[33] Two sets of institutional properties are particularly relevant to a study of FDI decision-making. First, once directionally instated institutions tend to follow the path of development on which it has ventured, highly persistent to change. Second, the emergence and development of institutions tend to depend on the complementary presence of other institutions.

Path dependency and institutional inertia

Understanding the interlinked concepts of institutional *path-dependency* and *inertia* are important when assessing the relationship between institutions and FDI, as both phenomena contribute to creating little intra-country variation in the institutional constructs assessed.[34] Institutional *path-dependency* means "that once a country or region has started down a track, the costs of reversal are very high" (Levi, 1997, 28). The tendency can be depicted in the economic terminology of "increasing returns", where the "probability of further steps along the same path increases with each move down that path" (Pierson, 2000, 252).[35] In essence, path-dependency is about how the direction of institutional development is unpredictable, inflexible, non-ergodic, and potentially inefficient. These features in turn arise as institution building involves large set-up costs, thoroughgoing learning effects, complex coordination effects, and a great deal of adaptive expectations (see e.g. Eggertsson, 2005; North, 2005).

Institutional inertia is the story of the pace of institutional development, and has been observed over time in many countries (see e.g. Acemoglu and Robinson, 2006*b*; North, 2005). The idea is that institutions instated and consolidated at the national level tend to remain in place for a long time, highly resistant to change. Once a path-dependent process is established, "positive feedback may lead to a single equilibrium. This equilibrium will in turn be resistant to change" (Pierson, 2000, 263). One can identify at least three mechanisms contributing to institutional inertia. First, establishing institutions is pricey (Acemoglu and Verdier, 1998, 1382). Once funds or efforts are sunk in a particular set of institutions, they are expensive to revert. Second, when political agents commit resources to complement the existing set of institutions, they will be more inclined to support that particular set-up than later challenges. Political actors in essence bind themselves by vesting their interest in certain institutions (Pierson, 2000, 262).[36] Third, to protect themselves from future changes induced by new political rule, incumbent political powers may create rules making established arrangements hard to change (Moe, 1990, 125). For

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[33] Also Adam Smith in "The Theory of Moral Sentiments" (1767) assumed humans to be constrained by cognitive limitations.

[34] See Pierson (2000) for an elaborate discussion of the way in which the two concepts are interlinked.

[35] See Arthur (1994) for the an elaboration on the "increasing returns" argument.

[36] This move has a political rationale. The literature shows that actors often do better in both the short term and the long run if they remove certain policy options from their future repertoire (North and Weingast, 1989). Repeated complementary commitments to the existing institutional infrastructure in turn makes adverse change difficult (Acemoglu, 1995, 18).

MNEs moreover, institutional inertia means that host-country institutions represent "immobile factors" (Mudambi and Navarra, 2002, 637) they have to live with. Forced change through the flexing of economic power only affect the existing institutional order in the long run. One would therefore expect that FDI strategies are shaped and tuned to the constraints of institutional structures.

Interdependency and complementarity

A substantial literature has portrayed how institutional change tend to come about as a function of complex interdependence and complementarity (see e.g. Katzenstein, 1985; North, 2005; Hall and Soskice, 2001; Amable, 2003; Pierson, 2004; Acemoglu, Johnson and Robinson, 2005). In spite of increased international economic interdependence (Keohane and Nye, 2000), it is often noted how industrialized societies exhibit starkly different complexes of institutions. The idea is that different institutions have co-evolved over long periods of time, the occurrence of certaines depending on the presence of others.

Acemoglu, Johnson and Robinson (2005, 389-96) provide an integrated theory of the interplay between political and economic institutions.[37] First, economic institutions matter for economic performance through shaping the incentives of key actors in society – as such, they affect both economic performance and distribution of resources. However, economic institutions are endogenous, determined as a collective choice in society based on their economic consequences. The conflict of interest in this choice is likely to be determined by the distribution of political power. Whichever part has more political power will be able to establish its preferred economic institutions. The dissemination of political power in society is also endogenous. At this point it is necessary to distinguish between *de jure* and *de facto* political power. The former emanates from the formal political institutions in society, whereas the latter is determined by the distribution of resources. Distribution of resources, as we remember, is determined by the economic institutions. If a group is not allocated power institutionally it might use its *de facto* power (its economic resources) to revolt or oppose those in possession of *de jure* power. Therefore, the outcome of economic institutions also play a role in determining political institutions.[38]

This interconnectedness complicates conceptual distinction between institutional concepts. The chance is that policy climates associated with a certain set of institutions is dependent on the presence of other institutions. Distinguishing between different institutional concepts is still fruitful in conjunction with *The Varieties of FDI framework*, but subsequent investigations should try to embrace the interactive elements present in institutional matrices. With that in mind, a reassessment of the traditional Ricardian-type L-factors in the *eclectic paradigm* is next.

2.3.3 The eclectic paradigm institutionally revisited

Although the O-components of the *eclectic paradigm* are specific to the firm, host-country L-advantages may interact with them (especially Oi- and Oa-advantages). The general argument is that host-countries,

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[37]Acemoglu, Johnson and Robinson (2005, 389-91) define *economic institutions* as property rights structures and presence and perfection of markets, while *political institutions* include government form and constraints on executives.

[38]See the historical example bestowed by North and Weingast (1989) especially.

through sound regulatory environments, can enhance the O-advantages of MNEs by helping them pre-serving their intangible assets.[39] But, there are different effects running through the different O-components. First, composition and strength of Oi-advantages are highly contextual in that MNEs' ability to gain from the institutions internal to their organization depends on the environment in which they operate (Dunning and Lundan, 2008, 101).[40] Above, it was discussed how it may be perceived as profit-maximizing to ex-ercise CSR for firms in certain industries. This "business case" for CSR has especially been raised in the context of child labor abolition (see e.g. Kolk and van Tulder, 2002, 2004).[41] Typically, national regula-tion of labor standards are aspects MNEs subjugated to CSR reporting will consider before conducting FDI.[42] The lack of such standards might erode the Oi-advantages MNEs have in responsible production by complicating production under the standards they have committed to.[43] Second, institutions play important roles as L-factors through their effect on the Oa-advantages of firms, their resources (Dun-ning and Lundan, 2008, 101).[44] In a world where Oa-advantages become more available and globally transferable, L-specific institutions are vital. They influence whether the Oa-advantages are success-fully absorbed by the local subsidiary, and whether the know-how of the MNE is confined to investees. Protection of Oa-advantages might have important ramifications for the productivity of MNEs.

The physical linkages between L-components and Oa-adavantages are best expressed in the context of NIE. One of North's (1990, 62-64) main arguments is that institutions affect MNEs' cost-equation through defining transaction and production costs. Moreover, an interesting contention in the prolon-gation of the traditional NIE argument is the claim that for foreign investors the effect of institutions go beyond the direct influence on transaction and production costs, especially when FDI is in emerging markets (see e.g. Henisz, 2000; Henisz and Williamson, 1999). When property rights are unprotected, foreign investors face both a direct and an indirect hazard. The former is manifested through national-ization or expropriation risk, whereas the latter is reflected through local firms being favored due to their better access to, and understanding of, the national political domain.

Which institutions is it that matter? Insights from East-Asian newly industrialized economies and Central and Eastern European transition economies indicate that there are certain institutions associated

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[39]Such as for example monopolistic advantage over local competitors.

[40]Relevant Oi-advantages are: the value-added governance; their codes of conduct; and, their incentive systems.

[41]See Margolis and Walsh (2003) for the general business case for CSR, and Porter and van der Linde (1995); Berry and Rondinelli (1998); Reinhardt (1999) for other business cases in support of pollution prevention. But, see Vogel (2005) for critical discussions on the limitations of the CSR business case.

[42]Actual reporting is enhanced by the upturn in monitoring and reporting initiatives on CSR (see e.g. Gjølberg, 2009).

[43]This problem might be exacerbated if the firm employs subcontractors in their production. When in direct control of production, the firm, regardless of the societal respect for standards in general, at least have some control of how production is carried out. With subcontractors, this control function diminishes, and increases the potentials for market sanctions Spar (1998). A telling example is the 2008 disclosure of how the Norwegian MNE Telenor's subsidiary in Bangladesh, GrameenPhone, used a subcontractor who was found to deploy child labor. Telenor themselves claimed they had investigated the labor standards of the subcontractor, but when a Danish journalist looked into the matter, it was revealed how extensive child labor was in use. Telenor faced severe public criticism for the unveilings. See: http://e24.no/utenriks/barn-bygger-for-telenor/2421221.)

[44]Relevant resources could be: product innovations; marketing systems; non-codifiable knowledge; and, general ability to reduce costs of inter-firm transactions (Dunning and Lundan, 2008, 101).

with successful restructuring of economies (see e.g. Rondinelli and Behrman, 2000; Kogut and Spicer, 2002; Rondinelli, 2005), institutions that are all related to the transaction and production costs of firms. If these authors are right in averring that the differences in the configuration of institutional restructuring is critical to explain differential economic development paths, and *pari passu* may be an important determinant of FDI, it follows that the effect of these institutions should be examined as drivers of FDI. Institutional concepts are unpacked below. In short, the *eclectic paradigm* is expanded by acknowledging host-country institutional concpets to be L-factors. Institutions affect the ability of firms to interact, and therefore affect the relative transaction and production costs. Moreover, MNEs often need institutions to realize their core functions and firm-specific advantages.

2.4 The Varieties of FDI framework

What follows is my theoretical contribution. There is a burgeoning empirical literature on the institutions-FDI link, but efforts have been inconclusive as to how the institutional mechanisms function. In developing a theoretical framework allowing for MNE heterogeneity, I highlight the level of aggregation in previous studies as one possible reason for the mixed empirical results. I believe that previous efforts have failed to "avoid simplicity [and] embrace complexity", as Cohen (2007) puts it. Barba-Navaretti, Venables and Frank, underlining the same issue, posit that "most theoretical frameworks are still based on the simplifying assumption of homogenous agents, and theories encompassing heterogeneity are still in their infancy" (2004, 281). My objective is accordingly to nurture the complexity of FDI by distinguishing between the economic sectors of MNEs. After a short discussion of the empirical incongruousness, an unpacking of institutional concepts is followed by discussions of their connective mechanisms to FDI. Next the traits of the three economic sectors of activity are stylized to form expectations as to how the institutional mechanisms are likely to vary in their effects on *The Varieties of FDI*.

2.4.1 The (lack of a coherent) empirical link

When Kobrin in 1976 investigated the "environmental determinants" of FDI, he stated that "the extent to which the environment affects the foreign direct investment [...] decision has proved difficult to investigate empirically. [...] it is often difficult – if not impossible – to identify the separate effects of political, social, cultural, legal, and economic variables in the investment decision" (1976, 29). This, to the extent that the problem concerns the inherent complementarity of institutions, is still an issue to be tackled. However, in tandem with data and software developments, a voluminous empirical literature on the institutional determinants of FDI has developed.

The growth in studies has not however lead to convergent understandings of mechanisms at play. Scholars routinely fail to agree on basic relationships. This is perhaps most evident as regards different understandings of regime type characteristics' effect on FDI. Four often cited studies find a positive link between democracy and FDI: Busse (2004), for a sample of sixty-nine developing and emerging market economies from 1972 to 2000; Rodrik (1996), for U.S. manufacturing FDI to forty countries in the

period 1982-9; Harms and Ursprung (2002) for a sample of sixty-two emerging market and developing economies; Jensen (2006), through combining a sample of at most one hundred and fourteen countries between 1970-98 with an ample supply of interviews. In two contrasting studies however, democracy is found to affect FDI negatively: Resnick (2001) analyzes FDI flows to nineteen developing countries in Asia, Latin America, and the Caribbean between 1971-93; Tuman and Emmert (2004) when studying U.S. FDI flows to a sample of fifteen Latin American countries between 1976-96. Other findings again land somewhere in the middle: Noorbakhsh, Paloni and Youssef (2001) consider thirty-six developing host-countries from Africa, Asia and Latin-America in the period 1980-94; and Li and Resnick (2003), for a sample of fifty-three developing host-countries.

Conflicting findings are also flourishing as regards corruption's effect on FDI. Some find no link between corruption and FDI, for example: Wheeler and Mody (1992), assessing forty-two countries for the period 1982-8; Hines Jr. (1995), for U.S. firms' FDI in the years 1977 and 1982; Alesina and Weder (1999), for FDI data from seven to eight source-countries to forty or so host-countries. Some actually find FDI to be stimulated by corruption, see especially: Egger and Winner (2005), for seventy-three developed and less developed countries in the time period 1995-99. Others again find corruption to impede FDI: Wei (2000) for FDI from twelve source-countries to forty-five host countries in 1993; Lambsdorff (2003), for fifty-four countries in the period 1975-90; Egger and Winner (2006), for a sample of twenty-five source-countries and fifty-nine developed and less developed recipient countries.

Conflicting findings could have been listed for other concepts as well. The informed reader would probably note that there could be many potential reasons for the schism between studies. Various sample selection biases in either source- or host-country samples constitute some, econometric specification and modeling others. The unaccounted for cleavages along which MNEs exhibit heterogeneity is the explanation assessed here. Examining samples with un-modeled variance within may make results sensitive to model specification. After unpacking the relevant institutional concepts, this heterogeneity is assessed.

2.4.2 Unpacking institutions

While there are a number of conceptual and empirical challenges a disaggregated assessment of institutions has to overcome (see Section 3.6.1 especially), there are also important functional variations between different institutional concepts. These variations MNEs increasingly can and might be willing to exploit.[45] Research on the link between institutions and FDI often seems to assess institutional concepts based on ad-hoc application of available indices.[46] To remedy this arbitrariness, institutions are unpacked in the conjuncture of the abovementioned investigations into the state's role in economic upgrading and the empirical literature examining institutions' effect on FDI.

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[45]MNEs expanding their production into new markets more often than before turn to commercial risk ratings and rankings that distinguish between different institutional risk categories when deciding on where to invest (Rondinelli, 2005, 398). A World Bank survey in 2003 found "a marked shift toward integrated management of FDI related risks" (2003, 21). See also the short discussion of the *political risk assessment* and *political risk insurance* in Section 3.1.

[46]See for example Daude and Stein (2007) and Busse and Hefeker (2007).

Key insights from the literature on new role of states in a globalized world underline that certain policy areas are more important than others in achieving national economic upgrading. Experiences from East Asian and Central and Eastern European economies show that successful economic restructuring is often associated with a convergent set of government strategies.[47] Shortly summarized, they are: (1) increase social cohesion; (2) support equality in opportunity and provide safety nets; (3) secure ubiquitous participation in the political system; (4) improve government efficiency; (5) create transparency and accountability in government; (6) secure property and contract rights; (7) create effective oversight of financial institutions and functioning credit markets; (8) strengthen legal institutions.[48]

Surveying the empirical literature on institutions and FDI, one may identify distinct institutional concepts coinciding with these objectives. To provide an analytically fruitful categorization of these, the traditional political and economic institution dichotomy is expanded. The former is split in *personal freedoms* and *political governance* to separate the rights protection from the system of political preference aggregation and governance. The latter is split in institutions facilitating *economic interaction* between actors in the marketplace, and the *economic regulation* of financial institutions such as banks.

Personal freedoms (see Figure 2.1) thus consists of human rights and labor standards. Protection of these are important aspects in the creation of social cohesion and equality in opportunity (objectives 1 and 2). Aspects appertaining to *political governance*, democratic preference aggregation and control of corruption, capture host governments' ability to secure ubiquitous participation in the political system, the government's efficiency, and its transparency and accountability (3, 4, and 5). The *economic interaction* concepts, protection of property rights and enforceability of contracts, have been directly assessed in relation to FDI. As has those of *economic regulation* such as institutions expediting movement of money and the quality of banks and credit. These are parallel to the latter three objectives (6, 7, and 8).[49]

2.4.3 Institutional mechanisms

The institutional mechanisms are now considered. Some of these mechanisms affect FDI directly and some in a more indirect way. Connections runnig through economic growth or political instability, which in turn is assumed to affect FDI, are examples of the latter. It is not within the scope of this thesis to distinguish between direct and indirect effects analytically, but future studies should examine this.

Personal freedoms: human rights and labor standards protection

Human rights and the upholding of labor standards are concepts closely interlinked. Conventional wisdom on their relation to FDI mirrors some of the duality expressed with respect to the theories on regime

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[47]Summarized from: Rondinelli and Behrman (2000), Kogut and Spicer (2002), and Rondinelli (2003, 2005).

[48]Dunning (15-25 2005), in an assessment of Eastern European transition economies, actually underline that these structures all tend to be important for the locational-decision of MNEs as well.

[49]For an empirical examples examining the concepts and their link to FDI see for example: Blanton and Blanton (2007) for human rights; Kucera (2002) for labor standards; Li and Resnick (2003) for political preference aggregation; Wei (2000) for corruption; Asiedu, Jin and Nandwa (2009) for property rights protection; Egger and Winner (2003) for contract enforeceability; Bevan, Estrin and Meyer (2004) for banks and credit.
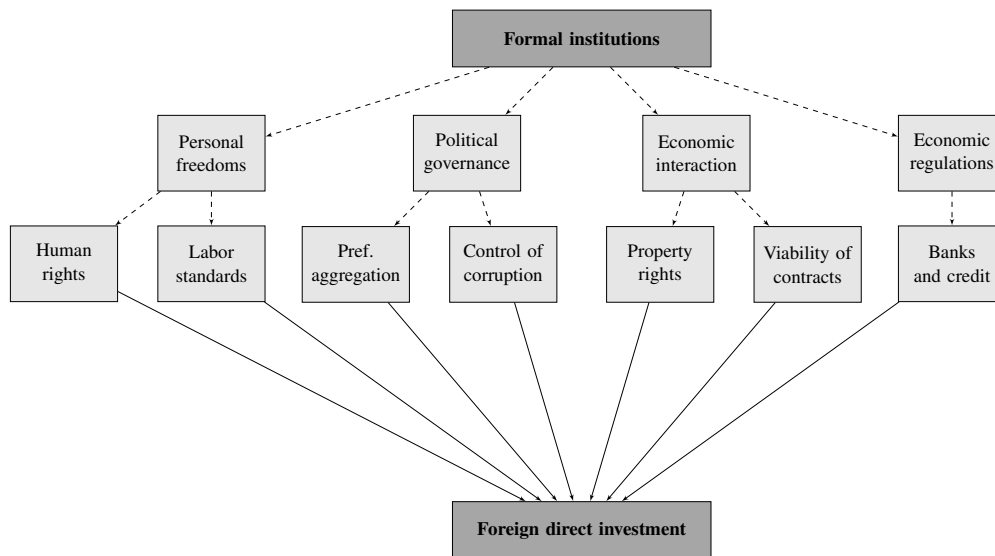
Figure 2.1: Causal model: institutions unpacked and foreign direct investment

type and FDI, as discussed below. Dependency theory (see e.g. Cardoso and Faletto, 1969; dos Santos, 1970) conventionally posits that low-standard countries are havens for foreign investors, based on a classic "race to the bottom" assumption (see also Chan and Ross, 2003). However, other perceptions prevail withal. Consider first the relationship between *human rights* and FDI. It is ambiguous to say the least, but there are increasing arguments for why investors act contradictory to the "race to the bottom" convention. At the most fundamental level human rights are the rights to be a human – they are ordinary legal rights in most countries (Donnelly, 2003, 11). The enforcement of them however vary widely. There are at least two reasons for why FDI decisions may be affected by a human rights protecting environment. One regards the increasing audience costs arising from global "spotlight regimes" monitoring production practices (Spar, 1998, 9). Being caught red-handed violating human rights in production increases the chance of consumer sanctions in local and global marketplaces. Decreased communication and transportation costs globally (see e.g. Keohane and Nye, 1998), help increase the reach of non-governmental organizations (NGOs) and thereby the salience of the "spotlight regime" (ee e.g. Starr, 2000; Letnes, 2002).[50] In turn, awareness around MNEs locational choices amongst consumers has increased, levying the standards by which MNEs need abide (Busse, 2004, 60).[51]

The second effect of human rights protection runs through political violence. MNEs operating in abusive regimes run an increased risk of experiencing attacks and sabotage on their facilities by repressed

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[50]Local activists with limited funding can now, thanks to developments in communications technology, build international coalitions and spread information on human rights abuse faster and with more influence (see e.g. Ronfeldt and Thorup, 1995).

[51]This effect is probably most prominent when the MNE comes form a Western country, standard-bearers at the forefront of the international responsibility march. High-profile examples of companies experiencing market sanctions due to complicity with abusive governments include Nike in Indonesia, Unocol in Myanmar and Texaco in Ecuador (see e.g. Ottaway, 2001).

groups seeking national or international attention.[52] Such turmoil might decrease the security of MNEs' employees (Blanton and Blanton, 2009, 472). Insecurity created by the chance of upheaval in turn impose uncertainty premiums and most likely extra security fees on MNEs wishing to invest there.

Labor standards and inbound FDI are connected by some of the same mechanisms.[53] First of all, the "spotlight mechanism" might also work punitive if violations of labor standards are divulged (Spar, 1998).[54] Second, freedom of association allows founding of workers' organizations such as unions, giving workers independence from employers and the state. Allowing for organization and negotiation of legally binding collective bargaining agreements is the foundation of stable and long-term labor peace, decreasing the chances of strikes. When conflict is shifted from the workplace to the political level, stable bargaining equilibrium should result in fewer industrial disputes (Robertson and Teitelbaum, 2011, 669).

Third, higher labor standards may affect the opportunity and quality of labor, and in turn productivity. As international production involves more and more manufacturing and services relative to resource extraction, expectations and requirements of labor quality change (Spar, 1999, 64). Labor standards are not equivalent to higher productivity, but the ability of a country's citizenry to attain the skills necessary for effective production is more likely in an environment where labor rights are respected.[55] Citizens in secure employment should be more willing to contribute their time and ideas towards firm productivity.[56]

It should be noted that both human rights protection and labor standards upholding on FDI may also affect FDI negatively. The main argument would run through their effect on the costs of labor. Higher protection of for example workers' right to form unions may increase their leverage in collective wage bargaining, and in turn increase their wage-demands and the costs of production (Robertson and Teitelbaum, 2011, see e.g.). The scale and scope profits MNEs intended to reap by venturing abroad may be lost with too high wage levels, and as such their willingness to invest decrease.

Political governance: preference aggregation and corruption

Substantial research exists on the effect of regime type on FDI allocation, although both findings and theory is ambiguous.[57] I consider the minimalist interpretation of democracy in discussing the effect of regime type so to distinguish these effects from those of the human rights and labor standard situations.

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[52]Examples are abundant. In Nigeria for example, Shell experienced kidnappings and repeated sabotage as a consequence of marginalized groups in the oil-rich region protesting against the government (see e.g. Haufler, 2002). In Sudan, Chevron was forced to abandon production in two oil-fields due to the killings of several employees (see e.g. Schulz, 2001).

[53]Labor standards typically include freedom of association, collective bargaining, prohibition of forced labor, elimination of exploitative child labor, and nondiscrimination in the workplace (Krueger, 1996, 1).

[54]Spar's (1998) argument does not explicitly distinguish human rights from labor standards.

[55]Moreover, evidence shows that higher labor standards may lead to more rapid economic growth which in turn has been shown to attract FDI (Kucera, 2002, 34). This has especially been shown to be true of reductions in child labor deployment, a key violation of international labor standards (Galli, 2001). The use of child labor deter future levels of human capital as these children lose out on the opportunity of becoming more productive in the future (Emerson and Souza, 2011).

[56]An example of this search for high-quality labor is Intel's decision to build a semiconductor test and assembly plant in Costa Rica. The locational decision was based on Costa Rica's human rights track record, as well as the country's ability to produce skilled labor (see e.g. Spar, 1998).

[57]The empirical ambiguity was discussed above. For theoretical contradictions, see O'Donnell (1988) versus Olson (1993).

That leaves me with aspects pertaining directly to the system of preference aggregation in society and the control of corruption. The latter concept is by many thought of as an economic malfunctioning of the state, and it could well have been discussed as a part of the economic interaction category. It is discussed in the context of political governance simply because it also can be seen as a fallacy of lower-level constraining of public officials, inherently a political wrongdoing.

National systems of *preference aggregation* perceivably affect MNEs through at least two channels.[58] First, political competition affects the level of social tension in society because the degree to which real competition for political power exists define the interaction between workers, employers, and the state (see Robertson and Teitelbaum, 2011, 668-9). In regimes with no public political competition, social tensions are dealt with by suppression. Introducing a degree of competition for political power effectively shifts some of the power from the state to the electorate as the incumbent has to consider the popular opinion.[59] When political competition increases further, political parties gain autonomy from the state and social organizations become potential political power factors. In turn, more political openness forces political parties to embrace working class voters to win elections.[60] In essence, political competition forces the incumbent and political parties to integrate the working class' interests in their political considerations, and by so conflict is dealt with at the political level.[61] The adverse case, social instability "diverts resources that would otherwise have gone into productive long-term investments into forms of wealth that are more easily protected, or even into capital flight to more stable environments", according to Olson (1982, 165). Political instability, to be sure, is especially undesirable to MNEs and might contribute to divert their capital elsewhere.

Second, national leaders' room to act opportunistically also affect MNEs' locational decisions. By way of minimizing potential government appropriation of private property, uncertainty on investment decreases (Li, 2009, 1103-11). Arguments moreover suggest that democratically elected governments on average protect property rights better than authoritarian ones (see e.g. Olson, 1993; Knutsen, 2011). The idea is that the state offers to protect individuals' property in exchange for taxes. Protection however is not self-enforcing and in certain instances the state might have incentives not to honor this social contract (for example when in war). "Therefore, the provision of effective property rights protection relies on a constrained state" (Li and Resnick, 2003, 186). Increasing the number of political veto players fetters opportunistic behavior by leaders.[62] While it could be argued that a benevolent autocrat with a long time-horizon might also defend citizens' property rights (see e.g. Olson, 1993; Clague et al., 1996), their credibility diminishes the more they feel accountable to the ruling elite and the less they

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[58]Key subcomponents of democratic systems of preference aggregation are: the processes whereby executive and legislature is elected by popular vote, the lawful and actual existence of multiple parties within the legislature, the absence of advantages in favor of the incumbent, and the constraints on the incumbent (Przeworski et al., 2000; Przeworski, 2010). See more in the operationalization in Section 3.3. See also Dahl (1971, 2000) and his concept of representative democracy.

[59]As witnessed in for example the competitive authoritarian regime in Mexico (see e.g. Magaloni, 2006).

[60]See the emergence of socialist labor parties in Europe competing for workers' votes (Przeworski and Sprague, 1986).

[61]See also Feng (2003, 93-109) for empirical corroborations of various measures of democracy enhancing political instability.

[62]As argued by North and Weingast (1989). See also Stasavage (2002).

mind the preferences of the general population. Therefore, constraints on the executive may reduce the perceived uncertainty of MNEs surrounding their property and affect the decision on where to invest. Specific arguments as to why poor protection of property rights affect investors are presented below.

Note however, also democratic institutions might impede inbound FDI. Taxes for example have been argued to be higher in democracies as the median winning coalition member will be poorer than the average autocrat. Moreover, tax monitoring and collection is arguably more rigid in democracies (Boix, 2003, 23-5). A number of studies in turn show that lower taxes on profits repatriation affect both the timing of repatriate decision and mode of repatriation by MNEs (see e.g. Altshuler, Newlon and Slemrod, 1993; Hines Jr., 1994; Mutti and Grubert, 1996; Altshuler, Grubert and Newlon, 2000). While this suggests that taxing can affect the profitability of MNEs, it is not necessarily evidence that overall FDI will decline. But, higher taxation might well have a negative effect on FDI.

Corruption is a specific feature of the political regime tightly inter-vowed with the degree to which constraints are put on the executive power (see e.g. Shleifer and Vishny, 1993). Although an early strand of literature supported a "helping hand"-notion of corruption, underlining how such could positively affect productivity by allowing investors to leapfrog excessive red tape (see especially Leff, 1964; Huntington, 1968), most later theory find corruption to be detrimental to growth and productivity – a "grabbing hand" (Nye, 1967; Rose-Ackerman, 1975; Shleifer and Vishny, 1993).[63] The standard economic definition of corruption denotes the use of "public office for private gains" (Bardhan, 1997, 1321), but corruption might also be political, whereby increased political power is the ill-gotten gain.[64]

There are at least three ways the degree to which policy climates controlling corruption might affect inbound FDI. The most obvious effect of corruption on FDI is the distinct cost premium it represents. Having to pay bribes when attempting to obtain investment licenses is obviously a disincentive to investment. Similarly, losses on corruption-based investments are not deductible the same way taxable income is in some countries (Bardhan, 1997, 1327-8). As such, corruption is more distortionary than formal taxation. An aggravating factor is the secrecy of corruption. MNEs are often legally sanctioned when found guilty of complicity in corruption. The efforts to avoid detection and punishment might be even more costly than the bribe itself, and low control corruption may thus impede FDI.

Secondly, an indirect effect of corruption on FDI runs through general growth and productivity. Besides distorting taxable income, corruption has been known to reduce growth through reducing the incentive for domestic investment (see e.g. Mauro, 1995; Knack and Keefer, 1995; Rodrik, 1996), and to reduce the profitability of productive investments relative to rent-seeking investments, effectively stifling productivity growth (see e.g. Murphy, Shleifer and Vishny, 1993).[65] "[C]orruption as a tax on *ex post*

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[63]Theobald (1990, 130) vividly puts it: "the political ascendance of naked self-interest intensifies social inequalities, encourages social fragmentation and internecine conflict and propels a corrupt society into an unremitting cycle of institutional anarchy and violence".

[64]See more in: Gray and Kaufmann (1998) and Lambsdorff (2001).

[65]Rent-seeking investments seek to capitalize on the scarcity value of a good or service rather than entrepreneurship and the production of new goods (Krueger, 1974, 291).

profits may in general stifle entry of new goods or technology which require an initial fixed cost invest-ment" (Bardhan, 1997, 1328). Corruption may have a negative impact on the productivity of capital.

Third, corruption also tend to breed ineffective and unstable governments (see Rose-Ackerman, 1975; Lambsdorff, 2003, respectively). The strive for the fruits of corruption might make governments inca-pable of carrying out their declared programs, reducing their popular support. This in turn may un-dermine government stability and in turn deter foreign investment as MNEs have to interact with these de-stabilized host-governments (see e.g. Olson, 1982; Brunetti and Weder, 1998).

Economic interaction: property rights and contracts

"Freedom to exchange [...] is meaningless if individuals do not have secure rights to property, including the fruits of their labor", Gwartney, Lawson and Hall (2011, 6) hold.[66] Uncompensated property losses are by and far the worst possible scenario for an MNE conducting FDI. Indeed, property rights protection systems are frequently cited to be the key conduit of economic progress is (see e.g. North, 1990; Knack and Keefer, 1995). The essence of the argument is that a dearth of property rights security discourage not only investment, but also specialization.

Systems of property rights protection may affect inbound FDI in at least three ways. First, property rights protection are costly to police and enforce. If MNEs are made to conduct these functions them-selves, a substantial premium will be deducted from their net gain calculus. The presence of national systems protecting property rights define the size of this discount, and therefore also whether MNEs finds it attractive to invest or not (North, 1990, 62). Second, property rights systems also affect MNEs inclination towards specializing through affecting the costs of production. Technology level deployed by MNEs depend on whether such is protected on the one side, and allowed to blossom on the other. Institutional arrangements protecting the exclusive right to use ones technology may affect the quality of technology available to MNEs, and thereby potential growth in the initial FDI.[67]

Third, much of the literature on property rights and development consider the particular case of ex-propriation (see e.g. North and Weingast, 1989; Barro, 1996; Weimer, 1997).[68] The special pervasiveness of government-induced divestment or expropriation is that it leaves MNEs without any protective rights in the host country – the protector becomes the aggressor. One would therefore expect uncertainty arising from potential expropriation or forced divestment to affect the MNEs locational decision profoundly.

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[66]Property rights systems is "a method of assigning to particular individuals [or firms] the 'authority' to select, for specific goods, any use from an unprohibited class of uses" (Eggertsson, 1990, 33). See also North (1990, 1991) and Eggertsson (2005).

[67]In this context, certain scholars have examined the importance of protecting intellectual property rights (IPRs) in particular (see e.g. Oxley, 1999; Yang and Maskus, 2001; Javorcik, 2004*a*). Due to the complete lack of broad ranging measures of IPR, this concept is not assessed here. It would however have been interesting to asses the distinct effects of protection of physical and intellectual property rights. Efforts to quantify the protection of intellectual property rights are underway however (Dedigama, 2008). See information on the International Property Rights Index here: www.internationalpropertyrightsindex.org.

[68]Expropriation is the forced transfer of output and physical assets from firms to governments (Kobrin, 1980, 67-9). While the actual occurrence of full-scale expropriation is now quite rare (see e.g. Kobrin, 1984; Minor, 1994), forced divestment or partial expropriation is still quite pervasive in the developing world (ee e.g. Asiedu, Jin and Nandwa, 2009). Forced divestment is most likely to be a policy tool to achieve some long-run political objective (Kobrin, 1980, 67), and is therefore closely knit with the functional distribution of power. See also Schnitzer's (1999, 1115) idea of "creeping expropriation".

Next, as regards *contract viability*, North (1990, 54) underlines "the inability of societies to develop effective, low-cost enforcement of contracts" as a key obstacle to economic success.[69] As property rights, the contracting environment has important implications for economic growth (see e.g. Acemoglu and Johnson, 2005), and empirical studies have shown that contract viability also affect FDI positively (see e.g. Gastanaga, Nugent and Pashamova, 1998; Egger and Winner, 2003; Ahlquist and Prakash, 2010). Contracts are germane to most economic activity, governing the interface between actors and through reducing uncertainty. They can be between either two or more private actors or between private actors and governments (see e.g. North, 1981; North and Weingast, 1989; Olson, 2000).[70] The enforceability of private contracts depends crucially on the legal system of a country, which is the basis for settling the terms of business transactions and resolving commercial disputes.

The foremost way in which contract viability affect MNEs' decision on where to invest is manifested through the contractual webs of all business. Without contract enforceability, substantial costs are imposed on private actors. These transaction costs erode MNEs' potential profits, and make FDI less attractive. Business-to-business contracts are crafted to avoid opportunistic exploitation of interfirm uncertainty. Without structures facilitating the upholding of agreements, commercial actors have fewer incentives to commit to long-term investments. FDI is conducted with long time-horizons, and therefore low enforceability of contracts can be expected to seriously impede to the investment decision. Moreover, MNEs tend to have fewer non-governmental means to enforce contracts than their domestic counterparts. Local firms might police their agreements through informal business networks and corresponding sanctions. MNEs however are less likely to be embedded in such networks or structures, and thus depend even more on governments to secure their contracts (Ahlquist and Prakash, 2010, 183).

Economic regulation: quality of banks and credit markets

Well developed financial systems and credit markets are integral to the establishment of foreign capital and closely related to the viability of contracts (see e.g. La Porta et al., 1998; Clague et al., 1999). The provision of credit is essentially a non-simultaneous transaction where the creditor provides capital in expectation of a later return. With high levels of insecurity, this transaction might prove costly.

Banks and credit markets serve multiple functions for foreign investors. There are at least three ways in which these structures may affect FDI. First, the ability of investors to move money in acts of investment, reinvestment, or principal-to-subsidiary transfers is a crucial factor in their quest for capital accumulation (Coan and Kugler, 2008, 405). To ensure the longevity of an investment, host-governments

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[69]"Contracts specify the rights and obligations of the transacting parties and enable impersonal exchange over space and time" (Ahlquist and Prakash, 2010, 185). They are rarely self-enforcing, and government is needed to secure reciprocal trust.

