Foreign direct investment and host country institutions: Does state ownership matter?

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Abstract

This paper investigates to what extent Foreign Direct Investment (FDI) decisions are influenced by state ownership. The literature on determinants of FDI indicates that host country institutions affect FDI allocation. The paper presents theoretical arguments that indicate differences between state-owned enterprises (SOEs) and privately owned enterprises (POEs), when it comes to how host country institutions affect FDI decisions. SOEs are expected to invest relatively more than POEs in countries with poor rule of law and poor property rights protection. However, SOEs are expected to invest relatively less than POEs in dictatorships and countries with poor labour rights protection. To test these hypotheses OLS with Panel Corrected Standard Errors and Random Effects Tobit analysis are applied on data of Norwegian firms’ FDI from 1998 to 2006. The empirical analysis strongly supports the first hypothesis. SOEs are more inclined than POEs to invest countries with poor rule of law and property rights protection. There is however no solid evidence for the second hypothesis.
1 Introduction

In the last decade or so, many studies on foreign direct investment (FDI) have moved beyond a focus on traditional economic factors such as market size to consider also the effects of various political and institutional structures on FDI. The clear message from this literature is that well-functioning institutions attract FDI, among other things through providing secure property rights and advantageous economic climates.\(^1\) However, most of these studies, except some studies on particular sectors, rely on aggregated measures of national FDI. Is it plausible to assume that all companies react similarly to institutional structures such as democracy and rule of law when they allocate FDI? We don’t believe so. In this paper, we investigate the effect of \textit{state ownership} on firms’ investment behaviour. One difference between state owned enterprises (SOEs) and private owned enterprises (POEs) is that SOEs often are expected to (also) achieve various types of non-economic goals that may not be in harmony with profit maximization. Such social goals are a possible first source of differences in investment behaviour. A second source of differences in behaviour is related to the functioning and governance of SOEs. One line of argument suggests that there are generic problems in the governance of SOEs, which give SOE managers more discretion to pursue goals other than those of the owner. A second line of argument suggests that politicians may interfere with the operations of SOEs. By combining insights from the literature on institutions and FDI and the literature on state ownership, we present theoretical arguments implying diverging patterns of FDI allocation between SOEs and POEs. All else equal, we expect that:

\(H1\) SOEs invest relatively less than POEs in countries that protect property rights and have a well-functioning system of rule of law.

\(^1\) Another important finding is that host country institutions strongly influence whether FDI has positive or negative effects on the country’s wider economy (e.g. Moran et al., eds., 2005).
Briefly, the argument is that SOEs may be less sensitive to the economic risk that poorly functioning institutions represent, because SOEs expect to be “rescued” by their home state, and/or because state ownership reduces expropriation risk.

We also expect that:

**H2) SOEs invest relatively more than POEs in countries that are democratic and protect human rights (including labour rights).**

Briefly, the argument is that self-interested politicians might actively pressure SOEs to not invest in countries that violate human rights, because of various political costs associated with such investment allocation.

We test these hypotheses using firm-level data on Norwegian outward FDI stocks from 1998 to 2006. These data obtained from Statistics Norway, allow us to distinguish between SOE and POE FDI. Compared to most other OECD countries, Norway represents extensive state ownership in business (Hjellum, 2002; OECD, 2005).\(^2\) At the end of 2007, the state and municipalities owned 30.3 percent of the total market value of the shares on the Oslo Stock Exchange (Oslo Børs, 2008). The same year, there were almost 3000 government majority-owned firms (Statistics Norway, 2008), comprising everything from large publicly listed companies to small municipal enterprises. Many large Norwegian firms investing abroad are partially or fully state-owned. Norwegian government ownership policy emphasizes both good corporate governance of SOEs and protection of minority shareholders; as well as corporate social responsibility by SOEs.

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\(^2\) The Norwegian state also has substantial foreign *portfolio* investment (less than 10 percent ownership) in foreign firms through the Government Pension Fund-Global (PF-G) which consists of petroleum revenues and is invested abroad. At the end of 2008, the fund’s market value was NOK 2275 billion. The portfolio consists of almost 7700 companies, and the fund owns 0.77 percent of global equity (NBIM, 2009).
To the best of our knowledge, this is the first statistical study on the effect of state ownership on FDI decisions. The paper thus contributes to the literature on the relationship between FDI and political institutions, and to the literature on state ownership. In section 2, we briefly review the general literature on political determinants of FDI and the literature on state ownership, before we present our theoretical arguments on the interaction effects between state ownership and host country institutions on FDI allocation. Section 3 presents the data. Section 4 investigates our hypotheses by applying OLS with Panel Corrected Standard Errors and Random Effects Tobit analysis. We find strong and robust support for H1; SOEs invest relatively more than POEs in countries with poor property rights protection and lax rule of law. However, we find no evidence for H2.

2 A review of theory on FDI, institutions and state ownership

2.1 Why institutions matter for FDI allocation

Location-specific advantages, the L in Dunning’s (1980) OLI-framework, refer to the advantages of locating production abroad rather than at home. Countries that offer advantages such as good market access or low factor costs are likely to attract FDI (Navaretti and Venables, 2004). However, various host-country institutional structures are also important determinants of FDI allocation (Blonigen, 2005). Profit-maximizing investors prefer economic environments that protect property rights and enforce rule of law. The worst scenario for a foreign investor is non-compensated expropriation, but theft or looting of property will also affect profits negatively. Political risk factors such as political instability and selective enforcement of the law will thus deter FDI. Asiedu et al. (2009) argue that violations of property and contract rights deter FDI to an even stronger degree than domestic

3 The two other components are ownership advantages (notably firm-specific assets such as technology or brands) and internalization advantages (referring to factors such as proprietary technology which may make arm’s length trade and licensing unviable).
investment. Furthermore, institutions that protect property rights and enforce rule of law also affect economic growth positively (e.g. Acemoglu et al., 2001). Thus, institutional structures that provide secure property rights and rule of law might have a positive indirect effect on FDI, through affecting the overall economic environment in a country. Although foreign investors have demonstrated ability to adjust to changing political and legal context (Lipson, 1985), empirical studies find that government stability and policy commitment positively affect FDI (e.g. Daude and Stein, 2007; Coan and Kugler, 2008). Corruption also affects FDI negatively (e.g. Wei, 2000; Busse and Hefeker, 2007; Bénassy-Quéré et al., 2007).

