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Public goods, unemployment and policy coordination ☆

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Abstract

Earlier literature on tax competition and policy coordination typically assumes that the labor market is competitive; a description less suitable for Europe, where trade unions have had a strong position in the labor market for a long time. This paper concerns factor income taxation and public good provision in small open economies characterized by capital mobility and imperfect competition in the labor market. We assume that each national government collects public revenues via taxes on capital and profit income, and that the revenues are spent on a public consumption good and a public input good, where the latter enters the economic system in terms of an 'externality production factor'. We show that tax coordination contributes to higher welfare even if the labor market is noncompetitive. However, the relative overprovision of the public input good derived by Keen and Marchand [Keen, M., Marchand, M., 1997. Fiscal competition and the pattern of public spending. Journal of Public Economics 66, 33–53.] may no longer hold in the presence of unemployment.

JEL classification: H21; H41; J51
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1. Introduction

As productive capital is mobile across countries, it has been recognized that independent national governments have incentives to adjust their public policies in order to compete for mobile capital. Earlier literature dealing with fiscal competition and/or policy coordination (in order to internalize the associated externalities) has focused much attention on tax policy.[1] A major result is that tax competition leads to undertaxation of capital (at least if the economies are characterized by competitive markets) which may, in turn, give rise to underprovision of public goods relative to the first best.[2] However, much less attention has been paid to the related issue of how the tax revenues are spent, i.e. the mix of public expenditures. This is somewhat surprising, as empirical evidence suggests that the mix of public spending might be important for the size and growth of output.[3]

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[1] See e.g. Wilson (1986), Zodrow and Mieszkowski (1986) and Mintz and Tulkens (1986). See also Wilson (1999) for an overview.
[2] Bucovetsky and Wilson (1991) show that also labor taxes tend to be too low in an uncoordinated equilibrium.
[3] See e.g. the studies by Ratner (1983) and Aschauer (1989) dealing with the effect of 'public capital' on output. See also the later studies by Berndt and Hansson (1992), Seitz (1994) and Batina (1999), where the authors make a formal distinction between different types of public spending.

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An important exception is Keen and Marchand (1997), who make a distinction between a public consumption good, which enters the economic system via the utility function, and a public input good entering as an 'externality production factor'. In their study, the set of tax instruments contains linear taxes on labor and capital and a (nondistortionary) profit tax. If, as they assume, the nondistortionary tax instrument does not raise enough revenues (meaning that distortionary taxes must be used), the results show that the public input good will be inefficiently large relative to the public consumption good in an uncoordinated equilibrium, where each national government behaves as a Nash competitor. The intuition in terms of their model is that the public consumption good does not, itself, give rise to externalities, whereas the public input good strengthens the externality caused by the competition for mobile capital. Matsumoto (2000) incorporates labor mobility into the Keen–Marchand framework, in which case the public consumption good causes a transboundary externality. As a consequence, it is no longer clear *a priori* in which way the relative public spending is distorted. In the special case with factor-augmenting public inputs and a CES-production technology for the remaining factors, there is no relative distortion between public consumption and public inputs. A distinction between two types of public inputs is made by Matsumoto (2004). More specifically, he assumes one public input to be complementary with immobile labor and the other to be complementary with mobile capital. The result now depends on the elasticity of substitution between capital and labor: there is relative overprovision of the public input that is complementary with capital when the elasticity of substitution exceeds unity.

The literature discussed above is based on the assumption of competitive markets. In this paper, we relax the assumption that the labor market is competitive and assume, instead, that the wage rate is decided upon by bargaining between unions and firms, meaning that the equilibrium is characterized by involuntary unemployment. Given this description of the labor market, our paper deals with optimal taxation and public good provision in small open economies competing for mobile capital. To be able to address the mix of public expenditures, we follow Keen and Marchand in the sense of distinguishing between a public consumption good and a public input good, while the set of tax instruments contains a linear tax on capital and a nondistortionary profit tax. The overall purposes are to characterize the tax and expenditure policies, if decided upon at the national level, and analyze the welfare effects of policy coordination with respect to the capital tax and public expenditures, respectively.

There are several reasons for considering imperfect competition in the labor market in the context of optimal taxation and public goods. First, unions are important institutions, at least in a European context, suggesting that the introduction of imperfect competition in the labor market provides additional realism to the study of taxation, public goods and policy coordination. Considering that many countries have experienced high rates of unemployment for a long time, it is clearly relevant to extend the theory of fiscal competition accordingly. Second, by analyzing the mix of public goods more thoroughly in the context of fiscal competition, our study provides a complement to the literature developed so far on optimal taxation and public provision (of public and private goods) in economies with involuntary unemployment (see e.g. Marceau and Boadway, 1994; Fuest and Huber, 1997; Koskela and Schöb, 2002; Aronsson and Sjögren, 2004a; Aronsson et al., 2005).

Policy coordination under capital mobility and imperfect competition in the labor market has been addressed by Lejour and Verbon (1996) and Fuest and Huber (1999). Lejour and Verbon analyze social insurance financed by labor income taxation in a two-country economy. In their study, where a monopoly union characterizes the labor market, capital mobility leads to undertaxation in an uncoordinated equilibrium. As a consequence, a coordinated tax increase leads to higher welfare. Fuest and Huber consider fiscal competition and policy coordination in small open economies with right-to-manage wage formation. They assume that the set of tax instruments facing each national government consists of linear taxes on labor and capital and a 100% profit tax, while the expenditure side includes a public consumption good only. Their main contribution is then to show that coordinated labor and capital tax increases will not necessarily increase the welfare, if the labor market is characterized by union–firm wage bargaining[4] (coordinated increases in the labor and capital taxes would increase welfare in their model, if the labor market were competitive).

Our paper differs from the aforementioned studies in several ways. First, we pay more attention to the expenditure side by considering the mix of public goods; as such our paper is connected to the study by Keen and Marchand. Second, the distinction between two types of public goods also enables us to address the interesting issue of how the additional tax revenues, following a coordinated tax increase, are spent. The paper starts by a brief characterization of

[4] There are other possible reasons for policy coordination in open economies characterized by right-to-manage wage formation. For instance, firms might move abroad in case the bargain fails. This means that the wage formation system gives rise to an international externality (as the reservation profit is determined abroad and treated as exogenous in the context of domestic public policy) which, in turn, motivates policy coordination; see Aronsson and Sjögren (2004b).