[70]Enforceability of contracts with governments relate to the probability of opportunistic behavior. Governments may breach their obligations for rational or irrational reasons. For example, in the advent of government change, new governments, for ideological reasons, may not consider themselves committed to the agreements of the previous one. Furthermore, failure to honor contracts with foreign firms may also result from xenophobic nationalism, exploited by the government or the opposition for political reasons. Opportunism is discussed in the context of political preference aggregation, and is therefore not included her.

need see to that agreements such as long-terms loans taken up in local credit markets, are followed up (see e.g. Olson, 1993). Research has shown that in the absence of a financial infrastructure facilitating economic transfer, MNEs recourse to internal capital markets, undermining the existing systems of exchange and reducing the chances of increases in the initial FDI stock (Desai, Foley and Hines Jr., 2004, 2451). In addition, moving credit within internal international investment hierarchies expose the MNE to exchange rate risk (Bevan, Estrin and Meyer, 2004, 48).

Second, there are payment systems. Where channels are lacking through which firms can transfer payment to their employees or suppliers, costs are likely to arise as the MNE needs to find alternative ways of conveyance (Bevan, Estrin and Meyer, 2004, 48-9). Last, in an economy with ample access to sound credit, local customers are also more likely to have spending power. This in turn raises local demand for MNE goods and create flourishing markets (Bevan, Estrin and Meyer, 2004, 48-9). Credit can be seen as the oil of market exchange. The absence of sound money undermines the gains from FDI.

Table 2.1: Institutional mechanisms summed up

Institutional concepts	Mechanisms/effects
Human rights protection	(1) Spotlight regime
	(2) Decreasing political violence
Labor standards upholding	(1) Spotlight regime
	(2) Labor peace
	(3) Productivity gains
Political preference aggregation	(1) Politicizing conflict
	(2) Impeding opportunism
Control of corruption	(1) Cost premium
	(2) Productivity growth
	(3) Political stability
Property rights protection	(1) Cost premium
	(2) Increasing specialization,
	(3) Impeding expropriation
Contract enforceability	(1) Cost premium
Quality of credit	(1) Facilitating movement of money
	(2) Supplying payment systems
	(3) Increasing local demand

All mechanisms are discussed in the text.

Institutional mechanisms summed up

The institutional mechanisms are summed up in Table 2.1. Before moving on, it can not be underlined enough: these mechanisms, as institutions themselves, are not independent of each other. There are a number of studies showing that status on one institutional parameter may affect the status on others. Democracy, for example, has been found to provide better property rights systems than autocracies (Knutsen, 2011). Another is the link between contract viability and credit quality. Credit transactions depend on third-party enforcement of the lending contracts, and in societies where lending agreements

are repeatedly abrogated, capital markets are often limited (see e.g. La Porta et al., 1998; Clague et al., 1999). On a more general note, remember Acemoglu, Johnson and Robinson's (2005) integrated theory of the interplay between political and economic institutions. Their argument in essence imply that there may be a circular reciprocity between the different categories of institutional concepts discussed above.

The inherent interdependence of these effects is not solved simply through discussing them in separate. The problem when assessing the effect of institutions is not categorizing them, but separating the individual effects of different constructs. Statistical multicollinearity is discussed in Section 3.6.1, and solved by examining different institutional constructs separately. When discussing estimated effects however, the potentially tandem occurrence of certain results should be viewed as an indication that differing concepts sometimes capture the same effects.

2.4.4 Disaggregating FDI

The main endeavor of this thesis is to provide a richer understanding of the institutional determinants of FDI by distinguishing between varieties of FDI. In spite of all the empirical incoherence presented above, empirical assessments endemically lack acknowledgments of FDI complexity.[71] Differentiations of FDI have been made on the basis of multiple criteria, perhaps most prominently according to whether natural resource availability, efficiency gains or access to new markets motivates the investment (see e.g. Dunning, 1998; Caves, 2007).[72] Although insightful in its scope, contrasting of FDI as a function of investment motive has obvious flaws complicating empirical assessment. The most pressing problem of the motive distinction is that the categories are not mutually exclusive. It is not unthinkable that a garment producer looking to set up a textile factory could be motivated by both the efficiency gains of cheap labor, as well as the access to a new consumer market. Another problem with the motive-based disaggregation is that MNEs' motivation may well change with experience in new markets. Increased scope of production may for example alter the motives driving FDI (Dunning and Lundan, 2008, 68). Investigating the relative salience of any variable across categories that are not mutually exclusive is problematic as certain firms would be represented multiple times.[73]

A more objective taxonomy is distinguishing between economic sectors of activity. Economists often divide business into three such categories, and MNEs "within each of these sectors share a number of common traits and effects that tend not to be found in companies operating in other sectors" (Cohen, 2007, 78). Using sector as a differentiator then is simply a question of separating FDI based on MNEs' areas of activity. Thus, to test the relative importance of the different institutional outputs presented above, I chose to split MNEs according to whether they operate in *natural resource extraction*, *manufacturing production* or *services supply*. Given the present level data quality, this distinction arguably

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[71]Honorable exceptions being Busse (2004); Schulz (2007); Blanton and Blanton (2009); Ali, Fiess and MacDonald (2010).

[72]See Cohen (2007, 62-92) for a review of other sources to FDI heterogeneity.

[73]More fundamentally, separating between types of FDI based on their motive entails building in assumptions on subjective motives of investors, which is problematic when those assumptions in turn create distinctions on which an assumed relationship between FDI and institutions is formulated.

preserves the most useful variation in the data while being the most sound approach theoretically.[74]

According to UNCTAD,[75] investments in *extractive industries* typically encompass: petroleum extraction; mining; quarrying; aquaculture; agriculture; forestry. *Manufacturing industries* consist of single component or assembly industries in areas such as: food; textile; leather; pulp and paper; chemicals; rubber and plastic; metal fabricates; machinery and equipment; electrical and optical equipment; transport equipment; furniture; recycling of waste. *Services* consist of: financial services; business activities such as real estate, rentals, and research and development; transport, including telecommunications and postal services; wholesale and retail trade.

Table 2.2: Bivariate correlations between Norwegian sectors of FDI

Variables	TFDI	NRFDI	MFDI	SFDI
TFDI	1.000			
NRFDI	0.711	1.000		
MFDI	0.819	0.540	1.000	
SFDI	0.805	0.322	0.411	1.000

NRFDI = natural resource FDI; MFDI = manufacturing
FDI; SFDI = services FDI. Data from Statistics Norway.
See Section 3.2 for volumes.

A preliminary inquiry into the heterogeneity of FDI is depicted in Table 2.2. By assessing bivariate correlations between FDI from different economic sectors one observes that investors on the balance seem to differ substantially in where they place their equity. For reasons expatiated on below it would be natural to assume natural resource investors to diverge more from manufacturers and service suppliers in their investment behavior, than manufacturing and services would differ from each other. But, as the correlations show, not only does natural resource FDI, at 0.540 and 0.322 respectively, show low correlations with manufacturing and services, but the correlation between services and manufacturing is at a mere 0.411. This unexplained complexity is what the following theory hopes to capture.

2.4.5 Sectoral traits

To form coherent expectations about *how* institutional concepts across economic sectors might help elucidate the unexplained FDI heterogeneity in Table 2.2, sectoral traits are identified. Since this is a fairly novel field of empirical assessment, as well as a holistic vantage point, the assumptions are built on fairly commonsensical perceptions of MNE attributes. The key differentiators between the varieties of FDI are argued to be: size of FDI; relative sunkenness; marginal value added of MNEs' operations; MNEs'

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[74]Dunning's (1998) tripartite distinction of FDI on motive is more or less aligned with two of the sectoral categories. While almost all extractive FDI is resource-seeking, FDI in services is usually market-seeking due to the virtual non-tradeability of services (UNCTAD, 2004; Kolstad and Villanger, 2008). Manufacturing FDI on the other hand might be both market- and efficiency-seeking, depending on the good produced. In the assumptions formulated below, insights from the distinction on motive are used as regards the two former sectors.

[75]See: http://www.unctad.org/templates/Page.asp?intItemID=3149&lang=1

relative urban presence; integration in local labor markets; closeness with which producers are in contact with end users; complexity of operations. Some sectors are difficult to score within certain categories, for example due to further within-sector heterogeneity. Therefore you will sometimes experience that discussions of traits' relative importance in certain sectors do not fully juxtaposed all three sectors in each of the following seven paragraphs. Traits are summarized in Table 2.3.

Size of FDI is an important trait to understand as it is often linked to the potential for scale and scope gains, as well as indicating the potential loss on investment that MNEs might be exposed to in the case of fallacy.[76] Although there has been a rise in small and medium sized MNEs since the late 1990's (see e.g. Liesch and Knight, 1999), it should still be safe to claim that the average FDI is larger than the average national investment. The simple reason is that setting up foreign production involves more fixed costs than national investments, for example through: pre-investment monitoring; market surveying costs; setting up of foreign affiliate management channels from home-country offices. Investing abroad is relatively costly, and as such, FDI would need to be fairly sizable to be deemed profitable *ex ante*. Although this trait is classified high for all sectors, the initial equity transfer should be highest for the extractive activity.[77] The costs incurred by seismic surveying of petroleum dwellings and setting up of land-based or offshore extraction facilities are extensive. Additionally, specific transport infrastructure such as pipelines or liquefying facilities needs construction. As regards FDI in manufacturing, the initial costs are likely to be lower than for extractive industries, varying with whether investments are in green-fields or in mergers and acquisitions. If production facilities are set up from the ground they should be higher than if existing production facilities are merged into MNE production networks.

The *sunkenness of FDI* matters for the locational decision as it says something about the commitment to a new market. As a trait it should vary significantly across sectors. Natural resource FDI is expected to be most sunk in the sense that the physical facilities involved in such operations are largely immobile and site-specific (Schulz, 2007, 12). The extent to which these facilities are constructed for certain locations, dependent on water depth, ground structure and so forth, make them less applicable in other locations. The sunkenness of investments in manufacturing and services depend on whether production facilities are owned or leased. Either way, given that facilities are wholly-owned by the MNE, production buildings and office space should be easier to sell off than extractive facilities.

The *size of the profit margin* on which MNEs produce is important as it indicates to which degree it can cope with petty losses or short-term production halts. FDI in natural resources should exhibit the highest degree of marginal value added (Vivoda, 2011, 1). The "structural shift" on the demand side has created price booms not only in petroleum, but also metallic minerals. Illustratively, UNCTAD in 2007 stated that petroleum and metal "[p]rices are likely to remain high" (2007, 90).[78] Generally high

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[76]The effect of traditional Ricardian type L-factors has for example been found to differ among large and small and medium sized Japanese MNEs investing in Asia for example (see e.g. Kinoshita, 1998).

[77]"The extraction of mineral resources is largely dominated by large-scale, capital-intensive investments [...] characterized by a high degree of uncertainty and long gestation periods" UNCTAD (2007, 91) note.

[78]After oil prices begun to decline in real terms after the findings of new petroleum reserves in non-OPEC countries such as

sales prices imply a marginal value added so high that losses might be compensated fairly quickly (see e.g. Bravo-Ortega and De Gregorio, 2005). FDI in manufacturing, to the degree that such are conducted to realize efficiency gains is most likely to produce closest to the margin.[79] Offshoring production of goods is often a sign of discontent with the costs of producing at home. As regards FDI in services, the picture is likely to vary according to whether FDI is in industries like wholesale and retail trade, or more in-demand services such as finance, insurance, and telecommunications.

Whether MNEs exhibit high *urban presence* or not might define whether the encumbrance of social and political instability affect production. FDI in services is imply suppling a service through a direct relationship with a customer. Due to the virtual non-tradability of such, they need be "physically present in the place where their product is consumed" (Cohen, 2007, 82).[80] The dependence on close customer contact should contribute to these businesses locating their facilities in or around financial centers, which is where the consumers of their products are. FDI in natural resource extraction is likely to be most secluded geographically. Indeed, "[m]ost mines, oil wells, plantations, and so on are largely self-contained enclaves (sometimes fenced in communities) located away from main population centers" (Cohen, 2007, 79). The physical presence of manufacturing MNEs however is more equivocal. To the degree that they seek the efficiency gains of scale and scope, they will need to locate where labor is available. However, in many countries manufacturing production is conducted in export-processing zones (EPZ), in essence artificial production enclaves sometimes located far away from urban centers.[81]

The MNEs' *host-country labor market integration* define whether they need to consider local labor relations or not. Manufacturing is most likely to employ local labor. Whether the product manufactured needs high or low skilled labor should matter little, it would be of little economic logic to offshore production and transport the whole national labor pool employed to produce overseas. Indeed, Cohen (2007, 80) notes how host-countries tend to find manufacturing FDI particularly appealing because of the group's ability to create local employment and increase operations as earnings are reinvested. FDI in natural resource extraction should on the balance be very poorly integrated in the host-country's labor market, exhibiting a "silo mentality" (MacDonald and McLaughlin, 2003, 235). Moreover, they source very few inputs from local suppliers (Schulz, 2007, 10). As regards services it is difficult to say, but it should be safe to assume commercial services such as hotels, restaurants and retailers to hire more locally than petroleum extractors.

Norway, Mexico and the Soviet Union in the mid 1980's, they have been on average growing steadily since the agreement to reduce supply was signed in 1998 between OPEC and non-OPEC countries. Metal prices, having been in a long decline since the early 1970's du to reduced intensity in use of metals in many countries (see e.g. Tilton, 1990), prices began to rise sharply in 2004 (UNCTAD, 2007, 88-9).

[79]This will of course vary somewhat depending on the manufacturing industry. Producers of certain up-market goods for example will probably have substantially higher profit margins than simpler assembly industries.

[80]There are however signs that services are becoming more tradable, see UNCTAD (2004, 148-9). Non-tradability means that "most services are non-storable and hence need to be produced when and where they are consumed" (UNCTAD, 2004, 97).

[81]EPZ production is fairly common in countries like the Dominican Republic (Schrank, 2008), Mexico (Graham and Wada, 2000) and Mauritius (Johansson, 1994; Rodrik, 1999*a*, 2000), to mention some.

Whether MNEs (either at home or in the host-country) have *close contact with end users* of their product or not might have important ramifications for how they craft their business profiles. Both manufacturers and service suppliers are likely to be fairly exposed to their product consumers. For those manufacturers that function as intermediate product suppliers, the degree to which NGOs and other social hawks increasingly scrutinize MNEs global value chains may force end product assemblers to treat their intermediates as if they are in direct contact with the customer themselves (see e.g. Starr, 2000). Extractors of natural resources, because such almost exclusively are sold on global resource markets, because world demand for energy resources is so high, and because different firms extract and refine the resources, will most likely have little contact with their end product users (UNCTAD, 2007, 90-1).

The *complexity of foreign operations* define the amount of nodes where MNEs come in contact with local actors. Both FDI in natural resources and services are fairly complex in their own specific manners. As regards extractive investments, such have come to deploy more and more high-tech solutions in their extraction procedures. Petroleum extraction, for example, follows from advanced seismic monitoring procedures, and pumping, liquefying and refining of oil and gas are complex procedures. Different extraction routines (onshore or offshore) calls for site-specific knowledge. The site-specificity should increase as new types of unconventional resources are discovered. The global demand for natural resources is also likely to remain so high that market-facilitating structures should be provided (UNCTAD, 2007, 90-1). FDI in services is intricate in the form of contractual complexity, and increasingly so (see e.g. UNCTAD, 2004). Delivering a service good implies agreeing on what to be delivered, when, and to what price. FDI in manufacturing may be complex also, for example full scale manufacturing of for example electrical and optical equipment or computers. The increasing diversification of value chains makes manufacturing production the sector most likely to procure intermediate products in their operations locally, yielding a different kind of operational complexity.[82]

Table 2.3: Relative importance of traits across sectors

	The Varieties of FDI		
	Nat. resource FDI	Manufacturing FDI	Services FDI
Size of FDI	High	High	High
Sunkenness of FDI	High	Varied	Low
Size of profit margin	High	Low	Varied
Urban presence	Low	Varied	High
Local labor market integration	Low	High	Varied
Closeness of end user contact	Low	High	High
Complexity of operations	Varied	High	High

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[82]For a discussion of value chain complexity, see Gereffi, Humphrey and Sturgeon (2005).

2.4.6   Effects interacted

These traits should affect how different types of MNEs weight institutional contexts in host-countries. Table 2.4 sums up the arguments for how MNE idiosyncrasies and institutional concepts are thought to interact. The number in each cell represents one particular argument defining an interface. Each argument is described in the following text, connoted with numbers corresponding to those in the Table.

Table 2.4: Effects interacted on the back of traits and institutional mechanisms

	Size of FDI	Sunkenness of FDI	Marginal value added	Urban presence	Local labor market integ.	End user contact	Complexity of operations
Human rights protection		**X** (3)				**X** (14)	
Labor standards upholding			**X** (6)	**X** (9)	**X** (12)	**X** (15)	
Democraticness of preference aggregation	**X**(1)	**X** (4)		**X** (10)			
Control of corruption			**X** (7)				**X** (18)
Property rights protection	**X**(2)	**X** (5)		**X** (11)			
Contract enforceability						**X** (16)	**X** (19)
Quality of banks and credit			**X** (8)		**X** (13)	**X** (17)	**X** (20)

All investors deeply care for protection of their property, this is one of the main tenets of North's NIE (1981; 1990; 2005). But as investments grow in size the potential loss a case of ownership rights violation or expropriation might incur should rise, simply because the real loss on investment is bigger. The general argument is that the larger the investment, the more MNEs can be expected to value good protection of property rights (*argument 2* in Table 2.4). In the same vein, you would expect MNEs to value political climates where the incumbent is constrained so that opportunistic acts of expropriation or forced divestment becomes nonviable (*argument 1*).

The relative sunkenness of FDI may affect MNEs' valuation of two of the institutional concepts. With immobilized equity, MNEs become more vulnerable to sabotage and violent attacks on production facilities that might arise in human rights abusive regimes (*argument 3*). Correspondingly, one might expect investors with stock-still positions to worry relatively more about the direct effects of non-democratic political regimes. With fewer escape routes they become more vulnerable to government opportunism such as expropriation or divestment measures, as well as undesirable side-effects of conflict in general (*argument 4*). This argument should also apply to the protection of property rights (*argment 5*).

The relative size of the profit margin should interact with three of the institutional concepts. Low

calculated profit margins may increase the salience of labor standards upholding, because higher standards is expected to decrease the chances of labor unrest and increase productivity (*argument 6*). Control of corruption should also be important if production is close to the margin. The cost premium brides and side-payments represent is more likely to yield negative profits if production is already close to the margin (*argument 7*).[83] At last, producing on the margin often means having limited capital reserves – in turn making the smoothness of money movement up and down value chains, and between suppliers and demanders, important.[84] Moreover, it may make continuous access to sound credit important. Therefore, well-functioning financial infrastructure should be a locational factor attracting producers operating close to the margin (*argument 8*).

Whether MNEs are located in or near urban centers or not should be important in relation to three of the institutional concepts. First, the contagiousness of strikes and the general social instability resulting from such is more of an issue when situated in or around cities, where most upheavals take place (*argument 9*). In the same manner, democratic regimes' way of dealing with conflict at the political level, decrease the chance for rampant instability driven by dissatisfied urban dwellers (*argument 10*). As for property rights protection, there should be more potential violators in cities, and with low public enforcement of property rights, private policing might become expensive (*argument 11*).

The degree to which MNEs utilize local labor, interact with two institutional concepts. The most obvious regards the protection of workers' rights. With large shares of locally hired workers, labor peace becomes salient to ensure continuity in production. Moreover, labor standards upholding might enhance the productivity of the labor stock and thereby future profit margins (*argument 12*). The ability of firms to move money (pay salaries) to its employees is also vital when hiring locally. Without stable and well-functioning channels through which the employer can pay employees, intra-firm trust may erode and with it important productivity gains.[85] Moreover, attracting the best workers become more difficult when payment channels are not moored in a sound financial infrastructure. Well-functioning and regulated banks and systems of credit is should thus be more important when hiring locally (*argument 13*).

With close end user contact, a number of institutional concepts might become important locational factors. First of all, Spar's (1998) "spotlight effect" only work if consumers have an interface in which they can sanction producers. With close demander contact, whether in local or global markets, MNEs should therefore worry more about human rights and labor standards (*argument 14 and 15*). Selling often involves committing to a contractual relation of some kind. For those MNEs that conduct such contractual sales in local markets, the enforceability of contracts should be important (*argument 16*). Similarly, those dependent on sales in local markets would profit from a vibrant local demand. Local demand should be spurred by stable access to credit and a sound currency (*argument 17*).

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[83]However, if the government knows that MNEs are abundant in capital, the asked-for bribes might be much higher.

[84]Producing close to the margin does not always imply meager capital reserves of course. There is a vital difference between affiliates' profits and principals'. Large principals with broad portfolios should depend less on individual affiliates' profit margins for liquidity. Since most FDI data are not at the affiliate-level, this is however a very difficult issue to control for.

[85]Trust has been found important for productivity in inter-firm relations and in small firm networks (see e.g. Sako, 2006).

The last trait, operational complexity, should be important in relation to three institutional concepts. Complex operations increase the amount of nodes where officials may demand bribes to grant for example operational licenses or transport permits. Thus, MNEs with highly complex operations should worry relatively more about host-country control of corruption (*argument 16*). Property rights theory holds that contract enforcement should matter relatively more for sectors that produce complex goods (Nicolini, 2007, 1).[86] Highly complex MNE operations in the sense that production require a large number of intermediate products or production where customer relations are contractually complex, should therefore consider host-country contracting environment an important locational factor (*argument 17*). At last, complexity of operations may create more individual capital transactions between MNEs and suppliers of intermediate products. These transactions should in turn depend on functioning payments systems, and as such the quality of financial infrastructure may be an important locational factor (*argument 18*).

2.4.7   The Varieties of FDI expectations

Based on the specific traits of the interactions sketched out above, expectations on the relative importance of the different institutional constructs may be formulated. Table 2.5 sums up the expected relationships, with the numbers in parentheses pertaining to the argument(s) discussed in the previous section. Shortly summarized, arguments are developed as to why both manufacturing and service supplying MNEs are attentive to all seven institutional concepts, while only three concepts are expected to matter for natural resource investors. This can be interpreted in line with the notion that natural resource extraction is more "different" from manufacturing and services than manufacturing and services are from each other.

Table 2.5: Expected relationships between FDI across sectors and institutional concepts

	Personal freedoms		*Political governance*		*Economic interaction*		*Economic regulation*
	Human rights protection	Labor standards upholding	Political pref. aggregation	Control of corruption	Prop. rights protection	Contract enforceab.	Quality of credit
NRFDI	+ (3)		+ (1,4)		+ (2,5)		
MFDI	+ (14)	+ (6,12,15)	+ (1)	+ (7, 18)	+ (2)	+ (14,17)	+ (8,13,17,20)
SFDI	+ (14)	+ (9,15)	+ (1,10)	+ (18)	+ (1,9)	+ (14,17)	+ (15,18)

NRFDI = natural resource FDI; MFDI = manufacturing FDI; SFDI = services FDI.

Natural resource FDI

The traits of natural resource extraction that accounts for the theoretical expectations are the size of FDI and its relative sunkenness. The former should indicate importance for property rights protection as size of investment increases potential losses on investment (*argument 2* in Table 2.4), and for the manner with which political preferences are aggregated. Democratic leaders remember, are less likely to act opportunistically (North and Weingast, 1989) (*argument 1*).

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[86]See Costinot (2005), Levchenko (2007), and Nunn (2007) for empirical corroborations of the contracts and complexity argument from research into trade patterns.

The degree to which natural resource investments are sunk should matter for the consideration of the human rights environment, the system of political preference aggregation, and the general protection of property rights. Protection of human rights should create less political violence and instability that expose sunk costs in facilities to potential attacks and sabotage (*argument 3*).[87] As regards the system of preference aggregation, the same argument as posited above holds. An unconstrained autocrat is more viable to expropriate than a constrained one (see e.g. North and Weingast, 1989). With expensive sunk-in physical equipment, natural resource extractive MNEs should therefore contemplate the political regime with more scrutiny before investing (*argument 4*).[88] This holds for property rights in general also – the more sunk costs are, the more protection of such should be considered *ex ante* (*argument 5*).

The expectations formulated for natural resource FDI should be taken with a certain degree of caution for two reasons. First, the degree to which conducting FDI is actually a real choice between potential locations vary extensively across sectors. MNEs investing in natural resource extraction should in that sense be most constrained in their locational choice (Cohen, 2007, 66). Decisions on where to locate FDI are in the first instance determined by the presence of sought-after resources. Coupled with a large profit margin and the high future demand for resources (UNCTAD, 2007, 90-1), resource MNEs might accept more uncertainty when choosing where to invest than MNEs in other industries.

The second limitation to the natural resource FDI expectations is that host-governments often are more dependent upon MNEs to realize their resource dwellings than they are upon other foreign expertise in other sectors. Yergin (1991, 423-33) notes how the host-government has exclusive sovereignty of any oil beneath its soil, but that the oil has no value unless it is discovered, produced, and marketed.[89] Especially in the developing world, host-countries have often been dependent upon MNEs to generate petroleum-related currency to their Exchequer (see e.g. Vivoda, 2011). Indeed, even though "extractive industries account for a small share of global FDI, they constitute the bulk of inward FDI in a number of low-income countries" (UNCTAD, 2007, 125). Therefore hosts may sometimes make more effort to protect these investments from derelict policy climates. Extractive MNEs might be unaffected by institutional malfunctioning affecting the rest of the business community (Cohen, 2007, 78).

Manufacturing FDI

Manufacturing FDI's weighting of host country institutions should theoretically hinge upon: size; generally low marginal value added; high integration in local labor markets; high degree of contact with end

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[87]In Nigeria for example, ethnic rivalry resulted in a spate of armed attacks and invasions of oil installations in the Niger Delta, causing evacuation of foreign staff by oil MNEs present, and temporary halts in production (Jakobsen, 2012, 11).

[88]Indeed, Hajzler (2010*b*, 2) states that the uncertainty stemming from potential expropriation or divestment "is particularly acute in resource-based sectors." Although full-scale expropriation is a rare phenomena there are contemporary examples of official overtakings of MNE's resource production in industries like mining and petroleum in Bolivia, Ecuador, Russia and Venezuela. Consider for example Bolivia's Evo Morales' government expropriation of Brazilian Petrobas' natural gas fields. See: "Now it's the people's gas", The Economist, May 4, 2006. Consider also Argentinas decision to expropriate and nationalize 51 percent of YPF, a former stat-owned oil company sold to Spanish Repsol in 1999. See: "Argentina to Seize Control of Oil Company", New York Times, April 16, 2012, and "Feed me, Seymour", The Economist, April 16, 2012.

[89]Except for in the the U.S. where beneath-soil resources is the property of the land owner (see e.g. Mommer, 2002).

users; the complexity of intermediate products necessary in production. The institutional concepts that are assumed to affect manufacturing FDI are thus: human rights protection; labor standards upholding; control of corruption, property rights protection; contract enforcement; quality of banks and credit. The human rights link runs through manufacturing MNEs' relatively high degree of contact with end product users, and the potential "spotlight effect" of consumer sanctions (Spar, 1998) (*argument 14*).[90] Feeding into the argument is the relatively low marginal value added of the manufacturing sector. Consumer sanctions might hurt producers more when profit margins are meager.

Next, manufacturing MNEs should consider labor standards upholding both because of the profit margin on which it produces, but also because of its relatively high integration in local labor markets. The former of the two traits, besides emulating the spotlight effect (*argument 15*), pertain to the idea that well-protected worker's rights increase productivity, for example through the abolition of child labor (see e.g. Emerson and Souza, 2011), and thereby increasess the marginal profit of manufacturers seeking scale and scope gains (*argument 6*). The effect stemming from the latter trait is fairly straightforward. Higher labor standards are assumed to create less labor unrest (see e.g. Robertson and Teitelbaum, 2011), and in turn more smooth production (*argument 12*).

Systems of preference aggregation and property rights should be important for manufacturers for the same reasons as it is for natural resource extractors: because investing abroad is costly relative to national investment. The losses if expropriated would thus be more substantial. (*argument 1*). The same pertains to the general protection of property rights from theft or violation on non-state actors (*argument 2*).

Control of corruption is assumed to be important for manufacturers because the cost premium associated with the "grabbing hand"-notion (see e.g. Nye, 1967; Rose-Ackerman, 1975; Shleifer and Vishny, 1993). Corruption might affect the productivity of capital negatively through stifling the entry of new goods (Bardhan, 1997, 1328), as well as lowering productivity on capital, a vital facet to on-the-margin production (*argument 7*). Moreover, the processual complexity of manufacturing operations, especially assembly industries, might create more nodes in which public officials may demand brides and side-payments, another reason for why corruption control matters more for manufacturers (*argument 18*).

Policy climates enabling the enforceability of contracts should pull manufacturing MNEs due the complexity of their supply chain networks. The argument from this complexity trait is in line with the notion in the property rights literature: The more relations with intermediate product producers MNEs engage in, the more salient becomes the contracting environment (Nicolini, 2007, 1). As manufacturing production often consist of assembly industries, they should value on institutions specifying and enforcing the rights and obligations in contracted transactions (*argument 17*). To the degree that manufacturers have direct relations with their end product users, these relations are also likely to be governed by contracts at some level. The closeness of consumer contact should therefore also signal that contract

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[90] An excellent example of a successful spotlight regime was the 2001 highlighting of the German lingerie producer Triumph International's production facilities in Myanmar. After having been accused of pillaring up the country's authoritarian regime Triumph decided to adhere to the accusing NGOs' demands of withdrawing from Myanmar (Jakobsen, 2012, 13).

enforceability matter to manufacturers (*argument 14*).

At last, manufacturing MNEs are expected to value sound host-country financial systems and quality of credit. The argument has four parts: First, producing on the margin necessitates undisturbed and functional flow of money so that margins on the balance are kept positive and production not halted unnecessarily (*argument 8*). Second, deploying local labor makes functioning payments systems important to maintain good relations with laborers and unions (*argument 13*). Third, to the degree that manufacturers are market-seeking they depend on local demand. They should therefore favor markets where local customers have spending power (*argument 17*). Fourth, with complex economic ties in local markets, manufacturing MNEs would be expected to depend on functioning payments systems to secure stable sourcing of inputs, as well as in-time realization of payments (*argument 20*).

One general note that should be made is that manufacturing industries are often those that are accused of driving the "races to the bottom" in host-country labor markets. As such, arguments assuming that human rights and labor standards should matter to manufacturers might create dubiety in some circles, perhaps especially amongst anti-globalists.[91] Bill Jordan, former General Secretary of the International Confederation of Free Trade Union was once quoted saying: "intense competition between countries to attract foreign investment is under-mining respect for the labor standards [...] And it is particularly in labour-intensive industries that the competition is most vicious" (Chan and Ross, 2003, 1023).

Services FDI

The expectations of services MNE's weighting of host-country policy environments depend on the sector's following traits: size; high urban presence; high degree of end user contact; relatively high contractual complexity in operations. The institutional concepts though to affect FDI in services industries are: human rights protection; upholding of worker's rights; system of preference aggregation; control of corruption; property rights protection; viability of contracts; quality of banks and credit.

The link between human rights protection and services FDI should function pretty much in the same manner as it does in regards to manufacturing FDI, through Spar's (1998) "spotlight mechanism" (*argument 14*). What differentiates services form manufacturing in this context is that the former would experience the "spotlight sanction" in the host-market if anywhere, due to its non-tradability (Kolstad and Villanger, 2008). The argument however still stands to reason – it is not unthinkable that local consumers might punish human rights abusive production.

As regards labor standards upholding, two arguments indicate that such should matter for services MNEs. The "spotlight effect" (*argument 15*), and the fact that services MNEs should locate in or around urban centers, exposing them to the infectiousness of strikes or other forms of labor unrest that might arise from violation of labor standards (see e.g. Robertson and Teitelbaum, 2011). Thus, protection of worker's rights through standards upholding should affect services MNEs positively (*argument 9*).

Services MNEs' weighting of host-countries preference aggregation systems could should favor

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[91] See for example the argumentation in Neumayer and de Soysa (2006).

democratic institutions mainly because of their urban presence. Being located where turmoil unfolds increases the chance of becoming targets for rampant outbreaks of destruction. Democratic systems of government are more likely to handle conflict at the political level rather than letting it unfold in the city streets (Robertson and Teitelbaum, 2011) (*argument 10*). Moreover, general size of investment should make autocrats, with more leeway to act opportunistic, less likely to receive services FDI (*argument 1*).

Host country control of corruption should matter for service suppliers due to the high degree of contractual complexity in such operations, increasing the nodes where public officials may demand side payments and so forth (*argument 18*).[92] Property rights systems should matter for service suppliers as theirs, like all MNEs', are costly investments (*argument 1*), but also as their high urban presence make them more prone to property violations and theft (*argument 11*).

Host-country contracting environment should matter for services MNEs given the contractual nature of their operations. Services are in essence intangibles that in most cases imply agreeing on mutual obligations surrounding one party's conduction of an activity for another – good examples being banks lending money to local business or consultancy companies offering their expertise to private or public customers. If host-countries do not police these agreements, MNEs will face extensive costs (*argument 16*). With increasing complexity, the importance of contracts increase further as they are likely to become more numerous (*argument 19*).

At last, the soundness of banks and credit should matter for foreign service production for two of the same reasons as manufacturing FDI. The market-seeking nature of services MNE (Dunning and Lundan, 2008, 70-1) creates a dependence on local demand. Local demand in turn should be accelerated when demanders have access to credit. Thus the soundness of credit regulation should affect service MNEs positively (*argument 17*). Similarly, services operations would depend on functioning payment systems to realize the gains from sales in host-markets (Bevan, Estrin and Meyer, 2004, 48) (*argument 20*).

2.5   Summary

This section started off by exploring the potential developmental effects of attracting FDI, and how gains might hinge upon what type of FDI is attracted. Next, the analytical perceptions of FDI and MNEs were defined, before Dunning's (see e.g. 1977; 1981; 1988; 1993) *eclectic paradigm* for explaining foreign production was discussed. Thereunder, formal institutions were defined in line with the *new institutional economics* understanding of such (see e.g. North, 1981, 1990, 2005), and discussed in terms of how institutions develop, and affect the transaction and production costs of business (see e.g. Coase, 1960; Williamson, 1985, 2000; North, 1987; Eggertsson, 2005). Host-country institutions was then discussed as potential locational factors in Dunning's paradigm.

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[92]An good example is the ongoing corruption scandal around the issuing of licenses to operate on the Indian mobile market. Due to allegations of bribery in the process of allocating 122 mobile licenses. Norwegian telecom MNE Telenor might end up losing its entire initial investment in subsidiary Uninor of over 14.4 billion NOK. See: http://www.bbc.co.uk/news/world-asia-india-16848844, http://www.bbc.co.uk/news/world-asia-india-16906220 and http://www.na24.no/nyheter/article3327309.ece.

The remains of the chapter was devoted to developing *The Varieties of FDI framework* for formulating divergent expectations of institutional determinacy across variations of investors. It was discussed how the lack of a coherent empirical link between institutions and FDI may be due to unaccounted for MNE heterogeneity. Concepts associated with institutions were unpacked in conjuncture with research into the state's role in a globalized world (see e.g. Rondinelli and Cheema, 2003; Grosse, 2005) to expand on the political and economic institutions dichotomy of Acemoglu, Johnson and Robinson (2005). These concepts' potential effects on FDI in general was discussed in turn, before the same effects were differentiated on the basis of distinguishing between FDI from different economic sectors. Theoretical expectations followed as a natural consequence of interacting sectoral traits and institutional mechanisms. Each expectation was based on one or more theoretical arguments as to why one particular trait of one particular sector should make the effect of institutional concepts likely to impact on location decisions made by MNEs from that sector.

