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Tax competition — Greenfield investment versus mergers and acquisitions

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ABSTRACT

In this paper, we analyse tax competition in a model where investor firms have the choice between two types of investment, greenfield investment and mergers and acquisitions. We show that the coexistence of these two types of investment intensifies tax competition in comparison to the case where there is only greenfield investment. If a specific tax on acquisitions is available, this result changes. Then, tax competition is mitigated compared to the pure greenfield case. The existence of an acquisition tax may even lead to corporate overtaxation.

1. Introduction

The increasing mobility of capital across borders challenges national governments' ability to tax investment income. An increase in domestic taxes leads to an outflow of capital into other jurisdictions where it increases production and, thus, tax revenue. This positive fiscal externality implies that tax competition is likely to yield inefficiently low levels of public goods provision. A large theoretical and empirical literature, starting with Zodrow and Mieszkowski (1986) and Wilson (1986), has emerged which has significantly improved our understanding of this issue. An important characteristic of this literature is that it focuses almost entirely on greenfield investment. Building a new plant, however, is not the only way to realize an investment project. As an alternative, the investor may purchase an existing firm.

Empirically, mergers and acquisitions (M&A) play an important role. Fig. 1 displays the total volume of all M&A transactions worldwide and in Europe (left ordinate) over time. Mergers and acquisitions come in waves with a peak of more than three trillion U.S. dollars in 2000 and falling to only one trillion in 2002. The ordinate on the right depicts the fraction of national M&A, i.e. transactions where acquirer and vendor are within the same borders, and the sum of national and intraregional M&A. In contrast to the high volatility in volumes, these fractions stay virtually constant over time.

What is the difference between greenfield investment and M&A? Greenfield projects "*entail developing organizational structures, building factories and distribution systems, and hiring workers de novo*", (p. 23 in Estrin et al., 1997). In other words, the investor adds new resources to the country's stock of production facilities. Accordingly, in standard models of tax competition, investment is modelled as a redistribution of net savings across countries.[1] However, as recently pointed out by Desai and Hines (2004), M&A do not imply a relocation of corporate capital but rather a change in ownership and control rights. After an M&A transaction, "*[t]he new affiliate starts as a going concern, that normally possesses production facilities, sales force, and market share. The foreign investor attains control over these local assets, though they may not be structured to match the strategic needs of the investor, and the integration of the acquired firm may require considerable effort*" (p. 2 in Meyer and Estrin, 1999). As will be discussed later on in this section, firms considering a new investment project often have the choice between an acquisition of an existing firm or a greenfield investment. The above quote already gives an idea of the trade-off behind this choice. The advantage of greenfield investment is that all production facilities are built up from scratch and, thus, perfectly suit the investor's needs. This has to be weighed against the advantage of an acquisition, which is that the investor may benefit from already existing and well-functioning organizational structures, specific assets of the target firm, client networks, distribution systems etc.

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[1] Standard references are Musgrave (1969), Feldstein and Hartman (1979), Wilson (1986), Zodrow and Mieszkowski (1986), Bond and Samuelson (1989), Bucovetsky and Wilson (1991).

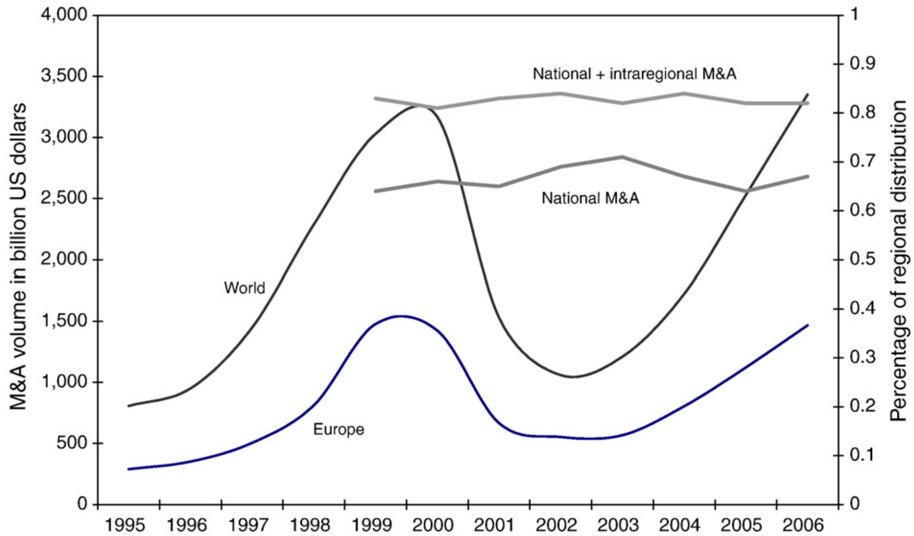

Fig. 1. M&A volume worldwide (data source: Thompson Financial).

