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Country risk, country size, and tax competition for foreign direct investment

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ABSTRACT

This paper analyzes tax competition for foreign direct investment with country risk using a two-country model with different market sizes. We show that the trade-off between country size as a locational advantage and country risk as a locational disadvantage affects the location choice of a foreign firm. Given the circumstance in which the foreign firm faces the same probabilities of country risk in both potential host countries when deciding investment location, our analysis shows that if the market size of the high-risk country is sufficiently large relative to the low-risk country, the foreign firm benefits from choosing the high-risk larger country even if the host country's government imposes a lump-sum tax. Given the situation in which the foreign firm faces different probabilities of country risk in each host country, our results show that the important matter for the foreign firm is whether the host country is high-cost or low-cost, rather than whether the host country is high-risk.

1. Introduction

Globalization and economic integration have led to the increase of international economic activity such as foreign direct investment (FDI), which has in turn increased interest in theoretical analysis of tax competition for FDI. Reflecting this situation, a large number of papers have studied tax competition for FDI.[1] In a pioneering contribution to this field, Haufler and Wooton (1999) (as well as Haufler, 2001) developed a tax competition model for FDI. Their study employed a simple two-country model in which there were no domestic incumbent firms, using two potential host countries with asymmetric market sizes competing with each other to attract a foreign-owned monopolist. This study concluded that the foreign monopolist prefers to be located in a host country with a larger market, even if the government of that country imposes a positive tax rate when the market size is significantly large.

Several studies have attempted to elaborate on the model of Haufler and Wooton (1999).[2] For example, Fumagalli (2003) examined tax competition for FDI between two regions that differ in firm technology levels under the assumption that the regions had the same market sizes. Bjorvatn and Eckel (2006) analyzed tax competition for FDI between asymmetric countries by loosening the market structure of Haufler and Wooton's framework, and showed that differences in the market structure influence both the welfare implications of tax competition and the location choice of the foreign firm. They also showed that policy competition increases the attractiveness of a small country as an investment location. Haufler and Wooton (2006) analyzed unilateral and coordinated tax policy in a union of two regions which competes with a potential host region. Hao and Lahiri (2009) investigated passive and active governments in host countries in the location choice of the foreign firm by considering production

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[1] For a review of theoretical models of FDI, see Faeth (2009). See Dembour (2008) for a review of tax competition for FDI.

[2] See also Barros and Cabral (2000). They investigated subsidy competition for FDI from the aspect of employment.

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efficiency among the domestic and foreign firms. Mittermaier (2009) studied the role of firm ownership in tax competition for FDI under asymmetric market sizes in host countries and showed that in policy competition, the location choice of the foreign firm is affected by ownership conditions of incumbent firms in host countries.

None of the studies listed above were concerned with the country risk that foreign firms face when investing in host countries; these studies focused on country size differentials, the numbers of domestic firms, production cost differentials, the role of firm ownership, unemployment, the coordination of tax policy, and so on. However, in the real world, a great deal of risk accompanies FDI.[3] Indeed, any international investment project bears two types of risk: project-related risks and host country-related risks (Marjit, Broll, & Mallick, 1995).

Many empirical studies have investigated the relationship between FDI and country risk (e.g., Abadie & Gardeazabal, 2008; Asiedu, Jin, & Nandwa, 2009; Bevan & Estrin, 2004; Carstensen & Toubal, 2004; Fosfuri, 2004; Janicki & Wunnava, 2004; Mancuso, Dirienzo, & Das, 2010; Mody & Srinivasan, 1998; Wheeler & Mody, 1992; Yang, 2008), and some of them have shown a negative correlation between FDI and country risk.[4] In the literature on the theoretical analysis, several studies analyzed FDI by incorporating the concept of country risk into the model (e.g., Aizenman & Marion, 2004; Albuquerque, 2003; Broll & Zilcha, 1992; Marjit et al., 1995; Raff & Srinivasan, 1998; Schnitzer, 1999; Straub, 2008; Thomas & Worrall, 1994). These studies dealt with FDI and country risk, but did not examine competition between host countries (or regions). To our knowledge, there are no studies on tax competition for FDI that include country risk. That is, the existing works might have neglected to take into account country risk in analyzing tax competition for FDI. Therefore, by investigating tax competition for FDI with country risk from the point of view of the theoretical analysis, we might be able to provide additional insight into the literature in this field.