Chapter 3

Research design

What we see depends mainly on what we look for.
– Sir John Lubbock, *English proverb*

Success is a science; if you have the conditions, you get the result.
– Oscar Wilde, *The Complete Works of Oscar Wilde. Volume 15*, (1910, 153)

This chapter first makes the case for why a quantitative investigation is a good way of testing *The Varieties of FDI* expectations developed in Chapter 2. Second, FDI data in general and potential sources to bias in Norwegian FDI is discussed. Next, the seven institutional concepts are are operationalized using available indices of institutional performance. To fortify the empirical analysis, a set of control variables previously shown to affect FDI are also conceptualized. At last, various statistical issues are touched upon, after explaining the choice of econometric model. Success in science depend on the conditions at base – when you know how to look for answers you increase your chance of observing reality.

3.1 Quantitative reasoning and proxying

One way to justify a large-N quantitative study is to take a theory that has gained support in qualitative case studies or comparative small-N studies and test its applicability on a larger group of cases. The aim is to increase generalizability and reduce the risk of inferring based on subject selection bias (Geddes, 2003, 89-129). Another justification is to exploratively examine an issue-area that is under-researched as a vantage point for further reconnoitering on the matter. As indicated earlier, empirical embraces of FDI complexity are scarce. In that vein, this study is exploratory in the sense that it provides information on how a fairly wide set of institutional concepts differ as locational factors across types of FDI.[1] Within these sectors there is still substantial heterogeneity and the importance of further breaking them down into specific industries should not be understated.[2] Although much has happened since Kobrin (1976, 1980)

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[1] However, not exploratory without theoretical mooring. *The Varieties of FDI* expectations are still to be tested.
[2] See discussion in Chapter 5.

and Root and Ahmed (1979) conducted their insightful but statistically constrained analyses, streamlining of FDI data collection is still in its infancy (see e.g. Bellak and Cantwell, 2004; Dunning and Lundan, 2008).[3] The investment data used in this analysis, obtained directly from Statistics Norway (SSB), allows me to disentangle FDI and as such represents a rare chance to examine the MNE heterogeneity.

Moving from theoretical concepts to indicators is arduous because theoretical concepts in social sciences often are unobservable – especially so as regards policy climates (Jackman, 2008, 119). Certain statistical measures of institutional concepts are more tangible than others, for example lawful structures stipulated by constitutions or formal policy documents. However, the below operationalizations strive to capture the policy *outcomes* of institutional set-ups. These intangibles are susceptible to variations in subjective understandings of expert coders, and as such may offer reduced validity.

There are however good reasons for why *de facto* indicators are preferred.[4] The main argument is the belief that MNEs to a larger extent than before integrate political risk analysis in their investment decisions (see e.g. World Bank, 2003; Rondinelli, 2005).[5] In the wake of early day confrontations between MNEs and host-governments such as the Cuban, Iranian, and Nicaraguan revolutions, a political risk assessment industry grew forth. Therein, scholars have dealt with multiple definitional and conceptual issues in the field of political risk analysis (Jakobsen, 2012, 29).[6] Further integration of uncertainty stemming from politico-economic climate in business management is evidenced by the political risk insurance industry, providing both direct mediation and risk alleviation through confidential contracting (see e.g. West, 1996).[7] Important bodies in this concern are the Multilateral Investment Guarantee Agency, an entity of the World Bank (see e.g. Shihata, 1988; West and Tarazona, 1998; Baker, 1999), the and the U.S. government-affiliated Overseas Private Investment Corporation.[8]

Due to the conceptual impalpability, indicators should be understood as the empirical traces of institutional functionality, not functionality *per se*. Operationalizing complex concepts is a trade-off between specifying the specific and embracing reality, and the below measures exhibit various degrees of specificity. Operationalizations are conducted on the basis of a wide survey of statistical measures available. Some indicators initially considered potentially good proxies could not be obtained for cost considerations.[9] As for whether the measures applied capture the latent concepts they are meant to, their validity

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[3]Computer and statistical software developments have played important roles in this behavioral turn (Lewis-Beck, 2008).

[4]*De facto* indicators means measures of actual policy climates, in essence the performance of institutions as measured by the environments for production and economic exchange they create.

[5]*PriceWaterhouseCoopers* for example has, together with the Eurasia Group, "brought together a team of experts to build a Political Risk Assessment diagnostic and monitoring methodology that enables companies to isolate and assess the contribution of political risk to their overall risk profile, manage these risks, and identify and capitalize on unexploited opportunities". See: http://www.pwc.com/gx/en/political-risk-consulting-services/integrating-poitical-risk-into-enterprise-risk-management.jhtml. In Norway, *Norwegian Risk Consulting International* provide risk assessments and consulting services for companies looking to invest in Africa, the Middle East, Asia and South America. See: http://www.nrci.no/default.aspx.

[6]See for example Robock (1971), Boddewyn and Cracco (1972), Green and Smith (1972), Green (1974), and Simon (1982).

[7]See the number of books written on the industry: Moran (1998, 2001, 2004), Moran and West (2005), and Jensen (2008).

[8]See: http://www.miga.org/, and http://www.opic.gov/ respectively.

[9]See for example the country-level global forecasting data from the Economist Intelligence Unit's database: http://www.eiu.com/site_info.asp?info_name=eiu_ultimate_portfolio_global_economic_indicators&page=noads, or the risk in-

is discussed under each operationalization.

One last consideration as concerns proxying institutional concepts is that constructs linked to theory might represent multiple underlying theoretical concepts. This delineation problem is difficult both conceptually and operationally, making it hard to draw determinate conclusions from individual performances of variables. Multicollinearity is discussed below, but in essence the problem is that some proxies capture aspects attempted captured by other indicators.[10] Such problems are by no means reasons to give up investigating the institutions-FDI relationship, but rather signal that one must be cautious about drawing bombastic inferences from proxies capturing multiple aspects of institutional functionality.

3.2 Dependent variable: FDI stocks

Dependent variables in this thesis are Norwegian outbound FDI stocks, accounted for sector-by-sector and in total[i]. Data is analyzed at the host-country-year level, but underlying numbers are based on firm-level reports on FDI collected through annual surveys for the financial years 1998 through 2006.[11] The data structure is monadic with one source-country, resulting in aggregate annual pairwise movements of FDI between Norway and the countries for which Norwegian MNEs report their foreign assets.[12]

Table 3.1: Industry-by-industry Norwegian FDI stocks (1998-2006)

Sector	Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006
Natural resources	Agriculture and fisheries	0.2	0.2	2.0	2.1	1.8	2.5	2.9	3.4	3.6
Natural resources	Crude oil and natural gas extraction	87.3	96.0	104.1	103.9	105.1	131.1	147.0	211.3	227.9
Manufacturing	Manufacturing	90.3	133.4	156.6	231.9	232.4	245.4	224.3	228.6	231.1
Services	Energy and construction	0.6	14.9	33.9	22.9	29.3	30.1	31.1	36.5	38.1
Services	Commercial, hotels and restaurants	9.3	13.9	13.1	17.2	12.5	14.6	14.9	17.6	13.0
Services	Shipping and pipelines	6.9	20.0	23.5	24.8	22.9	22.1	21.6	28.7	42.5
Services	Transportation and communications	2.6	4.8	20.1	25.1	21.6	22.4	33.8	56.8	117.0
Services	Financial services and insurances	2.2	13.8	9.8	16.1	29.7	30.6	12.0	18.3	15.7
Services	Business services and property	33.1	35.6	35.6	35.8	32.8	37.0	40.6	37.9	50.6
Services	Other services	0.2	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.8
-	Miscellaneous	2.9	2.9	0.7	0.5	0	0.1	3.6	4.6	0
Total		**235.8**	**336.0**	**399.0**	**481.1**	**488.7**	**536.7**	**532.4**	**644.1**	**749.6**

Numbers are the aggregates from Statistics Norway's confidential firm-level data. FDI in billion NOK.

Table 3.1 displays developments in the dataset at industry group level.[13] These groups are in turn aggregated to sectors based on UNCTAD's standard classification of economic activity.[14] The aggrega-

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dices from IHS Global Risk Services: http://www.ihs.com/products/global-insight/country-analysis/global-risk.aspx.

[10]As is the case of the *investment profile* and the *property rights indices*, discussed in Section 3.3.

[11]The reasons observations cannot be stretched further than 2006 is that SSB, in line with OECD recommendations, in 2006 made changes to their reporting methodology (Knutsen, Rygh and Hveem, 2011, 15). The author actually obtained the data from *messieurs* Helge Hveem, Carl-Henrik Knutsen and Asmund Rygh, see previous investigations in: Hveem, Knutsen and Rygh (2008a,b,c); Hveem (2009) and (Knutsen, Rygh and Hveem, 2011).

[12]See Table A.1 in Appendix A for the full country sample. 194 countries are reported for throughout.

[13]These figures deviate slightly from the aggregates at SSB's website, see Hveem, Knutsen and Rygh (2008b, 15) for why.

[14]See: http://www.unctad.org/templates/Page.asp?intItemID=3149&lang=1.

tion is fairly straightforward: agriculture, fisheries and crude oil and natural gas extraction are classified as *natural resources FDI*, *manufacturing FDI* classifies itself, whilst *services FDI* is made up of energy, construction, commercial services, shipping, pipelines, communications, financial services, insurances, business services, and property.[15] Miscellaneous industries are excluded from the analysis.

3.2.1   Measuring FDI stocks

FDI data come in either flows or stocks. *Flows* are usually measured annually, and "consist of the net sales of shares and loans to the parent company plus the parent firm's share of the affiliate's reinvested earnings plus total net intercompany loans provided by the parent company" (Bellak, 1998, 235),[16] while *stocks* "are the value of the share of the subsidiaries' capital and reserves attributable to the parent enterprise, plus the net indebtedness of the associate or subsidiary to the parent firm" (Bellak, 1998, 236). In essence, flows are annual movements of FDI, while stocks are accumulated FDI positions.

While most empirical assessments of FDI determinants still use flows to measure FDI, arguments have been raised in their disfavor.[17] The main contention is that flows are held to be more volatile than stocks (Dunning and Lundan, 2008, 15-6), an that stocks better capture country's medium-to-long-term FDI equilibriums and dynamic differences across these values (Coan and Kugler, 2008, 408-9). In addition, stocks account for capital raised in local credit markets and is thereby a more appropriate measure of real capital ownership (Bénassy-Quéré, Coupet and Mayer, 2007, 769). Stocks are hence applied below.[18]

FDI, however, is only a proxy for MNE activity. In real life, MNEs have many non-equity arrangements by which they can control production. Turnkey agreements, network cooperation and production sharing are but a few examples (UNCTAD, 2011*b*, 133-41). Efforts towards measuring such activities have not yet been undertaken – FDI is the only consistent measure of MNE activity available. But, measuring FDI stocks is not straightforward either. Most national banks require their MNEs to report in line with the OECD (2008, 48) benchmark definition of FDI, identifying foreign investments as direct once MNEs account for ten percent or more of the capital holdings in the investment object. The statistical calculation of FDI stocks should include all subsequent equity transactions between the MNE and the subsidiary. The construction of the Norwegian FDI stocks are based on these internationally recognized accounting procedures. Reporting to SSB are between 750 and 1250 Norwegian MNEs, the number

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[15]For reasons unknown, mining is collapsed into the manufacturing industry category. Had this industry been big it could have created potential measurement errors. Norwegian foreign mining industry is however a vanishingly small industry, and as such it is not assumed to blur regression results where manufacturing FDI is the dependent variable. See SSB's online data resources: http://statbank.ssb.no/statistikkbanken.

[16]Some countries, such as Denmark, France, Japan, Span, Singapore, and Thailand do not require their MNEs to report on reinvested earnings, or do not report these positions in official documents (Dunning and Lundan, 2008, 12-3). As shown by Lundan (2006), differences in investment flows arising from omitting reinvested earnings might be substantial, and as such narrow the scope for comparability across borders when it comes to FDI data.

[17]See users of flows: Gastanaga, Nugent and Pashamova (1998); Asiedu (2002); Harms and Ursprung (2002); Kucera (2002); Li and Resnick (2003); Bevan, Estrin and Meyer (2004); Busse (2004); Ahlquist (2006); Blanton and Blanton (2007); Busse and Hefeker (2007); Asiedu, Jin and Nandwa (2009); Ali, Fiess and MacDonald (2010); Robertson and Teitelbaum (2011).

[18]See users of stocks: Wei (2000); Egger and Winner (2005); Daude and Stein (2007); Knutsen, Rygh and Hveem (2011).

increasing throughout the time period (Balsvik and Skaldebø, 2010, 12). The stock calculation reads:

$$stock = affiliate\ capital\ stock * (direct + indirect\ ownership\ share) + net\ loan\ positions \quad (3.1)$$

where reinvested earnings are captured by the affiliate capital stock. An important question when handling stock data is whether positions are accounted in book values or in constant replacement values (see e.g. Cantwell, 1992). Book values can be expected to undergo many changes over time. Exchange rate effects, asset depreciation, and changed accounting standards all contribute to book values underestimating earlier stocks when using long time-series, limiting over-time comparability as current market value of the stock should be scaled up (Bellak, 1998, 236-40).[19]

In the case of Norwegian FDI data, time-series only stretches nine years, reducing complications. Exchange rate effects and asset depreciation need more time to affect the stocks. The substantial rise in Norwegian FDI throughout the period is thus more likely to have been a function of Norwegian investors catching-up, rather than the result of underestimation of early values.[20] To correct for skewness in the FDI variables, a logarithmic transformation is applied. Since net loans are included in the stock calculation, numbers might take negative values.[21] Since numbers below zero have no natural logarithm, a transformation from Busse and Hefeker (2007, 404-405) is applied to retain all observations:

$$y = ln(x + \sqrt{(x^2 + 1)}) \quad (3.2)$$

3.2.2 Norwegian FDI: idiosyncrasies and generalization

An important issue when identifying suitable statistical proxies for real life phenomena is their construct validity, that is, to what extent they measure the latent concept they are supposed to (Jackman, 2008, 122). The Norwegian calculations by and large measure the concept of FDI as benchmarked by OECD (2008). A more relevant question is whether the Norwegian data inhibit idiosyncratic tendencies that may affect the basis for infering. The development of Norwegian FDI accelerated fairly late (see e.g. Balsvik and Skaldebø, 2010). This might be the reason that, save for a few assertions (see e.g. Selfors, 1999; Hveem, Heum and Ruud, 2000; Grünfeld, 2005; Knutsen, Rygh and Hveem, 2011), determinants of Norwegian FDI has not frequently been assessed. The general trend since the bloom begun has been one of geographical and sectoral dispersion. Norwegian FDI has traditionally been concentrated in the OECD countries, accounting for 92 percent of the stock in 1998. At the end of 2005 however, the OECD concentration was reduced to 75 percent. Over that same period, regions such as Africa (2450 percent) and Eastern Europe and the former Soviet Union (1350 percent) experienced high growth of Norwegian

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[19]Models of reevaluating historical book values have been developed (Cantwell and Bellak, 1998; Bellak and Cantwell, 1996, 2004), and applied by some (Egger and Winner, 2003, 2005).

[20]By Hveem, Knutsen and Rygh (2008b) labelled "latecomer investor" behavior.

[21]In the Norwegian data there are 55 country-years obtaining a negative value in FDI in resource extraction, 33 for manufacturing industries, and 67 for service industries.

Figure 3.1: Yearly developments in Norwegian FDI stocks, 1998-2006
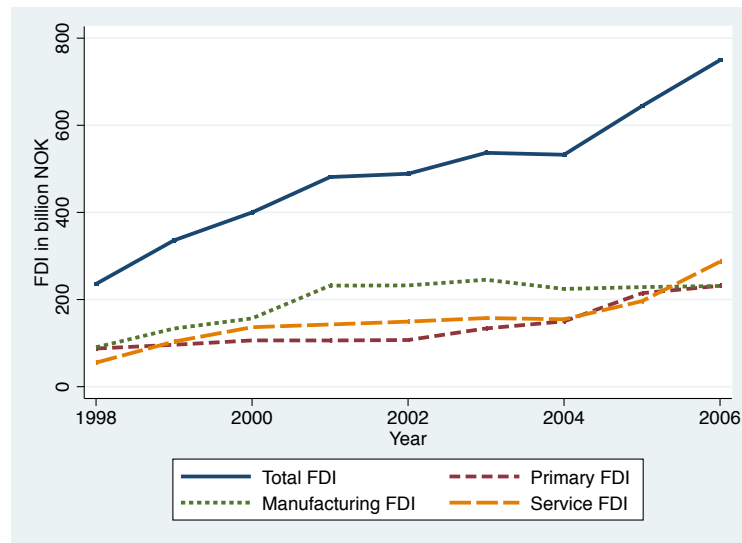
FDI (Hveem, Knutsen and Rygh, 2008a, 6).

Table 3.1 and Figure 3.1 portrays the developments in Norwegian FDI over the period 1998-2006, displaying good sectoral variation. While petroleum activity used to account for the bulk of natural resource FDI, cash cropping and fish farming increasingly contribute. In services, shipping has been accompanied by extensive growth in financial and banking services, as well as telecommunications (see e.g. Hveem, Heum and Ruud, 2000). Throughout the period, manufacturing industries, spanning over a large set of industries, on the balance account for a little more of total outward FDI than the two other sectors. But, after 2004 Norwegian FDI in services and extractive industries start catching up in line with international trends (UNCTAD, 2004, 2007). Norwegian FDI in the period 1998-2006 exhibited considerable variation within all three sectors. High sectoral variation yields data that is structurally suited for a disaggregated analysis and in turn analyses should be less plagued by selection effects.

Influential MNEs and influential destinations

Two issues raised concerning Norwegian FDI is that investment behavior in the aggregate might be driven by certain large corporations, or influential destinations (see Grünfeld, 2005; Hveem, 2009, respectively). Large corporations might inflate investment figures to certain countries, disproportionately affecting the analysis. As Norway is a relatively small country with a correspondingly small pool of MNEs, the problem is exacerbated. Companies like Statoil and Hydro for example account for much of the FDI in resource extraction, while Telenor is a major player in telecommunications services (see Claes, 2003; Lie, 2005; From, 2009, respectively). One would assume that small- and medium-sized MNEs are more uncertainty averse than large corporations. Losses on investment in relatively small holdings portfolios necessarily impose a relatively bigger economic blow than to large MNEs' extensive portfolios. Small

MNEs should therefore be more deterred by high levels of uncertainty than large MNEs, especially within the two categories associated economic institutions. The impact of large corporations is checked by excluding the top twenty largest MNEs from the sample.

Hveem (2009) press the potential influence of certain locations attracting disproportionate amounts of Norwegian FDI. Table 3.2 sums up the developments in the shares of Norwegian FDI gained by certain countries, the compound annual growth rate (CAGR) of country-stocks over time,[22] as well as their average score on two variables measuring broad aspects of civil liberties and political rights (FHI) and general respect for the rule of law (RLI).[23] Out of the countries that at some point between 1998 and 2006 accounted for more than 1 percent of total Norwegian FDI, Algeria, Angola, Azerbaijan, Liberia, Singapore and Venezuela intuitively stand out as potentially influential recipients. Their low scores on at least one of the two broad institutional measures indicate that one should beware of their effect.

Table 3.2: Potentially influential recipients

Country	% of Norwegian FDI			CAGR[#]	FHI (1-7)	RLI (1-5)
	1998	2002	2006			
Algeria	0.0	0.0	1.7	700.49%	2.5	1.6
Angola	0.0	1.8	2.2	80.19%	2.3	1.1
Azerbaijan	0.0	0.6	2.5	34.55%	2.6	1.6
Liberia	0.2	1.0	0.8	-25.00%	3.1	0.8
Singapore	1.1	2.4	8.1	41.91%	3.2	4.1
Venezuela	0.0	1.4	0.8	-37.96%	4.3	1.4

[#]Compound annual growth rates are based on the periods 2002-2006 for Algeria, and 1999-2001 periods for Azerbaijan. FHI = Freedom House Index from Freedom House, and RLI = Rule of Law Index from the World Governance Indicators.

First, consider countries with inflated FDI figures due to petroleum investments. Algeria, exhibiting the by far largest CAGR of the six nations at 700 percent, had no FDI recorded in 1998, but accounted for 1.7 percent in 2006. Angola, an extremely capital-poor nation, went from receiving close to no Norwegian FDI in 1998, to accounting for 2.2 percent of total stocks in 2006 with a noticeable CAGR of 29.6 percent. At the same time, Angola scores extremely low on general freedom and respect for the law throughout the entire period.[24] Azerbaijan exhibited somewhat the same development, going from being a minor recipient to accounting for 2.2 percent of Norwegian FDI in 2006 at the same time as scoring generally low on freedom and law and order indices. Venezuela, accounting for 1.4 percent of

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[22]The compounded annual growth rate (CAGR) is the rate at which something, in this case an FDI stock, grows over a period of years, taking into account the effect of annual compounding.

[23]The Freedom House Index (FHI) originally varies from 1 to 7, where 1 connotes maximum freedom. This scale has been inverted so that a score of 7 implies full freedom, see: http://www.freedomhouse.org/report/freedom-world-2012/methodology. The Rule of Law Index varies between approximately -2.5 and 2.5, where the higher the score the more law and order. For simplicity this scale has been inverted to vary between 1 and 5, where higher values still indicate respect for the rule of law, see: http://info.worldbank.org/governance/wgi/index.asp for information on the data sources.

[24]See le Billon (2001) for a informative account of Angola's relation to natural resource extractive MNEs.

FDI in 2002, scoring higher on the FHI than the other three oil nations, also exhibits very low general respect for law and order. In all these nations, large oil investments developed throughout the time-period. A different case not depicted in Table 3.2 is that of Belgium, accounting for 5.8 percent of total FDI in 2006. Dropping resource extractive investments from the sample reduces that share to 2.8 percent, mainly because Statoil has a coordination centre dealing with their financial affairs and overseas activities in Mechelen near Brussels (Hveem, 2009, 388).[25]

That Algeria, Angola, Azerbaijan and Venezuela, in spite of malfunctioning institutional infrastructures, receive considerable amounts of natural resource FDI might indicate that the limitations on the actual location decision and the host-country dependence-driven protection of petroleum enclaves discussed in Section 2.4.7 are at play. The robustness of natural resource regressions are controlled for the influence of oil-nations, and Belgium, by removing them from all relevant samples.

Secondly, certain locations might be transshipment platforms for Norwegian FDI or general hubs of FDI activity. Norwegian data on FDI is collected according to the resident principle, implying that investments for "mailbox locations", serving no other purpose than channeling FDI into other markets again, are sometimes reported (Hveem, Knutsen and Rygh, 2008a, 8). Such investments may give unreal importance to financial centers and their institutional structure as locational determinants of FDI (see e.g. Daude and Fratzscher, 2008). In the Norwegian data, Singapore, a minuscule island state, went from accounting for 1.1 percent of Norwegian FDI in 1998, to attracting 8.1 percent all stocks in 2006. That amounts to 78 percent of total Norwegian FDI to Asia, and, as Hasli (2009) hints at, probably indicates that Singapore is a transshipment country for Norwegian FDI to South-East and East Asia.

On a different note, Liberia, by Norwegian shipping investors traditionally considered a "convenience flag" (Balsvik et al., 2009, 24), in 2002 accounted for more than 1.0 percent of total Norwegian FDI. Labelled a tax haven by OECD (2000), Liberia might have above average influence on the services equations below. Liberia is therefore removed from the services sample to check the robustness of estimations, while Singapore is removed from all samples.

State ownership, human rights and corruption law

A more general bias might arise from the interplay between the Norwegian political sphere championing human rights, democracy and anti-corruption. Norwegian business, especially as compared to other OECD countries (see e.g. Jellum, 2002; OECD, 2005), but also in a Nordic context (see e.g. Bull, 2003; Engelstad et al., 2003), is heavily influenced by state ownership. Depending on the state's ownership policy, this could affect the valuation of L-specific factors when state-owned MNEs conduct FDI. Although the Norwegian government stresses the need for an active ownership policy, it has been cited as poster-boy example in separating between regulation and management of state ownership in MNEs (Radon and Thaler, 2009, 17-8). Aside from stipulating company objectives, centered on maintaining main offices in Norway, the state is confined to further its interests through channels such as the general assembly or

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[25]See: http://www.statoil.com/en/About/Worldwide/Belgium/Pages/default.aspx.

the media. In fact, unlike many other OECD countries, Norwegian state-owned MNEs do not even have state representatives on boards (OECD, 2005, 123). Previous studies have also confirmed the scope for state intervention in Norwegian state-owned MNEs to be limited (see e.g. Kiær and Jakobsen, 2007).

What has been corroborated to a certain extent is that the effect of state ownership on the locational decision seems to affect political risk-taking. While Knutsen, Rygh and Hveem (2011) find that Norwegian state-owned MNEs do not favor democratic host-countries any more than privately owned corporations, they find that state-owned MNEs are less negatively affected by risky business climates than privately owned MNEs.[26] Estimating the effect of state ownership across sectors is too large a task to simply control for in this analysis, but it should be kept in mind by future research.

Although Norwegian state-owned MNEs do not seem to be more socially responsible than privately owned, the case could be made that Norwegian FDI in general has a CSR bias. Gjølberg (2010, 212-3) indicate that Norwegian business' responsibleness is a function of Norway's role as a "humanitarian superpower". Having a long-standing role within diplomatic peace negotiations, human rights advocacy, and promotion of sustainable development, Norwegian authorities often see CSR as directly related to their foreign policy (see e.g. Bátora, 2005). Business is viewed as an important, necessary and even innate partner in fulfilling foreign policy aspirations (MFA, 2009).[27] CSR at the most elementary level is about voluntary responsibility-taking, driven by business, focused on efforts beyond compliance and thereby almost by definition precluding a government role. At the global level however, it can be seen as a tool to address governance vacuums (see e.g. Bendell, 2000). As has been indicated for other countries' governments (see e.g. Fox, Ward and Howard, 2002), Norwegian government pushes policies to promote CSR at the global level (MFA, 2009). CSR is particularly associated with human rights and labor standards upholding in foreign production (Ruggie, 2003), and as such, the interpretation of the the personal freedoms aspects below should reflect this potential bias.

A last potential source of bias in the Norwegian data is Norwegian law on corruption. Norwegian MNEs can, regardless of host-country laws on corruption, be tried and sentenced under Norwegian anti-corruption laws. Aside from governing by one of the strictest national corruption laws, the Norwegian judiciary might try Norwegian-based MNEs at the same time as they are being tried abroad. Unlike for example the US Foreign Corrupt Practices Act, distinguishing between acts of corruption when the benefactor of a corrupt practice give something in return (*quid pro quo requirement*) and those that do not (see e.g. Perkel, 2003), Norwegian law also define "facilitations payments" illegal. The corruption law might mitigate Norwegian MNEs' actions in institutional environments not controlling corruption more than the average MNE, and should be taken into account when discussing the effects of corruption.[28]

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[26]As measured by rule of law, protection of property rights, and control of corruption. This might be interpreted as a moral hazard finding in the sense that the state, through being a powerful owner both economically and diplomatically, reduce the actual uncertainty for state-owned corporations as they invest abroad. The state-owned MNEs might assume that the state will aide them should they get into trouble and thus be less risk averse (Knutsen, Rygh and Hveem, 2011).

[27]Norwegian business always score very high on CSR indices measuring both practice and performance (Gjølberg, 2009).

[28]See: http://www.regjeringen.no/en/dep/ud/tema/naeringslivssamarbeid_samfunnsansvar/n_samfunnsansvar/ansvar_korrups

3.2.3   Potential Norwegian FDI biases summed up

The potential biases in Norwegian data are: (1) large, influential corporations taking more risk than smaller MNEs might distort the significant positive effects of institutions on FDI; (2) certain locations receiving disproportionate amounts of FDI in spite of malfunctioning institutional infrastructure may hamper significant, positive relations in especially natural resources equations (through Algeria, Angola, Azerbaijan and Venezuela), but also in services (through Liberia); (3) Singapore as a transshipment location for Norwegian FDI to adjacent markets may have an inappropriately large effect on the estimates, making them overly positive; (4) the large influx of state ownership in Norwegian business may make Norwegian MNEs more socially responsible as the state may impose CSR-streamlined ownership policy on its companies, creating overly significant and positive relations between FDI from all sectors and rights and democracy issues; (5) substantial state ownership may also make Norwegian MNEs less hazard averse, especially as regards uncertainty around economic interaction and regulation; and, (6) Norwegian investors may be more corruption averse as Norwegian anti-corruption laws are particularly strict. For appropriate measures to check results' robustness to some of these biases, see Section 4.5.

3.3   Independent variables

To proxy the institutional concepts discussed above, indices from different sources are utilized.[29] In some cases, due to the way the theoretical expectations are constructed, two proxies of one institutional concept are applied. This way the full breadth of particular outcomes can be measured.

Above it was argued that *de facto* policy climates are preferred over *de jure* structures.[30] Note that "formal institutions" (*de jure*) and "public policies" (*de facto*) are not the same. The latter are "extremely prominent constraining features of the political environment" (Pierson, 2000, 259). The perceived opportunity space for MNEs should to a larger extent be constituted by the performance of institutions in the political environment than by their lawfulness. Adding to is the above argument that political risk assessment and insurance industries are more likely to deliver due diligence analyses focused on actual institutional environments rather than formally instated institutions.[31]

However, focusing on *de facto* policy outcomes makes variables subjective in the sense that scores are coded according to coders' perceptions of given situations. Such ratings may in some instances be biased against relatively poor and small countries, especially risk measured by private risk agencies (see e.g. Ferri, 2004), and in others be plagued by the "noisy" influence of coder biases (Asiedu, Jin and Nandwa,

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jon.html?id=635078

[29]All variables are summed up in Table 3.3. Descriptive statistics for independent variables and controls to be found in Table A.2, while data coverage (year 2006) on the independent variables can be fund in Table A.1, the two latter in Appendix A.

[30]There might be radical differences in what *de facto* and *jure* concepts measure statistically. See Feld and Voigt (2003) for a discussion of measures of constraints on the executive.

[31]It could be argued that any previous in-house investment experiences are also bound to be *de facto*. As Norwegian MNEs are on the rise, more and more such experiences are available to judge from. See a review of research on path-dependency in the FDI decision in Hutzschenreuter, Pedersen and Volberda (2007), and Hveem, Heum and Ruud (2000); Hveem, Knutsen and Rygh (2008b); Balsvik and Skaldebø (2010) for the late bloom of Norwegian MNEs.

2009, 271). Ideally, completely objective measures would have been applied. as uncertainty around what situation prevail in a country at any given time may create divergent codings of concurrent events. There are however no either-or constructs that capture the policy outcomes of institutions, potentially affecting constructs' validity and the reliability of estimates.

Some studies, to account for possible reciprocal effects, lag independent variables one or more years.[32] I chose to regress FDI on the institutional indices simultaneously to preserve as much useful variation in the data as possible, as some of the indices are constrained when moving back in time. The fact that institutions are highly inert should make this rather unproblematic (see e.g. Acemoglu and Robinson, 2006*b*; North, 2005). Moreover, professional risk analysis is often based on forecasting. A country's score on a given parameter at time *t* thus reflects the forecasted performance on that parameter in *t+1*.[33] Lags are however used to test the robustness of models.

Personal freedoms: human rights and labor standards protection

Given the amount of political attention and the vagueness of the concepts themselves, operationalizations of human rights protection and labor standards upholding are bound to be controversial. *Human rights protection* at the national level is a conceptually complex function of actors (foreign aggressors or intruders, various arms of the government, sub-national groupings or separatist movements) and freedoms to be upheld. To differ it from the wider definitions of democracy and workers' rights, human rights protection is defined as the *physical integrity rights* of individuals. Focusing solely on governmental protection of physical integrity allows clear demarcation of human rights as a lone-standing concept.

To capture this aspect of human rights, the Cingranelli-Richards (CIRI) index of government respect for physical integrity rights (PHYSINT) is used (see e.g. Cingranelli and Richards, 1999, 2008).[34] The CIRI PHYSINT index systematically assesses government violation of four human rights aspects: torture; political imprisonment; disappearances; extrajudicial killings.[35] Index scores are based on annual reports provided by Amnesty International and the U.S. State Department on human rights practices around the world. Using a polychotomous extension of Mokken scaling, scores on the four aspects of physical integrity rights (varying between 0 and 2) are combined into an aggregate ordinal scale ranging from 0 to 8. The lowest score indicate complete absence of protection for physical integrity and the highest is reserved for countries where physical integrity is fully protected.[36]

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[32]Reciprocity, or endogeneity, is the effect of FDI on institutions. By lagging institutional indices one year, institutional change that may (or may not) follow from FDI is arguably avoided. Endogeneity is discussed in Section 3.6.3.

[33]As is the case for ICRG's risk categories: http://www.prsgroup.com/ICRG_Methodology.aspx#RiskForecasts.

[34]The full Cingranelli-Richards dataset is available at: http://ciri.binghamton.edu/index.asp.

[35]*Torture* is defined as "the purposeful infliction of extreme pain [...] by government officials or by private individuals at the instigation of government officials" (Cingranelli and Richards, 1999, 408) and captures inhuman, degrading and capricious use of physical or mental force by the police or personnel in detention centers. *Political imprisonment* is defined as "incarnation of people by government officials because of their ideas" (Cingranelli and Richards, 1999, 408). Such ideas might be linked to speech, religious beliefs or nonviolent opposition to government. *Extrajudicial killings* are assassinations conducted by arms of the government or instigation thereof without due judicial processes, and *disappearances* encompass incidences of politically motivated abductions or killings where the victims have not been found.

[36]The PHYSINT index, as opposed to the more frequently applied Political Terror Scale (PTS), empirically demonstrates

The CIRI project's index for worker's rights (WORKER) is applied to capture national *labor stan-dards* upholding. Core labor standards stretch across many issues (Kucera, 2002, 39-47), but the CIRI worker's rights index covers a broad range of internationally recognized rights: freedom of association in the workplace; prohibitions against child and forced labor; the right to bargain collectively; generally acceptable conditions at work. WORKER is a measure of the actual existence of labor standards, an important point given the frequent differences between labor rights in law and those in practice (Greenhill, Mosley and Prakash, 2009, 674-5).[37] The WORKER index vary form 0 to 2, where 0 represent severe restriction of workers rights and 2 connotes full protection (Cingranelli and Richards, 2008, 65).[38]

Political governance: preference aggregation and corruption

The facets to political regimes interesting to this analysis are those determining social instability, governing politicians' elbow space, and controlling corruption. Research into the effect of regime type on FDI frequently use aggregate measures of democracy that cover also the above aspects of human and worker's rights. To separate, two indices are used to capture the existence of democratic elections on the one side and the constraints on the executive on the other.