It is the purpose of this paper to analyse the implications of this choice for the welfare effects of tax competition. We develop a simple theoretical framework which allows to explore how the coexistence of M&A and greenfield investment affects corporate tax competition. We assume that investor firms considering a new project firstly screen the market for existing firms which are suitable as acquisition targets. If they do not find an adequate existing firm, they build a new plant (greenfield investment). We thus consider a setting where greenfield and M&A investments are substitutes. In such a framework, taxes may distort both the decision on the overall number of projects and the choice to realize these projects as greenfield investments or on the basis of acquisitions.

How would we expect mergers and acquisitions to affect tax competition? Intuitively, one could argue that acquisitions are less tax sensitive than greenfield investment because taxes are likely to be capitalized in the purchase price of immobile assets.[2] This might suggest that the existence of M&A investment mitigates tax competition. However, our results do not confirm this presumption. To the contrary, in the baseline version of our model, we show that tax competition is intensified. The reason is that, due to the existence of M&A investment, greenfield investment becomes more tax sensitive. If a country increases its taxes, it does not only lose marginal greenfield investment projects, but intramarginal greenfield projects are replaced by acquisitions of existing firms. This reduces the number of 'new' projects in the country and, as a consequence, total tax revenue. Put differently, the introduction of M&A into the standard tax competition model generates a second fiscal externality which points in the same direction as the one known from the standard model. An interesting implication of this result is that high-tax countries are predicted to have more M&A projects than low-tax countries. But this is not to their advantage because, at the margin, greenfield projects generate more tax revenue than M&A projects.

Things are different, however, if one takes into account that tax policy may discriminate between M&A and greenfield projects by levying a specific tax on acquisitions. In this case, corporate tax competition is mitigated. The reason is that investors which respond to a corporate tax rate increase by switching from greenfield investment to an acquisition now pay an extra tax – the tax on acquisitions. This tax compensates the government for the revenue lost due to the decline in greenfield investment. We demonstrate that there may even be equilibria where corporate taxes become too high in the sense that a coordinated increase of corporate tax rates reduces welfare. Furthermore, there is a potential for welfare enhancing coordination of the tax treatment of acquisitions. This also sheds light on attempts by the European Union to coordinate the tax treatment of cross-border M&A, although our argument applies to purely domestic M&A as well.[3]

To the best of our knowledge, this is the first paper to analyse tax competition in a framework where investors may choose between greenfield investment and M&A. The choice between these two entry modes itself, though, has recently received much attention in economic research.[4] Given that this choice plays a key role in our model, it is useful to take a closer look at this literature. There is a number of theoretical papers which model the firm's choice between entering a market by greenfield investment or via an acquisition. Görg (2000) builds a model in which foreign entry of multinational firms is costly and changes the market structure of the host country. Depending on cost parameter constellations and competition characteristics, greenfield investment or M&A becomes the preferred mode of entry. Eicher and Kang (2005) add tariffs and transport costs and show that the optimal entry mode depends on the combination of country size and transport cost (see also Horn and Persson, 2001, and Norbäck and Persson, 2007). Müller (2007) endogenizes acquisition prices and equilibrium profits and shows that the degree of competition has a non-monotonic impact on the preferred mode of entry. Nocke and Yeaple (2007) introduce firm heterogeneity in the firms' endowment of mobile and immobile intangible goods. The authors show that, depending on the mobility degree of intangible goods, more profitable or less profitable firms have a higher propensity to enter a market via an acquisition. All these papers have in common that they search for firm specific or non-tax location specific characteristics in order to explain why firms opt for this or that mode of market entry. In contrast, our paper willingly abstracts from all these aspects in order to isolate the tax-related determinants of entry mode choice.

None of these theoretical contributions provides empirical evidence to support the predictions made. An exception is the study by Nocke and Yeaple (2008), which theoretically models and

[2] See the literature on property taxes and capital prices, e.g. Mieszkowski (1972) or Hamilton (1976) for a related argument.

[3] EC level coordination is mainly concerned about discrimination of border crossing relative to national transactions whereas our argument for coordination also applies to purely national transactions.

[4] In contrast, other approaches analyse the decision margin between exports and greenfield on the one hand, see e.g. Helpman et al. (2004), and exports and M&A on the other hand, see Neary (2007).