The literature has also studied the effects from democracy, human rights and labour rights on FDI. One line of arguments suggests that authoritarian regimes reduce labour costs by suppressing democratic rights such as freedom of organisation. Breaching labour rights through longer working hours and lax workplace safety requirements means lower costs for the individual firm investing. This could in turn attract foreign investors. However, democracy and labour rights may have important positive indirect effects on FDI. For example, reduced child labour may increase education levels, and labour unions improve social stability (Kucera, 2001). Democracy may also lead to increased accumulation of human capital (Baum and Lake, 2003). Transnational corporations (TNCs) also, and increasingly, face normative expectations from stakeholders regarding their behaviour, notably corporate social responsibility (CSR) norms. TNCs concerned with their reputation may avoid investing in undemocratic countries or countries with lax labour rights, as this could lead to consumer boycotts or at least reduced demand at home or in other large Western markets. Many empirical studies find that democracy has a positive effect on FDI, at least after 1990 (e.g. Busse, 2004; Busse and Hefeker, 2007). Empirical studies have also found
that extensive protection of labour rights (e.g. Kucera, 2001; Mosley and Uno, 2007)\textsuperscript{4} and human rights more generally (Blanton and Blanton, 2006) attract FDI. Some recent studies have looked beyond aggregate effects. For example, Wu (2006) finds that corruption is less of a deterrent for firms originating in countries with widespread corruption.\textsuperscript{5}

2.2 The goals and governance of state-owned enterprises

Economists have considered theoretical justifications of state ownership, particularly related to alleviation of \textit{market failures} such as natural monopoly, externalities, and public goods provision. State ownership has empirically also been an element in industrial policy, e.g. for launching emerging industries with high start-up costs and uncertain future property rights; or for controlling the decline in certain industries such as coal-mining (OECD, 2005). National ownership and control of natural resources has also empirically been an important justification for state ownership. Crucially, state ownership is often intended to achieve various types of “social” goals that may not be in harmony with strict profit maximization, including redistribution or helping economically depressed regions.\textsuperscript{6}

The theoretical literature has discussed whether state ownership is necessary to achieve the various goals presented above, or whether production could be contracted to the private sector.\textsuperscript{7} The literature has also discussed possible unintended effects of state ownership on

\textsuperscript{4} Some studies have found the opposite result (e.g. Bénassy-Quéré et al., 2007). The effects also depend on the particular type of labour standard.

\textsuperscript{5} Similarly, firms originating in countries with poor human rights records may find it easier to enter other countries with poor protection of human rights (UNCTAD, 2007).

\textsuperscript{6} Historically, ideological preferences have also influenced the degree of state ownership (or lack thereof) in different countries. Finally, state ownership has sometimes been more accidental, often a result of economic crises. The ongoing financial crisis has led many states, even market-liberal Great Britain, to (partly) nationalize private banks. In Norway, the banking crisis in the 1990s led to the state temporarily nationalizing all the major banks (Byrkjeland and Langeland, 2000) and maintaining a substantial position in the largest of them, DNBNor.

\textsuperscript{7} A general answer is that ownership matters only in the case of \textit{contractual incompleteness} (Hart, 2003; Martimort, 2006). A key question is then whether the stronger incentives under private ownership to innovate
firm behaviour (*regulatory failure*). The underlying idea is that the delegation of the management of SOEs on behalf of voters leads to agency problems. Broadly, there are two main perspectives (Gupta, 2005): Under the *managerial view*, it is assumed that politicians act benevolently in the interest of voters, but that there are generic agency problems in the governance of SOEs. In contrast, the *political view* assumes that politicians may use SOEs for their own purposes. These two views may appear contradictory, and as for the second view, the concern is more with control of politicians than with the control of firms. A broad common implication is, however, that SOEs will put relatively less weight on profit maximization, and relatively more weight on other concerns. This does *not* imply that, e.g., political interference will always be against voters’ interests: Altruistic voters might want SOEs to sacrifice economic efficiency in order to achieve other goals such as improving labour conditions in their foreign operations.

*The managerial view: Corporate governance of SOEs*

The corporate governance literature in economics analyses how separating ownership and control leads to interest conflicts between managers and owners, due to the former’s information advantage. Managers are assumed to be motivated (also) by other goals than value maximization for the owners. The so-called *empire building hypothesis* proposes that managers maximize the size of their firms because of prestige (Shleifer and López-Calva, 1998). Laffont and Tirole (1993) argue that regulated private firms suffer inefficiencies because of conflicts of interest between shareholders and regulators. However, SOE managers may invest less in non-contractible investments because they fear their investments will be redeploys by the government to alternative uses. Martimort (2006) finds public ownership to be theoretically optimal in some contexts and private ownership in other. Some authors also consider intermediate ownership forms, such as public-private partnerships (e.g. Hart, 2003).