Democracy as a regime type is a contested concept. Researchers for example disagree on whether the concept is an "either-or" phenomenon or whether democracy is a question of degree (see e.g. Przeworski et al., 2000; Elkins, 2000; Hadenius and Teorell, 2005). In my instance a minimal definition of democracy well captures the distinct nature of a system characterized by democratic preference aggregation through *elections*. Schumpeter (1976, 269) highlights that an alternative to classic minimalist definitions of democratic regimes is to focus is on the "institutional arrangement for arriving at political decisions in which individuals acquire the the power to decide by means of a competitive struggle for the peoples vote." The notion of Schumpeter that minimalist definitions of democracy encompass more than the mere existence of elections, coincide well with Przeworski's (2010, 122-4) idea of multiparty competitive elections as a mitigator of social discontent. Additionally, a minimalist definition of democracy offers the potential for stringent empirical measurement of the empirical issue.[39]

I chose minimalism because it allows me to distinguish rights protection from preference aggregation. The measure here used to capture democratic elections (DEMOCRACY) is that based on the argument

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unidimensionality, thereby also refusing previous claims that government protection for human rights is multidimensional (see e.g. McCormick and Mitchell, 1997). A unidimensional index, naturally, is more analytically applicable as an empirical proxy than indices with unexplainable multidimensionality.

[37]At this point it should be noted that an alternative data source is available through the extensive *Collective Labor Rights Dataset* of Mosley (2011), based on the coding methodology of Kucera (2002). The indices in this dataset are, at the time of writing, unfortunately temporally restricted to 2002, causing a dramatic drop of observations in my dataset. The CIRI index, aside from arguably being an adequate proxy for labor rights upholding, was thus chosen due to superior its coverage.

[38]Periods of interregnum and interruption are coded as missing.

[39]However, the gains in reliability from avoiding subjectivity should be weighted up against the losses in validity from not including all relevant information in the concept (Knutsen, 2011, 52-3). Both Dahl's (1971, 3) list of institutional guarantees and scholars focusing on the "attributes" of democracy (see e.g. Munck and Verkuilen, 2002) represent moves from minimalism toward conceptual width. See Knutsen (2011, 53-64) for an in-depth discussion of minimalist versus substantive understandings of democracy, and the "attributes" of institutions.

in Przeworski et al. (2000), found in the Alvarez-Cheibub-Limongi-Przeworski (ACLP) dataset (Alvarez et al., 1999). [40] A regime is defined as democratic if it passes four rules. First, the chief executive must be elected. Second, the legislature must be elected. Third, there must exist more than one elective party. Fourth, given that the three first rules are satisfied, regimes must allow leadership to change.[41] Thus, at least one alternation of government after the initial election must be observed before a polity is coded as democratic (Przeworski et al., 2000, 15-30). Regimes must meet all four criterions to be coded as democracies, whilst regimes somehow violating these rules are coded as dictatorships.

One aspect to the functional distribution of power not directly captured by this measure is the degree to which government officials are constrained in their actions when elected.[42] A lack of constraining structures might allow incumbents to comport themselves opportunistically, whether for political or economic purposes. To capture this feature the *executive constraints* (XCONST) variable from the Polity IV dataset is applied (see Marshall, Jaggers and Gurr, 2011). XCONST measures whether the executive power's freedoms to make decisions is constrained by one or more accountability groups. The proxy is a seven-fold scale, where the lowest value (1) denotes unlimited authority of the executive, and the highest value (7) indicates executive parity or subordination where accountability groups have authority effectively equal to, or greater than, that of the executive power.[43]

Corruption is a particularly multifarious concept. Some authors have attempted to model various aspects associated with corruption of the state separately (see e.g. Lambsdorff, 2003), but using by indices capturing general indices capturing bureaucratic quality, this approach is admittedly somewhat ad-hoc. In this analysis a more holistic proxy for corruption is used – the Control of Corruption index (CCI) from the Worldwide Governance Indicators (WGI) offered by the World Bank (see e.g. Kaufmann, Kraay and Mastruzzi, 2004, 2006, 2007, 2010). The CCI measures "the extent to which public power is exercised for private gains, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (Kaufmann, Kraay and Mastruzzi, 2007, 4). The World Bank uses a methodology consisting of identifying as many sources of data on corruption control as possible, and then uses a statistical procedure known as "unobserved components modeling" to aggregate an individual measure of the control of corruption (Kaufmann, Kraay and Mastruzzi, 2004, 258-261). Underlying data is weighted when aggregated, the weights representing the precision of the data source. The index ranges form approximately -2.5 to 2.5.[44] The CCI is not coded for 1999 and 2001, but replacement values are discussed in Section 3.6.2.[45]

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[40] The dataset was updated by Cheibub, Gandhi and Vreeland (2010).

[41] This latter rule is somewhat controversial, but as pointed out by Przeworski et al. (2000, 27-8), this criterion is a necessary and stringent test of democraticness as undemocratic regimes sometimes are difficult to detect until the incumbent refuses to leave office after an elective loss.

[42] Although indirectly it might be so, as democratic elections allow voters to punish elected officials violating their mandate.

[43] Periods of interregnum and interruption are coded as missing.

[44] In reality it the lowest score assigned is -1.98 (North Korea, 2003) and the highest is 2.56 (Finland, 2006).

[45] A word of caution as regards the CCI is that it is normalized with a mean of zero and a standard deviation of one. As such, they are not ideal for over-time comparisons. However, Kaufmann, Kraay and Mastruzzi (see e.g. 2006, 9) find no systematic trends over time in any of the WGIs, indicating that variables such as the CCI can be used in time-series regressions.

Economic interaction: property rights and contracts

Institutions protecting property rights are intimately linked with political preference aggregation on the one side, and with enforceability of contracts on the other (Acemoglu and Johnson, 2005, 950-1). Nevertheless, there are important differences between these concepts. Property rights protection is not only about protection against government opportunism, but also about protection of physical property against theft by other citizens. Although contracts may hedge actors against uncertainty in exchange, the informal contract expounding individuals' rights to control property needs enforcement.

To capture the *protection of private property*, the Property Rights index (PRI) from the Heritage Foundation is utilized.[46] The fact that protection of property rights conceptually overlap with other institutional arrangements of the state is mirrored in the subcomponents aggregated to construct this index. The PRI is coded on the basis of multiple components: the degree to which national laws protect private property; the degree to which those laws are enforced; the likelihood that private property will be expropriated; the independence of the judiciary; the existence of corruption within the judiciary; the ability of business to enforce contracts. As such, it distinctly measures at least two of my other theoretical concepts (corruption and contract enforcement). To the best of my knowledge, this however the most precise measurement of property rights protection freely available. The PRI itself is derived from a variety of sources,[47] and the scores vary between 100 and 0, where the higher the score, the better protected is private property (Miller, Holmes and Feulner, 2012, 455-6).[48]

Contract viability as a driver of FDI has two important facets: it defines the relation between seller and buyer in the marketplace, and it enforces this relation. The former aspect relates to MNEs ability to repatriate profits in a situation of economic exchange. Where sellers are uncertain of whether buyers will honor their common agreement, uncertainty premiums are subtracted from value-added calculations. Next, an independent and trustworthy enforcement entity is necessary for contracts to be enforceable – this is the latter aspect. Ideal measures of contract viability would capture the costs of contracting between private citizens, and between private citizens and the state. The latter relation however is well captured by the XCONST, and is hence left to be discussed in the context of government space for opportunism. To capture the former, measures of legal formalism – the number of legal procedures necessary to resolve simple court cases – have been suggested (see e.g. de Silanes et al., 2003; World Bank, 2004). However, these measures are very limited in their temporal and geographical stretch. Instead the Investment Profile index (IPI) from the International Country Risk Guide (ICRG) is applied to capture direct

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Interpretation of the coefficients derived from these estimations should be conducted with caution though.

[46]See: http://www.heritage.org/index/about, for documentation and access to indices from the Heritage Foundation.

[47]The Economist Intelligence Unit; U.S Department of Commerce; U.S. Department of State; and a hoard of news and magazine articles textually analyzed.

[48]More precisely, a score of 100 implies that "[p]rivate property is guaranteed by the government. The court system enforces contracts efficiently and quickly. The justice system punishes those who unlawfully confiscate private property. There is no corruption" (Miller, Holmes and Feulner, 2012, 455), while 0 indicates that "[p]rivate property is outlawed, and all properties belong to the state. People do not have the rights to sue others and do not have access to the courts. Corruption is endemic" (Miller, Holmes and Feulner, 2012, 456).

contractual uncertainty, whilst the CIRI independence of the judiciary (INJUD) index is applied to proxy the enforcement climate.

IPI is a forecasting measure of contract enforceability at the national level – it is applied to capture contracting situation in the marketplace. It is an unweighted aggregation of three underlying components: contract viability/expropriation; profits repatriation; payment delays.[49] The maximum score on each sub-indicator is 4, and the aggregate indicator varies from 0 to 12. Higher values connote low contract risk and lower values high risk. The IPI is constructed through ICRG staff collecting information on political, financial and economic issues, and converting them into risk points based on a consistent pattern of evaluation. The index thus reflects coders' subjective analysis of any given country's contract risk.

The INJUD index is captures "the extent to which the judiciary is independent of control from other sources, such as another branch of the government or the military" (Cingranelli and Richards, 2008, 95). It is applied to capture legal enforceability of contracts. INJUD addresses whether judges are safe from removal by peer officials, whether the judicial officials are unencumbered by corruption and involuntary dragooning, whether court hearings are communal, and whether the outcomes of proceedings are safeguarded from governmental interference. It ranges from 0 to 2, where 0 indicates low judicial independence, and 2 connotes high independence.[50]

Economic regulation: quality of banks and credit markets

The quality of banks and credit markets is assumed to smoothen economic transfers between principals and subsidiaries, as well as between employers and employees. Excess government interference in banking issues might debase investor reliance on their services in fear of discriminatory treatment. Moreover, state ownership of banks and other financial institutions might constrain availability of their services.

To capture the general ability of MNEs to budge money in foreign markets, the Investment Freedom Index (IFI) from the Heritage Foundation is applied. The IFI is constructed with an ideal score of 100, where points are deducted on the back of restrictions in countries' investment regimes. The IFI deducts scale points if: host-governments favor national companies in regulation; access to foreign exchange is restricted; restrictions on payments, transfers, and capital transactions are imposed; certain industries are closed to foreign investors. The IFI essentially measures the amount of regulatory "red tape" host-countries impose on MNEs' movement of money (Miller, Holmes and Feulner, 2012, 463-4).[51]

To account for the quality of banks, that is, their independence from government interference, the Financial Freedom Index (FFI) from the Heritage Foundation is used. The FFI "is a measure of banking efficiency as well as a measure of independence from government control and interference in the

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[49]Some might regard this construct as more a measure of property rights than an indicator of contracting environment. In essence distinctions are thin. It is applied in to capture contracts in this context as all of its subcomponents can be argued to capture contract viability. Keep in mind also that the IPI measures at least two of the other concepts operationalized here: property rights protection and the opportunism aspect to political governance.

[50]Periods of interregnum and interruption are coded as missing.

[51]The IFI is derived from contextual analysis of annual reports from the the Economist Intelligence Unit; the Office of the U.S. Trade Representative; and the U.S. Department of Commerce (Miller, Holmes and Feulner, 2012, 463-4).

financial sector" (Miller, Holmes and Feulner, 2012, 464). It has an ideal score of 100 where points are deducted on the back of violations within five areas of regulation: the extent of government regulation of banking services; the degree of state intervention in banks and financial institutions through direct or indirect ownership; the extent of capital and financial market development; government influence on the allocation of credit; the openness to foreign competition in banking. 100 connotes negligible government interference, while 0 convey the impression of a financially repressive government.[52]

3.4   Control variables

Control variables are entered to remove extraneous influences obscuring the true relationship between dependent and independent variable(s), and to avoid omitted variable bias. However, simply controlling for any factor that might have independent effects on dependent outcomes and independent variables might be erroneous itself. As noted by more than one political methodologist, parsimony of some sort should be a guiding star when link-modeling dependent outcomes as a function of independent factors (see e.g. Achen, 2002, 2005; Ray, 2003, 2005; Oneal and Russett, 2005). The implications for interpretation of estimates and the closely related issue of multicollinearity are discussed in Section 3.6.1.

The below equations have a distinct modeling structure beginning with the estimation of one uniform baseline model across all types of FDI, including the total aggregate to provide a benchmark. The baseline model is parsimonious in that it controls for only the most frequently assumed and proven independent non-institutional drivers of FDI, controls that theoretically are thought to affect all types of FDI. Next, to clarify the relationships between the varieties of FDI and the institutional concepts, sector-specific models are run. These models control for effects that are theoretically assumed to affect particular sectors only, and thus elaborate on the baseline estimations.

Baseline model controls

The baseline model enters five control variables. Four of these are variations of so-called "gravity factors", viz. geographical distance, market size, common language and trade closeness. Traditionally theories of endowment-driven FDI has assumed that, given mobile factors, competitive owners allocate their production wherever returns are maximized. The gravity model of trade departs from this simple notion by stating that "trade between two countries is proportionate to the product of their GNPs [gross national products] and inversely related to the distance between them, by analogy to the formula for gravitational attraction between two masses" (Frankel, Stein and Wei, 1995, 68).[53]

To capture the effect of *distance*, a bilateral measure of the average distances between source-host-country dyads is applied (DIST) (Mayer and Zignago, 2006).[54] The effect of distance on FDI

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[52]The FFI is based on country reports from the Economist Intelligence Unit; the IMF; the OECD; the U.S. Department of Commerce; the Office of the U.S. Trade Representative; the U.S. Department of State; the World Bank; as well as various news and magazine articles (Miller, Holmes and Feulner, 2012, 465).

[53]Variations of the gravity model has also been widely used to explain FDI (see e.g. Wei, 2000; Stein and Daude, 2002; Daude, Yeyati and Stein, 2003; Mody, Razin and Sadka, 2003; Bénassy-Quéré, Coupet and Mayer, 2007).

[54]Documentation and access to data from Centre d'Etudes Prospectives et d'Informations Nationales (CEPII) to be found at:

arguably depends on the type of FDI. For MNEs seeking to supply the host market such as those in services – the longer the distance the more costly transactions between principal and subsidiary becomes (Barba Navaretti, Venables and Barry, 2004, 33). The virtual non-tradability of services makes such difficult to supply abroad in any other way than by producing them on-location. Market-seeking manufacturers on the other hand more often produce goods that are tradable, and therefore the effect of distance should be the opposite of that on service supplying. The further away a target market is, the more likely it is that supplying it through on-location production is be cheaper than transporting it there (see e.g. Brainard, 1997). Distance might also be important for natural resource MNEs as they depend on access to export hubs to supply crude products to markets or processing facilities. However, such infrastructure is often supplied by MNEs themselves.[55] Distances are logged to correct for skewness.

Market size (MARKET), of which a valid proxy is gross domestic product (GDP), is probably the most empirically robust predictor of FDI (Chakrabarti, 2001, 96).[56] Data from the World Development Indicators (WDI) on GDP adjusted for purchasing power parity (PPP) is utilized.[57] Market size is expected to have a positive effect on FDI for both manufacturing and services FDI as the larger the host the more extensive the market potential. A thriving marketplace allows market-seeking MNEs to capitalize on economies of scale revenues. Moreover, higher GDP often also implies larger and more diversified factor markets. For less integrated natural resource FDI the relationship is less clear-cut. However, GDP captures general aspects of economic development that should affect most investors. Prosperous markets should for example more often than not have well-functioning institutional systems. The variable is logged to account for skewness, and lagged to account for potential reciprocal effects.

The gravity factor that is *common language* captures cultural commonality and similarity in structures such as legal systems affect FDI allocation (see e.g. Globerman and Shapiro, 2003). Two dummies are used to capture this commonality. The first indicates whether a country is Nordic (NORDIC), and the second whether a country is one of the 15 initial European Union (EU) member states (EU15). As regards NORDIC, although this variable captures two countries with languages incomprehensible to Scandinavians (Finnish and Icelandic), it should capture an important aspect of distance's gravity effect: historical business ties.[58] Two theoretical contributions underpin this claim: "The Uppsala Model" emphasizing cultural and psychological closeness (Johanson and Vahlne, 1977); and the "Linking-Leverage-Learning"

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http://www.cepii.fr/anglaisgraph/bdd/distances.htm.

[55]Additionally, due to the path-dependency of institutional development (see e.g. Levi, 1997; Pierson, 2000), it might be that the further away from the host-country MNEs venture, the more likely it is that institutional settings have developed differently to those in the MNE's home-country. Institutional distance in turn may affect the transfer of intangibles between principal and subsidiary and potentially reduce profitability of the investment (see e.g. Kostova, 1999; Kostova and Zaheer, 1999; Kostova and Roth, 2002). In Norway's case, it might be that institutional quality deteriorates the further away a host-country is, biasing investments in countries that are located geographically closer.

[56]Note that Chakrabarti (2001) uses GDP per capita, but this measure is here applied in sector-specific models to capture income levels, in line with the modelling of Blanton and Blanton (2009, 482).

[57]Access all the WDI data at: http://data.worldbank.org/data-catalog/world-development-indicators.

[58]Writings in International Business literature frequently point out how institutional proximity at the level of the firm might affect both the location of affiliates and the affiliates motivation to operate productively (Kostova, 1999; Kostova and Zaheer, 1999; Kostova and Roth, 2002).

approach of Mathews (2002). To Norwegian MNEs, relative newcomers to FDI, the commonality of dealing with Nordic peers is likely to represent a significant uncertainty-decreasing pull factor.

The EU15 dummy is entered to control effects stemming from closeness of trade. Hveem, Knutsen and Rygh (2008a, 13) argue against controlling for Eastern European newcomers when using time series from 1998 to 2006 only. Had the assumption been that Norwegian MNEs anticipated these states' inclusion in the EU anterior to inclusion, a control would have been justified. Assuming they did not, new EU members are excluded. The dummy is expected to affect all Norwegian FDI positively as EU is Norway's main trading partner, and since Norway is a member of the Single Market Act under the European Economic Community , the promotion of free capital flow between member countries should pull Norwegian FDI into the European Economic Area.

In addition to the four gravity factors, physical infrastructure (INFRASTR), proxied by the number of internet users per 100 inhabitants from WDI, is entered in the belief that infrstructure has a facilitating effect on all business (Chakrabarti, 2001, 101).[59] As such, INFRASTR should affect all types of FDI positively, but perhaps services the most as such is more information intensive than the two other sectors. The measure is lagged one year to avoid reciprocity problems.

Sector-specific controls

The sector-specific models include controls assumed to affect MNEs in particular sectors. *Natural resource FDI* is assumed to be most constrained in the actual choice of investment location, mainly due to the basic need for resources to extract (Cohen, 2007, 66). Although natural resources also encompass non-petroleum related activities such as fish farming and cash cropping, extraction of oil and gas is by far the dominant activity (see Table 3.1). As advocated by Knutsen, Rygh and Hveem (2011, 18) a variable measuring resource endowments in kilotons of oil equivalents (ENERGY) from the WDI is entered to clarify the effect of institutions on natural resource FDI. ENERGY is logged to correct for skewness.

Manufacturing FDI can be thought to vary with *income*, *openness to trade* and the level *of human capital*, in addition to the baseline controls. Average *income* (INCOME) is proxied by PPP adjusted GDP per capita in current US dollars from the WDIs. Higher average income reflect better investment opportunities as it implies higher consumer demand. On a different note, higher income may imply higher labor costs. To the degree that manufacturing production is efficiency-seeking and thus hiring locally, it should care for wage costs to minimize its production expenditures (Dunning and Lundan, 2008, 104-5). INCOME is logged to correct for skewness and lagged to correct for potential reciprocity.

Openness to trade, another a gravity factor, is proxied by exports plus imports as a share of GDP at constant 1990 prices (OPEN), from the United Nations Statistics Division National Accounts (UNNA).[60]

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[59]Corroborated by Moosa and Cardak (2006) and Ali, Fiess and MacDonald (2010), although with a different measures of infrastructure: telephone lines per 1000 inhabitants. Their's is arguably a more pure measure of infrastructure as it is not biased by whether the general population is educated enough to use internet. However, it is very constrained in its coverage, so to maximize utilized variation the described proxy is applied instead.

[60]Gastanaga, Nugent and Pashamova (1998, 1302) differ between degree of openness to FDI and general openness to capital

Trade openness is a fairly common control in locational FDI research, and is interpreted as a quantification of restrictions on trade.[61] The effect of trade openness might run two ways: to the degree that manufacturing FDI is export platform-driven, trade restrictions is a hindrance to profits from re-exportation. If the manufacturing MNE supplies the host-market, high trade restrictions might facilitate FDI relative to arms-length trade.[62] OPEN is logged to correct for skewness and lagged to avoid reciprocity.

Human capital (HUMCAP) is proxied by entering a variable measuring the average years of education for individuals over the age of 25 in populations as a whole, supplied by Institute for Health Metrics and Evaluation (IHME).[63] Human capital is admittedly one of the most important factors of production. Higher levels of education should affect decisions on where MNEs conduct their foreign production positively given that local labor is employed. Those most lenient to integrate their production in local labor markets, that is manufacturing and to a certain degree services, should be more likely to depend on high local skill levels. Manufacturing production can however be efficiency-seeking and therefore valuing low labor costs, often associated with production in the developing world (see e.g. Schneider and Frey, 1985), where skills are endemically low, and in turn create lower wage demands.[64]

FDI in services, in addition to the effect of the baseline controls, and the *income* and *human capital* variables used to explain manufacturing FDI, might be affected by two additional factors. The first, *capital density*, should matter, although arguments are indeterminate as to how. Authors such as Solow (1956) hypothesize that high levels of capital stocks in countries, all else equal, reduces the marginal returns on investment and as such impede FDI. The opposite argument, posed by amongst others Krugman (1991), is that investments have a multiplicative "crowding-in" effect on other investments. The idea is that investments are complementary, whereby capital density facilitate FDI. Capital density (DENISTY) is proxied by using the ratio of investment to GDP from the Penn World Tables (PWT) (Heston, Summers and Aten, 2011).[65] DENSITY is lagged to account for reciprocal effects.

FDI in services have also been found to accompany their clients abroad, often manufacturing industries. Although the question of causality is tricky, the logic of the argument is that controlling for manufacturing FDI may "provide evidence on the progression of the agglomeration process identified by studies showing that aggregate FDI is positively related to lagged FDI" (Kolstad and Villanger, 2008, 524).[66] As such the last sector-specific control entered is simply the Norwegian manufacturing FDI stock (labelled Manufacturing FDI). This variable should have a positive effect on services FDI, and is

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flows when conducting this control. For reasons of parsimony only a single measure is applied here, although restrictions on currency convertibility such as laws controlling foreign exchange are likely to deter FDI.

[61] See for example: Asiedu (2002); Blanton and Blanton (2007, 2009); Busse and Hefeker (2007).

[62] This is what has been labelled the "tariff jumping" hypothesis (see e.g. Bloningen, 2000).

[63] The variable is computed as the unweighted average of female and male education percentages over 25. Documentation and access to the data to be found at: http://www.healthmetricsandevaluation.org/. It should be noted that authors controlling for the effect of human capital on FDI allocation often use data on enrollment rates from the WDI (see e.g. Knutsen, Rygh and Hveem, 2011). The superior data coverage of the IHME measures is the main reason they were chosen.

[64]"[A] natural consequence of the abundance of labor will be its low price" (Noorbakhsh, Paloni and Youssef, 2001, 1598).

[65] For data and documentation, see: http://pwt.econ.upenn.edu/php_site/pwt_index.php.

[66] See for example: Singh and Jun (1995); Lipsey (1999); Noorbakhsh, Paloni and Youssef (2001).

logsquared as it is when applied as dependent variable to account for skewness, and lagged one year.

3.4.1   Operationalizations summed up

Table 3.3 sums up all operationalizations. The expected signs of the independent and control variables on the variations of FDI are added.[67] To assess whether the ten independent variables actually measure different underlying dimensions, an exploratory principal component analysis (PCA) was applied.[68] The uniqueness of the variables, that is, the variance they do not share with other variables, is what is of interest to us. DEMOC and XCONST were the two constructs with the lowest unique variation (0.1455 and 0.1326 respectively), with the CCI and the PRI following (0.2113 and 0.2313 respectively). The reason probably is that these two sets of variables are the pairs with the highest bivariate correlations (see Table A.2) This is only logical as they are entered to capture the same institutional categories. The six other variables had unique variation of 0.3 or more. There thus seems to be large degrees of overlap in constructs, but it could still be argued that they are capable of yielding substantial individual information when entered sequentially. Multicollinearity is discussed in Section 3.6.1.

Table 3.3: Concepts, associated variables, and expected effects

				Expected effects		
Variable type	Concept	Variable	Source	NRFDI	MFDI	SFDI
Independent	Human rights protection	PHYSINT	CIRI	+	+	+
variables	Labor standards upholding	WORKER	CIRI		+	+
	Political pref. aggregation 1	DEMOCRACY	ACLP	+	+	+
	Political pref. aggregation 2	XCONST	Polity IV	+	+	+
	Control of Corruption	CCI	WGI		+	+
	Property rights protection	PRI	Heritage	+	+	+
	Contract enforceability 1	IPI	ICRG		+	+
	Contract enforceability 2	INJUD	CIRI		+	+
	Movement of money	IFI	Heritage		+	+
	Credit and bank quality	FFI	Heritage		+	+
Baseline	Market size	MARKET	WDI	+	+	+
controls	Geographical distance	DIST	CEPII		+/-	-
	Commonality 1	NORDIC	-	+	+	+
	Commonality 2	EU15	-	+	+	+
	Infrastructure	INFRASTR	WDI	+	+	+
Sector-	Resource endowments	ENERGY	WDI	+		
specific	Income	INCOME	WDI		+/-	+
controls	Openness to trade	OPEN	UNNA		+	
	Human capital	HUMCAP	IHME		+/-	+
	Capital density	DENISTY	PWT			+
	Manufacturing FDI	Manufacturing FDI	SSB			+

NRFDI = natural resource FDI; MFDI = manufacturing FDI; SFDI = services FDI. Expected effects for the institutional

variables are the same as those in Table 2.5. Expectations sometimes depend on sector, and is as such connoted with +/-.

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[67] See Table A.2 for descriptive statistics, and Table A.1 for independent variable coverage (year 2006), both in Appendix A.

[68] "Principal component analysis (PCA) is a multivariate technique that analyzes a data table in which observations are described by several inter-correlated quantitative dependent variables. Its goal is to extract the important information from the table, to represent it as a set of new orthogonal variables called principal components, and to display the pattern of similarity of the observations and of the variables as points in maps" (Abdi and Williams, 2010, 433).

3.5 Statistical model: OLS with PCSE

Choosing the statistical model that is most appropriate for the data at hand is paramount when investigating social problems quantitatively. The nature of the Norwegian FDI data series and the inherent characteristics of institutions should therefore both affect the choice of regression model. The particular estimation technique applied is ordinary least squares regression with panel-corrected standard errors (OLS PCSE) (see e.g. Beck and Katz, 1995).[69]

Before explaining the nature of OLS PCSE models, note that many political scientist prefer fixed effects (FE) models when working with panel data. This because estimating country FEs may correct non-observable, exogenous factors that affect both dependent and independent variables. What FE does is incorporating dummies for all panel-units, effectively excluding cross-sectoral variation from the equation. Intra-variable variation is used to predict changes in the dependent outcome. The advantage of FE estimates is that they are less susceptible to bias due to omitted subject level covariates (Rabe-Hesketh and Skrondal, 2008, 189). The risk however is that valuable information goes to waste, increasing chance of committing Type II errors.[70] This is especially so when independent variables, like institutional concepts, are inherently inert (see e.g. Beck and Katz, 2001). Using institutions as explanatory variables leaves little intra-variable variation to explain FDI, a problem exacerbated by the short time series applied. 1998 to 2006 yields only 9 temporal points of observation. Beck and Katz (1995) highlight that OLS with PCSE is the appropriate method with relatively many units of observation and relatively few observation points in time, and is therefore considered the *ad rem* method of analysis.

As regards the assumptions in the standard OLS model, panel-correcting standard errors correct some of the violations panel data commit. More precisely, the assumptions that disturbance terms should have the same variance and be uncorrelated (Kennedy, 2003, 48-9).[71] The initial violation of these assumptions result in the problems of *heteroskedastisity* and *autocorrelation*. The former implying that disturbances do not have the same variances, and the latter that disturbance terms are correlated, meaning that a country's FDI stock in year t is positively correlated with its FDI stock in year $t + 1$. The fact that the same stocks over time are dependent on each other should be evident to most observers.

Simply put, OLS PCSE-models use differences in X and differences in Y to make inferences regardless of whether differences are observed along within-unit dimensions of time or across units in equal time-points (Knutsen, 2011, 166).[72] Aside from methodological reasons, using OLS with PCSE is

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[69]See also: Beck (2001*a*) and Beck (2001*b*).

[70]Type II errors means failing to make true inferences on existent relationships (Skog, 2004, 103).

[71]The other assumptions are: that the dependent variable is calculable as a linear function of an assemblage of independent regressors and an error term; that the anticipated value of the error term is zero; that observations on the independent variable can be considered fixed in repeat samples; and, that there are more observations than regressors and that no exact linear relationship exist between those regressors (Kennedy, 2003, 41-2).

[72]Meaning that Indonesia's low level of corruption control in 1998 and its corresponding low levels of FDI together with Great Britain's high control of corruption and high levels of FDI the same year is used to make inferences on corruption control's effect on FDI allocation, as is the juxtaposition of information from Indonesia in 1998 and Indonesia in 2006.

advantageous as estimated coefficients are easier to interpret. The basic econometric link function is:

$$Y_{i,t} = \beta_0 + \beta_1 X1_{i,t} + ... + \beta_n Xn_{i,t} + \varepsilon_{i,t} \tag{3.3}$$

where Y connotes the dependent outcome, the subscripts i and t refer to cross section units (countries), and to the temporal points (years), β_0 is an intercept, and β_{1-n} are the slope coefficients of variables $X1$-Xn. ε is the error term capturing unobserved scalar variables. The baseline model becomes:

$$lnsq(FDI)_{i,t} = \beta_0 + \beta_1 INST_{i,t} + \beta_2 ln(DIST)_i + \beta_3 ln(MARKET)_{i,t-1} + \beta_4 EU15_i +$$
$$\beta_5 NORDIC_i + \beta_6 INFRASTR_{i,t-1} + \varepsilon_{i,t} \tag{3.4}$$

where $lnsq(FDI)$ is the logsquared FDI measures, $INST_{i,t}$ refers to the institutional outcomes measures, $ln(MARKET)_{i,t-1}$ is market size lagged and logged, $ln(DIST)_i$ refers to the constant natural logarithm of bilateral dyadic distances, $NORDIC_i$ is a dummy indicating Nordicness, and $EU15_i$ is a dummy indicating initial EU membership. The sector-specific models become:

$$lnsq(NRFDI)_{i,t} = \beta_0 + \beta_1 INST_{i,t} + \beta_2 ln(DIST)_i + \beta_3 ln(MARKET)_{i,t-1} + \beta_4 EU15_i +$$
$$\beta_5 NORDIC_i + \beta_6 INFRASTR_{i,t} + \beta_7 ln(ENERGY)_{i,t} + \varepsilon_{i,t} \tag{3.5}$$

$$lnsq(MFDI)_{i,t} = \beta_0 + \beta_1 INST_{i,t} + \beta_2 ln(DIST)_i + \beta_3 ln(MARKET)_{i,t-1} + \beta_4 EU15_i +$$
$$\beta_5 NORDIC_i + \beta_6 INFRASTR_{i,t} + \beta_6 ln(INCOME)_{i,t-1} + \beta_7 HUMCAP_{i,t-1} +$$
$$\beta_8 ln(OPEN)_{i,t-1} + \varepsilon_{i,t} \tag{3.6}$$

$$lnsq(SFDI)_{i,t} = \beta_0 + \beta_1 INST_{i,t} + \beta_2 ln(DIST)_i + \beta_3 ln(MARKET)_{i,t-1} + \beta_4 EU15_i +$$
$$\beta_5 NORDIC_i + \beta_6 INFRASTR_{i,t} + \beta_6 ln(INCOME)_{i,t-1} + \beta_7 HUMCAP_{i,t-1} +$$
$$\beta_8 ln(DENSITY)_{i,t-1} + \beta_9 lnsq(MFDI)_{i,t} + \varepsilon_{i,t} \tag{3.7}$$

where $NRFDI$, $MRFD$, and $SFDI$ captures the sectoral FDI stocks. $ln(ENERGY)_{i,t}$ in Equation 3.5 is natural resource endowments as gauged by kilotons of oil equivalents logged. The two variables $ln(INCOME)_{i,t-1}$ and $HUMCAP_{i,t}$ in Equations 3.6 and 3.7 are the lagged and logged measures of average income and human capital, respectively. $ln(OPEN)_{i,t-1}$ in Equation 3.6 is the lagged and logged measure trade openness, while $ln(DENSITY)_{i,t-1}$ and $lnsq(MFDI)_{i,t}$ in Equation 3.7 are capital density lagged and logged, and Norwegian manufacturing FDI lagged and logsquared, respectively.

3.6 Statistical issues

Before discussing the results from the empirical analysis some key statistical issues are touched upon: multicollinearity and interpretation of estimated effects; missing values; bi-directional causality.

3.6.1 Multicolinearity and interpretation of effects

When investigating effects of multiple institutional concepts, the inherent overlapping nature of such should be dealt with. The reason this problem needs attention is methodological, but the problem is highly substantial. The deep-rooted complementarity of institutional evolution (see e.g. North, 1990; Hall and Soskice, 2001; Amable, 2003; Acemoglu and Robinson, 2006*b*) might lead to high statistical correlation between pairs of institutional constructs. The problem arising if a dependent variable is regressed upon multiple highly correlated constructs simultaneously is that of *multicollinearity*, a condition of approximate linear relationships between two or more of the explanatory variables.[73] It might lead to inflated standard errors and in turn changing slope coefficients of identical constructs between models because estimation procedures cannot detect enough independent variation in the regressors to estimate nonaligned effects on the regressand (Kennedy, 2003, 193). The problem is exacerbated by the fact that exact and definite metrics of institutions separating between sub-construct are scarce.

Another issue complicating the interpretation of results are the complex and unsettled relationships between independent and dependent variables. Linear models like the OLS PCSE use what is known as a "link function" to connect independent variables to a dependent outcome, where "explanatory factors are postulated to exert their influence through one or more parameters" (Achen, 2005, 328). Without estimating multi-equation systems with defined causal hierarchies (see e.g. Ray, 2003), the slope coefficients from link-based techniques can only be interpreted as *direct effects*, regardless of whether the variable of interest might affect the dependent variable through some other variable in the model.

The correlation table (Table A.3) in Appendix A lists the bivariate correlations between my ten institutional constructs. Given a fairly lenient criterion of maximum bivariate correlations of 0.7 (Skog, 2004, 288), there are few constructs that correlate problematically.[74] Entering more than maximum three of these in the same model would however prove difficult.[75] What is more, throwing everything but the kitchen sink in equations might control away important effects, not simply reduce omitted variable bias.[76] The main effort of this thesis being to explore *The Varieties of FDI* expectations, and thus the relative importance of institutions is assessed through sequential modeling. This approach yields information on the effect of the desired set of institutional concepts one-by-one, and arguably circumvents potential problems associated with mutlicollinearity at the same time. However, it is a simplified way of assessing

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[73]Multicollinearity is a frequent source of indeterminate research design (King, Keohane and Verba, 1994, 122-3).

[74]Bolded in Table A.3.

[75]Preliminary analysis revealed that both standard errors and slope coefficients in almost all models presented below were highly sensitive to multiple-institutions specifications.

[76]See for example Clarke (2005) for a thorough discussion of omitted variable biases.

the *relative* importance of institutions, and as such should be elaborated on in future research.

