Analysis

The curse of the haven: The impact of multinational enterprise on environmental regulation

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Abstract

We analyze the behavior of multinational enterprises in the context of resource rich and poor countries and regarding high and low income countries. We depart from the pollution haven hypothesis and the resource curse. The pollution haven hypothesis states that multinational enterprises move their dirty operations to countries with weak environmental regulation. The resource curse holds that economic growth in countries abundant in natural resources is reduced. We find that more polluting firms are relatively more often located in countries with weak environmental regulation. However, multinational enterprises do not have a significant impact on environmental regulation in the host country. It appears that it is mainly the quality of institutions that drives both the pollution haven and the resource curse.

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1. Introduction

This paper investigates the strategies and responses of multinational enterprises in the institutional context of resource rich and resource poor countries. We especially focus on multinational enterprises’ interaction with environmental regulation of the host countries in relation to their location behavior. We use the link between the pollution haven hypothesis and the resource curse to assess to which extent multinational enterprise presence influences environmental regulation.

The Pollution Haven Hypothesis (PHH) states that as a result of increased regulation, multinationals shift their production to countries with poor environmental and social standards (for example Antweiler et al., 2001; Cole and Elliott, 2003; Ederington et al., 2005; Eskeland and Harrison, 2002; He, 2006; Ross et al., 2011). The recent literature on the PHH emphasizes that there are possible endogeneity problems of the observed PHH-type behavior (see e.g. Baek et al., 2009; Cole et al., 2006; Leiter et al., 2011). Especially, the growing presence of large international firms may have an impact on government regulation. As such, it could be that dirty firms are not migrating to countries with weak environmental regulations, but that clean firms may impact on regulation and domestic business standards (Costantini and Crespi, 2008). The observed correlation between dirty FDI and regulation then might lead to the wrong conclusion, namely that the correlation is evidence for the PHH.

According to the resource curse literature, countries that are abundant in natural resources experience levels of economic growth below their potential (Brunnschweiler, 2008; Bulte et al., 2005; Sachs and Warner, 2001). This literature observes a negative relationship between a sizeable resource sector and economic growth. A critical review of the resource curse literature is provided by Brunnschweiler and Bulte (2008). They argue that especially the empirical underpinning of this resource curse is weak. The crucial determinant for both these phenomena seems to be the quality of domestic institutions: Weak environmental regulations facilitate so-called pollution havens. Furthermore, rent-seeking governments do not manage and allocate the gains of their natural resources very efficiently. The failure to invest in a sound institutional structure of the economy can result in suboptimal economic growth and development (see, for example, Baland and Francois, 2000; Tornell and Lane, 1999; Torvik, 2002).

In summary, both the PHH and the resource curse can be understood by poor quality of institutions. However, the evidence in favor of the PHH suffers from possible endogeneity problems (see Leiter et al., 2011) and that of the resource curse from data problems. This raises the natural
question whether we can, in some clever way, combine these givens and extract information on the impact of MNEs on regulatory quality. If the PHH is purely driven by weak institutions, we may observe this phenomenon more often, and find stronger evidence, in resource rich countries. However, if PHH-behavior is observed because large multinational enterprises have an impact on local regulations, then we may not expect to see significant differences in environmentally-driven location choice behavior with respect to resource rich and resource poor countries. As to the resource curse, we will need to focus on resource abundance instead of resource dependence.

To solve this issue, we investigate the actual location behavior of multinational enterprises (MNEs) and check whether environmentally less responsible firms are relatively more often located in countries with weak environmental regulation. As such, we analyze the importance of the impact of international business on economic development and we assess how the globalization of firms interacts with economic and institutional development (see also Baek et al., 2009). Especially, as we look into location behavior of MNEs in connection with the availability of natural resources and the quality of environmental regulation. This is a very relevant and important issue in less developed countries (see also Dunning and Narula, 2004; Sethi et al., 2002). To investigate the role of the natural resource curse, we compare the pollution haven effect between subsets of resource rich and resource poor countries. We proxy the notion of “poor institutional quality” by identifying resource rich countries, and use this as an instrumental variable. If poor institutional quality is the driving force behind both the PHH and the resource curse, we expect to observe pollution haven behavior more often in resource rich countries. If, however, regulation is affected by the presence of MNEs we do not expect to find this significant interaction effect in their location pattern.