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These arguments imply that SOEs are associated with inferior economic performance, which is confirmed by most empirical studies (see e.g. Shirley and Walsh, 2001; Meggison and Netter, 2001). Grünfeld et al. (2004) study Norwegian firms. However, assessing other possible contributions from SOEs has proved more difficult.
2003). Many authors consider such agency problems to be particularly severe in SOEs, which are assumed to allow more managerial discretion than POEs do. Providing the right incentives and monitoring are more difficult in SOEs, because their owners expect them to achieve multiple goals besides profit maximization (Godana, 1991; Grünfeld et al., 2004). Successive political administrations may also have different goals for SOEs (Vernon, 1979 and 1984).

Dispersed ownership may lead to sub-optimal monitoring, as each owner has an incentive to free-ride on the monitoring efforts of others. One might think that a fully concentrated state ownership would mitigate such problems. However, the ultimate owners of SOEs are the citizens, while monitoring is performed by bureaucrats who might have little incentive to devote energy on monitoring (Grünfeld et al., 2004). Also, the citizens cannot sell their shares in a poorly performing SOE. Since SOE shares are not traded, there is also a lack of information on firm performance (Shirley and Walsh, 2001). This problem is however less severe under partial state ownership (Laffont and Tirole, 1993; Gupta, 2005).\(^9\) The more “drastic” governance mechanisms of takeovers or bankruptcy are also less relevant for SOEs. There is no equivalent to takeovers for SOEs, short of privatization, which depends on the political process (Shirley and Walsh, 2001). SOEs have also often enjoyed soft budget constraints, since bankruptcy may lead to political costs for governments. Governments may therefore choose to extend subsidies when SOEs face economic trouble (Sheshinski and López-Calva, 2003; Martimort, 2006).\(^10\) This might influence the behavior of SOE managers, who can initiate more risky projects since they are insured against the worst outcomes. This point is important for our argument on FDI decisions and rule of law below. Despite the

\(^9\) Information problems are also reduced in sectors where there is competition from other firms, as these serve as a benchmark (Grünfeld et al., 2004)

\(^10\) Also POEs may take large risks and speculate in government bailouts (Aharoni, 2000) or lobby for resources (Laffont and Tirole, 1993).
problems mentioned above, even self-interested SOE managers will pay attention to profits. Good performance gives managers more discretionary resources, more internal funds for investment, and better positions in the managerial labour market (Godana, 1991).

*The political view: Political interference in SOEs*

The political view acknowledges that politicians may use SOEs for their own political purposes; e.g. for rewarding political supporters (Shleifer, 1998). Political transfers through SOEs may be more attractive than taxes and subsidies because they are less transparent (Shirley and Walsh, 2001). An alternative approach replaces the idea of a principal-agent “chain of command” in favour of a network of managers and politicians bargaining to maximize their own benefits. One result of this bargaining may be that SOE managers create inefficient but politically desirable “over-employment” in return for budget increases from politicians (Shirley and Walsh, 2001). SOEs have been subject to widespread political use and abuse in many countries (Aharoni, 2000). However, the idea that SOEs generally are “in the pocket” of politicians is doubted by Vernon (1984), who argues that many SOEs enjoy a high degree of autonomy. In Norway, this seems to have been the case for at least Statoil (Claes, 2003) and Norsk Hydro (Lie, 2005). SOEs have sometimes used FDI to increase their autonomy from home country governments (Vernon, 1979; Mazzolini, 1980). British Petroleum’s disregard of the boycott of Rhodesia exemplifies that governments cannot always control their SOEs’ foreign operations (Wettenhall, 1993). The scope for political intervention depends on the institutional relationship between the government and the SOE. Political interventions will be easier if the SOE is run as a section of a ministry, with its managers
directly appointed by a minister, than if the government is dealing with a relatively independent SOE through the board of directors (Shirley and Walsh, 2001).

2.3 State ownership and FDI allocation

The above arguments suggest that state ownership could have an influence on firm behaviour, including investment behaviour. In the context of FDI, state ownership may have an effect both on a decision whether to invest abroad or not; and, which is the focus of this paper, on a decision where to allocate FDI. Mazzolini (1979, 1980) argues that, on balance, state ownership is an impediment to FDI in the first place, among other things because governments might pressure SOEs to use domestic inputs even when this is inefficient. In other cases, however, governments may actively encourage SOEs to invest abroad. International activities by SOEs from developing and emerging economies are found especially in the oil and gas sector, and are driven not least by a wish to secure strategic energy resources or minerals for the home country (UNCTAD, 2006 and 2007).

Argument I) SOEs invest relatively more in countries with poor rule of law and poor property rights protection

Vernon (1979) notes that the government may offer several benefits to its SOEs, such as subsidized capital and underwriting of risk. For example Chinese and Indian SOEs derive ownership advantages from access to subsidized finance and investment insurance when investing abroad (UNCTAD, 2007).

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11 Many states carried out significant ownership reforms during the last decades. Besides full or partial privatization, reforms have aimed at improved governance of SOEs (OECD, 2005).

12 See also various contributions on international operations of SOEs in Negandhi et al., eds. (1986).

13 In other cases SOEs are “milking cows” for governments, leaving them with few resources to invest abroad (UNCTAD, 2007).
Let us assume, stylistically, that an SOE’s managers maximize expected profits (the argument holds also if managers are motivated by prestige, visibility or “empire building”), and that politicians in addition to profits care about the company’s survival and wider financial situation, because of motivations related to political gains and losses. The politicians, or the state, are the capital guarantor of the SOE. FDI decisions are made under uncertainty. An investment project can turn out to generate profits, but it can also turn out more costly than the generated (discounted) revenues. If politicians do not control the SOE’s FDI decisions directly, but determine the resources that will be transferred to the SOE after FDI payoffs are revealed, we can analyze the situation with a simple model.