3.6.2 Missing values

It is quite common that social sciences data miss values on certain observations. Missing values might in some instance be ignorable in the sense that they do not affect the efficiency of the estimation. When observing panel data on the other hand important efficiency losses are frequently incurred due to the normal way of dealing with it. A missing on one observation in a row of data points is usually tackled by listwise deleting that entire row from the sample – in effect eliminating non-missing information. Many indices of institutional concepts are indeed limited in their coverage, and if the missing structure is systematic this might become problematic. For example, large and relatively prosperous countries tend to be more transparent as to the well-function of their state, in turn yielding more information to base index scores on.[77] Moreover, developed countries also tend to have more stringent reporting procedures, another potential source to bias in favor of such countries.

There are multiple ways in which replacement values can be constructed, and in general little is known about the properties of estimators based on predicted values made to fill in data gaps (Greene, 2003, 59). As regards the independent variables, my first endeavor to mitigate missing biases was to search for those constructs with the broadest possible coverage, while still capturing relevant latent concepts.[78] As regards the remaining missing values, one specific replacement method advised by Honaker and King (2010) and Honaker, King and Blackwell (2011), the Amelia II imputation program is, use a multiple imputation method based on all systematic variation in ones dataset to construct replacement values where missing. For the Amelia II imputation method to function, the algorithm needs a certain degree of over-time systematic variation to converge. When running various specifications of the time-series imputative procedure on my dataset, Amelia II repeatedly failed to converge, probably due to a problem of too many degrees of freedom stemming from the short time-series.

I therefore resorted to using basic linear interpolation on the one independent variable that seriously constrained my sample when entered: the CCI. Up until 2002 WGI only coded CCI bi-annualy, which mean that for relevant equations, all information from the years 1999 and 2001 would have been listwise deleted.[79] The CCI scores for the years 1999 and 2001 is thus defined by:

$$\frac{(CCI_{t-1}) + (CCI_{t+1})}{2} \tag{3.8}$$

for the cases where missing values actually have both preceding and succeeding values.[80] All other

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[77]E.g. XCONST, only scored for the 162 most populous contemporary countries (Marshall, Jaggers and Gurr, 2011, 4).

[78]As can bee seen throughout the operationalizations, frequently used measures were discarded due to poor data coverage.

[79]The un-interpolated CCI exhibits a within-country variation of at most -0.93 to 1.08, with a standard deviation of only 0.20, as measured by using the command *xtsum wbgi_cce, i(countries_id)* in STATA (Rabe-Hesketh and Skrondal, 2008, 181-2), an indication the the inert nature of institutions creates little over-time variation and makes linear interpolation more feasible.

[80]Had the interpolated dataset yielded radically different results from thew the original set, one would have had to discuss the actual gain in inferring upon constructed data. However, testing of the below models of corruption control and FDI with

missing cases are treated by listwise deletion, and therefore *N* varies somewhat across models estimated.

There are also normally missing problems in FDI data (Dunning and Lundan, 2008, 12-5). SSB however codes missing at the affiliate level as if there were no FDI in these affiliates (Hveem, Knutsen and Rygh, 2008c, 33). Country-years where data is missing is thus reported as zero-positions in the dataset.[81] In some cases this might of course be factual. Certain countries probably had no Norwegian FDI in certain country-years. SSB claims to alleviate the missing problem of non-reported equity by filling in information from alternative sources like companies' annual reports, but it is possible that some of the zero-denoted country-years indeed had FDI Norwegian FDI not reported to SSB. As there is little the author can do about this, analysis proceeds without inquiring further into the problem.

3.6.3 Endogeneity

The possibility of bi-directional causality in the institutions-FDI relationship has led to an increased application of alternative regression methods accounting for reciprocity.[82] The idea is that once MNEs sink equity into a host-country, they might become constituents demanding institutional upgrading, creating a feedback effect from increased investment on institutional performance.[83] Moreover, a potential subjectivity bias might arise from experts reporting better scores on institutions where high levels of FDI is observed – after all, should the notion of institutions as drivers of FDI hold, high levels of FDI is necessarily a good indicator of sound institutions.

One of the advantages of using data from one single source-country is that the FDI-to-host-country-GDP-ratios becomes moderate. Even in cases such as Angola and Azerbaijan where Norwegian FDI is modestly high relative to GDP, the endogenous effect is probably small due to substitution options for the hosts. Both Angola's and Azerbaijan's Exchequers are heavily dependent on realization of petroleum rents, and it is not far-fetched to assume that other petroleum MNEs had offered their expertise had not Norwegian MNEs (Hveem, Knutsen and Rygh, 2008a, 5). Endogeneity in the institutions-FDI relationship is therefore assumed to not be a very large problem in the empirical analysis. As the possible reciprocity of FDI on independent variables was discussed in Section 3.3, and control variables though to affect policy climates were lagged when neccesary, no further discussion is conducted here.

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both the interpolated and un-interpolated versions of CCI revealed that results were the close to the same across all models regardless of variable application. The interpolated measure does thus not create conclusions based on constructed data, while including substantively more real data in the CCI regressions.

[81]There are in fact quite a few country years in each sector with no FDI reported. For total FDI, there are 745 occurrences of zero in 2255 country-years, in natural resources FDI there are 1314 occurrences, there are 1066 zero country-years in manufacturing FDI, and 844 occurrences in services FDI.

[82]See for example: Letnes (2002) for the effect of FDI on human rights, and Robertson and Teitelbaum (2011) for the effect of FDI on labor protest and regime type. The econometric method most frequently used to address these endogenous relationships is "instrumental variable analysis", see: Blanton and Blanton (2007); Daude and Stein (2007) for applied examples.

[83]Consider for example the "resource curse"-assumption that realization of resource rents gives autocrats the sufficient funds to successfully hold on to its power (see e.g. Ross, 1999). As autocrats rarely are in possession of the necessary technologies to extract their sub-ground dwellings, MNEs might effectively contribute to autocrats retaining their political power through realizing the his or her resource rents. In the case of Angola for example, le Billon (2001) goes far in concluding that MNEs extracting oil and diamonds have affected the legitimacy of government and economy.

3.7   Summary

This section has set the premises for the empirical analysis in Chapter 4. After arguing that quantitative analysis is the proper approach to assess the issue-area, the dependent variables were discussed at length. Standard measurement issues in FDI data and potential biases in the Norwegian FDI data were touched upon. Next, the institutional concepts presented in Chapter 2 were operationalized. Some concepts were argued to be best captured with two indicators. The appropriateness of each indicator was discussed in light of existing theoretical understandings of the latent concepts, and it was highlighted how measures capturing *de facto* policy climates are favored. Control variables were discussed in turn, again based on theory linking each concept to both FDI and institutional performance. A set of baseline controls were presented to be assessed in all regressions, and certain controls were restricted to one or two sectors only. It was argued that OLS with PCSE is the econometric model best fitted to assess the data at hand, before solutions to statistical issues such as multicollinearity, interpretation of effects, missing values, and endogenous relationships were touched upon.

Chapter 4

Empirical results

To see the whole elephant in front of you is a necessary but not sufficient means to achieve
an adequate understanding of the full range of characteristics and behavior of an entity that
exists in multiple forms.
– Stephen D. Cohen, *Multinational Corporations and Foreign Direct Investment*, (2007,
16-17)

Truly among man's innovations, the use of organization to accomplish his ends is among
both his greatest and his earliest.
– Kenneth J. Arrow, *Essays in the Theory of Risk-Bearing* (1971, 224)

This chapter presents the results from analyzing *The Varieties of FDI* expectations presented in chapter 2,
based on the research design outlined in chapter 3. It is an attempt to see the whole elephant that is FDI.
It starts off by explaining the logic of the empirical analysis, before discussing some bivariate relations,
the comparable baseline model, and the sector-specific models. Before reporting the results from a set
of robustness checks, it substantiates the findings from the sector-specific models. At last, the various
effects found of man's organization of society found on the varieties of investor behavior is summarized.

4.1   The logic of the empirical analysis

Since this exercise is an inquiry into the variations of investor behavior, focus in the analysis is on
whether differing empirical relationships across sectors exist. Exploring the actual *existence* of divergent
relationships thus precedes in-depth quest for explanatory power at this level of analysis. The assump-
tions developed within *The Variety of FDI framework* will be discarded or confirmed, and where plausible
explanations for divergence from expectations can be identified, these are discussed.

Three steps of analysis is presented. First, as an introduction, the results from bivariate regressions
of the institutional concepts and the varieties of FDI is accounted for, using OLS PCSE models. Next,
the three sectoral stocks of FDI and the total FDI aggregate is regressed upon the baseline model, with

institutional concepts entered sequentially. This to investigate the varieties of relationships in a comparable environment. The sensitivity of estimates across sectors and for total FDI numbers are also assessed here. Since the purpose of the baseline discussion is to shed light on whether there are any differences across sectors, benchmarking effects of the same variables across types of FDI is the focus when interpreting. Finally, effects are clarified through applying sector-specific controls in models regressing the three varieties of FDI. Here, the estimated relationships are discussed in light of the arguments at base in *The Varieties of FDI framework*. To substantiate effects, the estimated maximum effects are presented.

4.2   Bivariate relationships

The bivariate relationships in Table 4.1 indicate that there seems to be something about the institutional concepts that affect all types of FDI. Results are uniformly positive with high levels of significance for all indicators of *political governance*, *economic interaction*, and *economic regulation*.

Table 4.1: Bivariate models – Institutional concepts and FDI across sectors

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
TFDI	0.0632	0.235	**2.717******	**0.804*****	**2.926*****	**0.102*****	**0.612*****	**1.071*****	**0.0603*****	**0.0667*****
	(0.0815)	(0.213)	(0.514)	(0.126)	(0.189)	(0.0119)	(0.113)	(0.268)	(0.0115)	(0.0129)
NRFDI	**0.188***	**0.438***	**1.894*****	**0.638*****	**2.484*****	**0.0812*****	**0.648*****	**0.819***	**0.0439*****	**0.0434***
	(0.0844)	(0.217)	(0.540)	(0.126)	(0.200)	(0.0118)	(0.121)	(0.264)	(0.0109)	(0.0132)
MFDI	0.103	**0.554*****	**2.228*****	**0.937*****	**3.379*****	**0.104*****	**0.516*****	**1.370*****	**0.0647*****	**0.0818*****
	(0.0704)	(0.162)	(0.517)	(0.113)	(0.171)	(0.0113)	(0.109)	(0.233)	(0.0105)	(0.0109)
SFDI	**0.189***	**0.404***	**2.121*****	**0.645*****	**2.579*****	**0.0977*****	**0.661*****	**1.064*****	**0.0642*****	**0.0562*****
	(0.0768)	(0.193)	(0.476)	(0.123)	(0.200)	(0.0118)	(0.111)	(0.239)	(0.0104)	(0.0129)
Observations	1552	1555	1677	1369	1312	1380	1196	1679	1380	1380
Countries	190	190	190	160	190	161	136	190	161	161

Cell values are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses. Dependent variables are lnsq(FDI stock) in all models. TFDI = total FDI, NRFDI = natural resources, MFDI = manufacturing, and SFDI = services. Coefficient represents bivariate relationships. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The only category of variables displaying ambiguity is *personal freedoms*. While rises in neither human rights protection nor labor standards upholding seems to be accompanied by increases in total FDI, the disaggregated numbers show a more detailed picture. The politico-economic climate related to human rights protection has positive effects on natural resource FDI and FDI in services at 5 percent levels, coefficients estimated to be a little under 0.2, implying that a one point upwards change on the PHYSINT scale is associated with 0.2 percent increase in lnsq(NRFDI) and lnsq(SFDI). Host-country contexts associated with well-protected worker's rights affect all varieties of FDI positively, although predicted both stronger and more significant in the case of manufacturing (0.554, at the 1 percent level) than for natural resource FDI and services FDI (0.438 and 0.404 respectively, both at 5 percent levels). Given the assumption that manufacturers employ more locally this makes sense.

What this basic level of analysis tells us is twofold. First of all, and related to this thesis' motivation, the estimates from the personal freedom components indicate that aggregate numbers of FDI might blur the real effects that are at play when FDI is conducted. The mere fact that neither of the two freedoms components exhibit any significant relation to total FDI, but in different forms show relations to the disaggregates is intriguing. Second, estimates indicate that there is something about the contextual outcomes associated with sound institutions that attract FDI. The task of the hereinafter analysis is to clarify whether these relationships hold when taking non-institutional factors into account.

4.3 Baseline discussion

Table 4.2 presents the results from regressing the aggregate total of Norwegian FDI on the baseline-model specified in Section 3.5.[1] This is the level of data normally assessed and, depending on specification and choice of model, some variation of these relationships is what conclusions would have been drawn upon. Consider first the baseline controls. On the balance, all controls except the dyadic distances measure are significant, regardless of institutional concept applied. Having a large home market, being Nordic, being one of the initial 15 EU countries, and having developed well-functioning infrastructure should significantly increase the chances of garnering FDI. Why then does distance exhibit ambiguity? One explanation, as discussed in Section 3.4, is that while services should be negatively affected by distance as transaction costs increase, distance for manufacturers, to the extent that they are seeking markets, might increase the chance of production internationalization through in-market supply of goods. Exporting goods across long distances is expensive. Given that the two separate effects of distance pull in different directions, estimation based on collapsed numbers might create a mutual countervailing of effects.

Moving on to the institutional variables, there are four significant relationships confirmed, (bolded in the table). First, the point estimate of the *political governance* component DEMOC is significant at the 5 percent level. Having an electoral system that choses its leaders democratically increases the general chances of inbound FDI. The corruption component CCI is also significant at the 5 percent level. Corruption then, on the balance, seems to work more as a "grabbing" than as a "helping hand" for MNEs (remember the two stands of Leff (1964), and Nye (1967) respectively). A coefficient estimated at 0.906 implies that a move from the level of corruption observed in Bangladesh in the year 2000 (≈ -1.0 on the CCI scale) to that of Canada in the same year (≈ 2.0), all else equal between the two countries, is estimated to be associated with a 2.7 percent upwards change in inbound lnsq(TFDI).[2] None of the *personal freedoms* components are significant at any levels, neither are the FFI and IFI components of *economic regulation*. Two of the variables related to the facilitation of *economic interaction* are however

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[1]In the total FDI aggregate stock the miscellaneous industry from Table 3.1 is also included.

[2]Estimated in this manner: $0.906 * 3 = 2.718$. The change estimated to be incurred by full-scale transitions for all the sector-level models are reported and discussed in Table 4.8 in Section 4.4.4. Due to the extensiveness of this analysis, the logsquares are not anti-logged to estimate the summed FDI gain predicted from independent variables. Moreover, it could be argued that such simulations are rather semantic endeavors.

Table 4.2: Baseline models – Total FDI and institutional concepts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PHYSINT	0.112									
	(0.0875)									
WORKER		-0.0937								
		(0.207)								
DEMOC			**1.157***							
			(0.522)							
XCONST				0.0778						
				(0.138)						
CCI					**0.906***					
					(0.374)					
PRI						**0.0322***				
						(0.0144)				
IPI							0.131			
							(0.127)			
INJUD								**0.638***		
								(0.289)		
FFI									0.0132	
									(0.0120)	
IFI										0.00509
										(0.0144)
ln(DIST)	-0.224	-0.274	-0.225	-0.140	-0.244	-0.209	-0.333	-0.308	-0.131	-0.145
	(0.436)	(0.438)	(0.440)	(0.468)	(0.450)	(0.466)	(0.513)	(0.446)	(0.470)	(0.465)
ln(MARKET)$_{t-1}$	1.790***	1.746***	1.765***	1.933***	1.749***	1.859***	1.798***	1.799***	1.908***	1.909***
	(0.115)	(0.110)	(0.111)	(0.154)	(0.116)	(0.152)	(0.181)	(0.110)	(0.145)	(0.143)
NORDIC	2.385***	2.314***	2.519***	2.766***	2.119**	2.524***	2.766***	2.535***	2.724***	2.654***
	(0.692)	(0.702)	(0.690)	(0.744)	(0.724)	(0.727)	(0.764)	(0.685)	(0.736)	(0.743)
EU15	2.768**	3.103***	2.689**	2.253*	2.001$^+$	1.986*	2.570*	2.462*	2.695**	2.713**
	(0.929)	(0.912)	(0.934)	(1.014)	(1.060)	(0.994)	(1.025)	(0.968)	(0.961)	(0.971)
INFRASTR$_{t-1}$	0.0508***	0.0537***	0.0467**	0.0507**	0.0324*	0.0431**	0.0393*	0.0449**	0.0495**	0.0538***
	(0.0153)	(0.0151)	(0.0152)	(0.0167)	(0.0152)	(0.0153)	(0.0167)	(0.0150)	(0.0157)	(0.0160)
Constant	-35.33***	-33.24***	-34.81***	-39.38***	-33.37***	-38.10***	-34.87***	-34.93***	-39.17***	-38.72***
	(4.569)	(4.516)	(4.555)	(4.782)	(4.793)	(4.771)	(5.384)	(4.547)	(4.744)	(4.779)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	172	172	172	150	172	152	128	172	152	152
R^2	0.214	0.212	0.224	0.211	0.217	0.215	0.178	0.223	0.211	0.213

Panel-corrected standard errors in parentheses. OLS PCSE and dependent variable lnsq(FDI Stock) in all models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

significant, both at the 5 percent level. On average, both property rights protection, and contract viability as measured by judiciary independence, seem to attract FDI.

This then, all else equal, could have been the general conclusion of a standard empirical assessment assuming FDI to be a homogenous enterprise. Not controversial at all. Maybe would a discussion of why it is that MNEs from the "humanitarian superpower" Norway (Gjølberg, 2010, 212-3) seem impervious to human rights protection and labor standards upholding have been added. And of course, the standard juxtaposition of some similar study concluding differently than one's own. End of the empirical story? Normally yes, but since the SSB data allows me to break the numbers down into sectoral subcategories, let us take a step down the ladder and see what the picture looks like at the sector-level.

Table 4.3: Baseline models – Institutional concepts and FDI across sectors

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
TFDI	0.112	-0.0937	**1.157***	0.0778	**0.906***	**0.0322***	0.131	**0.638***	0.0132	0.00509
	(0.0875)	(0.207)	(0.522)	(0.138)	(0.374)	(0.0144)	(0.127)	(0.289)	(0.0132)	(0.0144)
NRFDI	0.115	0.00680	0.345	-0.0329	**0.767***	0.0162	0.168	0.317	-0.00255	-0.0129
	(0.0947)	(0.232)	(0.551)	(0.138)	(0.389)	(0.0155)	(0.144)	(0.315)	(0.0121)	(0.0152)
MFDI	**0.194****	**0.271**$^+$	**1.531****	**0.440*****	**1.765*****	**0.0477*****	0.00370	**1.111*****	**0.0315****	**0.0394*****
	(0.0735)	(0.154)	(0.468)	(0.116)	(0.311)	(0.0129)	(0.119)	(0.242)	(0.0106)	(0.0117)
SFDI	**0.201***	0.0899	0.620	-0.0138	**0.886***	**0.0322***	0.176	**0.524***	**0.0195**$^+$	0.00469
	(0.0865)	(0.190)	(0.483)	(0.131)	(0.355)	(0.0129)	(0.130)	(0.246)	(0.0116)	(0.0133)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	172	172	172	150	172	152	128	172	152	152

Cell values are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses. Dependent variables are lnsq(FDI stock). Control variables, constants and explained variance estimates are omitted and can be found in Tables B.1-B.3 in Appendix B. TFDI = total FDI, NRFDI = natural resources, MFDI = manufacturing, and SFDI = services. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4.3 portrays the slope coefficients for institutional variables after regressing the varieties of FDI on baseline models. Each cell in Table 4.3 therefore represents one full baseline model. The results from the total FDI models in Table 4.2 are carried on to provide benchmarks. The low bivariate correlations between the sectors of FDI presented in Table 2.2 in Section 2.4.4 indicated that MNEs from different sectors vary widely in allocation of FDI. Natural resource FDI exhibited 0.540 and 0.322 correlations with services FDI and manufacturing FDI respectively, and the two latter were correlated at no more than 0.411. This then begs the question: Do they also differ in their valuation of host-country policy climates?

The overall picture when assessing effects across sectors confirm the general suspicion in *The Varieties of FDI framework*: relationships between institutional outcomes and varieties of FDI seem to differ according to investment type. No sectoral set of estimates embody the same relational matrix as the total FDI estimates in the topmost row. First, the complete lack of significant effects from the two *personal freedoms* components on total FDI is differentiated. While FDI in natural resources seems indifferent to variations in freedoms protection, countries where physical integrity rights are protected are more suc-

cessful in obtaining manufacturing FDI, significant at the 1 percent level. The same effect is apparent on services FDI, although only significant at the 5 percent level. The effect is estimated to be marginally stronger for services FDI than manufacturing FDI. Only given a lenient definition of significance (10 percent level), protection of worker's rights is predicted to increase the chances of inbound manufacturing FDI. WORKER shows no significant relation to FDI in natural resources, nor services. Again, given the assumption that manufacturers hire more locally this makes sense.

Also as regards the indicators of *political governance* structures, heterogeneity across sectors is found. While the total FDI model found the democratization of political power delegation to affect FDI positively, it seems that in real life it is only the manufacturing investors that value this institutional trait. For the same investors, safeguard against government opportunism as measured by the effective constraints on incumbents also seems of impact. Neither the DEMOC nor the XCONST variables are significant at any levels for FDI in natural resource extraction or in services.

The last indicator of sound *political governance*, control of corruption, holds a positive significant effect across all types of FDI. Examining the magnitude and level of significance still tells of FDI's motley nature. While the significance of CCI on natural resource FDI and manufacturing FDI is significant at the 5 percent level, the positive effect is somewhat weaker than for the totality of FDI. The effect on manufacturing FDI however is significant at all levels, and almost double in strength of what the coefficient for total FDI was. Considering the same scenario as depicted above, a change from the level of corruption in Bangladesh in the year 2000 (≈ -1.0) to that of Canada the same year (≈ 2.0) is estimated to lead to a 2.3 percent rise in lnsq(NRFDI), a 5.3 rise in lnsq(MFDI), and 2.7 percent rise in lnsq(SFDI). Corruption, it seems, throbs all investors, but manufacturers the most. More interestingly, although the FDI finding is reproduced in all sectors, both the magnitudes and certitudes of effects diverge.

Moving on to the variables capturing how host countries facilitate *economic interaction*, neither the effect of property rights protection nor the impact of judiciary independence found for the totality of FDI, hold for natural resource regressions. For services industries, the results from the total FDI regressions are almost reproduced, both effects and significance levels are close to the same. For manufacturing MNEs, the positive effect is again stronger, especially for the viability of contracts as measured by independence of the courts, while results are significant at all levels for both PRI and INJUD. Contracting environment as measured by manufacturing MNEs' ability to repatriate profits, payment delays and their safeguard against expropriation seems unimportant for all investors, regardless of type.[3]

At last there are the two *economic regulation* variables capturing the ease with which money is moved in society, and the quality of banks and credit. Still portraying significant disparity across sectors, higher scores on both the FFI and the IFI is positively associated with higher levels of manufacturing FDI, significant at 1 percent level and all levels respectively. The effect is marginally strongest for IFI, predicating that a ten point scale leap should lead to 0.39 percent in lnsq(MFDI), the prediction for FFI

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[3]On the balance, the IPI component of contracting performs badly throughout all regressions. The geographical stretch of this variables is the most restricted of those used, and might have a bearing upon its poor performance.

being a 0.31 percent rise given the same leap. The FFI measure of the ease with which money is moved in society, is significant only at the 10 percent level for service MNEs, while the IFI measure of banking and credit quality is predicted to be statistically unimportant. This is rather peculiar, given that around 65 percent of all services FDI was in either financial services, insurance, business services or property in 2006 (see Table 3.1). For natural resource investors, as was estimated for the totality of FDI, neither of the economic regulation proxies seem to have bearings upon investment decisions. Generally as regards indicators of *economic regulation*, the estimated effects on total FDI seems to be driven by idiosyncrasies in foreign extraction of natural resources and service supplying.

4.3.1 Heterogeneity uncovered?

The notion of divergent effects for varieties of FDI indicated by the bivariate relationships is strongly corroborated when controlling for basic macroeconomic and geographical gravity factors. Only two concepts associated with sound host-country institutions retains its effect across all sectors as predicted by total FDI models – the positive effect of the CCI measure of corruption control and the non-finding of effects from the IPI measure of contracting environment.[4] The four positive relationships found for the totality of FDI, varied markedly across sectors. Moreover, baseline models estimated for sector-specified FDI stocks uncovered eight relationships not predicted by the total FDI models.

There is another way in which this heterogeneity may be assessed. The diversity inherent to aggregate FDI stocks, as was discussed for the distance control, may create countervailing of effects. As such the total FDI estimates should be more sensitive to changes in model specifications than those estimated by the sector-specific models. I therefore conduct a simple form of sensitivity analysis examining how significance levels of point estimates develop as the baseline model is sequentially expanded.[5] Table 4.4 depicts how the significance of estimates for the ten institutional outcome variables develops when entering the controls one-by-one in the total FDI model, added to the bivariate estimate recognizable from Table 4.1.[6] The five baseline controls were first entered in a sequence reflecting assumptions as to the relative importance of them. Market size was added to the bivariate model first, followed by geographical distance, infrastructure, initial EU membership, and Nordicness. Two of the controls applied in some of the below sector-specific models were also included, the trade openness variable and the average income level parameter, to further check the control sensitivity of the total FDI aggregates.

The general picture is that institutional concepts are discarded in an unstructured manner as models are expanded on the total FDI aggregate. XCONST and IFI lose significance after controlling for geographic distance. The effects of corruption control, property rights protection, and contract viability

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[4]It was noted that the endemic lack of effects from IPI might have something to do with its coverage.

[5]The sensitivity of an estimate concerns its ability to capture true positives and false negatives, i.e. the model's ability to capture real relationships (Skog, 2004, 91). In for example the empirical literature on economic growth, some of the most used predictors of growth have proved highly sensitive to control variable specification (Sala-I-Martin, 1997).

[6]All the significant coefficients are positive regardless of model.

Table 4.4: Sensitivity analysis – Institutional concepts and total FDI

	Bivariate	ln(MARKET)$_{t-1}$	ln(DISTANCE)	INFRASTR$_{t-1}$	EU15	NORDIC	ln(OPEN)$_{t-1}$	ln(INCOME)$_{t-1}$
		Sequential entering of controls						
PHYSINT		***	**					
WORKER								
DEMOC	***	***	***	*	*	*	*	
XCONST	***	*						
CCE	***	***	***	***	*	*		
PRI	***	***	***	**	**	*		
IPI	***	**	*					
INJUD	***	***	***	**	*	*		
FFI	***	**	*					
IFI	***	*						

Cell values connote the significance level of the corresponding institutional concept in the leftmost column. Dependent variables are lnsq(FDI stock). All estimates are positive. Institutional concepts are connoted in the leftmost column. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

as measured by INJUD lose significance when controlling for openness to trade. The other aspect to contracts however, IPI, together with the FFI, retains a level of significance only until the infrastructure control is entered. PHYSINT, the human rights measure, had no effect in the bivariate estimation, but became significant when market size taken into account, and then loses significance when infrastructure is controlled for. DEMOC is significant the longest, but only until average income levels are controlled for. On a general note, once more than six controls are entered, regardless of which, all relationships are discarded. Moreover, when controls were entered in sequences not based on assumed relative importance, significance levels fluctuated even more.

It should emphasized that significance is not the holy grail of statistics. However, when assessing the sensitivity of total FDI estimates, they seem to be uncoordinatedly sensitive to different control specifications. Many assessments of the FDI-institutions relationship also enter more controls than I have done, and one would accordingly expect the conclusions researchers are left with to diverge, depending on model specification. This of course, I have already demonstrated that they do. Table B.4-B.6 in Appendix B show that for the sector-specified models the picture is somewhat more comprehensible. In the natural resource models, there are close to no changes in the significance of the one retained explanatory variable, the CCI, after market size, distance and infrastructure is controlled for. Only the two personal freedoms components appear unstable in the manufacturing regressions, while the other independent variables retain much the same results after the first three controls are entered. The sensitivity of estimates in services models seem more prone to control fluctuation then natural resources and manufacturing estimates. Perhaps services inhibit more intra-sectoral heterogeneity than the two varieties of FDI. Still however, the picture seems much defined after the entering of the infrastructure control. In general, sector-divided models seem less sensitive to model specifications than total FDI models.

The main takeaway from the baseline estimations is that there seems to be plenty of unaccounted

for heterogeneity in aggregate FDI figures. It is beyond my reach to determine whether these disparities directly create the lack of a coherent empirical link in the FDI-institutions literature, but evidence presented here indicate that operating with general FDI numbers in the Norwegian case blur the relation between FDI and policy climates associated with institutions more than it clarifies it.

4.4 Sector-specific discussions

In the following subsections, the effects from the sector-specific models are discussed. Since estimates across sectors from hereon are based on different model specifications they are not comparatively interpreted. Instead, the expectations formulated under in *The Varieties of FDI framework* are scrutinized. Interesting effects are substantiated in Section 4.4.4.

4.4.1 Natural resources FDI

The expectations in *The Varieties of FDI framework* were that, *a priori*, human rights protection, political preference aggregation and property rights protection should matter for natural resource MNEs in conducting FDI. However, the expectations were moderated by underlining how natural resource MNEs face a more constrained choice when investing than other MNEs. Moreover, the potential for host-governments constructing artificially protected extraction enclaves as a result of their dependence on extractive MNEs realizing their resource rents was mentioned.

Table 4.5 presents the results from regressing natural resources FDI on the natural resource sector-specific models. Note first that entering the energy control limits the sample in these models. In the natural resource baseline regressions observations varied between 1243 and 1415, while this sample at most consider 1072 country-years. The WDI measure of oil equivalent is to the best of my knowledge the most adequate proxy for natural resource endowments available, and will have to do. The energy control is essential as it allows interpretation of estimated effects as the relationship given actual presence of resources to extract. In essence then, controlling for resource endowments may be a way to limit the choice-constraint problem of in the investment decision of extractive investors (Cohen, 2007, 66).

The estimates of the six controls in Table 4.5 yield interesting information. Distance is invariably negative and significant, while market size seems to capture some latent aspect(s) important to extractive MNEs, being consistently positive and significant. Nordicness does not seem to have any structural effect on Norwegian natural resource FDI, most likely because there are few unextricated natural resource endowments in the Nordic region to invest in. Being one of the initial 15 EU member states however has a firm, positive, and significant effect on inbound FDI.[7] The infrastructure measure exhibits almost the same tendency, being significant and positive in nine out of ten models. Natural resource MNEs thus seem to value access to communication with intermediate processing markets, and well-developed

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[7]These results are found robust to removing Belgium from the sample. Statoil remember, has a coordination center in Mechelen, near Brussels, that could have affected the estimations (Hveem, 2009, 388).

Table 4.5: Natural resource FDI and institutional concepts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PHYSINT	0.135									
	(0.119)									
WORKER		0.0789								
		(0.302)								
DEMOC			0.367							
			(0.771)							
XCONST				0.0198						
				(0.180)						
CCI					**1.042***					
					(0.500)					
PRI						0.0231				
						(0.0182)				
IPI							**0.284**$^+$			
							(0.152)			
INJUD								0.285		
								(0.434)		
FFI									0.0118	
									(0.0142)	
IFI										-0.00892
										(0.0189)
ln(DIST)	-1.145*	-1.217*	-1.215*	-0.962$^+$	-1.218*	-1.307*	-1.178*	-1.230*	-1.259*	-1.255*
	(0.510)	(0.533)	(0.538)	(0.560)	(0.539)	(0.534)	(0.574)	(0.548)	(0.536)	(0.547)
ln(MARKET)$_{t-1}$	1.047***	1.030***	0.979**	0.809*	0.794*	0.908**	0.913**	0.990**	1.007**	1.089**
	(0.296)	(0.310)	(0.340)	(0.355)	(0.336)	(0.337)	(0.333)	(0.325)	(0.319)	(0.339)
NORDIC	-0.263	-0.338	-0.373	1.441	-1.007	-0.615	0.0719	-0.326	-0.341	-0.332
	(1.723)	(1.805)	(1.828)	(1.898)	(1.820)	(1.776)	(1.838)	(1.846)	(1.783)	(1.812)
EU15	4.089**	4.249**	4.260**	5.521**	3.391*	3.763*	4.045*	4.149*	4.151**	4.296**
	(1.496)	(1.576)	(1.584)	(1.715)	(1.700)	(1.603)	(1.620)	(1.639)	(1.553)	(1.590)
INFRASTR$_{t-1}$	0.0490*	0.0527**	0.0517*	0.0670**	0.0321	0.0467*	0.0375$^+$	0.0497*	0.0499*	0.0555**
	(0.0196)	(0.0197)	(0.0201)	(0.0217)	(0.0212)	(0.0203)	(0.0212)	(0.0203)	(0.0209)	(0.0208)
ln(ENERGY)	0.317	0.297	0.329	0.303	0.442$^+$	0.372	0.402	0.326	0.335	0.246
	(0.229)	(0.243)	(0.258)	(0.283)	(0.241)	(0.244)	(0.256)	(0.248)	(0.245)	(0.267)
Constant	-17.16*	-15.45$^+$	-14.60$^+$	-12.30	-10.49	-13.29	-15.95$^+$	-14.78$^+$	-15.37$^+$	-15.58$^+$
	(7.722)	(8.014)	(8.459)	(8.557)	(8.726)	(8.323)	(8.878)	(8.378)	(8.084)	(8.309)
Observations	1069	1071	1072	1024	1072	1039	967	1072	1039	1039
Countries	126	126	126	122	126	123	123	123	113	126
R^2	0.138	0.126	0.123	0.133	0.125	0.132	0.121	0.120	0.130	0.126

OLS PCSE, standard errors in parentheses, and dependent variable lnsq(FDI stock) in all models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

transport infrastructure to shift extracted resources. Hosts supplying such facilities should increase the chance of enticing multinational resource extractors.

Lastly as regards the controls, and somewhat enigmatically, the energy measure is not significant in any of the models estimated, save for in the CCI regression.[8] This finding is counterintuitive in that it means having natural resource endowments, as measured by estimated oil equivalents, has no statistically structured effect on the allocation of extractive investments. However, removing FDI in agriculture and fisheries from the natural resource sample clarifies the picture. Although these investments only accounted for a fraction of the total natural resource sector (see Table 3.1), the energy measure becomes positively significant at the 5 percent level or better in all but one model sequestering petroleum-related activity. Natural resources FDI not in petroleum are kept in the sample though, as removing them has little bearing upon the effects estimated by the institutional variables. Moreover, they constitute an integral part of this sector theoretically. This disparity is however a sign of intra-sectoral heterogeneity.

The entering of the energy control has two effects on independent variable effects as estimated in the baseline models. Controlling corruption is still positively and significantly related to FDI in natural resources, but more so than before controlling for energy endowments. Secondly, contracting environment as measured by IPI now exhibits a marginally positive effect on investment, significant at the 10 percent level. The changes in effects themselves are not overly interesting. What is notable is that the energy control effectively induced changes in estimates. As regards the expectations developed in *The Varieties of FDI framework*, none of the three predicted relations were found.

What is nice about an explorative inquiry like this is that both discarding *a priori* expectations and discovering unexpected relationships are equally interesting. The non-finding of relations between extractive FDI and human rights protection, political preference aggregation, and property rights protection in essence support the idea that FDI in natural resources is different. The fact that the instability effect of the former two is not found might be a function of resource investors' low urban presence. Societal upheaval and riots may simply not reach close enough to extractive installments to pose any real danger to MNEs. It may also be a sign that resource investors, due to dependence on their produce, is given extra protection by host governments (Cohen, 2007, 78).

