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Journal of Urban Economics 57 (2005) 258–274

JOURNAL OF Urban Economics

www.elsevier.com/locate/jue

Factor endowments and welfare levels in an asymmetric tax competition game

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Received 30 December 2003; revised 27 September 2004

Available online 13 December 2004

Abstract

This paper addresses capital tax competition among an arbitrary number of countries. Countries are asymmetric not only in their population endowment but also in their capital endowment per inhabitant. National governments tax capital and labor in order to finance a fixed public budget. Asymmetric capital taxation arises at equilibrium leading to a distortion on the international capital market. We fully characterize how equilibrium taxes and welfare levels depend upon countries' population and capital endowments. We compare it to the autarky situation and show that fiscal competition erodes some, but not all, of the gains from capital markets liberalization.

JEL classification: H23; H3; H73; F21

Keywords: Capital mobility; Tax competition; Asymmetric regions; Nash equilibrium

1. Introduction

The ongoing globalization movement allows a superior utilization of resources and a better allocation of risks among countries. However, national economies become more in-

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0094-1190/$ – see front matter
doi:10.1016/j.jue.2004.10.007

terdependent and fiscal policy affects trade, capital and labor flows. Governments have to take their trade partners' behavior into account when undertaking local redistributive policies or public good supply. A possible consequence of this phenomenon is a downward pressure on the size of the public sector. This concern has given rise to quite an extensive literature (cf. Cremer et al. [2] or Wilson [12] for surveys of the literature). Most of this literature has focused on the problem of public good underprovision. Factor mobility increases the marginal cost to tax, hence each country sets a suboptimal tax rate. In most of these models countries have identical endowments of capital per inhabitant and also identical technologies and, therefore, there is no efficiency reason to open the borders in the first place. Capital is equally productive in all the countries and the only effect of globalization is public good underprovision. We know however that one of the reasons invoked for capital movement liberalization is that it allows capital to fly from low to high productivity regions, thereby increasing world production. In this paper, we address the consequences of fiscal competition in such a context, i.e. one in which there is a good reason to let capital move freely across borders. The effect of fiscal competition is to distort productive efficiency.

We use a model with an arbitrary number of asymmetric countries where competitive firms produce an homogeneous good using mobile capital and immobile labor. National governments tax production factors in order to fund a fixed budget. The capital tax we consider here, as it concerns productive capital, is to be understood as *a corporate tax*.[1] As our aim is to focus on productive efficiency, we endow governments with a non-distorting way to finance the public budget, i.e., the labor tax. Productive efficiency seems to be the main concern of policy makers in the fiscal harmonization debate. As put by Devereux and Pearson ([5], p. 1658), "the concept of efficiency which is most often quoted in policy discussions relating to international taxation of capital income (...) is based on the notion of productive efficiency which holds if total output cannot be reallocated across projects in such a way as to reduce total costs." The underprovision of the public good, widely studied in the literature on fiscal competition, is absent from our framework. In this world of asymmetric capital endowments and identical technologies, once borders are open, capital flies from the countries where it is abundant to the ones where it is scarce. This arbitrage of capital productivities increases overall production. Two related questions arise in such a setting, and those are the object of this paper. On the one hand, we check whether each individual country is better off under autarky or at the fiscal competition equilibrium. We show that all countries benefit from globalization since they are better when capital is freely mobile than in autarky. Fiscal competition erodes some, but not all, of the gains from liberalization. On the other hand, we compare welfare levels among countries, both before and after opening borders. We show that while capital endowment is always a determinant of welfare level, population size only becomes an issue in a liberalized world. Moreover, we fully characterize the Nash equilibrium of the tax game, both in terms of tax levels and welfare.

[1] This view is shared by most of the literature; see, for instance, Person and Tabellini [10].