Assume there are two possible investment locations, countries A and B. These countries differ when it comes to rule of law and property rights protection. In country A, there is, with certainty, no expropriation of foreign capital. In country B, non-compensated expropriation occurs with probability $p$. The cost of investing in both countries is $c$, and the revenue generated in country $I$ is $r_I$. A profit-maximizing POE is indifferent between investing in country A and B if $r_A - c = (1-p)r_B - c$, implying that $r_B > r_A/(1-p)$ must hold for the investor to invest in country B. The expropriation risk means that in order to invest in country B, a private investor must expect large potential revenue when there is no expropriation, for example because of higher prices in product markets or lower wages.

Consider now an SOE deciding whether to invest in A or B. The SOE will (like the POE) receive a profit of $r_A - c$ if it invests in A. However, the expected profit from investing in B is different for the SOE from that of the POE, given our assumptions about the politicians’ utility function and ability to rescue SOEs. If we assume that the state is willing to bail out the SOE in case it makes negative profit, so that its profit is at least zero, the expected profit from investing in B is $p*0 + ((1-p)(r_B - c) = (1-p)(r_B - c)$, which is $(pc)$ higher than $(1-p)r_B - c$. The expected profit for the SOE from investing in the risky country is higher than for the
POE, whereas the expected profits are the same in the safe country. The empirical implication is that SOEs will invest relatively more in risky countries than will POEs; i.e. SOEs will allocate more of their FDI to countries with weak rule of law and poor property rights protection.

The above argument is a moral hazard argument, as SOE managers take advantage of politicians’ attention to political gains and costs; it is in this respect closely related to the managerial view. However, governments might also actually prefer SOEs to take higher risks, with associated higher expected profits. The state has a greater ability to absorb risk than any private investor, because of its size and diversification possibilities (Charreaux, 1997). If investors are risk averse, politically induced risk reduction might be efficiency-enhancing. Invoking the political view, politicians might also want to be associated with large (and development-friendly) investment projects by SOEs abroad. The Norwegian government has supported Statoil in its investments abroad (Austvik, 2007). Last year, the government also signalled willingness to increase the capital in Telenor to support the company’s large scale investments in India, while the company’s private owners were critical.14

The risk of expropriation might also be endogenous to ownership. If the home country government has diplomatic leverage over the host country, it can threaten with reprisals if the host country expropriates. Historical examples of this abound (Lipson, 1985). It appears likely that such a threat is more often signaled, and is more credible, in cases where the home country is a big power. However, small states might to a certain extent also utilize political tools to protect their SOE’s FDI. This would make the host country refrain from expropriating FDI more often than if there were no such political threats. As Keohane and Nye (1989) noted, there are linkages between issue areas in international relations, creating a relationship

of complex interdependence whereby two states may be in a position to exercise mutual and reciprocal influence based on one of them enjoying power in one issue area, the other in another. A state may thus bargain (or threaten) to generate benefits for or impose costs on other states in different areas, depending on the other states’ treatment of its national companies’ FDI. Stopford and Strange (1991) proposed an analytical model to capture the bargaining that takes place between host country state, home country state and a TNC doing FDI – what they termed ‘trilateral diplomacy’. Such bargaining could involve security of property rights related to the TNC’s FDI. One effective bargaining chip is threatening to turn off foreign aid in case of FDI expropriation (Asiedu et al., 2009). In general, large firms carrying out FDI may benefit from diplomatic support from their home countries and be able to influence host-country politicians (Lambsdorff, 2003). However, if home countries are more likely to use reprisals, like annulment of treaties, economic sanctions or withdrawal of foreign aid, in the case of expropriation of its SOEs than of its POEs, the probability of expropriation of SOEs’ FDI would be lower than for POEs. The home state may be particularly tied to an SOE and thus be more willing to risk “political capital” in its defense. Moreover, if the home state is bailing out SOEs in the way the model above describes, the home state has financial incentives to build a reputation as a retaliatory agent, in order to avoid expensive bailouts in the future. The state would therefore be more willing to take costs when punishing foreign countries that have expropriated FDI from SOEs than from POEs. If companies know this, SOEs will be more likely than POEs to invest in risky business environments. The hypothesis derived from the argument(s) above is therefore that POEs will

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15 They applied, however, the model mostly on the TNC-host country state relationship, assuming that the home state was retreating from playing a role in transnational economic affairs (Strange, 1996).

be more reluctant than SOEs to invest in countries with poor property rights protection and poor rule of law.

**Argument II) SOEs invest relatively less in dictatorships and countries with poor protection of labour rights**

Although it may be political sensitive to deal with countries that lack rule of law, dealing with dictatorships and countries that show little respect for human rights is probably even more politically sensitive in a Western democracy. This would imply that SOEs invest relatively less in dictatorships that violate human rights. If voters see themselves as the ultimate owners of SOEs, voters’ moral sensitivity may be particularly strong for SOEs; this may pressure politicians to regulate or otherwise affect SOEs’ foreign operation. This is illustrated by the reactions in Norway to dangerous working conditions, deaths and child labour in operations of Norwegian SOEs in developing countries (MFA, 2009). They led to extensive criticism of the SOEs, but also of the lack of knowledge and control from the state as an owner (e.g. Alm, 2008). State oil company Statoil has also been criticized for being involved in corruption practices in Iran and Libya (Hveem, 2009). Reputation effects could be stronger for SOEs also if buyers of their products expect SOEs to conform to a stricter norm of social responsibility, because of their affiliation with the state. Politicians governing SOEs may have normative motivations, and even self-interested politicians realize that operations of SOEs which the electorate disapproves of, could hurt them in the next election. Furthermore, Norwegian policy documents emphasize that the legitimacy of the Norwegian state as a legislator and in carrying out foreign policy may be compromised if the state does not have