In this paper, we develop a simple tax competition model for FDI with country risk by using the two-country model in which there exists a high-risk country and a low-risk country. Our study analyzes how with the existence of country risk, tax competition by host countries' governments influences the location choice of the foreign monopolist (or foreign firm) who is a potential new entrant into the foreign market, focusing on market size and transportation costs. We consider two situations: first, we investigate a situation in which the probabilities that the foreign firm faces country risk are the same in both potential host countries when choosing an investment location. Second, we examine the situation in which the probabilities that the foreign firm faces country risk are not the same in both host countries. The difference between these situations is affected by whether the two countries are geographically close, or whether the various spatial factors of the host countries are similar.[5] In addition, the probabilities that the foreign firm faces country risk affect whether the host country is high-cost or low-cost.

We show that under the case that the foreign firm faces the same probabilities of country risk, if the market size of the high-risk country is sufficiently large relative to the low-risk country, the foreign firm benefits from settling within the high-risk larger country, in which the host country's government charges a lump-sum tax to the foreign firm. The foreign firm prefers to locate within the low-risk small country when the market sizes of the two host countries are approximately the same, and the foreign firm chooses to invest in the low-risk country if the unit trade cost is low. Under the case that the probabilities of country risk are different, we show that the foreign firm prefers to invest in the low-cost country if the trade cost is relatively small, while the foreign firm prefers to invest in the country with a large market if the trade cost is relatively large, even if the investment location is a more costly country. These results imply that the trade-off (the large market size of the country as a locational advantage versus country risk as a locational disadvantage), affects the location choice of a foreign firm wanting to invest in one of the potential host countries. However, under a situation in which the probabilities of country risk are different, our analysis shows that what is important for the foreign firm is not country risk, but whether the host country is high-cost or low-cost.

Our study adopts the framework of Haufler and Wooton (1999) in the sense that the foreign monopolist attempts to invest in one of the host countries where domestic incumbent firms do not exist. As we believe that country risk affects the productivity of the foreign firm, our study is nearer to those of Fumagalli (2003) and Hao and Lahiri (2009), who investigated tax competition for FDI by considering the productivity of firms.[6] However, they did not examine tax competition for FDI from the point of view of country risk; therefore, the present paper has a different viewpoint from their works. Moreover, our study might relate to that of Raff and Srinivasan (1998), who analyzed tax incentives as a signal by the government of the host country by considering country risk. They provided theoretical analysis as well as empirical results, but did not deal with tax competition between potential host countries. In contrast, we provide a more simple tax competition model without the signaling game to investigate the foreign firm's location choice for FDI.

This paper is organized as follows. Section 2 introduces the basic model. Section 3 analyzes the situation in which the probabilities that the foreign firm faces country risk are the same in both potential host countries when deciding investment location. Section 4 studies the circumstance that the probabilities of country risk for the foreign firm are not the same in both host countries when choosing an investment location. Section 5 concludes the paper.

[3] According to the International Country Risk Guide (ICRG) published by the Political Risk Services (PRS) Group, country risk includes political risk, financial risk, and economic risk (http://www.prsgroup.com). In the present paper, following the study of Mody and Srinivasan (1998), we define that country risk by the composite measure of economic, political, and social uncertainty in the potential host country. The specific elements of country risk include corruption, geographical issues, internal and external conflict, terrorism, alteration of the economic situation, rapid changes in the exchange rate, unstable infrastructure, and natural disasters.

[4] In Görg et al. (2009), the interaction between corporate taxation and FDI was analyzed by considering the role of social expenditure.

[5] Spatial factors used include industrial structures, social infrastructures, political policies, national characteristics, natural environments, natural resources, and climate. For the spatial factors of FDI, see also Chakrabarti (2003) that investigated the spatial distribution of FDI.

[6] Zhong and Lahiri (2009) developed a theoretical model of international joint ventures (IJVs) by incorporating the productivity of the domestic firms and the foreign firm into the model, and analyzed tax competition for an IJV between two host countries. For theoretical contributions on IJVs, see, for example, Al-Saadon and Das (1996), Asiedu and Esfahani (2001), Lee (2004), and Müller and Schnitzer (2006).