Another explanation, more related to the non-finding of property rights protection as a driver of FDI, is that the high marginal gains from extractive activity compensates losses on investment quicker than in other industries. Higher profit margins should make investment less vulnerable to production halts or asset losses (see e.g. Bravo-Ortega and De Gregorio, 2005). The extreme case of partial or full-fledged uncompensated expropriation of MNE properties is often particularly acute in resource-based sectors as the idea of natural resources as a good that belongs to the people is proliferating in many transition economies. Hogan, Sturzenegger and Tai (2010, 5-6) for example, reported of 22 cases of planned, confirmed, or in-progress expropriations of oil, gas and/or mining investments in 2007, while

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[8]That is still given only given a 10 percent level of significance.

Hajzler (2010*a*) find that the average share of resources in total FDI is three times higher in expropriating countries than in non-expropriating ones. Previous research actually shows that even in countries with high expropriation rates, extractive FDI tends to flourish and re-flourish cyclically (see e.g. Hajzler, 2010*b*). For some reason, natural resource MNEs re-invest time and time again in markets with high risk of public commandeering of MNE property. A potential supportive explanation is that resource-gains-dependent host-governments offer favorable deals to expropriated MNEs after taking their assets to coax them back in,[9] perhaps through offering low royalty rates so that the expropriated investor can re-realize the losses on the expropriated investment (see e.g. Hajzler, 2010*a*).

It should be duly noted however that the IPI variable, as mentioned when operationalized, also capture important aspects of public violations of MNEs' property rights. The marginal finding of a relationship between IPI and extractive FDI could be interpreted as yielding some support to the assumption that protection of property rights is not only important for economic progress in general, but also for private investment in particular (see e.g. North, 1990, 1991; Knack and Keefer, 1995). More relevant, it indicates that the possibilities of positive repatriation of profits and avoidance of payment delays might motivate resource investors to choose one investment location over another. This is only logical – accumulated profits is of no value if systems facilitating payments are not in place.

At last, the predicted positive effect corruption control on resource investments give support to Nye's (1967) and Rose-Ackerman's (1975) "grabbing hand"-type notions of corruption. Bardhan's (1997) idea of corruption not only being an economic facet to institutional err, but also a potential tool for achieving political gains, is intriguing in this context. Natural resource extraction is at the most basic level driven by public licensing of extractive activity. The distribution of these licenses to natural resource MNEs is an interface where public officials potentially hold power to decide who extracts what, and at what price. Given that the MNEs prefer sound and transparent tendering, the results for the CCI may indicate that those governments susceptible to utilize instances of public offerings to increase their own economic leverage, and *pari passu* their *de facto* political power, are punished by natural resource MNEs.[10]

The fact that, as seen below, control of corruption is the only stable predictor of FDI regardless of sector or specification might also indicate that there is something about Norwegian MNEs that enhance the focus on corruption. Both the substantial state ownership and national law on corruption may play a role in this concern. Moreover, the largest player in Norwegian overseas petroleum activity, Statoil, actually require employees venturing abroad to undergo a crash course in how to avoid becoming complicit in corruption.[11] Additionally, general threats to inference such as omitted variable bias should not be discarded. However, when running preliminary composite models, regardless of sector, the control of corruption finding seemed to hold pretty well when entering the institutional concepts significant in the

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[9]See for example the various essays in Hogan and Sturzenegger (2010).

[10]Remember Acemoglu, Johnson and Robinson's (2005) argument defining the interdependency and complementarity of politically and economically induced economic power

[11]See: http://www.statoil.com/en/About/EthicsValues/Pages/default.aspx.

sector at hand.[12] The uniform effect of corruption is elaborated on in Section 4.6 below.

4.4.2 Manufacturing FDI

In *The Varieties of FDI framework*, expectation were developed predicting manufacturing FDI to be affected by all institutional concepts operationalized. Table 4.6 shows the regressing of manufacturing FDI on sector-specific manufacturing models. In addition to the five baseline controls, average income levels, human capital, and trade openness is entered.

Note first that the geographic distances control, unlike in natural resource equations, affect manufacturing significantly positive in all but one model. This indicate that manufacturing FDI may be driven by both market-seeking and streamlining of operations (reduction of transport costs). The longer away the market the manufacturer wishes to supply, the more economically sound does producing the good there instead of trading it there become (see e.g. Brainard, 1997). The fact that market size has a strongly significant and positive effect on manufacturing investment adds to the argument, as a larger market may create more demand. The two country-group dummies are strong, significant, and positive predictors of manufacturing FDI across all models – market commonalities and similar legal structures represented by these variables may make it easier to both produce and sell goods. Moreover, historically close trade relations may have contributed to building up close business ties. In general, Johanson and Vahlne's (1977) theoretic underlining of the importance of cultural and psychological closeness is supported for manufacturing, as is Hveem, Knutsen and Rygh's (2008b) notion of Norwegian FDI as relative newcomers to the global investment field utilizing the business channels already available to them to catch up.[13]

Infrastructure on the other hand seems to affect manufacturers little, the same does average income levels. The latter finding is in partial opposition to the dependency theorists claim of a global "race to the bottom" (see e.g. Cardoso and Faletto, 1969; dos Santos, 1970), an allegation perhaps especially directed towards manufacturing industries, as discussed in Section 2.4.7. The expectation that higher average income levels would lead to higher demand is not supported at first glance either, but removing market size from the regressions makes the income measure strongly positive and significant at all levels, regardless of institutional concept assessed. It seems that the market size proxy captures the income effect. The human capital component shows little relation to manufacturing FDI also, perhaps indicating that most manufacturing FDI is in low-skill production. But again, when removing one of the other controls, this time the average income measure, human capital becomes significant and positve at the 5 percent level or better in five of the ten models.[14] The variable capturing trade openness shows straight-forward positive and significant relations to manufacturing FDI in all models, indicating instead that efficiency-seeking export-platform production prevails in manufacturing, complementing the positve effect of distance. It

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[12]It is however difficult to estimate models with more than two of these indicators in the same regression due to the multicollinearity issues discussed in Section 3.6.1.

[13]See also Mathews (2002).

[14]In the models examining PHYSINT, WORKER, IPI, INJUD, and IFI.

Table 4.6: Manufacturing FDI and institutional concepts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PHYSINT	0.0912									
	(0.0778)									
WORKER		0.219								
		(0.159)								
DEMOC			**1.057***							
			(0.510)							
XCONST				**0.334****						
				(0.123)						
CCI					**1.730*****					
					(0.383)					
PRI						**0.0326***				
						(0.0148)				
IPI							-0.0665			
							(0.118)			
INJUD								**0.759****		
								(0.271)		
FFI									**0.0194**$^+$	
									(0.0111)	
IFI										**0.0286***
										(0.0116)
ln(DIST)	1.065*	1.052*	1.007*	0.707	0.965*	0.865$^+$	1.026$^+$	0.891$^+$	1.004*	1.006*
	(0.433)	(0.443)	(0.464)	(0.510)	(0.454)	(0.503)	(0.565)	(0.456)	(0.477)	(0.469)
ln(MARKET)$_{t-1}$	1.796***	1.758***	1.744***	1.885***	1.845***	1.954***	1.926***	1.813***	1.958***	1.959***
	(0.145)	(0.145)	(0.152)	(0.202)	(0.144)	(0.178)	(0.229)	(0.147)	(0.177)	(0.173)
NORDIC	3.406***	3.400***	3.551***	3.642***	2.482**	3.525***	3.650***	3.429***	3.804***	3.847***
	(0.718)	(0.728)	(0.740)	(0.797)	(0.800)	(0.762)	(0.815)	(0.727)	(0.731)	(0.723)
EU15	4.553***	4.509***	4.470***	3.680***	3.378***	3.666***	4.427***	4.184***	4.204***	3.924***
	(0.858)	(0.888)	(0.935)	(0.974)	(0.975)	(0.990)	(1.022)	(0.922)	(0.910)	(0.911)
INFRASTR$_{t-1}$	0.0302$^+$	0.0289$^+$	0.0256	0.0282	0.01000	0.0188	0.0147	0.0266$^+$	0.0185	0.0195
	(0.0161)	(0.0162)	(0.0164)	(0.0172)	(0.0157)	(0.0164)	(0.0186)	(0.0162)	(0.0165)	(0.0166)
ln(INCOME)$_{t-1}$	0.310	0.405	0.358	0.314	-0.492	0.203	0.123	0.183	0.409	0.389
	(0.392)	(0.397)	(0.413)	(0.438)	(0.439)	(0.436)	(0.479)	(0.402)	(0.417)	(0.404)
HUMCAP$_{t-1}$	0.152$^+$	0.148	0.107	0.0193	0.178$^+$	0.115	0.296*	0.118	0.113	0.122
	(0.0920)	(0.0941)	(0.103)	(0.115)	(0.0938)	(0.103)	(0.149)	(0.0954)	(0.101)	(0.0990)
ln(OPEN)$_{t-1}$	1.277**	1.281**	1.371**	1.464**	1.502***	1.527***	1.981***	1.366***	1.517***	1.514***
	(0.406)	(0.414)	(0.427)	(0.453)	(0.407)	(0.442)	(0.542)	(0.406)	(0.441)	(0.430)
Constant	-57.86***	-57.38***	-56.74***	-58.14***	-51.73***	-61.13***	-61.99***	-56.19***	-63.53***	-63.95***
	(5.855)	(5.994)	(6.248)	(6.497)	(6.564)	(6.524)	(7.501)	(6.063)	(6.188)	(6.080)
Observations	1283	1285	1337	1211	1335	1219	1051	1337	1219	1219
Countries	162	162	162	148	162	149	124	162	149	149
R^2	0.292	0.284	0.275	0.275	0.294	0.287	0.252	0.289	0.289	0.298

OLS PCSE, standard errors in parentheses, and dependent variable lnsq(FDI stock) in all models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

seems that manufacturing on the balance both supply host-markets through on-location production, but also supply other (perhaps adjacent) markets.

The entering of the additional controls to some extent moderates the baseline effects of the institutional concepts on manufacturing FDI, and renders two relationships insignificant at all levels. All concepts but contracts were positive and significant in the manufacturing baseline models. The two aspects lapsing into insignificancy in the sector-specific models are human rights protection and labor standards upholding. This is contrary to *The Varieties of FDI* expectations. Thus, Spar's (1998) "spotlight regime" does not seem to be at play as regards either concepts. In interpreting this evanescence of effects, remember the fact that the linear link-function predicting them are only interpretable as *direct effects* of the independent constructs on FDI (Achen, 2005). Labor standards upholding were for example expected to matter for manufacturers through increased productivity in the local labor stock, but it was also discussed that labor standard protection could impede efficiency-seeking FDI because of the potential effect on production costs. When controlling for macro-economic outcomes such as market size and average wage levels, as well as general education levels; the productivity gains from stronger labor standards may be covered altogether. The direct effect of labor standards may thus already be captured.[15]

The effects from the other institutional concepts, as theoretically expected, remain intact however. Both of the political preference aggregation measures, DEMOC at the 5 percent level and XCONST at the 1 percent level, increase the chances of obtaining manufacturing FDI. The strongest effect was found for XCONST. The relatively high fixed costs in all setting up overseas production thus seem to make manufacturers attentive to democratic institutions such as elections and executive constraints. The fact that manufacturers often produce close to the margin contributes to the argument. In the face of instability more resources are diverted to non-productive activity Olson (1982, 165) holds. This diversion for manufacturers is likely to make an FDI unprofitable faster than for other MNEs.

Control of corruption, as expected theoretically, also pulls manufacturing FDI. The same does well-protected property rights, and reliable contracting environments as measured by judiciary independence, all relationships expected within *The Varieties of FDI framework*. Corruption was discussed to have an cost premium-effect through the need for bribes or side-payments (see e.g. Bardhan, 1997), making manufacturers likely to favor more transparent hosts. This expectation seems to hold. Property rights protection, a pivotal incentive for both production and innovation (see e.g North, 1990, 1991; Gwartney, Lawson and Hall, 2011), is estimated to affect manufacturing FDI positively (5 percent level), implying that a 10 point leap on the PRI scale is expected to increase lnsq(Manufacturing FDI) by ≈ 0.5 percent.[16]

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[15]Indeed, the adding of INCOME only to the manufacturing baseline equation is what renders both PHYSINT and WORKER insignificant. However, when regressing manufacturing FDI on the two regional dummies, the infrastructure measure, and WORKER, the latter still remains insignificantly linked to the investment decision.

[16]What could be added is that, had there existed broad-covering measures of such, examining the effect of intellectual property rights protection could have clarified relations further (see e.g. Javorcik, 2004*a*). Efforts to quantify the protection of intellectual property rights are underway however (Dedigama, 2008). See information on the International Property Rights Index here: www.internationalpropertyrightsindex.org.

That contract enforceability as measured by INJUD is positively related to manufacturing FDI, but show no significant relation as measured by IPI, might indicate that manufacturers value unbiased dispute settlement mechanisms more than the perceived space for profits repatriation. The effect of INJUD also in support of the interpretation of the market size effect as an indicator of market-seeking manufacturing. The more complex and multifarious the seller-customer ties, the more important contract viability becomes. The importance of judiciary indpendence may also be a sign of manufacturing MNEs working with independent in-market suppliers when investing abroad, because in such relations, given a certain distance in perceptions of business norms, one cannot expect even informal contracts to enforce themselves, never mind written agreements (see e.g. Ahlquist and Prakash, 2010).

At last, both measures of economic regulation retain positive and significant effects in the sector-specific manufacturing models. Again, this may be interpreted as a sign of manufacturers on the balance being well-integrated in the host-economies, both through the deployment of local labor, but also in using local channels to procure intermediate goods. These results were expected on the basis of multiple arguments in *The Varieties of FDI framework*, and it is impossible to determine who are at play. Some interpretations could however be: producing on the margin seems to make functioning money-moving channels important; using local labor seems to make functioning payment systems important; to the degree that manufacturers seek new markets, the availability of credit seems to create a more vibrant local demand; and, to the degree that manufacturers conduct in-house in-market assembly operations or participate in inter-firm coordinated assembly, the complexity of interactions up and down value chain relations seem to underline a need for functioning financial infrastructure.

4.4.3   Services FDI

The Varieties of FDI framework also developed arguments as to why all of the institutional concpets could be drivers of services FDI. The baseline regressions gave a first indication that effects varied more than expected. Adding the four sector-specific controls moderate the picture further. Consider first the controls, Table 4.7 shows that distance is significantly negative in all service sector models. The non-tradable services FDI thus suffer the further away from the principal's they are conducted (see e.g. Kolstad and Villanger, 2008). Market size is significantly and positively associated with service FDI in all models, but being Nordic or one of the 15 initial EU-states show no signs of being related to FDI in services.[17] A potential explanation is that since services are almost exclusively market-seeking they are viable to go where there are unfulfilled market potentials. Internal markets in the Nordic countries and the EU however are very saturated after decades of economic prosperity and investment. They might therefore offer less profit potential than emerging markets in other parts of the world.

Infrastructure remains an important determinant of FDI in services, but again average income levels are insignificance in all models. As was the case with the manufacturing models, this is because the

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[17]Table B.3 in Appendix B show that this was the case also before the sector-specific controls were entered.

Table 4.7: Services FDI and institutional concepts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PHYSINT	**0.203***									
	(0.0941)									
WORKER		0.0489								
		(0.193)								
DEMOC			0.0591							
			(0.495)							
XCONST				-0.0965						
				(0.133)						
CCI					**0.862***					
					(0.420)					
PRI						**0.0260**$^+$				
						(0.0135)				
IPI							0.156			
							(0.130)			
INJUD								0.251		
								(0.257)		
FFI									0.0119	
									(0.0116)	
IFI										-0.00391
										(0.0136)
ln(DIST)	-0.922*	-0.957*	-0.932*	-1.065*	-0.984*	-1.136**	-1.027*	-0.987*	-1.018*	-0.999*
	(0.386)	(0.384)	(0.397)	(0.431)	(0.390)	(0.419)	(0.470)	(0.396)	(0.422)	(0.424)
ln(MARKET)$_{t-1}$	1.228***	1.119***	1.125***	1.213***	1.168***	1.216***	1.107***	1.146***	1.214***	1.186***
	(0.164)	(0.150)	(0.151)	(0.195)	(0.152)	(0.178)	(0.214)	(0.152)	(0.179)	(0.183)
NORDIC	2.416$^+$	2.350	2.389	2.803$^+$	1.899	2.293	2.367$^+$	2.379	2.515$^+$	2.476$^+$
	(1.433)	(1.431)	(1.493)	(1.566)	(1.534)	(1.454)	(1.410)	(1.484)	(1.450)	(1.444)
EU15	0.741	0.912	1.019	0.361	0.370	0.210	0.770	0.842	0.668	0.760
	(1.322)	(1.329)	(1.390)	(1.440)	(1.328)	(1.286)	(1.325)	(1.374)	(1.345)	(1.328)
INFRASTR$_{t-1}$	0.0600**	0.0622**	0.0614**	0.0637**	0.0521**	0.0572**	0.0515*	0.0610**	0.0574**	0.0606**
	(0.0191)	(0.0191)	(0.0195)	(0.0201)	(0.0198)	(0.0195)	(0.0205)	(0.0195)	(0.0199)	(0.0195)
ln(INCOME)$_{t-1}$	0.00129	0.190	0.204	0.181	-0.186	0.183	-0.157	0.152	0.363	0.449
	(0.351)	(0.336)	(0.352)	(0.367)	(0.421)	(0.378)	(0.417)	(0.356)	(0.373)	(0.370)
HUMCAP$_{t-1}$	-0.0380	-0.0302	-0.0234	-0.0431	-0.00968	-0.0555	0.106	-0.0356	-0.0544	-0.0445
	(0.0932)	(0.0932)	(0.0978)	(0.107)	(0.0982)	(0.101)	(0.133)	(0.0961)	(0.103)	(0.102)
ln(DENSITY)$_{t-1}$	0.00772	0.00954	0.00917	0.0198	0.00777	0.00302	0.00487	0.00873	0.00415	0.00402
	(0.0159)	(0.0158)	(0.0152)	(0.0211)	(0.0150)	(0.0172)	(0.0198)	(0.0150)	(0.0173)	(0.0175)
lnsq(MFDI)$_{t-1}$	0.1000*	0.102*	0.0934*	0.0932*	0.0866*	0.0721$^+$	0.0923*	0.0926*	0.0727$^+$	0.0761$^+$
	(0.0413)	(0.0412)	(0.0417)	(0.0423)	(0.0417)	(0.0420)	(0.0424)	(0.0416)	(0.0417)	(0.0421)
Constant	-18.23**	-16.05**	-16.52**	-16.89**	-13.60**	-17.54**	-13.91*	-16.23**	-19.44**	-18.95**
	(5.871)	(5.764)	(5.847)	(5.905)	(5.878)	(5.907)	(6.406)	(5.830)	(5.926)	(6.009)
Observations	1282	1284	1336	1210	1334	1219	1051	1336	1219	1219
Countries	161	161	161	147	161	149	124	161	149	149
R^2	0.196	0.194	0.194	0.183	0.197	0.199	0.170	0.195	0.194	0.194

Standard errors in parentheses

OLS with PCSE, dependent variable lnsq(Services FDI stock).

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

market size control captures much of the same effect as income.[18] The two next sector-specific controls, HUMCAP and DENSITY, seem to lack direct relation to services FDI at first glance. Human capital however becomes significant at the 1 percent level or better in nine out of ten models when removing MARKET, INCOME, and INFRA, structures that potentially capture some of the educational effect.

The consistent lack of effect from the capital density proxy however is less comprehensible. It seems as neither Solow's (1956) "crowding-out" argument, nor Krugman's (1991) "crowding-in" contentions dominate. The variable remains insignificant even without market size in the models, which could have captured some of the market vibrancy Krugman focuses on. It is however possible that the effects counteract each other in the regressions. At last, the manufacturing FDI stock in a country at time $t-1$ seems to positively affect the stock of service FDI at time t in that same country, as also indicated by Kolstad and Villanger (2008) as a sign that agglomeration effects being at play.

As regards the explanatory variables of interest, PHYSINT remains significantly associated with more service FDI, so does the CCI and the PRI, although the latter marginally at best (10 per cent). The relations found for the contracting measure INJUD and marginally for FFI evaporate. Perhaps most interestingly, the effect of INJUD remains significant when entering all controls but the HUMCAP. Higher average education levels it seems, explains some of the presence of true *Montesquieuean* judiciary independence, capturing the effect of INJUD on services FDI.

Government protection of human physical integrity remains positively associated with services FDI in both baseline and sector-specific models, signaling that Spar's (1998) "spotlight effect" is at play as regards general human rights. The worker's rights regression corroborates no relations. For consumers to be able to sanction human rights violating MNEs there needs to be an interface where the demander meets the purveyor of goods. In *The Varieties of FDI framework*, it was noted how service MNEs meet their demanders in host-country markets exclusively, while manufacturers are also exposed to global markets.[19] As the PHYSINT-FDI relationship was not found in manufacturing models, it might seem as if local consumers are the ones sanctioning violators. An alternative (and supportive) explanation is that service MNEs, depending on local demand, will suffer more if gross human rights violations lead to societal instability. Demand, one would assume, is not thriving when in the state of turmoil.

The perceived pervasiveness of corruption hold also for the services models, again disfavoring the once conventional "helping hand"-assumptions of Leff (1964) and Huntington (1968). The chances for complicity in corruption increase the more MNEs have to interact with public officials and the government apparatus. Supplying postal services, telecommunications channels, transportation infrastructure, health services, credit, insurance and so on is in many countries something that governments traditionally have taken care of. When such services are privatized, public processes of tendering usually define who gets to supply what. The widespread liberalization of services in the 1990s, better externally supplied

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[18]Removing the former from all regressions makes average income levels positively significant at the 1 percent level or better in eight out of ten models.

[19]With the proviso that services are becoming more tradable (UNCTAD, 2004, 148-149).

through FDI than trade, might have created a climate where service MNEs have to interact more with host governments.[20] A natural consequence is of course the wish transparent and fair processes.

Property rights as a driver of services FDI is estimated to be positive but marginal (at the 10 percent level). It does however yield some signification to North's (1990) claim that protecting property is the most important role of governments wishing to prosper economically, at least as regards FDI in services. The non-findings in these models more than anything imply that FDI in services differ more from FDI in manufacturing than assumed in *The Varieties of FDI framework*. The lack of an effect from any of the two political preference aggregation variables contradict assumptions that hosts politicizing conflict is important for urbanely present service suppliers. In the same manner, the evidence from trade theory of how the salience of contracts increase with the complexity of operations (see e.g. Nicolini, 2007), does not hold in the context of services. At last, and perhaps most surprisingly, well-functioning financial infrastructure has no structural bearing upon the allocation of service FDI in the analyses. In the theoretical framework stable availability of sound credit was assumed to be important as it may raise local demand for services, while channels facilitating payment systems would reduce the costs associated with transferring goods from supplier to demander, and payment vice versa (see e.g. Bevan, Estrin and Meyer, 2004). Neither assumptions hold up when tested against the data.

4.4.4 Substantiation of findings

To substantiate findings across all sectors, Table 4.8 provides the maximum effects of the relationships predicted at 10 percent levels of significance or better. Cell values connote the magnitude with which lnsq(FDI stock) change when shifting from the lowest level on the relevant independent variable to the highest.[21] Obviously these drastic changes are not realistic in that single countries are likely to make full-scale leaps in one year, but they might be illustrative as regards the magnitudes of effects.[22]

Control of corruption is estimates to have the largest effect on all varieties of FDI. In the sector-specific natural resource models, moving from a corruption score of -2.5 to 2.5, would imply an increase in natural resource FDI of more than 5 percent.[23] The corresponding maximum effects for manufacturing FDI is between 8 and 9 percent increase in lnsq(Manufacturing FDI), while for services a full-scale leap is estimated to increase lnsq(Services FDI) by a little over 4 percent.

As p-values indicate, the effects of corruption control, aside from being on balance the strongest, is also predicted with the least uncertainty for manufacturing industries. Figure 4.1 offers a visual illustration of both the magnitude and certitude of CCI findings across sector-specific models.[24] The shaded

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[20]See for example Konan and Maskus (2006) as regards worldwide liberalization of services, and Markusen, Rutherford and Tarr (2005) for how services arguably are better supplied externally through FDI than trade.

[21]Effects are estimated by multiplying the range of independent variables with regression estimates, p-values in parentheses.

[22]It should be noted that comparison between sectors is technically only feasible as regards the baseline models, as control specifications vary across sector-specific analyses.

[23]That is to say, a move of five standard deviations. The CCI remember, is normalized with a mean of 0 and a standard deviation of 1 (see e.g. Kaufmann, Kraay and Mastruzzi, 2006).

[24]The models predict with the least amount of certainty around 0 on the CCI both because this is where there is the most

Table 4.8: Estimated effects of significant results from baseline and sector-specific models

	Regression estimate * Scale = Maximum effect					
	Natural resources FDI		Manufacturing FDI		Services FDI	
	Baseline	Sector	Baseline	Sector	Baseline	Sector
PHYSINT	-	-	1.55%	-	1.61%	1.62%
$p <$			(.01)		(.05)	(.05)
WORKER	-	-	0.54%	-	-	-
$p <$			(.10)			
DEMOC	-	-	1.53%	1.06%	-	-
$p <$			(.001)	(.05)		
XCONST	-	-	2.64%	2.01%	-	-
$p <$			(.001)	(.01)		
CCI	3.85%	5.23%	8.85%	8.66%	4.41%	4.27%
$p <$	(.05)	(.05)	(.001)	(.001)	(.05)	(.05)
PRI	-	-	4.72%	3.22%	3.19%	2.57%
$p <$			(.001)	(.05)	(.05)	(.10)
IPI	-	3.41%	-	-	-	-
$p <$		(.10)				
INJUD	-	-	2.22%	1.52%	1.05%	-
$p <$			(.001)	(.01)	(.05)	
FFI	-	-	3.12%	1.92%	1.93%	-
$p <$			(.01)	(.01)	(.10)	
IFI	-	-	3.80%	2.83%	-	-
$p <$			(.001)	(.001)		

confidence interval in plot (b), depicting confidence interval of the predicted marginal effect of corruption control on manufacturing FDI along values on the CCI, is accordingly the narrowest of the three.

For natural resources moreover, the maximum effect of IPI is in the sector-specific model estimated to induce a 3.4 percent increase in lnsq(natural resource FDI). In sector-specific services models, moving from no protection to full human rights protection is associated with a 1.6 percent increase in inbound lnsq(services FDI); while a full-scale transition on the PRI predicts a little over 2.5 percent upswing.

As regards manufacturing production, moving from autocracy to democracy as defined by Przeworski et al. (2000, 15-30), is predicted to increase lnsq(manufacturing FDI) by a little over 1 percent. A full-scale leap on the XCONST variable is estimated to prompt a 2 percent increase in lnsq(manufacturing FDI). The economic interaction indicators PRI and INJUD predict maximum effects of a little over 3 and 1.5 percent increases in lnsq(manufacturing FDI) respectively. At last, the two indicators of economic regulation, FFI and IFI, predict a little under 2 and almost 3 percent maximum increases in lnsq(manufacturing FDI) each. Before evaluating the empirical findings up against the expectations developed in *The Varieties of FDI framework*, consider some robustness checks.

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data, but also because of the way the CCI is constructed with a mean of 0 (see e.g. Kaufmann, Kraay and Mastruzzi, 2006).

(a) Natural resource FDI
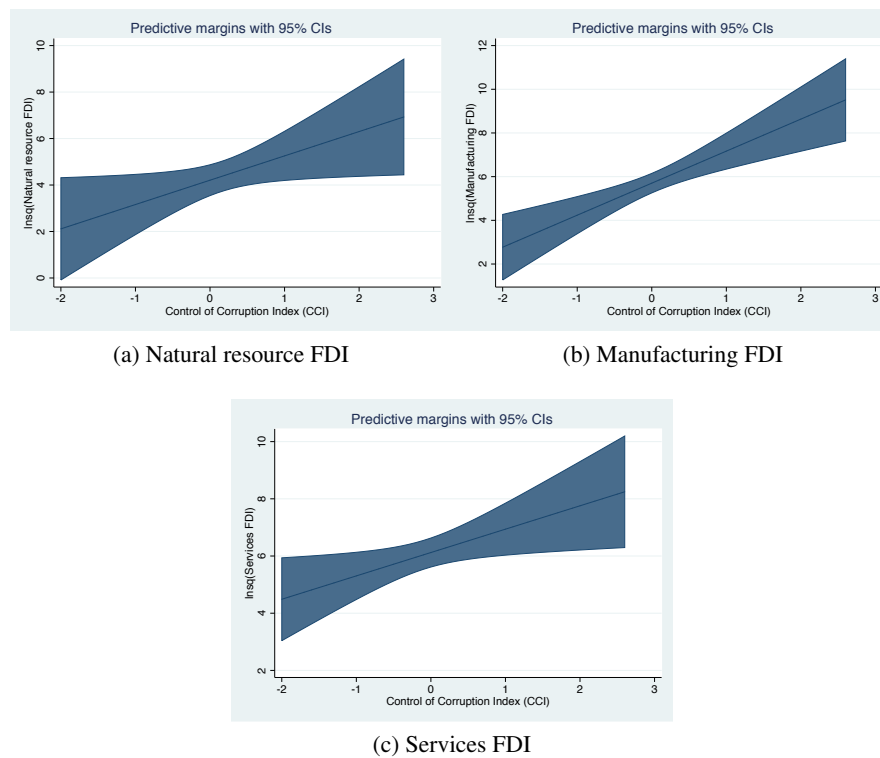
(b) Manufacturing FDI

(c) Services FDI

Figure 4.1: Marginal effects of CCI across sectors of FDI

4.5 Robustness tests

In order to test the robustness of the results discussed in the previous section, nine robustness checks are conducted.[25] Statistics is sometimes treated as an exact science in that estimates have their defined levels of uncertainty and so forth. The virtue of checking results' robustnesses is that one cannot rely on just one specification of a model, one single conceptualization of a theoretical concept, or one sole econometric method when drawing inferences upon the assumption or theory under scrutiny. In the words of Knutsen: "There is limited knowledge of what a "correct specification" looks like, and results could be driven by the particular specification chosen" (2011, 315-318).

Alternative econometric models: fixed effects and random effects

In Section 3.5 it was argued that OLS with PCSE is the appropriate econometric method when estimating short time-series with institutional concepts as independent variables, as compared to standard OLS and FE-models (see e.g. Beck and Katz, 2001). First, as suspected, running FE-models with standard errors clustered on countries yielded statistically confirmed relations. An alternative to country FE models, is to apply random effects (RE) regression. Country FE models assume specific intercepts for each

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[25]Where tables are not reported in the Appendices, regressions results are available from the author upon request. Please us the following e-mail address: taraldberge@hotmail.com

panel-unit.[26] RE models moderate this assumption, although each panel-unit still gets its own intercept. The difference lies in the interpretation of these unit-specific intercepts. The RE procedure "views the different intercepts as having been drawn from a bowl of possible intercepts, so they may be interpreted as random [...] and treated as though they were part of the error term" (Kennedy, 2003, 304). Given that the assumption of randomly selected intercepts hold (i.e. that no correlation with independent variables exists), RE-models might be more efficient as compared to FE models – while still controlling for some of the potential impacts from unobserved differences between panel units.

Running baseline models across sectoral FDI and total FDI with RE and standard errors clustered on countries support the FDI heterogeneity-claim.[27] The sector-specific models run with RE differs more from the OLS PCSE models.[28] Corruption retains a significant, positive effect on natural resource FDI and manufacturing, but not services. In general, no independent constructs are significant in services models. Moreover, only two relations are confirmed for manufacturing FDI. The entering of sector-specific controls constrains samples somewhat, and it may be possible that too little variation accounts for the loss of effects. On the other side it may be that there actually are unobserved factors that affect both dependent and independent variables. Future studies on these data should endeavor constructing longer time-series to investigate these issues with more intra-country variation to infer upon.

Lagging independent variables

Although the case has been made that MNEs are susceptible to act upon contemporary policy climates when conducting FDI, perceptions may be influenced by history also. Some might even argue this is a more proper cause-effect scenario. All independent variables are in that vein entered with a one-year lag in all baseline and sector-specific models. The baseline models again support FDI heterogeneity.[29] In the sector-specific models findings for natural resource FDI vanish.[30] Corruption control remains remarkably robust in both manufacturing and services equations. The manufacturing FDI results robust to lags were the economic interaction variables PRI and INJUD, and the economic interaction variables FFI and IFI. For services, the relation found for PRI was retained.

Alternative measure of corruption control

The concept with the on average most robust and consistent effect across all sectors and specifications is the control of corruption index. As has been discussed, the construction of the CCI may be problematic in over-time comparison as it is normalized with a mean of zero and a standard deviation of one. Although Kaufmann, Kraay and Mastruzzi (2006, 9) claim there are no trends in the CCI, baseline and sector-specific models using the CCI are tested using an alternative measure of corruption control: the freedom

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[26]Time FE effects models can also be used, as demonstrated below.
[27]See Table B.7 in Appendix B.
[28]See Table B.8 in Appendix B.
[29]See Table B.9 in Appendix B.
[30]See Table B.10 in Appendix B.

from corruption index (FCI) from the Heritage Foundation.[31]

In the baseline models with OLS PCSE, significant, positive effects of FCI were found for total FDI and manufacturing and services FDI. The sector-specific models only found a relationship for manufacturing FDI. Using an alternative measure of corruption control thus moderates the steadfast effect of non-corrupt policy environments on FDI. Most strikingly, the effect for manufacturing FDI remained positive and significant throughout all regressions.

Regional and time-trend dummies

Although there seems to be too little over-time variation in the FDI and institutions data to run FE-models, it might be that unobserved intra-group homogeneity at the regional level can be accounted for. As such, a regional dummy is entered in the baseline and sector-specific models to manually create a regional type fixed effects. Instead of using purely geographical regions, a tenfold politico-geographic classification from Teorell and Hadenius (2005) is applied to classify world regions.[32] Baseline regressions with regional dummies more or less mirrored the results from the original baseline models, confirming the heterogeneity of FDI determinants.[33] There were but a few minor changes in magnitude and certitude of the sector-specific point-estimates also.[34] Results seem robust to regional fixed effects.

As for controlling for temporal trends, the OLS PCSE model corrects for first-order autocorrelation (AR1) only when it comes to serial correlation of errors. Time trend controls or year dummies are the only ways to guard against omitted variable bias from trends. Therefore, all baseline and sector-specific models were run entering a linear time-trend variable. Mirroring the models with regional dummies, there were but a few changes in strength that separated the de-trended models from the original ones.[35] Results were robust to time-trends.

Theoretically influential cases and outliers

In Section 3.2.2 it was discussed how certain recipients of Norwegian FDI could affect estimations disproportionately.[36] Algeria, Angola, Azerbaijan, Venezuela, as well as Belgium in natural resource

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[31] See: http://www.heritage.org/index/about, for documentation and access to the FCI. The scores for the FCI is derived primarily from the Corruption Perceptions Index (CPI) of Transparency International, measuring corruption levels in 178 countries. For those countries not covered by the CPI, qualitative sources are used to fill in missing values. The following nine countries are not covered by the CPI: Belize, the Bahamas, Fiji, Micronesia, Myanmar, North Korea, St. Lucia, St. Vincent and the Grenadines, and Suriname. The CPI rages from 0 to 100, where a score of 0 connotes indicates highly corrupt governments, and a score of 100 indicates little corruption (Miller, Holmes and Feulner, 2012, 456).