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17 This argument is mainly relevant for SOEs from democratic countries. SOEs from e.g. China are entering countries like Burma and Sudan which at least Western companies avoid (UNCTAD, 2007).
18 Similar concerns have been voiced for Norwegian public procurement (MFA, 2009).
19 The Norwegian Minister of Development and Environment emphasized in a TV interview (NRK Dagsrevyen 11 November 2008) that any threat to the reputation of a Norwegian firm doing FDI is also a threat to the reputation of Norway at large.
high standards also in the area of ownership policy (MFA, 2009). This could lead the government to put extra pressure on SOEs to respect this type of standards in their operations. The above arguments thus yield our second hypothesis: SOEs are more reluctant than POEs to enter dictatorships and countries with poor human rights protection.

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We test our hypotheses on Norwegian data. Norwegian ownership policy distinguishes clearly between the state’s roles as policy maker, supervisory authority and manager of property. Beyond stipulating the company’s object and other articles of association and beyond participating in the nomination and election of governing bodies, the state must further its interest through the general (enterprise) assembly (MTI, 2006). Indeed, Norway has been cited as an example of successful governance of SOEs because of its separating management and regulation of SOEs (Radon and Thaler, 2009). Unlike many other OECD countries, Norway does not even have a state representative on SOE boards (OECD, 2005). Norwegian SOEs are mainly managed by “professional executives”. Statoil is mainly commercially oriented, differentiating it from state oil companies firms from many OPEC and emerging economies (Claes and Hveem, 2009). Earlier studies in Norway have also concluded that ownership is not widely used to achieve sector political goals (MGAR, 2003:23). The scope for formal direct political interference in Norwegian SOEs is therefore limited, at least compared to in many other countries. In a highly publicized case involving SOE manager compensation, there were public demands for the politicians to intervene. But even in this case, the state respected the “rules of the game” by addressing future manager compensation packages through changes in the Public Limited Liability Companies Act (Reiten, 2009; MTI, 2006). SOEs are expected to develop ethical guidelines in line with the UN Global Compact and the OECD Guidelines on Multinational Enterprises. It is also proposed that SOEs with substantial international activity consider using the Global Reporting Initiative (GRI) guidelines on reporting social and environmental issues (MTI, 2008). In Sweden, SOEs are required to implement the GRI guidelines.
Nevertheless, political pressures might affect investment decisions through more informal channels.²¹ Norway is also one of very few countries which have allowed an SOE to go bankrupt (OECD, 2005), indicating that the soft budget constraint argument could be less relevant for Norway than other countries.²² Thus, if our hypotheses find empirical support from Norwegian data, there is good reason to expect they will hold also in general, as soft budget constraints is the underlying premise for hypothesis I and political inference is the underlying premise for hypothesis II.

3 Data

The Norwegian FDI stock has grown tremendously since the early 1990s. Norwegian FDI stocks in 1980 and 1990 were only 0.4 percent and 9.0 percent respectively of the 2006 stock (UNCTAD, 2007). Norway’s share of the global FDI stock increased from 0.1 to 1.0 percent between 1980 and 2005. Norwegian FDI has historically been concentrated to OECD and in particular Western European countries (Hveem et al., 2009). However, recent years have seen investment surges in several Asian, Eastern European and African countries. Data on Norwegian FDI stocks in the period 1998 to 2006 is compiled by Statistics Norway through surveys.²³ Data is originally gathered annually for all company affiliates abroad, making it possible to separate SOE and POE FDI.²⁴ For each year, a firm is classified as SOE according

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²¹ For example, politicians might signal their preferences to SOE-managers through private contact or through the media. Former Norsk Hydro CEO, Eivind Reiten (2009), pointed out that such statements may sometimes mainly be directed at public opinion, and are not issued to change SOE behavior, although they may provide important signals that firms must take into account in the longer run.

²² Of course, Norway also has a larger population of SOEs which might go bankrupt than many other countries.

²³ For advantages of using FDI stocks rather than flows, see Hveem et al. (2009).

²⁴ We are thankful to Statistics Norway for granting us access to these data. In the original dataset, firms where the state or municipalities have majority ownership are identified. Besides this, our classification of SOEs is based on State ownership reports and other publications (MTI, 2002, 2003, 2004a, 2004b, 2005, 2006 and 2007; Hjellum (2002); Byrkjeland and Langeland, 2000).
to the alternative thresholds of $\geq 50$ percent (0.50-rule) or $\geq 33.3$ percent (0.33-rule).\textsuperscript{25} A holding of more than 50 percent ensures control of decisions that require simple majority at the general meeting, including approval of the annual accounts and decisions to distribute dividend. The election of members of the board of directors and corporate assembly also requires simple majority.\textsuperscript{26} A holding of more than one-third of the votes gives veto power over two-thirds majority-decisions; allowing the shareholder to block important decisions such as moving the head office, increasing the share capital or amending the articles of association.\textsuperscript{27} 

We aggregate POEs’ and SOEs’ FDI stocks by host country on an annual basis. FDI stocks are calculated only for investment objects where either the ownership share or the voting share (direct+indirect in both cases) is above 10 percent, in accordance with the OECD definition. As Table 1 shows, more than one-third of Norwegian FDI in 2006 was carried out by SOEs when applying the 0.50-rule. If we apply the 0.33-rule, the SOE share of total FDI stock was almost 60 percent in 2006.