Research on the determinants of FDI patterns and MNEs’ impact on parent and host countries is in its developing stage. Blonigen (2005) argues that the literature shows that it cannot simply be concluded that factors such as exchange rates or tax policies have a clear and unambiguous general impact on FDI patterns and management decisions. Blonigen (2005) also points at the potentially valuable role of institutions as a determinant of FDI, particularly for less-developed economies. Location studies usually estimate (conditional) choice models of location decisions. The econometric specification mostly is a (nested) logit model of the binary choices to be present in a specific country. However, these are partial equilibrium approaches and the literature acknowledges that there is of course a dynamic interplay between regulation and MNEs’ internalization policies. A well-known example of such interplay is the massive divestment from South-Africa in the 1980s. The pressure to operate socially responsible led to an economic boycott and withdrawal from South-Africa because of the apartheid regime. Consequently the divestment did have an impact on South-Africa’s regulations in the sense that the political regime was bound to fall as economic development was compromised.

The empirical evidence for the PHH is at best mixed (Grether et al., 2009). Most studies rely on two main datasets: the Pollution Abatement and Control Expenditures (PACE) survey, which measures the “dirtiness” of an industry and data on Foreign Direct Investment flows (for a more detailed discussion see Letchumanan and Kodama, 2000). Also, as data on regulation is often lacking, proxies for environmental regulation such as corruption indices have been used to test the PHH (Smarzynska Javorcik and Wei, 2004). This complicates the interpretation of such findings. Moreover, there are also arguments against the PHH, stating that due to an increase in “global eco-consciousness”, multinationals are induced to innovate in cleaner production instead of migrating towards countries with poor environmental standards (Costantini and Crespi, 2008; Letchumanan and Kodama, 2000). Therefore, we will use an alternative dataset on “dirtiness”. More specifically, we will want to investigate corporate social responsibility (CSR). CSR is about the impact of firm performance on people and planet while taking care that profits are such that the corporation sustains (Heal, 2005). There are several definitions of CSR and there are several ways to measure it (see Wood, 2010). The definitions of CSR share the belief that companies have a responsibility for the common good and that CSR actions basically are voluntary, that is, they go beyond what is legally required. The definitions emphasize different elements. At the firm level, Harjoto and Jo (2011) suggest four motives as to why firms might engage with CSR. First is that management wants to build their reputation as a good global citizen. Second, they suggest it can be a strategic choice by CEOs to generate support from stakeholders in order to reduce the probability of CEO turnover in a future period. Third is that via CSR the firm can signal its quality. Fourth is that firms use CSR to reduce conflicts of interest between managers and stakeholders. In recent years CSR has become increasingly important (See e.g. Beltratti, 2005; Heal, 2005; Kolk and van Tulder, 2010). Therefore, the interplay between domestic regulations and corporate location policy can also be expected to play a more prominent role (Baek et al., 2009).

To sum up, we investigate the strategies and responses of multinational enterprises vis-à-vis the institutional context of resource rich and poor countries and of high and low income countries. We concentrate on multinational enterprises’ locational behavior in connection with environmental regulation of their host countries. We use the pollution haven and the resource curse literature as our frame of reference. We use data from the World Business Environment Survey about the quality of environmental regulation and the Kaufmann et al. (2005) dataset about institutional quality. We have firm-level data about environmental policy and key financial characteristics. Then, for 540 multinational enterprises with 44,149 subsidiaries in 188 countries, we investigate location behavior. We estimate a binary location choice model and explicitly test for interaction effects. We find that more polluting firms are relatively more often located in countries with weak environmental regulations. However, multinational enterprises do not appear to have a significant impact on this regulation.

Our research is original in several respects. First, as far as we are aware of, we are the first to combine the pollution haven hypothesis with the resource curse. Second is that we rely on data that have hitherto not been used to investigate either of the two phenomena, namely environmental performance scores from the Ethical Investment Research Service, international location of firms from AMADEUS, and the World Business Environment Survey from the World Bank for countries’ environmental regulation standard. Third is that we use data on resource abundance, not dependence, as suggested by Brunnenschweiler and Bulte (2008). We use this in a well-established econometric approach to arrive at our conclusion that the less environmentally responsible firms are relatively more often located in countries with weak environmental regulation and that multinationals do not seem to have a significant impact on environmental regulation in the host country.

The structure of the remainder of this paper is as follows. We first introduce our data and explain the methods we employ to analyze the problem. Then we present the results and discuss our findings. Section 4 holds the conclusion.

2. Data and methodology

We first selected companies that are in the Dow Jones Stoxx 600 selection list in 2004, a list of the largest publicly quoted European companies. We disregard financials such as banks and insurance companies in our analysis and are left with 540 multinational enterprises. Appendix B gives an overview of the number of multinational enterprises, classified by the country in which the company is based and by the industry the company is in. Overall, it appears that most MNEs are based in the UK and a ranking of the number of MNEs in each country is in accordance with what one would expect on the basis of population sizes of the countries.
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