[32] The variable is based on a concoction of two considerations: geographical proximity and area-specialists on democratization contributing with their expertise (Teorell and Hadenius, 2005).The ten categories are: (1) Eastern Europe and post-Soviet Union (including Central Asia); (2) Latin America (including Cuba, Haiti, and the Dominican Republic); (3) North Africa and the Middle East (including Israel, Turkey, and Cyprus); (4) Sub-Saharan Africa; (5) Western Europa and North America (including Australia and New Zealand); (6) East Asia (including Japan and Mongolia); (7) South-East Asia; (8) South Asia; (9) The Pacific; and (10) The Caribbean (including Belize, Guyana, and Suriname).

[33] See Table B.13 in Appendix B.

[34] See Table B.16 in Appendix B.

[35] See Table B.15 and Table B.14 in Appendix B.

[36] Such *influential cases* have great impacts on regression results through extreme values on independent variables, or function as *outliers* with unexpected values on dependent variables given their values on independent variables (Menard, 2010, 135).

FDI; Liberia in services FDI; and Singapore for all regressions were the countries discussed. They were therefore excluded from relevant analyses to assess their independent effect on estimations. First out, the five natural resource extractors were ostracized from baseline and sector-specific natural resource models; first with one-by-one, and then in tandem. The one-by-one exclusions rendered no substantial changes in estimations. The tandem removing of all five countries yielded on the balance somewhat stronger effects. Liberia was next removed from the baseline and sector-specific services regressions. No substantial change occurred in estimations here either.

Lastly, Singapore was removed from all regressions. In the baseline regressions the only noticeable change was that corruption control no longer having an effect on natural resource FDI. The same happened in the sector-specific model. All other results hold when excluding Singapore. The significance lapse of corruption control in natural resources indicate that Singapore, scoring an average 2.37 on the CCI throughout the period, might drives this somewhat surprising relation. Hasli's (2009) suggestion that Singapore is a transshipment location for Norwegian FDI to the adjacent regions makes the finding more interesting. There are obviously few investments into direct resource extraction in natural endowment-poor Singapore. But, as large natural resource investments meant for other countries in the region are recorded recorded in Singapore, her low levels of corruption may seem to affect the CCI estimate substantially.[37]

Statistically identified outliers

Cases that affect results disproportionately are sometimes also the result of data error (Greene, 2012, 141). For that reason, and to capture outliers not theoretically presumed, a statistical check of such was conducted. Outliers were categorized as panel-units that have standardized residuals of greater than 2 or smaller than -2.[38] Between 25 and 75 observations were deleted when applying the threshold, depending on the model. The tendency however was the same, both baseline and sector-specific regressions seem robust to outliers. Rather, they have a moderating effect, observed as significance levels of the institutional constructs increased in most models after the removal of problematic cases.

Influential MNEs

In Section 3.2.2 the possibility that large MNEs might have affect estimations incommensurately was discussed (see e.g. Grünfeld, 2005). Being relatively large, it was argued that these corporations might not be as vulnerable to especially economic uncertainty as smaller MNEs. To assess these firms' relative effect on the estimates, the largest 20 MNEs in the Norwegian data were removed from all samples,

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[37]The unextricated energy resources as measured by WDI's oil equivalents measure in Singapore lies around 20-25 kilotons, as compared to the global average of 75 000-85 000 kilotons. See the WDI data at: http://data.worldbank.org/datacatalog/world-development-indicators.

[38]These thresholds are arguably arbitrary, but nevertheless suggested by Menard (2010, 134-7). Since I have not been able to identify a code creating standardized residuals for the *xtpcse* regression command, they were created manually. First, observed values were subtracted from predicted values to generate the residuals. The residuals in turn were divided by their standard deviations to form standardized residuals.

and baseline and sector-specific models were run.[39] The new country-years exhibited relatively low correlation with the old natural resource FDI (0.376), medium correlation in manufacturing (0.702), whilst services FDI is seems have very few of the top 20 MNEs (before and after exclusion correlated 0.963). One would therefore expect more divergent findings the two former sectors than for the latter.

Results from the baseline estimations exhibited an interesting tendency. In manufacturing, excluding the larger companies reduced the certitude in all point estimates, an indication that larger manufacturers in fact are *more* observant of institutional structures than smaller ones. For the natural resource and services regressions few changes was incurred. Results generally differed substantially across sectors however, and FDI heterogeneity is still supported. When running the sector-specific models, the tendency in manufacturing was exacerbated. Only CCI, PRI, and INJUD retained significant estimates. One potential explanation for this large MNE-inclination towards more sound policy climates lies in the prolongation of Spar's (1998) spotlight argument. It might be that large corporations get more attention if they are caught violating the ideals of rights protection, anti-corruption and pro-democracy abroad. This is arguably even more relevant given the FDI data applied. The Norwegian government pushes democracy, CSR and anti-corruption unwaveringly, as discussed in Section 3.2.2.

Tax havens and financial centers

A generally problematic issue when examining the determinants of FDI is that of tax havens. Much equity is funneled into such states where taxes are levied at low rates or sometimes not levied at all, whilst offering low rates of corruption and high levels of law and order.[40] Moreover, tax havens may also be used as transshipment platforms. To address the effect of tax havens on estimations, a dummy indicating whether a country is classified as a tax haven by the OECD or not is entered in all models.[41]

There are no large changes in independent variable effects in any regressions when entering the tax haven dummy.[42] More interestingly, the dummy shows a robust, significant effects in all services models, at all levels. Services FDI it seems is the category most likely to be enticed by low-levied taxes and good governance. In one sense this is only normal seeing as industries such as shipping, financial services, and real estate are part of services.All in all, estimations are robust to the influence of tax havens.

Old OECD countries

The last operation conducted was to check whether the traditional concentration of Norwegian FDI in the OECD countries drives the results. As such, a dummy connoting Western Europe or North America, Japan, Australia, and New Zealand was entered in all regressions. Neither did the dummy alter the point

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[39]Large as measured by total sales.

[40]See especially: Dharmapala and Hines Jr. (2009) and Hines Jr. (2010).

[41]The OECD list of countries can be found here: http://www.oecd.org/dataoecd/38/14/42497950.pdf. The countries that are both listed by the OECD and exists in my sample are, randomly ordered: Mauritius, Malta, Panama, Cyprus, Bahrain, Belize, St. Lucia, Barbados, Andorra, Maldives, Samoa, St. Kitts and Nevis, Liberia, Grenada, Dominica, San Marino, Vanuatu, Liechtenstein, Seychelles, Nauru, Marshall Islands, Antigua and Barbuda, Bahamas, and St. Vincent and the Grenadines.

[42]See Tables B.17 and B.18 in Appendix B.

estimates of institutional constructs, nor was it significant in any models itself. Being one of the old OECD nations does not increase the chances of obtaining Norwegian FDI. It seems like the sectoral dispersion discussed by Hveem, Knutsen and Rygh (2008b) has manifested itself in practice.

4.6   Summary of findings and evaluation of expectations

This analysis was conducted in four steps. First a set of bivariate relationships were assessed, revealing that there seemed to be something about the contextual outcomes of sound institutional set-ups that entice MNEs from all sectors. However, already at this stage a certain degree of ambiguity was found for the personal freedoms indicators across sectors, and as compared to the total FDI bivariates.

A proper investigation of this apparent disparateness came next. In four sets of baseline regressions, the ten institutional concepts were assessed for total FDI and sectoral FDI. The underlying assumption in *The Varieties of FDI framework*, that effects are likely to vary between sectors and that using total FDI figures conceal effects, was corroborated by the data. Table 4.3 showed that the only effect that retained significance across all the types of FDI stocks was the positive effect of corruption control. The effect of DEMOC on total FDI only remained significant in the manufacturing regressions, while the effects from PRI and INJUD were significant in both manufacturing and services models. However, magnitudes and certitudes of estimates differed with manufacturing regressions on the balance seeming more vulnerable to sound institutional contexts than what was estimated for services and the totality of FDI. A further test of the claim that totality of FDI figures are problematic was reported in Table 4.4. Testing the sensitivity estimates to model specifications revealed that the effects for total FDI were more volatile to control specifications than effects in sector-divided models. This was discussed as a sign effects countervailing each other, underlining the need to disaggregate FDI to understand better the relationship between institutions and FDI.

The third step was a more proper investigation of the determinants themselves. Estimating sector-specific models allowed me to control for idiosyncratic factors, refining the estimates from the baseline models. These models were in turn discussed up against the specific expectations developed in *The Varieties of FDI* framework. Table 4.9 juxtapose the expectations from Table 2.5 with the results from the baseline models presented in Table 4.3, and the sector-specific models presented in Tables 4.5-4.7. The various effects found in the sector-specific models were discussed elaborately above, so let me focus on how the findings correspond with the theoretical expectations.

Consider first the two *personal freedoms* components. The protection of human rights was expected to be of importance to FDI from all three sectors. Effects were found for manufacturing and services FDI in the baseline regressions, but only for services FDI in the sector-specific regression. PHYSINT's effect on services FDI did not hold in neither RE regression, nor when applying a one year lag-structure, but all in all, it proved pretty robust. As for labor standards, such were expected to matter for manufacturers and service suppliers. The only effect found was a marginal relation for manufacturing FDI in the baseline

Table 4.9: Evaluation of expected relationships between FDI across sectors and institutional concepts

	Personal freedoms						*Political governance*						*Economic interaction*						*Economic reg.*		
	Human rights protection			Labor standards upholding			Political pref. aggregation			Control of corruption			Prop. rights protection			Contract enforceab.			Quality of credit		
	Exp	Bas	Sec	Exp	Bas	Sec	Exp	Bas	Sec	Exp	Bas	Sec	Exp	Bas	Sec	Exp	Bas	Sec	Exp	Bas	Sec
NRFDI	+						+				+	+	+					(+)			
MFDI	+	+		+	(+)		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SFDI	+	+	+	+			+				+	+	+	+	(+)	+	+		+	(+)	

Theoretical expectations from Table 2.5 in columns connoted by "Exp", results from baseline models in Table 4.3 in columns connoted with "Bas", and results from the sector-specific models in Tables 4.5-4.7 in columns connoted with "Sec". Relationships marked with (+) are only significant at the 10 percent level.

model. This result however was very sensitive to robustness checks.

The two *political governance* components yielded more relations. Arguments were set forth in *The Varieties of FDI framework* as to why political preference aggregation should matter for all varieties of FDI. The only relation found was for manufacturing investments, a very robust effect at that. Both indicators, DEMOC and XCONST, were very strongly significant in all baseline and sector-specific manufacturing regressions. They were not robust to RE in the sector-specific models, to a one-year lag-structure, or removal of large MNEs. To most other specifications both measures were quite robust.

Control of corruption exhibited a strong and pretty robust relation to FDI in manufacturing and services, as expected in the *The Varieties of FDI framework*, but also to a certain extent as regards FDI in natural respurces. There could be many reasons why this effect is so unwavering. The construction of the CCI, incorporating enormous amounts of data and being normalized is one. Applying the alternative corruption control measure however yielded positive and significant effects of corruption control on FDI in manufacturing in both baseline and sector-specific models, while only in the baseline model for services. No relations were found for natural resource FDI. Some of the strength in effects may thus be an artifact to the indicator itself. When using the CCI however, estimates were found most robust for manufacturing and services FDI, but quite robust also for natural resources FDI. An interesting () was that when removing Singapore from the sample corruption no longer had a significant effect on natural resource FDI. Moreover, anti-corruption laws and public policy in Norway has been discussed as one potential explanation for the effect of corruption control throughout regressions. It should also be noted that corruption overlaps heavily with other institutional categories, being detrimental to rights upholding, economic interaction, property rights protection as well as the regulation of the financial sector. High levels of corruption, as emphasized by Rothstein and Uslaner (2005, 44), deteriorates trust in society. Trust in turn is vital in all economic interaction.

The components facilitating *economic interaction*, property rights protection and contract enforceability, seemed important throughout. Property rights protection was expected to matter to all types of FDI, but the PRI models corroborated relations for manufacturing and services FDI only. This finding was not robust to RE-estimation, but to most other checks. The main tenet of North's (1990) NIE thus

receives support as regards manufacturers and service suppliers; investors on the balance care highly for the protection of their property. Remember also that it is possible natural resource MNEs value property right more than the model predicts, host-governments in countries with low general levels of protection may create property rights-enclaves with artificially high levels of protection (Cohen, 2007, 78).[43]

Contract enforceability as measured by INJUD was expected to matter for manufacturing and service FDI in *The Varieties of FDI framework*.[44] It did so for manufacturing consistently, and services only in baseline regressions. Results were robust to most checks, even RE-estimation in the case of manufacturing. Property rights theory holds that the salience of contracts is increases the more complex goods are produced (Nicolini, 2007, 1). Manufacturing it seems, with assembly complexity and procurement channels to tend to, value this trait the most. Moreover, natural resource investors are found to value contract viability as measured by the IPI in the sector-specific model. The fact that this effect appeared after energy endowments were controlled for indicate that contracts matter in the subset of countries where there actually are resources to extract.

At last, the indicators of *economic interaction* were expected to matter for manufacturing and services. The estimations indicate that the quality of banking and credit mattered only for manufacturing, save for a marginal effect in services baseline models. The manufacturing results were robust, apart from RE-estimations and the exclusion of the 20 largest MNEs. Size in terms of total sales it seems, increases the importance of money-moving channels and credit.

One last consideration is in place. The notion that natural resources FDI differ more from manufacturing and services than the two latter differ from each other is expanded on. In Table 2.2, manufacturing and services FDI were found to correlate low. This property was also manifested in their respective institutional determinants. Manufacturing retained the most relationships with institutional concepts, robust estimates found for the indicators of economic interaction and economic regulation, while relations were both fewer and less robust in services equations. I can think of at least one possible explanations of this difference in valuation of policy climates: Henisz (2000, 334) posits that "[p]artnering with host-country firms that possess a comparative advantage in interactions with the host-country government can safeguard against [...] hazard." Supplying services abroad, inherently a market-seeking exercise, might on the balance include more local partnering than manufacturers production of simple goods. Knowledge on market mores et cetera is vital for success when supplying host-markets only. With more local partners, access to knowledge on how to tackle rampant policy climates might be available, and as such, service suppliers may dare venture into more precarious markets than manufacturers.

With that said, this analysis has come to an end. The concluding remarks collects some of the treads that has run through this thesis, and discusses where to go from here. The general notion as regards *The Varieties of FDI framework* is: the complexity of FDI is not an aspect that should be disregarded.

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[43]Note the effect of IPI in the sector-specific natural resource model may be in partial support of the idea that property rights matter for natural resource investors – this measure captures expropriation risk in addition to contract viability aspects.

[44]The consistently lacking effect of the IPI might be due to its missing structure. See Table A.1 in Appendix A.

Chapter 5

Concluding remarks

I Just Ran Two Million Regressions
– Xavier X. Sala-I-Martin, *I Just Ran Two Million Regressions*, (1997, 178)

It takes a mix of knowledge, means, and need to turn discovery into opportunity
– David S. Landes, *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor*, (1999, 68)

I may not have run as many regressions as Sala-I-Martin, but I have run quite a few. The question is what have they taught us? This section sums up the main findings in the thesis. I do not wish to blatantly conclude upon the sector-specific results at this point – rather the other sources to variation in FDI are touched upon. Both as regards a further disaggregation of the sectoral categories into industries, but also along other cleavages that may disperse FDI systematically. It does take a mix of knowledge, means, and need to turn findings into opportunity – let's see where we can go from here.

5.1   Summary of findings and discussion

In building *The Varieties of FDI framework* I highlighted that the level of data aggregation may be one reason for the lack of coherent findings in the empirical literature on the determinants of FDI. The baseline models estimated for all sectors revealed that the results when using sector-divided FDI data *never* reproduce the total FDI estimations. Instead, results to a large extent diverged from the total FDI benchmark. As a further inquiry into what total FDI models actually investigate, a sensitivity analysis was conducted. With un-modeled heterogeneity, internal countervailing of effects should make total FDI models more sensitive to models specification than sector-divided models. Indeed, the estimates from the total FDI regressions were found to fluctuate more with different control specifications. It is difficult to say whether the unaccounted for heterogeneity is the only reason why researchers continuously conclude differently when assessing the institutional determinants of FDI, but it may well be one very important reason. As most studies apply more controls than I do in the baseline model it would be natural to think

their results diverged accordingly.

In the sector-specific models, the expectations developed in *The Varieties of FDI framework* were assessed. Natural resource FDI expected to be affected by human rights climates, systems of political preference aggregation and property rights systems in host-countries. The only noticeable effect found was for control of corruption however. The relation was not overly robust as it evaporated when applying an alternative measure of corruption control, and when removing Singapore from the country-sample. In essence, the view of natural resource extraction as "different" was corroborated. Properties such as the sector's high value added and the world and host-country dependence on resource extraction was discussed as potential reasons. Moreover, the assumption that natural resource MNEs are likely to be the investors most constrained in their locational choice when venturing abroad should be examined further. If it is the case that they have only a subset of countries in which they actually can invest, it might be interesting to examine effects within country strata rather than for the full sample of countries globally.

Manufacturing FDI was the variation found most attentive to host-country policy climates – robust relations found for indicators of political governance, economic interaction and economic regulation. Less robust were the findings for the personal freedoms components, but all in all the expectations developed for manufacturing FDI were well corroborated. The general high levels of attentiveness to policy climates amongst manufacturers is however something that should be explored more in-depth. Identifying alternative traits within *The Varieties of FDI framework* could clarify relations. As could the further disaggregating of sectors into industries, as discussed below.

The findings for services FDI was less aligned with theoretical expectations. Arguments were developed as to why all institutional concepts should matter for service MNEs in conducting FDI. However, only human rights protection and control of corruption were found to be robust predictors of services FDI. One potential explanation that will need further elaboration is the effect of entry mode, as discussed in the context of Henisz's (2000) assertion on ties with local businesses. If it is the case that service MNEs more often than other MNEs enter host markets through mergers and acquisitions, they might gain more access to local knowledge on how to navigate in unsound policy climates.

As the only effect found fairly consistent across sectors and total FDI was for corruption control, this would also need elaborating on. It might be an artifact of Norwegian law and public stance on anti-policy, and as such should be investigated for FDI from other countries, as mentioned below. Moreover, in what ways corruption actually affect investors – either through cost-premiums, stifling of productivity growth, through creating instability or other ways – would be interesting to find out.

5.2   Where to go from here?

In many ways this study is only a preliminary step in direction of embracing the complexity of FDI. There are expansions and nuances to be developed both outside and within *The Varieties of FDI framework*. Within the framework, analyses of FDI data from other source countries would prove valuable

robustness tests of the results found for Norwegian FDI. I highlight the value of using data from single source-countries only as it allows more thorough modeling of idiosyncrasies and makes it is easier to discuss potential biases in the data. Personally I have been in contact with national banks and statistical agencies in a number of European countries, and data should be obtainable from the following countries at least: Sweden, Denmark, Finland, and Holland.[1] Second, getting access to industry-level data would allow controlling for company-specific factors such as: size; governance method; ownership structure; mode of entry; geographical footprint. Third, *The Varieties of FDI framework* itself could be expanded. With more data, sectors could be disaggregated further into industries. There should for example be important intra-sectoral differences between industries such as: petroleum extraction and cash-cropping; low-skilled and high-skilled manufacturing; financial services and retail. Moreover, estimating the effects of more disaggregated indicators of the institutional concepts could yield more information on what it is about these measures that drive FDI. Fourth, comparative case studies at the company level could prove insightful as regards *how* political factors are actually considered in firms from different sectors (and industries). Such would also allow examining to what degree firms engaged in different forms of FDI are constrained in the locational decision. Fifth, case studies of national policy processes could help explain how different tipping points in restructuring facilitate the entry of different types of MNEs. For example, observing the developments in Myanmar as they happen would be an interesting endeavor.

Outside the *The Varieties of FDI framework* other sources to heterogeneity should be explored. One such factor is type of owner. Previous explorations into the effect of state ownership on FDI have found important differences between state-owned and privately owned firms in their locational decisions (see e.g. Knutsen, Rygh and Hveem, 2011). Second, there is a cleavage between MNEs engaged with multiple subsidiaries and those with only one overseas affiliate (Cohen, 2007, 86-7). In this vein, there might also be important differences stemming from the size of the principal. Larger MNEs might be less averse to risk than small MNEs. Third, Cohen (2007, 74-5) also highlight that the extent of foreign ownership might be important. It is not axiomatic that a ten percent allows as active a management structure as a majority share would. At last, there might be diametrical differences between firms investing in different regions. Bloningen and Wang (2005) for example find it inappropriate to wealthy and poor host-countries in empirical studies of FDI.

However, the main message of this exercise is that examining what drives an entity that does not exist in the form that is assumed might be futile. Nursing the complexity of foreign production should be the guiding star of future research into determinants of such. If anything, both the theoretical underpinnings of *The Varieties of FDI framework* and the empirical analysis of expectations developed therein have shown that heterogeneity does indeed prevail.

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[1]In Sweden the organization to contact is *Statistiska Centralbyrån*, in Denmark data is obtainable from *Danmarks Nationalbank*, for Finnish data *Suomen Pankki* should be contacted, while *De Nederlandsche Bank* possesses the Dutch data.

Appendix A

Additional tables

Table A.1: Full country sample and coverage on independent variables

Country	FDI	PHY	WOR	DEM	XCO	CCI	PRI	IPI	INJ	FFI	IFI
Afghanistan	X	X	X	X	-	X	-	-	X	-	X-
Albania	X	X	X	X	X	X	X	X	X	X	X
Algeria	X	X	X	X	X	X	X	X	X	X	X
Andorra	X	X	X	X	-	X	-	-	X	-	-
Angola	X	X	X	X	X	X	X	X	X	X	X
Antigua and Barbuda	X	X	X	X	-	X	-	-	X	-	-
Argentina	X	X	X	X	X	X	X	X	X	X	X
Armenia	X	X	X	X	X	X	X	X	X	X	X
Australia	X	X	X	X	X	X	X	X	X	X	X
Austria	X	X	X	X	X	X	X	X	X	X	X
Azerbaijan	X	X	X	X	X	X	X	X	X	X	X
Bahamas	X	X	X	X	-	X	X	X	X	X	X
Bahrain	X	X	X	X	X	X	X	X	X	X	X
Bangladesh	X	X	X	X	X	X	X	X	X	X	X
Barbados	X	X	X	X	X	X	X	-	X	X	X
Belarus	X	X	X	X	X	X	X	X	X	X	X
Belgium	X	X	X	X	X	X	X	X	X	X	X
Belize	X	X	X	X	-	X	X	-	X	X	X
Benin	X	X	X	X	X	X	X	-	X	X	X
Bhutan	X	X	X	X	X	X	-	-	X	-	-
Bolivia	X	X	X	X	X	X	X	X	X	X	X
Bosnia and Herzegovina	X	X	X	X	-	X	X	-	X	X	X
Botswana	X	X	X	X	X	X	X	X	X	X	X
Brazil	X	X	X	X	X	X	X	X	X	X	X

Continued on next page

Table A.1 – *Continued from previous page*

Country	FDI	PHY	WOR	DEM	XCO	CCI	PRI	IPI	INJ	FFI	IFI
Brunei	X	X	X	X	-	X	-	X	X	-	-
Bulgaria	X	X	X	X	X	X	X	X	X	X	X
Burkina Faso	X	X	X	X	X	X	X	X	X	X	X
Burundi	X	X	X	X	X	X	X	-	X	X	X
Cambodia	X	X	X	X	X	X	X	-	X	X	X
Cameroon	X	X	X	X	X	X	X	X	X	X	X
Canada	X	X	X	X	X	X	X	X	X	X	X
Cape Verde	X	X	X	X	X	X	X	-	X	X	X
Central African Republic	X	X	X	X	X	X	X	-	X	X	X
Chad	X	X	X	X	X	X	X	-	X	X	X
Chile	X	X	X	X	X	X	X	X	X	X	X
China	X	X	X	X	X	X	X	X	X	X	X
Colombia	X	X	X	X	X	X	X	X	X	X	X
Comoros	X	X	X	X	X	X	-	-	X	-	-
Congo	X	X	X	X	X	X	X	X	X	X	X
Congo, Dem. Rep.	X	X	X	X	X	X	-	X	X	-	X
Costa Rica	X	X	X	X	X	X	X	X	X	X	X
Cote d'Ivoire	X	X	X	X	-	X	X	X	X	X	X
Croatia	X	X	X	X	X	X	X	X	X	X	X
Cuba	X	X	X	X	X	X	X	X	X	X	X
Cyprus	X	X	X	X	X	X	X	X	X	X	X
Czech Republic	X	X	X	X	X	X	X	X	X	X	X
Denmark	X	X	X	X	X	X	X	X	X	X	X
Djibouti	X	X	X	X	X	X	X	-	X	X	X
Dominica	X	X	X	X	-	X	-	-	X	-	-
Dominican Republic	X	X	X	X	X	X	X	X	X	X	X
Ecuador	X	X	X	X	X	X	X	X	X	X	X
Egypt	X	X	X	X	X	X	X	X	X	X	X
El Salvador	X	X	X	X	X	X	X	X	X	X	X
Equatorial Guinea	X	X	X	X	X	X	X	-	X	X	X
Eritrea	X	X	X	X	X	X	-	-	X	-	-
Estonia	X	X	X	X	X	X	X	X	X	X	X
Ethiopia	X	X	X	X	X	X	X	X	X	X	X
Fiji	X	X	X	X	X	X	X	X	X	X	X
Finland	X	X	X	X	X	X	X	X	X	X	X
France	X	X	X	X	X	X	X	X	X	X	X
Gabon	X	X	X	X	X	X	X	X	X	X	X
Gambia	X	X	X	X	X	X	X	X	X	X	X

Continued on next page

Table A.1 – *Continued from previous page*

Country	FDI	PHY	WOR	DEM	XCO	CCI	PRI	IPI	INJ	FFI	IFI
Georgia	X	X	X	X	X	X	X	-	X	X	X
Germany	X	X	X	X	X	X	X	X	X	X	X
Ghana	X	X	X	X	X	X	X	X	X	X	X
Greece	X	X	X	X	X	X	X	X	X	X	X
Grenada	X	X	X	X	-	X	-	X	X	-	-
Guatemala	X	X	X	X	X	X	X	X	X	X	X
Guinea	X	X	X	X	X	X	X	X	X	X	X
Guinea-Bissau	X	X	X	X	X	X	X	X	X	X	X
Guyana	X	X	X	X	X	X	X	X	X	X	X
Haiti	X	X	X	X	X	X	X	X	X	X	X
Honduras	X	X	X	X	X	X	X	X	X	X	X
Hungary	X	X	X	X	X	X	X	X	X	X	X
Iceland	X	X	X	X	-	X	X	X	X	X	X
India	X	X	X	X	X	X	X	X	X	X	X
Indonesia	X	X	X	X	X	X	X	X	X	X	X
Iran	X	-	X	X	X	X	X	X	X	X	X
Iraq	X	X	X	X	-	X	-	X	X	-	-
Ireland	X	X	X	X	X	X	X	X	X	X	X
Israel	X	X	X	X	X	X	X	X	X	X	X
Italy	X	X	X	X	X	X	X	X	X	X	X
Jamaica	X	X	X	X	X	X	X	X	X	X	X
Japan	X	X	X	X	X	X	X	X	X	X	X
Jordan	X	X	X	X	X	X	X	X	X	X	X
Kazakhstan	X	X	X	X	X	X	X	-	X	X	X
Kenya	X	X	X	X	X	X	X	X	X	X	X
Kiribati	X	X	X	X	-	X	-	-	X	-	-
Korea, North	X	X	X	X	X	X	X	X	X	X	X
Korea, South	X	X	X	X	X	X	X	X	X	X	X
Kuwait	X	X	X	X	X	X	X	X	X	X	X
Kyrgyzstan	X	X	X	X	X	X	X	-	X	X	X
Laos	X	X	X	X	X	X	X	-	X	X	X
Latvia	X	X	X	X	X	X	X	X	X	X	X
Lebanon	X	X	X	X	X	X	X	X	X	X	X
Lesotho	X	X	X	X	X	X	X	-	X	X	X
Liberia	X	X	X	X	X	X	-	X	X	-	-
Libya	X	X	X	X	X	X	X	X	X	X	X
Liechtenstein	X	X	X	X	-	X	-	-	X	-	-
Lithuania	X	X	X	X	X	X	X	X	X	X	X

Table A.1 – *Continued from previous page*

Country	FDI	PHY	WOR	DEM	XCO	CCI	PRI	IPI	INJ	FFI	IFI
Luxembourg	X	X	X	X	-	X	X	X	X	X	X
Macedonia	X	X	X	X	X	X	X	-	X	X	X
Madagascar	X	X	X	X	X	X	X	X	X	X	X
Malawi	X	X	X	X	X	X	X	X	X	X	X
Malaysia	X	X	X	X	X	X	X	X	X	X	X
Maldives	X	X	X	X	-	X	-	-	X	-	-
Mali	X	X	X	X	X	X	X	X	X	X	X
Malta	X	X	X	X	-	X	X	X	X	X	X
Marshall Islands	X	X	X	X	-	X	-	-	X	-	-
Mauritania	X	X	X	X	X	X	X	-	X	X	X
Mauritius	X	X	X	X	X	X	X	-	X	X	X
Mexico	X	X	X	X	X	X	X	X	X	X	X
Micronesia	X	X	X	X	-	X	-	-	X	-	-
Moldova	X	X	X	X	X	X	X	X	X	X	X
Mongolia	X	X	X	X	X	X	X	X	X	X	X
Montenegro	X	X	X	X	X	X	-	-	X	-	-
Morocco	X	X	X	X	X	X	X	X	X	X	X
Mozambique	X	X	X	X	X	X	X	X	X	X	X
Myanmar	X	X	X	X	X	X	X	X	X	X	X
Namibia	X	X	X	X	X	X	X	X	X	X	X
Nauru	X	X	X	X	-	-	-	-	X	-	-
Nepal	X	X	X	X	X	X	X	-	X	X	X
Netherlands	X	X	X	X	X	X	X	X	X	X	X
New Zealand	X	X	X	X	X	X	X	X	X	X	X
Nicaragua	X	X	X	X	X	X	X	X	X	X	X
Niger	X	X	X	X	X	X	X	X	X	X	X
Nigeria	X	X	X	X	X	X	X	X	X	X	X
Oman	X	X	X	X	X	X	X	X	X	X	X
Pakistan	X	X	X	X	X	X	X	X	X	X	X
Palau	X	X	X	X	-	X	-	X	X	-	-
Panama	X	X	X	X	X	X	X	X	X	X	X
Papua New Guinea	X	X	X	X	X	X	-	X	X	-	X
Paraguay	X	X	X	X	X	X	X	X	X	X	X
Peru	X	X	X	X	X	X	X	X	X	X	X
Philippines	X	X	X	X	X	X	X	X	X	X	X
Poland	X	X	X	X	X	X	X	X	X	X	X
Portugal	X	X	X	X	X	X	X	X	X	X	X
Qatar	X	X	X	X	X	X	X	X	X	X	X

Table A.1 – *Continued from previous page*

Country	FDI	PHY	WOR	DEM	XCO	CCI	PRI	IPI	INJ	FFI	IFI
Romania	X	X	X	X	X	X	X	X	X	X	X
Russia	X	X	X	X	X	X	X	X	X	X	X
Rwanda	X	X	X	X	X	X	X	-	X	X	X
Samoa	X	X	X	X	-	X	-	-	X	-	-
San Marino	X	X	X	X	-	-	-	-	X	-	-
Sao Tome and Principe	X	X	X	X	-	X	-	X	X	-	-
Saudi Arabia	X	X	X	X	X	X	X	X	X	X	X
Senegal	X	X	X	X	X	X	X	X	X	X	X
Serbia	X	X	X	X	X	X	-	X	X	-	X
Seychelles	X	X	X	X	-	X	-	-	X	-	-
Sierra Leone	X	X	X	X	X	X	X	X	X	X	X
Singapore	X	X	X	X	X	X	X	X	X	X	X
Slovakia	X	X	X	X	X	X	X	X	X	X	X
Slovenia	X	X	X	X	X	X	X	X	X	X	X
Solomon Islands	X	X	X	X	X	X	-	-	X	-	-
South Africa	X	X	X	X	X	X	X	X	X	X	X
Spain	X	X	X	X	X	X	X	X	X	X	X
Sri Lanka	X	X	X	X	X	X	X	X	X	X	X
St. Kitts and Nevis	X	X	X	X	-	X	-	-	X	-	-
St. Lucia	X	X	X	X	-	X	-	-	X	-	-
St. Vin. and the Gren.	X	X	X	X	-	X	-	-	X	-	-
Sudan	X	X	X	X	X	X	-	X	X	-	-
Suriname	X	X	X	X	-	X	X	X	X	X	X
Swaziland	X	X	X	X	X	X	X	-	X	X	X
Sweden	X	X	X	X	X	X	X	X	X	X	X
Switzerland	X	X	X	X	X	X	X	X	X	X	X
Syria	X	X	X	X	X	X	X	X	X	X	X
Taiwan	X	X	X	X	X	X	X	X	X	X	X
Tajikistan	X	X	X	X	X	X	X	-	X	X	X
Tanzania	X	X	X	X	X	X	X	X	X	X	X
Thailand	X	X	X	X	X	X	X	X	X	X	X
Timor-Leste	X	X	X	X	X	X	-	-	X	-	-
Togo	X	X	X	X	X	X	X	X	X	X	X
Tonga	X	X	X	X	-	X	-	X	X	-	-
Trinidad and Tobago	X	X	X	X	X	X	X	X	X	X	X
Tunisia	X	X	X	X	X	X	X	X	X	X	X
Turkey	X	X	X	X	X	X	X	X	X	X	X
Turkmenistan	X	X	X	X	X	X	X	X	X	X	X

Table A.1 – *Continued from previous page*

Country	FDI	PHY	WOR	DEM	XCO	CCI	PRI	IPI	INJ	FFI	IFI
Tuvalu	X	X	X	X	-	X	-	X	X	-	-
Uganda	X	X	X	X	X	X	X	X	X	X	X
Ukraine	X	X	X	X	X	X	X	X	X	X	X
United Arab Emirates	X	X	X	X	X	X	X	X	X	X	X
United Kingdom	X	X	X	X	X	X	X	X	X	X	X
United States	X	X	X	X	X	X	X	X	X	X	X
Uruguay	X	X	X	X	X	X	X	X	X	X	X
Uzbekistan	X	X	X	X	X	X	X	-	X	X	X
Vanuatu	X	X	X	X	-	X	-	-	X	-	-
Venezuela	X	X	X	X	X	X	X	X	X	X	X
Vietnam	X	X	X	X	X	X	X	X	X	X	X
Yemen	X	X	X	X	X	X	X	X	X	X	X
Zambia	X	X	X	X	X	X	X	X	X	X	X
Zimbabwe	X	X	X	X	X	X	X	X	X	X	X

Data coverage on independent variables is connoted as of 2006. PHY = PHYSINT, WOR = WORKER, DEM = DEMOC, XCO = XCONST, and INJ = INJUD.