\textbf{***TABLE 1 HERE***}

SOEs (0.50 rule) accounted for more than 90 percent of the Norwegian FDI stock in several countries in 2006, particularly in developing and transition economies like Algeria, Angola, Azerbaijan, Bangladesh, Pakistan, Nepal, Serbia, Ukraine and Venezuela. In contrast, many OECD countries received relatively little FDI from Norwegian SOEs. SOEs stood for less than 5 percent of Norwegian FDI in Finland, Italy, Spain and Canada in 2006, and in France,

\textsuperscript{25} Some firms crossed these thresholds in our period. Most notably, in 1999 Norsk Hydro went from majority to minority state ownership. Ammunition producer Nammo went from minority to majority state ownership in 2005.

\textsuperscript{26} If a corporate assembly has been established, however, it is this body that elects the board of directors.

\textsuperscript{27} Reiten (2009) claimed that in listed companies (with otherwise dispersed ownership), a share of one-third is sufficient to ensure control of most decisions of importance.
there was no registered Norwegian SOE FDI. These examples might indicate that SOEs invest relatively more in poor countries where rule of law is less developed, than do POEs. This will be tested more stringently below.

Institutional variables

For testing hypothesis I), we use the rule of law index (RLI) from the World Governance Indicators (WGI). RLI is constructed on the basis of several indicators, many of which relate to protection of private property (Kaufmann et al. 2007: 74). This variable is therefore interpreted as a proxy for both rule of law and private property rights protection. For testing hypothesis II), we use the Freedom House Index (FHI), which is an average of Freedom House’s political rights and civil liberties indexes. The FHI captures not only whether a country holds elections, but also the protection of basic civil liberties and political rights. The FHI is thus an indicator of a relatively broad democracy concept (Knutsen, 2009), which makes it well suited to testing our second hypothesis that rested on reputation mechanisms related to violations of political and civil rights and liberties (including labour rights).  

Control variables

As controls, we include the standard gravity variables GDP, geographical distance from Norway, as well as energy production measured in kilotons of oil equivalents. GDP is a measure of host country market size. A large market is likely to attract FDI by allowing for economies of scale in production and distribution. Geographical distance is a measure of costs

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28 We also tested hypothesis II) by first using a narrower democracy operationalization, the Polity-index (Marshall and Jaggers, 2002: 12-15), and then by using a measure related more specifically to protection of labour rights, namely the log of International Labour Organization (ILO) conventions signed (despite many problems with the latter measure as discussed by Block, 2007). There were no systematic changes to the results, which basically are that there is no evidence for hypothesis II), when using these two measures instead of FHI. The Tobit-regressions using Polity and the 0.33-rule showed some support for hypothesis II), but we do not think this is sufficient for arguing that this hypothesis is even partially corroborated.
associated with serving a foreign market through trade and also influences the costs of trade within a TNC; FDI may thus be either a complement and substitute to trade in different circumstances (Navaretti and Venables, 2004). Energy production is a proxy for energy resources, and is included in order to account for the importance of oil-related FDI, especially for Norwegian SOEs. Finally, real GDP per capita (measured in 2000-dollars), investment/GDP ratios, tertiary school enrolment rates, and EU15/EEA and Nordic dummies are also entered as controls in some specifications. Data for GDP, energy production, GDP per capita, investment and school enrolment are from the World Development Indicators (WDI).

We face several data problems. First, many independent variables have data only for a limited number of country-years. RLI is especially problematic, as it lacks data for 1999 and 2001. Second, Statistics Norway codes missing FDI data from affiliates as if there were no FDI in these affiliates, which likely results in underreporting of FDI. Third, parts of the FDI registered in specific host countries may in fact be destined for other countries. To check that our results are not driven by this fact, we re-estimate the models excluding suspected *transhipment countries*, such as Belgium and Singapore. The results presented below were however not sensitive to these exclusions.

4 Statistical analysis

4.1 OLS with Panel Corrected Standard Errors (PCSE)

We first use OLS with PCSE, investigating the determinants of FDI stock allocation for POEs and SOEs separately.\(^\text{29}\) The dependent variable, FDI stock, is entered in logs, as are GDP, energy production, geographical distance and GDP per capita. Investment ratio, tertiary

\(^{29}\) See Beck and Katz (1995). The method allows us to utilize both cross-national and inter-temporal variation, and takes into account heterogeneous standard errors across panels, as well as autocorrelation (AR1) within panels.
school enrolment ratio and the dummy variables are entered linearly. RLI and FHI are also entered linearly, since taking the logarithm of these indexes is problematic (Hveem et al., 2009). At first, we enter the FHI and RLI separately in different models. Tables 2 and 3 show the results for models applying the 0.33- and 0.50-rules respectively. Note that a lower value on the FHI implies more democratic.

**TABLES 2 and 3 HERE**

Independent of classification rule, RLI is never a statistically significant determinant of SOEs’ FDI, even at the 10%-level. The picture is quite different when it comes to POEs’ FDI. Independent of classification rule, the effect from the RLI is positive and significant at the 1%-level. The estimate from the 0.33-rule model indicates that the effect of going from the lowest RLI-score in 2006 (Somalia) to the highest (Iceland and Norway) is a 14 percent increase in Norwegian POE FDI stock, when holding other variables constant. These findings back up the hypothesis deduced from argument I: SOEs do not seem too concerned about investing their capital in countries where rule of law and property rights are weakly protected. POEs, however, tend to shy away from such countries.

From argument II), we expected SOEs to be more reluctant than POEs to invest in dictatorships with bad human rights records. When it comes to SOE FDI, the FHI is significant at the 1%-level. However, also POEs invest more in relatively democratic countries: FHI is significant at least at the 5%-level for both classification rules. The estimated effects of going from most dictatorial to most democratic on the FHI is a 5%

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30 Most studies of FDI use a log-log formulation for these variables, due to the skewed nature of the data. The transformation $y = \ln(x+\sqrt{x^2+1})$ from Busse and Hefeker (2007:404) allows us to retain also zero and negative observations. We also tested linear specifications (available on request). Though we do not emphasize these results, it is worth noting that all linear models supported hypothesis I.