Table A.2: Descriptive statistics for dependent, independent, and control variables

Variable		Minimum	Maximum	Mean	Std.dev	Skewness	Kurtosis
Dependent variables							
Total FDI	TFDI	-1864232	1.58e+08	2607865	1.04e+07	6.677	61.016
Natural resource FDI	NRFDI	-1836311	5.10e+07	729833.6	3164174	7.033	71.508
Manufacturing FDI	MFDI	-3351069	4.56e+07	1050391	4553100	6.293	47.059
Services FDI	SFDI	-1655490	1.21e+08	818513	5456028	13.426	223.709
Independent variables							
Physical integrity index	PHYSINT	0	8	4.973	2.265	-0.533	2.317
Worker's rights index	WORKER	0	2	0.948	0.737	0.082	1.843
Democracy	DEMOC	0	1	0.581	0.493	-0.330	1.109
Executive constraints	XCONST	1	7	4.788	2.102	-0.398	1.680
Control of corruption index	CCI	-1.981	2.560	-0.042	0.985	0.702	2.733
Property rights index	PRI	10	90	49.638	23.618	0.304	2.167
Investment profile index	IPI	1.083	12	8.522	2.307	-0.410	2.646
Independence of the judiciary	INJUD	0	2	1.117	0.764	-0.200	1.736
Financial freedom index	FFI	10	90	50.630	20.910	-0.080	2.474
Investment freedom index	IFI	10	90	52.783	19.051	-0.144	2.573
Control variables							
Geographic distances	DIST	502.690	17455.910	6411.592	3687.791	0.414	2.742
GDP, PPP	MARKET	1.63e+08	1.27e+13	2.88e+11	1.03e+12	8.288	85.827
Nordicness	NORDIC	0	1	0.0226	0.149	6.420	42.218
Initial 15 EU membership	EU15	0	1	0.0949	0.293	2.764	8.641
Internet users per 100 inhabs.	INFRASTR	0	87.566	12.433	18.068	1.897	5.978
Kilotons of oil equivalents	ENERGY	14.424	1728257	78842.87	216699.6	5.406	35.393
GDP per capita, PPP	INCOME	185.299	71463.68	10205.69	12158.64	1.826	6.419
Avg. years of educ. over 25	HUMCAP	0.6	14	7.041	3.407	-0.0345	1.815
Tot. trade as share of GDP	OPEN	3.109	1406.288	110.769	108.999	6.737	66.508
Investment-to-GDP ratio	DENSITY	0.880	93.598	22.210	13.772	1.337	6.216

Table A.3: Bivariate correlations between the institutional concepts

	PHYSINT	WORKER	DEMOC	XCONST	CCI	FFI	IFI	PRI	IPI	INJUD
PHYSINT	1.000									
WORKER	0.422	1.000								
	(1552)									
DEMOC	0.406	0.467	1.000							
	(1551)	(1554)								
XCONST	0.465	0.522	**0.827**	1.000						
	(1344)	(1346)	(1369)							
CCI	0.619	0.455	0.393	0.482	1.000					
	(1534)	(1537)	(1646)	(1369)						
FFI	0.510	0.422	0.439	0.578	0.584	1.000				
	(1343)	(1345)	(1378)	(1284)	(1376)					
IFI	0.476	0.477	0.484	0.592	0.567	0.678	1.000			
	(1343)	(1345)	(1378)	(1284)	(1376)	(1380)				
PRI	0.572	0.522	0.467	0.542	**0.850**	0.638	0.642	1.000		
	(1343)	(1345)	(1378)	(1284)	(1376)	(1380)	(1380)			
IPI	0.588	0.330	0.315	0.434	0.685	0.569	0.531	0.627	1.000	
	(1178)	(1180)	(1196)	(1114)	(1195)	(1149)	(1149)	(1149)		
INJUD	0.592	0.517	0.571	0.677	0.647	0.540	0.563	**0.716**	0.587	1.000
	(1552)	(1555)	(1677)	(1369)	(1646)	(1378)	(1378)	(1378)	(1196)	

Cell values are bivariate correlations. The sample upon which each correlation is based is connoted in parentheses below each correlation estimate.

Appendix B

Additional results

Table B.1: Baseline models – Resource extractive FDI and institutional concepts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PHYSINT	0.115									
	(0.0947)									
WORKER		0.00680								
		(0.232)								
DEMOC			0.345							
			(0.551)							
XCONST				-0.0329						
				(0.138)						
CCI					**0.762***					
					(0.389)					
PRI						0.0162				
						(0.0155)				
IPI							0.168			
							(0.144)			
INJUD								0.317		
								(0.315)		
FFI									-0.00255	
									(0.0121)	
IFI										-0.0129
										(0.0152)
ln(DIST)	-0.786	-0.827	-0.820	-0.838	-0.827	-1.048*	-1.052$^+$	-1.075*	-1.061$^+$	-0.856
	(0.486)	(0.520)	(0.543)	(0.555)	(0.531)	(0.534)	(0.540)	(0.537)	(0.565)	(0.540)
ln(MARKET)$_{t-1}$	0.955***	0.901***	0.882***	0.958***	0.866***	1.091***	1.094***	1.066***	1.155***	0.898***
	(0.144)	(0.149)	(0.156)	(0.197)	(0.155)	(0.186)	(0.187)	(0.191)	(0.203)	(0.153)
NORDIC	-0.290	-0.395	-0.324	1.792	-0.595	-0.160	-0.234	-0.174	0.320	-0.299
	(1.820)	(1.933)	(2.013)	(2.015)	(1.956)	(1.901)	(1.920)	(1.894)	(1.850)	(1.974)
EU15	4.555**	4.841**	4.801**	5.653**	3.996*	4.330**	4.508**	3.911*	3.936*	4.607**
	(1.539)	(1.641)	(1.727)	(1.798)	(1.782)	(1.640)	(1.662)	(1.697)	(1.647)	(1.723)
INFRASTR$_{t-1}$	0.0533**	0.0568**	0.0531**	0.0646**	0.0380$^+$	0.0543**	0.0564**	0.0468*	0.0423*	0.0514**
	(0.0186)	(0.0189)	(0.0197)	(0.0219)	(0.0205)	(0.0207)	(0.0208)	(0.0205)	(0.0206)	(0.0195)
Constant	-14.74*	-12.56$^+$	-12.31$^+$	-13.89$^+$	-11.39$^+$	-15.28*	-14.79*	-15.24*	-18.19*	-12.49$^+$
	(6.150)	(6.555)	(6.863)	(7.188)	(6.812)	(6.862)	(6.967)	(6.988)	(7.254)	(6.697)
Observations	1338	1341	1415	1223	1413	1243	1243	1243	1084	1415
Countries	172	172	172	150	172	152	128	172	152	152
R^2	0.138	0.121	0.114	0.133	0.121	0.126	0.125	0.127	0.122	0.118

Standard errors in parentheses

OLS with PCSE, dependent variable lnsq(FDI Stock).

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

Table B.2: Baseline models – Manufacturing FDI and institutional concepts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PHYSINT	0.194**									
	(0.0735)									
WORKER		0.271+								
		(0.154)								
DEMOC			1.531**							
			(0.468)							
XCONST				0.440***						
				(0.116)						
CCI					1.760***					
					(0.311)					
PRI						0.0477***				
						(0.0129)				
IPI							0.00370			
							(0.119)			
INJUD								1.111***		
								(0.242)		
FFI									0.0315**	
									(0.0106)	
IFI										0.0394***
										(0.0117)
ln(DIST)	0.637	0.585	0.579	0.311	0.552	0.481	0.464	0.352	0.0593	0.439
	(0.396)	(0.410)	(0.422)	(0.460)	(0.424)	(0.436)	(0.439)	(0.453)	(0.503)	(0.410)
ln(MARKET)$_{t-1}$	1.713***	1.651***	1.624***	1.802***	1.586***	1.927***	1.925***	1.858***	1.898***	1.681***
	(0.105)	(0.104)	(0.105)	(0.142)	(0.106)	(0.127)	(0.127)	(0.133)	(0.164)	(0.103)
NORDIC	2.693***	2.537***	2.800***	2.725***	2.058**	3.367***	3.431***	3.018***	3.051***	2.824***
	(0.711)	(0.737)	(0.727)	(0.803)	(0.705)	(0.766)	(0.756)	(0.729)	(0.835)	(0.699)
EU15	4.784***	5.013***	4.833***	3.747***	3.218***	4.456***	4.110***	3.545***	4.301***	4.213***
	(0.776)	(0.788)	(0.814)	(0.890)	(0.955)	(0.814)	(0.845)	(0.929)	(0.929)	(0.832)
INFRASTR$_{t-1}$	0.0614***	0.0652***	0.0548***	0.0497**	0.0250+	0.0464**	0.0488**	0.0401**	0.0492**	0.0517***
	(0.0140)	(0.0139)	(0.0141)	(0.0162)	(0.0142)	(0.0147)	(0.0149)	(0.0148)	(0.0166)	(0.0138)
Constant	-43.64***	-41.03***	-40.85***	-44.16***	-38.29***	-48.24***	-48.53***	-46.06***	-42.22***	-41.27***
	(4.590)	(4.674)	(4.799)	(5.200)	(4.904)	(4.809)	(4.833)	(4.891)	(5.637)	(4.612)
Observations	1338	1341	1415	1223	1413	1243	1243	1243	1084	1415
Countries	172	172	172	150	172	152	128	172	152	152
R^2	0.286	0.273	0.272	0.261	0.279	0.283	0.282	0.276	0.232	0.291

Standard errors in parentheses

OLS with PCSE, dependent variable lnsq(FDI Stock).

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

Table B.3: Baseline models – Services FDI and institutional concepts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PHYSINT	**0.201***									
	(0.0865)									
WORKER		0.0899								
		(0.190)								
DEMOC			0.620							
			(0.483)							
XCONST				-0.0138						
				(0.131)						
CCI					**0.883***					
					(0.355)					
PRI						**0.0322***				
						(0.0129)				
IPI							0.176			
							(0.130)			
INJUD								**0.524***		
								(0.246)		
FFI									**0.0195**$^+$	
									(0.0116)	
IFI										0.00469
										(0.0133)
ln(DIST)	-1.086**	-1.163**	-1.136**	-1.026*	-1.148**	-1.086**	-1.108**	-1.174**	-1.471***	-1.200**
	(0.393)	(0.393)	(0.395)	(0.412)	(0.399)	(0.410)	(0.413)	(0.401)	(0.437)	(0.396)
ln(MARKET)$_{t-1}$	1.361***	1.301***	1.305***	1.431***	1.287***	1.448***	1.453***	1.401***	1.391***	1.332***
	(0.136)	(0.130)	(0.129)	(0.167)	(0.131)	(0.160)	(0.161)	(0.159)	(0.195)	(0.131)
NORDIC	-0.257	-0.415	-0.295	2.902$^+$	-0.639	-0.0558	-0.169	-0.292	0.0183	-0.242
	(2.270)	(2.264)	(2.306)	(1.714)	(2.347)	(2.216)	(2.240)	(2.203)	(2.164)	(2.300)
EU15	1.135	1.438	1.361	0.948	0.528	1.032	1.125	0.365	0.611	1.067
	(1.407)	(1.403)	(1.435)	(1.540)	(1.444)	(1.391)	(1.401)	(1.340)	(1.390)	(1.433)
INFRASTR$_{t-1}$	0.0644***	0.0701***	0.0663***	0.0709***	0.0499*	0.0668***	0.0731***	0.0629**	0.0565**	0.0631***
	(0.0184)	(0.0181)	(0.0186)	(0.0199)	(0.0199)	(0.0197)	(0.0192)	(0.0194)	(0.0201)	(0.0186)
Constant	-19.72***	-16.76**	-17.34***	-20.98***	-16.17**	-21.93***	-21.19***	-20.52***	-17.49**	-17.59***
	(5.460)	(5.218)	(5.214)	(5.603)	(5.218)	(5.366)	(5.496)	(5.256)	(6.030)	(5.223)
Observations	1338	1341	1415	1223	1413	1243	1243	1243	1084	1415
Countries	172	172	172	150	172	152	128	172	152	152
R^2	0.161	0.158	0.163	0.157	0.162	0.162	0.157	0.168	0.138	0.164

Standard errors in parentheses

OLS with PCSE, dependent variable lnsq(FDI Stock).

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

Table B.4: Sensitivity analysis – Institutional concepts and natural resource FDI

	Bivariate	ln(MARKET)$_{t-1}$	ln(DISTANCE)	INFRASTR$_{t-1}$	EU15	NORDIC	ln(OPEN)$_{t-1}$	ln(INCOME)$_{t-1}$
				Sequential entering of controls				
PHYSINT	*	***	***					
WORKER	*	*						
DEMOC	***	**	*					
XCONST	***	*						
CCE	***	***	***	***	**	**		*
PRI	***	***	**					
IPI	***	**	*					
INJUD	**	**	**	*				
FFI	***	*						
IFI	**							

Cell values connote the significance level of the corresponding institutional concept in the leftmost column. Dependent variables are lnsq(FDI stock). All estimates are positive. Institutional concepts are connoted in the leftmost column. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.5: Sensitivity analysis – Institutional concepts and manufacturing FDI

	Bivariate	ln(MARKET)$_{t-1}$	ln(DISTANCE)	INFRASTR$_{t-1}$	EU15	NORDIC	ln(OPEN)$_{t-1}$	ln(INCOME)$_{t-1}$
				Sequential entering of controls				
PHYSINT		***	***	***	*	**		
WORKER	***	***	***	**				
DEMOC	***	***	***	***	***	***	**	**
XCONST	***	***	***	***	***	***	**	**
CCE	***	***	***	***	***	***	***	***
PRI	***	***	***	***	***	***	**	*
IPI	***	**						
INJUD	***	***	***	***	***	***	***	***
FFI	***	***	***	**	**	**	*	
IFI	***	***	***	***	***	***	**	**

Cell values connote the significance level of the corresponding institutional concept in the leftmost column. Dependent variables are lnsq(FDI stock). All estimates are positive. Institutional concepts are connoted in the leftmost column. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.6: Sensitivity analysis – Institutional concepts and services FDI

	Bivariate	ln(MARKET)$_{t-1}$	ln(DISTANCE)	INFRASTR$_{t-1}$	EU15	NORDIC	ln(OPEN)$_{t-1}$	ln(INCOME)$_{t-1}$
				Sequential entering of controls				
PHYSINT	*	***	***	*	*	*	*	*
WORKER	*	*						
DEMOC	***	**	*					
XCONST	***		*					
CCE	***	***	***	**	*	*	*	**
PRI	***	***	***	*	*	*	*	*
IPI	***	***	**					
INJUD	***	***	***	*	*	*		*
FFI	***	***	***					
IFI	***	*						

Cell values connote the significance level of the corresponding institutional concept in the leftmost column. Dependent variables are lnsq(FDI stock). All estimates are positive. Institutional concepts are connoted in the leftmost column. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.7: Robustness – Baseline models with random effects regression

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
TFDI	0.105	**-0.506**[+]	1.172	0.0974	**1.038****	0.00239	0.187	**0.839***	-0.00717	-0.00496
	(0.0890)	(0.290)	(0.818)	(0.256)	(0.388)	(0.0158)	(0.118)	(0.413)	(0.0165)	(0.0182)
NRFDI	**0.238***	-0.121	0.568	-0.00633	**0.914***	0.00238	**0.236**[+]	**0.631**[+]	-0.00900	-0.0154
	(0.0974)	(0.299)	(0.569)	(0.173)	(0.418)	(0.0162)	(0.126)	(0.375)	(0.0130)	(0.0174)
MFDI	**0.158**[+]	0.0453	**1.471***	**0.469***	**1.620*****	**0.0242***	0.186	**0.872****	0.0131	**0.0203***
	(0.0917)	(0.156)	(0.593)	(0.216)	(0.306)	(0.0106)	(0.118)	(0.305)	(0.0137)	(0.0100)
SFDI	0.0800	-0.141	0.849	0.0459	**0.884***	0.0143	0.0488	**0.481**[+]	0.00896	-0.00985
	(0.0833)	(0.215)	(0.899)	(0.255)	(0.378)	(0.0147)	(0.108)	(0.277)	(0.0124)	(0.0142)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	172	172	172	150	172	152	128	172	152	152

Cell values are slope coefficients of institutional concepts connoted in the top row, with standard errors clustered on panel-units (countries) in parentheses.

Dependent variables are lnsq(FDI stock). Control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15 and INFRASTR$_{t-1}$.

[+] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.8: Robustness – Sector-specific models with random effects regression

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
NRFDI	**0.239***	-0.140	0.745	0.0507	**1.197***	-0.00133	**0.296***	0.750	-0.00129	-0.0186
	(0.119)	(0.367)	(0.918)	(0.254)	(0.549)	(0.0191)	(0.133)	(0.504)	(0.0163)	(0.0217)
Observations	1069	1071	1072	1024	1072	1039	967	1072	1039	1039
Countries	126	126	126	122	126	123	113	126	123	123
MFDI	0.0556	0.00926	0.934	0.340	**1.385*****	0.0109	0.152	**0.573**[+]	0.00410	0.0136
	(0.0897)	(0.161)	(0.582)	(0.227)	(0.337)	(0.0110)	(0.116)	(0.338)	(0.0143)	(0.0104)
Observations	1283	1285	1337	1211	1335	1219	1051	1337	1219	1219
Countries	162	162	162	148	162	149	124	162	149	149
SFDI	0.0570	-0.203	0.296	-0.0746	0.535	0.00328	0.0239	0.234	-0.0000719	-0.0131
	(0.0845)	(0.219)	(0.922)	(0.273)	(0.451)	(0.0156)	(0.109)	(0.301)	(0.0125)	(0.0142)
Observations	1282	1284	1336	1210	1334	1219	1051	1336	1219	1219
Countries	161	161	161	147	161	149	124	161	149	149

Cell values in shaded rows are slope coefficients of institutional concepts connoted in the top row, with standard errors clustered on panel-units (countries)

in parentheses. Dependent variables are lnsq(FDI stock). Baseline control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15

and INFRASTR$_{t-1}$. Sector-specific controls are ln(ENERGY) in NRFDI models, ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(OPEN)$_{t-1}$ in MFDI models,

and ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(DENSITY)$_{t-1}$, lnsq(MFDI)$_{t-1}$ in SFDI models. [+] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table B.9: Robustness – Baseline models with one year lag-structure

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT$_{t-1}$	WORKER$_{t-1}$	DEMOC$_{t-1}$	XCONST$_{t-1}$	CCI$_{t-1}$	PRI$_{t-1}$	IPI$_{t-1}$	INJUD$_{t-1}$	FFI$_{t-1}$	IFI$_{t-1}$
TFDI	-0.0130	0.0843	-0.133	-0.0178	**0.916***	0.0225	-0.0130	**0.604**[+]	0.0160	0.0129
	(0.0358)	(0.126)	(0.164)	(0.0499)	(0.394)	(0.0143)	(0.118)	(0.313)	(0.0123)	(0.0144)
NRFDI	-0.0362	-0.0240	-0.248	-0.0384	0.563	0.00816	0.0317	0.286	-0.000837	-0.00222
	(0.0453)	(0.147)	(0.195)	(0.0554)	(0.402)	(0.0151)	(0.132)	(0.342)	(0.0126)	(0.0153)
MFDI	0.00701	0.156	0.00991	-0.0612	**1.709*****	**0.0432*****	0.110	**1.097*****	**0.0340****	**0.0450*****
	(0.0317)	(0.110)	(0.140)	(0.0398)	(0.326)	(0.0127)	(0.107)	(0.267)	(0.0112)	(0.0117)
SFDI	-0.00115	0.176	0.0569	**0.0979***	**1.042****	**0.0358****	**-0.228**[+]	**0.703***	**0.0244***	0.00564
	(0.0358)	(0.112)	(0.161)	(0.0450)	(0.364)	(0.0129)	(0.119)	(0.286)	(0.0122)	(0.0137)
Observations	1267	1289	1397	1150	1387	1238	1075	1415	1238	1238
Countries	172	172	172	172	172	152	129	172	152	152

Cell values are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.

Dependent variables are lnsq(FDI stock). Control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15 and INFRASTR$_{t-1}$.

[+] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.10: Robustness – Sector-specific models with one year lag-structure

	Personal freedoms		Political governance			Economic interaction			Economic regulation	
	PHYSINT$_{t-1}$	WORKER$_{t-1}$	DEMOC$_{t-1}$	XCONST$_{t-1}$	CCI$_{t-1}$	PRI$_{t-1}$	IPI$_{t-1}$	INJUD$_{t-1}$	FFI$_{t-1}$	IFI$_{t-1}$
NRFDI	-0.0437	-0.0590	-0.344	-0.0464	0.804	0.0110	0.124	0.243	0.0105	0.00514
	(0.0627)	(0.188)	(0.255)	(0.0741)	(0.501)	(0.0176)	(0.143)	(0.462)	(0.0148)	(0.0192)
Observations	964	980	1060	863	1070	1035	958	1072	1035	1035
Countries	126	126	126	126	126	123	114	126	123	123
MFDI	0.00694	0.142	-0.0151	**-0.0733**$^+$	**1.637*****	**0.0274**$^+$	0.0646	**0.657***	**0.0216**$^+$	**0.0326****
	(0.0324)	(0.112)	(0.146)	(0.0416)	(0.393)	(0.0146)	(0.108)	(0.300)	(0.0117)	(0.0117)
Observations	1196	1216	1319	1078	1313	1214	1042	1337	1214	1214
Countries	162	162	162	162	162	149	125	162	149	149
SFDI	0.0201	**0.215**$^+$	0.0523	**0.120***	**0.997***	**0.0266***	**-0.243***	0.386	0.0169	-0.00413
	(0.0370)	(0.118)	(0.170)	(0.0466)	(0.434)	(0.0133)	(0.119)	(0.297)	(0.0121)	(0.0140)
Observations	1195	1215	1318	1077	1312	1214	1042	1336	1214	1214
Countries	161	161	161	161	161	149	125	161	149	149

Cell values in shaded rows are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors
in parentheses. Dependent variables are lnsq(FDI stock). Baseline control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15
and INFRASTR$_{t-1}$. Sector-specific controls are ln(ENERGY) in NRFDI models, ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(OPEN)$_{t-1}$ in MFDI models,
and ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(DENSITY)$_{t-1}$, lnsq(MFDI)$_{t-1}$ in SFDI models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table B.11: Robustness – Baseline models with regional dummies

	Personal freedoms		Political governance			Economic interaction			Economic regulation	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
TFDI	0.110	-0.108	**1.128***	0.0813	**0.872***	**0.0309***	0.130	**0.602***	0.0136	0.00506
	(0.0874)	(0.206)	(0.523)	(0.138)	(0.379)	(0.0143)	(0.128)	(0.296)	(0.0120)	(0.0144)
NRFDI	0.115	-0.0128	0.273	-0.0296	**0.677**$^+$	0.0144	0.176	0.234	-0.00149	-0.0128
	(0.0946)	(0.232)	(0.544)	(0.139)	(0.403)	(0.0154)	(0.145)	(0.325)	(0.0121)	(0.0151)
MFDI	**0.196****	**0.255**$^+$	**1.484****	**0.443*****	**1.747*****	**0.0475*****	0.00352	**1.072*****	**0.0319****	**0.0401*****
	(0.0736)	(0.153)	(0.472)	(0.117)	(0.306)	(0.0126)	(0.120)	(0.247)	(0.0106)	(0.0116)
SFDI	**0.200***	0.0724	0.559	-0.00787	**0.793***	**0.0297***	0.181	**0.449**$^+$	**0.0208**$^+$	0.00476
	(0.0866)	(0.191)	(0.487)	(0.130)	(0.370)	(0.0133)	(0.130)	(0.260)	(0.0115)	(0.0132)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	172	172	172	150	172	152	128	172	152	152

Cell values are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.
Dependent variables are lnsq(FDI stock). Control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15, INFRASTR$_{t-1}$,
and REGION. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.12: Robustness – Sector-specific models with regional dummies

	Personal freedoms		Political governance			Economic interaction			Economic regulation	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
NRFDI	0.142	0.0743	0.407	0.0281	**1.033***	0.0221	**0.289**$^+$	0.277	0.0121	-0.00926
	(0.122)	(0.302)	(0.793)	(0.185)	(0.499)	(0.0182)	(0.152)	(0.434)	(0.0143)	(0.0189)
Observations	1069	1071	1072	1024	1072	1039	967	1072	1039	1039
Countries	126	126	126	122	126	123	113	126	123	123
MFDI	0.0942	0.209	**1.043***	**0.327****	**1.713*****	**0.0310***	-0.0632	**0.731****	**0.0202**$^+$	**0.0283***
	(0.0779)	(0.157)	(0.506)	(0.123)	(0.376)	(0.0146)	(0.119)	(0.274)	(0.0110)	(0.0116)
Observations	1283	1285	1337	1211	1335	1219	1051	1337	1219	1219
Countries	162	162	162	148	162	149	124	162	149	149
SFDI	**0.206***	0.0340	0.0485	-0.105	**0.790**$^+$	0.0226	0.160	0.194	0.0127	-0.00376
	(0.0943)	(0.193)	(0.494)	(0.134)	(0.423)	(0.0138)	(0.129)	(0.265)	(0.0116)	(0.0136)
Observations	1282	1284	1336	1210	1334	1219	1051	1336	1219	1219
Countries	161	161	161	147	161	149	124	161	149	149

Cell values in shaded rows are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.
Dependent variables are lnsq(FDI stock). Baseline control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15,
INFRASTR$_{t-1}$, and REGION. Sector-specific controls are ln(ENERGY) in NRFDI models, ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(OPEN)$_{t-1}$ in MFDI models,
and ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(DENSITY)$_{t-1}$, lnsq(MFDI)$_{t-1}$ in SFDI models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table B.13: Robustness – Baseline models with time-trend dummies

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
TFDI	**0.165***	0.0345	0.405	-0.0271	**1.212*****	**0.0307****	0.106	**0.598***	**0.0198***	0.00785
	(0.0770)	(0.187)	(0.452)	(0.125)	(0.348)	(0.0119)	(0.120)	(0.255)	(0.0100)	(0.0126)
NRFDI	0.0699	0.0765	0.0174	-0.0188	**0.664***	0.0120	0.0620	0.345	-0.00433	-0.00455
	(0.0606)	(0.145)	(0.440)	(0.0905)	(0.289)	(0.0113)	(0.104)	(0.216)	(0.00909)	(0.0110)
MFDI	**0.0996***	0.101	0.427	0.0886	**1.214*****	**0.0299*****	0.0253	**0.618*****	**0.0108**$^+$	**0.0149***
	(0.0426)	(0.104)	(0.311)	(0.0804)	(0.222)	(0.00761)	(0.0598)	(0.136)	(0.00633)	(0.00702)
SFDI	**0.165***	0.0345	0.405	-0.0271	**1.212*****	**0.0307****	0.106	**0.598***	**0.0198***	0.00785
	(0.0770)	(0.187)	(0.452)	(0.125)	(0.348)	(0.0119)	(0.120)	(0.255)	(0.0100)	(0.0126)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	172	172	172	150	172	152	128	172	152	152

Cell values are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.

Dependent variables are lnsq(FDI stock). Control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15, INFRASTR$_{t-1}$,

and TIME. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.14: Robustness – Sector-specific models with time-trend dummies

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
NRFDI	0.133	0.0693	0.368	0.0144	**1.180***	0.0267	**0.285**$^+$	0.290	0.0120	-0.00999
	(0.119)	(0.317)	(0.781)	(0.181)	(0.526)	(0.0197)	(0.151)	(0.460)	(0.0144)	(0.0190)
Observations	1069	1071	1072	1024	1072	1039	967	1072	1039	1039
Countries	126	126	126	122	126	123	113	126	123	123
MFDI	0.0811	0.163	**1.034***	**0.329****	**1.708*****	**0.0307***	-0.0556	**0.707***	**0.0186**$^+$	**0.0266***
	(0.0777)	(0.161)	(0.515)	(0.124)	(0.385)	(0.0156)	(0.119)	(0.277)	(0.0111)	(0.0117)
Observations	1283	1285	1337	1211	1335	1219	1051	1337	1219	1219
Countries	162	162	162	148	162	149	124	162	149	149
SFDI	**0.215***	0.149	0.0828	-0.0912	**1.103***	**0.0379****	0.147	0.342	0.0131	-0.000749
	(0.0938)	(0.198)	(0.495)	(0.133)	(0.432)	(0.0144)	(0.130)	(0.261)	(0.0116)	(0.0139)
Observations	1282	1284	1336	1210	1334	1219	1051	1336	1219	1219
Countries	161	161	161	147	161	149	124	161	149	149

Cell values in shaded rows are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.

Dependent variables are lnsq(FDI stock). Baseline control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15,

INFRASTR$_{t-1}$, and TIME. Sector-specific controls are ln(ENERGY) in NRFDI models, ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(OPEN)$_{t-1}$ in MFDI models,

and ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(DENSITY)$_{t-1}$, lnsq(MFDI)$_{t-1}$ in SFDI models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table B.15: Robustness – Baseline models excluding top 20 largest MNEs

	Personal freedoms		*Political governance*			*Economic interaction*			*Economic regulation*	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
TFDI	**0.165***	0.0345	0.405	-0.0271	**1.212*****	**0.0307****	0.106	**0.598***	**0.0198***	0.00785
	(0.0770)	(0.187)	(0.452)	(0.125)	(0.348)	(0.0119)	(0.120)	(0.255)	(0.0100)	(0.0126)
NRFDI	0.0699	0.0765	0.0174	-0.0188	**0.664***	0.0120	0.0620	0.345	-0.00433	-0.00455
	(0.0606)	(0.145)	(0.440)	(0.0905)	(0.289)	(0.0113)	(0.104)	(0.216)	(0.00909)	(0.0110)
MFDI	**0.0996***	0.101	0.427	0.0886	**1.214*****	**0.0299*****	0.0253	**0.618*****	**0.0108**$^+$	**0.0149***
	(0.0426)	(0.104)	(0.311)	(0.0804)	(0.222)	(0.00761)	(0.0598)	(0.136)	(0.00633)	(0.00702)
SFDI	**0.228****	0.158	0.464	-0.0239	**1.188*****	**0.0406****	0.197	**0.582***	**0.0283****	0.0104
	(0.0854)	(0.190)	(0.474)	(0.124)	(0.336)	(0.0124)	(0.129)	(0.245)	(0.0109)	(0.0127)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	172	172	172	150	172	152	128	172	152	152

Cell values are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.

Dependent variables are lnsq(FDI stock) excluding top 20 MNEs' FDIs. Control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15,   .

and INFRASTR$_{t-1}$. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.16: Robustness – Sector-specific models excluding top 20 largest MNEs

	Personal freedoms		Political governance			Economic interaction			Economic regulation	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
NRFDI	0.0550	0.0418	-0.507	-0.132	0.561	0.00548	0.0957	0.229	-0.00143	-0.0161
	(0.0751)	(0.187)	(0.649)	(0.114)	(0.349)	(0.0127)	(0.105)	(0.287)	(0.0106)	(0.0136)
Observations	1069	1071	1072	1024	1072	1039	967	1072	1039	1039
Countries	126	126	126	122	126	123	113	126	123	123
MFDI	0.0544	0.0921	0.0929	0.0684	**1.202***	**0.0285***	-0.00839	**0.411**	0.00573	0.0103
	(0.0436)	(0.107)	(0.313)	(0.0786)	(0.265)	(0.00812)	(0.0614)	(0.146)	(0.00641)	(0.00700)
Observations	1283	1285	1337	1211	1335	1219	1051	1337	1219	1219
Countries	162	162	162	148	162	149	124	162	149	149
SFDI	**0.207***	0.106	-0.165	-0.139	**1.101**	**0.0305***	0.147	0.221	**0.0184**+	0.00000116
	(0.0923)	(0.192)	(0.484)	(0.128)	(0.400)	(0.0130)	(0.128)	(0.260)	(0.0111)	(0.0129)
Observations	1282	1284	1336	1210	1334	1219	1051	1336	1219	1219
Countries	161	161	161	147	161	149	124	161	149	149

Cell values in shaded rows are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.

Dependent variables are lnsq(FDI stock). Baseline control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC,

EU15, INFRASTR$_{t-1}$, and TAXHAV. Sector-specific controls are ln(ENERGY) in NRFDI models, ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(OPEN)$_{t-1}$ in MFDI models,

and ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(DENSITY)$_{t-1}$, lnsq(MFDI)$_{t-1}$ in SFDI models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table B.17: Robustness – Baseline models with tax haven dummy

	Personal freedoms		Political governance			Economic interaction			Economic regulation	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
TFDI	0.0827	-0.148	**0.958**+	0.0590	**0.653**+	**0.0271**+	0.104	**0.511**+	0.00931	0.00338
	(0.0871)	(0.208)	(0.527)	(0.137)	(0.388)	(0.0144)	(0.125)	(0.289)	(0.0121)	(0.0144)
NRFDI	0.101	-0.0185	0.242	-0.0362	**0.680**+	0.0144	0.157	0.260	-0.00431	-0.0136
	(0.0953)	(0.233)	(0.550)	(0.136)	(0.412)	(0.0158)	(0.144)	(0.318)	(0.0122)	(0.0151)
MFDI	**0.173***	0.235	**1.393**	**0.428***	**1.654***	**0.0462***	-0.00905	**1.027***	**0.0299**	**0.0386***
	(0.0726)	(0.155)	(0.468)	(0.115)	(0.330)	(0.0133)	(0.118)	(0.248)	(0.0104)	(0.0116)
SFDI	**0.172***	0.0365	0.388	-0.0334	0.605	**0.0261***	0.139	0.388	0.0147	0.00278
	(0.0862)	(0.190)	(0.481)	(0.130)	(0.368)	(0.0131)	(0.128)	(0.245)	(0.0118)	(0.0132)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	172	172	172	150	172	152	128	172	152	152

Cell values are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.

Dependent variables are lnsq(FDI stock). Control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC, EU15,

INFRASTR$_{t-1}$, and TAXHAV. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B.18: Robustness – Sector-specific models with tax haven dummy

	Personal freedoms		Political governance			Economic interaction			Economic regulation	
	PHYSINT	WORKER	DEMOC	XCONST	CCI	PRI	IPI	INJUD	FFI	IFI
NRFDI	0.127	0.0925	0.349	0.0247	**1.010***	0.0218	**0.271**+	0.296	0.0100	-0.00859
	(0.119)	(0.302)	(0.764)	(0.180)	(0.504)	(0.0183)	(0.153)	(0.434)	(0.0146)	(0.0188)
Observations	1069	1071	1072	1024	1072	1039	967	1072	1039	1039
Countries	126	126	126	122	126	123	113	126	123	123
MFDI	**0.173***	0.235	**1.393**	**0.428***	**1.654***	**0.0462***	-0.00905	**1.027***	**0.0299**	**0.0386***
	(0.0726)	(0.155)	(0.468)	(0.115)	(0.330)	(0.0133)	(0.118)	(0.248)	(0.0104)	(0.0116)
Observations	1338	1341	1415	1223	1413	1243	1084	1415	1243	1243
Countries	162	162	162	148	162	149	124	162	149	149
SFDI	**0.215***	0.0411	0.0374	-0.0816	**0.860***	**0.0261**+	0.151	0.307	0.0103	-0.00326
	(0.0931)	(0.193)	(0.491)	(0.130)	(0.419)	(0.0134)	(0.127)	(0.255)	(0.0115)	(0.0135)
Observations	1282	1284	1336	1210	1334	1219	1051	1336	1219	1219
Countries	161	161	161	147	161	149	124	161	149	149

Cell values in shaded rows are slope coefficients of institutional concepts connoted in the top row, with panel-corrected standard errors in parentheses.

Dependent variables are lnsq(FDI stock). Baseline control variables in all models are ln(DISTANCE), ln(MARKET)$_{t-1}$, NORDIC,

EU15, INFRASTR$_{t-1}$, and TAXHAV. Sector-specific controls are ln(ENERGY) in NRFDI models, ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(OPEN)$_{t-1}$ in MFDI models,

and ln(INCOME)$_{t-1}$, HUMCAP$_{t-1}$, ln(DENSITY)$_{t-1}$, lnsq(MFDI)$_{t-1}$ in SFDI models. $^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

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