31 See Hveem et al. (2009) for discussions on benefits and drawbacks with entering institutional variables separately versus jointly when investigating determinants of FDI allocation.

32 In all tables, * indicates $p<0.10$, ** indicates $p<0.05$ and *** indicates $p<0.01$. 
increase in Norwegian SOE FDI stock and a 4% increase in Norwegian POE FDI stock, according to the 0.33-rule models.

Our results might however be driven by factors other than ownership as such. Our first robustness check excludes FDI from the petroleum sector.\textsuperscript{33} This sector constitutes one third of Norwegian FDI (stock), and Norwegian SOEs are especially heavily involved in petroleum activities. The lacking relation between rule of law and SOE FDI above might be due to several countries with large oil and gas resources having weak rule of law, even if we control for an energy proxy.\textsuperscript{34} The 0.50-rule model does indeed find a positive significant effect (1%-level), from RLI on SOE FDI. However, the 0.33-rule model indicates that SOEs’ FDI is unaffected by RLI. SOEs do however invest more in democracies (significant at 1%-level). POE FDI, however, is positively affected both by rule of law (significant at 1%-level) and democracy (at least 5%-level), independent of classification rule. Our second robustness check considers that quality of institutions might have different effects when choosing between developing country hosts than between developed country hosts. Excluding the “old” OECD countries of Western Europe, North America, Japan, Australia and New Zealand from the sample, there is still a positive effect, significant at the 1%-level, from RLI on POE FDI when using both classification rules. The sign of RLI is actually negative (though insignificant at the 10% level) for SOE FDI when using the 0.33 rule. The evidence is somewhat mixed however, as the 0.50-rule model shows a positive effect, significant at the

\textsuperscript{33} Some government funds, such as Norfund, have an explicit purpose of investing in developing countries (MFA, 2009). However, these funds provide loans both to POEs and SOEs. Also, the share of total SOE FDI by Norfund subsidiaries was only 0.1 per cent in 2003 and still only 0.6 per cent in 2006.

\textsuperscript{34} Oil-and gas-related investments are defined as those classified in the 2002 Standard Industrial Classification as either: 11 Extraction of crude petroleum and natural gas, service activities incidental to oil and gas extraction excluding surveying; and 74.203 Geological surveying, which includes exploration of oil and gas fields. Other categories were also considered, but did not contain observations. However, we are unable to incorporate a range of supplier operations associated with these activities, where several Norwegian firms are important (UNCTAD, 2007). This means that our measure likely underestimates oil-and petroleum-related Norwegian FDI.
5%-level. Nevertheless, also for the sample of non-OECD countries, there are indications that POEs are more reluctant to invest in countries with poor rule of law than SOEs. Both POEs and SOEs invest significantly more in democratic than in dictatorial non-OECD countries.

Summing up the OLS with PCSE analysis, we find strong and robust support for hypothesis I) when applying the 0.33 rule, while the results are somewhat less robust when using the 0.50 rule. In contrast, there is no support for hypothesis II), as both SOEs and POEs invest more in democratic countries.

4.2 Random Effects Tobit analysis

Our hypotheses yield predictions on the relative propensity of SOEs and POEs to invest in different institutional contexts. An alternative approach is thus to calculate the ratio of SOE FDI to total FDI (SOESHARE), and investigate whether the institutional variables affect SOESHARE. In other words: Is the relative proportion of Norwegian FDI coming from SOEs for example higher in countries with weak rule of law, as we have hypothesized? SOESHARE is a continuous variable, and logit or probit analyses are therefore unfit. However, since ratios vary between 0 and 1, there are restrictions on the dependent variable, and OLS would yield biased results (Long, 1997). Moreover, we get some non-interpretable values, since SOE or POE FDI in some instances is negative because of substantial loans from affiliate to parent company. A suitable estimation method is therefore Random Effects Censored Tobit Regression (RET), which handles restricted, continuous dependent variables. We set the censoring values, quite naturally, to 0 and 1, and run RET to take into account the panel-nature of our data. As the dependent variable is now the share of SOE FDI to total FDI, we first only control for variables we strongly suspect affect this share, which is (log) energy

\[ \text{SOESHARE} = \text{intercept} + \beta_1 \text{logGDP} + \epsilon \]

In order to reduce the number of iterations needed for convergence, we run a first RET analysis with only log GDP as independent variable (500 iterations). We save the constant and slope coefficient, and use these as initial values in all models below. All models below are based on 2000 iterations.
production (because of large oil and gas SOEs). We also control for the standard gravity
variables (log) GDP and (log) distance.

***Table 4 Here***

The results (0.50-rule) shown in Table 4 indicate that the SOE share of Norwegian FDI
decreases when rule of law in a country improves.\(^{36}\) This result, significant at the 5% level,
corroborates our theoretical argument that SOEs are less sensitive to risky business climates.
There is however no significant effect from FHI on SOESHARE, and thus no reason to
conclude that hypothesis II) is correct. The results do not change substantially when entering
the other control variables, also in conjunction. There is however one exception: When
including GDP per capita, the negative effect from RLI becomes insignificant, and the GDP
per capita variable is significantly negative. One interpretation is that SOEs invest relatively
more in countries with low wages rather than in countries with poor rule of law. The results
above might therefore be attributable to omitted variable bias. However, another likely
interpretation is that the models in Table 4 yield the correct conclusions, but that the models
including GDP per capita give wrong estimates due to multi-colinearity problems (the
bivariate correlation between the RLI and GDP per capita is 0.86).

We test the same models using the 0.33 rule. The results are shown in Table 5. These models
yield basically the same results for the institutional variables. The RLI is now significantly
negative at the 1%-level. However, the results differ a bit for the control variables, such as
GDP.

***TABLE 5 HERE***

\(^{36}\) Although the interpretation of sign and significance of coefficients are straightforward in Tobit models,
interpreting coefficient-size is a bit more involved (see e.g. Greene, 2003: 764-8). Because of this, and because
our hypotheses concern the signs, and not sizes, of effects, we discuss only sign and significance below.
The results could be biased because of the prevalence of oil investments from SOEs. We exclude oil and gas FDI and calculate a new SOESHARE. However, the results remain robust. The RLI’s p-value is below 0.02 when using the 0.50 rule. Poorly functioning rule of law and property rights protection increase the share of Norwegian FDI coming from SOEs, even when we exclude oil and gas FDI. The FHI is insignificant at the 10%-level. When we use the 0.33 rule, FHI is still insignificant. RLI is still negative and statistically significant, but only at the 10%-level, with a p-value of 0.08. We also excluded all the old OECD-countries in a restricted sample. No models, independent of classification rule, yielded anywhere near significant results for FHI. The RLI is still negative and significant at the 1%-level when using the 0.33 rule. However, the t-value is only -1.3 when using the 0.50 rule.

A model incorporating both RLI and FHI might lead to difficulties with finding significant effects, because of high multi-colinearity. Nevertheless, omitted variable bias might be driving the results above. We tested RET models with RLI and FHI entered simultaneously. Even when controlling for FHI, using the 0.33-rule, there is a negative and significant effect (5%-level) from RLI on SOESHARE. The 0.50-rule model, however, yielded a p-value for RLI of 0.12. Nevertheless, taken together these results yield relatively strong support for hypothesis I). There was no significant effect from FHI in these models either.

*  

Summing up, we found no empirical evidence for the hypothesis that SOEs’ and POEs’ FDI allocation are differently affected by democracy and human rights protection in host countries. However, our results suggest that SOEs are not as easily deterred by poor business climates as are POEs. SOEs’ FDI decisions are less sensitive than POEs’ FDI decisions to poor rule of law. Some OLS with PCSE analysis actually also indicated that rule of law had no significant effect on SOE FDI allocation altogether, which is quite remarkable.
5 Conclusion

Earlier papers investigating political institutions’ effects on FDI allocation have mostly used aggregated national data. In this paper, we argue that there might be important interaction effects between firms’ ownership structure and political institutions on FDI allocation. We presented two theoretical arguments on the interaction between state ownership and various host country institutions. First, we argued that SOEs were not as reluctant to invest in countries with poor rule of law and poor property rights protection as POEs. One reason is that SOEs can expect to be “reimbursed” by the home state in case of expropriation or other bad luck in unstable environments. Therefore, SOEs have the same upside in risky environments as POEs, but the downside is considerably smaller. Another reason is that the home state by bargaining, threatening or otherwise interacting with the host state might reduce the risk of expropriation from its SOEs or negotiate for otherwise favorable conditions for SOE FDI. The second argument indicated that SOEs might invest relatively more than POEs in democratic countries that protect human rights. One reason is that politicians might exert pressure on SOEs not to invest in countries the electorate dislikes. Large-scale SOE investment in autocratic regimes for example might be politically sensitive, and hurt the governing party in the next election. Moreover, SOEs might be extra sensitive to so-called reputation effects, if they are held to higher standards than POEs by consumers.

Using data from Norway, we find strong and relatively robust support for our first hypothesis that SOEs are less reluctant than POEs to invest in countries with poor rule of law and poor property rights protection. SOEs tend to invest relatively more of their FDI in risky environments. We urge researchers to conduct similar studies on data from other countries than Norway, to see if the results hold. We find no particular support for our second hypothesis that SOEs are more inclined than POEs to invest in democracies.
Literature


Table 1: SOE share of Norwegian FDI stock

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<td>0.44</td>
<td>0.23</td>
<td>0.31</td>
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<td>0.23</td>
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<td>0.33 rule</td>
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<td>0.42</td>
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<tr>
<td>Total FDI in billion NOK</td>
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<td>345.1</td>
<td>415.9</td>
<td>508.1</td>
<td>507.3</td>
<td>553.8</td>
<td>549.7</td>
<td>665.3</td>
<td>781.2</td>
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Table 2: Models using 0.33 rule

<table>
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<tr>
<th>Variable\Model</th>
<th>POEI b/(t)</th>
<th>POEII b/(t)</th>
<th>SOEI b/(t)</th>
<th>SOEII b/(t)</th>
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<td>-0.84***</td>
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<td>-0.84***</td>
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<td>(-3.03)</td>
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<td>0.53**</td>
<td>0.55*</td>
<td>0.93***</td>
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<td>(2.61)</td>
<td>(2.23)</td>
<td>(1.89)</td>
<td>(2.98)</td>
</tr>
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<td>1.16***</td>
<td>0.80*</td>
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<td>(3.60)</td>
<td>(3.67)</td>
<td>(1.81)</td>
<td>(0.99)</td>
</tr>
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<td>(0.72)</td>
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Table 3: Models using 0.50 rule

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<th>POEII b/(t)</th>
<th>SOEI b/(t)</th>
<th>SOEII b/(t)</th>
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<td>(2.46)</td>
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Table 4. T-values, 0.50 rule (SOESHARE dependent variable)

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Table 5. T-values, 0.33 rule (State FDI/Total FDI dependent variable)

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