E C O N O M I C S B U L L E T I N

Rawlsian governments and the race to the bottom

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Abstract

This paper argues that there is no race to the bottom when the social planner adopts a Rawlsian criterion, only the poor are mobile and they do not work at the optimal tax outcome. This argument is developed within a two skill−model of optimal income taxation.

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1 Introduction

The current debate on the desirability of economic integration has produced a seemingly simple and intuitive conclusion: unfettered integration triggers an unavoidable "race to the bottom" in environmental standards, labor laws and social protection. Increasing factor mobility frees corporations, investors and workers to scour the enlarged economic union for the country where they can earn the highest bene…ts and to move accordingly. Fearing losses of their tax bases, nation states have little choice but to loosen their regulations and to lower their taxes to avoid capital ‡ight and a brain drain and to lower the social bene…ts they o¤er in order not to welcome all the world's misery. As a consequence, the inevitable result is a Darwinian struggle for human and physical capital in which all other values including environmental quality and social justice are sacri…ced upon the altar of the inevitability of economic integration.[1]

Such a race-to-the-bottom hypothesis seems quite logical. However, up to now there appears to be little supporting evidence beyond anecdotes about the brain drain, increases in immigration by low-skilled workers, and …rms moving to tax havens. To explain this lack of evidence, there are two common explanations. First, one needs to remember the other side of the coin: taxation, payroll taxes, and environmental protection generate public services, social protection, and environmental quality, all of which are valued by many consumers and producers. Second, there might be time lags in factor responses. Reductions in restraints on factor mobility and trade are relatively recent and have probably not yet produced their full e¤ects. The purpose of this paper is to suggest another reason why the race-to-the-bottom hypothesis is not veri…ed. When governments have Rawlsian objectives, that is when they give full priority to the welfare of the needy, the race to the bottom may never get started in the …rst place.

We use a simple model to demonstrate this result. Consider an income tax whose proceeds …nance a ‡at-rate bene…t for low-income households. The government's objective is to maximize this bene…t which constitutes the only resources for the lowest income households. In autarky, the tax will simply be the one which lies at the top of the La¤er curve. Suppose now that there are two identical countries and that only low-income households can freely move between them. It is obvious that the level of bene…t which can attract

[1] Classic papers on this are Stigler (1957) and Wildasin (1994).

outsiders is just equal to the maximum revenue divided by the number of recipients and that, hence, there is no room for strategic behavior. As a consequence, in this particular example, mobility does not lower the level of bene…ts and there is no race-to-the-bottom.

We …rst develop this result in a simple model using a general tax structure which could be a simple linear income tax or a fully optimal nonlinear income tax. One message we wish to present is that the e¤ects of …scal externalities are not independent of the objective functions of governments in an economic union. Thus, the race to the bottom is not as inevitable as some hope or fear.

2 A simple model

We consider a two-country world. In each country i $(i = 1; 2)$; there is a population of n_i^s skilled individuals earning a wage rate w and working $\grave{}_i$ hours. Without loss of generality we normalize n_i^s so that $n_i^s = 1$. Their utility is:

$$u_i^s = u(c_i^s; \grave{}_i^s)$$

where $c_i^s = (1 \; ¡ \; ¿_i)w\grave{}_i^s + a_i$ is disposable income or consumption, and $¿_i$ and a_i are the parameters of the linear income tax. There are n_i^u unskilled individuals who do not work because their productivity is less than their disutility of labor. They each receive a bene…t a_i and obtain utility:

$$u_i^u = u(a_i; 0)$$

The revenue constraint is simply: $a_i = \dfrac{¿_i}{1 + n_i^u} w \grave{}_i^s$:

We …rst consider the autarkic case with no mobility by either type. The government has a Rawlsian social welfare function and thus wishes to maximize the utility of the unskilled (as long as $u_i^s > u_i^u$):

Since the unskilled do not work, the government simply maximizes the demogrant a_i …nanced by a revenue collected from the skilled population.

Under autarky, the government's problem is simply:

$$\underset{¿_i}{Max} \; a_i = \frac{R_i(¿_i)}{1 + n_i^u} = \frac{¿_i}{1 + n_i^u} w \grave{}_i^s:$$

where $R_i(\epsilon_i)$ stands for tax revenue from the skilled. Assume that $u = c - \frac{\ell^2}{2}$; then $\ell_i^s = w_i(1 - \epsilon_i) - \tau_i$ and $\frac{\partial \ell_i^s}{\partial \tau_i}\frac{\tau_i}{\ell_i^s} = 1$. With such a particular specification, the optimality condition is:

$$\begin{aligned}\frac{\partial a_i}{\partial \epsilon_i} &= \frac{\epsilon_i}{1+n_i^u}\ell_i^s w_i\left[1+\frac{\partial \ell_i^s}{\partial \tau_i}\frac{\tau_i}{\ell_i^s}\frac{\epsilon_i}{1-\epsilon_i}\right] \\ &= \frac{\epsilon_i}{1+n_i^u}\ell_i^s w_i\left[1-\frac{\epsilon_i}{1-\epsilon_i}\right] = 0\end{aligned}$$

Its solution $\epsilon_i^\alpha = 1/2$ corresponds to the peak of the Laffer curve[2]. In this particular case ϵ_i^α does not depend on n_i^u. With more general utility and tax function, this would not be the case.

We now allow for mobility. We assume that the skilled individual is immobile, while the unskilled can move between countries at zero cost. The unskilled relocate until they receive equal utility in both countries.

At the migration equilibrium, the income of the unskilled will be $a_1 = a_2 = \frac{R_1(\epsilon_1)+R_2(\epsilon_2)}{2+n_1^u+n_2^u}$: The objective function in each country is still to maximize the utility of the unskilled residents in the jurisdiction. Given that $n_1^u + n_2^u$ is a constant, the objective is to maximize tax revenue from the skilled. Hence, the tax parameter chosen in each jurisdiction will be the same as under autarky. Thus, we find that the taxes levied on the skilled population do not vary when the unskilled population becomes perfectly (or imperfectly mobile).

There is clearly no race to the bottom. We can indeed state that migration does not generate any race to the bottom when the amount of redistribution would not change if autarky were reinstaured at the migration equilibrium. When the two countries are different, migration implies equalization of utility for the unskilled and hence, some win and some loose. If at this equilibrium, each country was free to choose its redistribution policy without the migration threat, there would be no change.

A similar analysis would apply for the optimal nonlinear income tax (as in Stiglitz (1982)) with a simple modification. As shown in Hamilton and Pestieau (2002), the optimal nonlinear income tax with a Rawlsian social

[2]Note that there may not be a peak with a more general utility function. In the case of a quasi-linear specification, this happens only when labor is perfectly inelastic (see Gahvari (1989) for more details).

welfare function depends on the relative proportions of the skilled and unskilled. For many utility functions, the unskilled do not work if the proportion of skilled in the population exceeds a certain threshold. In such cases, the tax on the skilled equalizes the utility of the skilled and unskilled, and the utility of both types is decreasing in the fraction of unskilled. The migration equilibrium then equalizes the utilities of both skilled and unskilled across jurisdictions.For identical jurisdictions, the optimal nonlinear income tax under autarky is the same as with free mobility of the unskilled. For heterogeneous jurisdictions, migration of unskilled to the jurisdiction with a greater bene…t level under autarky raises the bene…t in the jurisdiction which was less generous under autarky.

What does change are the bene…ts received by the unskilled population in the two jurisdictions. Whatever di¤erences existed under autarky are eliminated by the mobility of the unskilled. The unskilled gain in the poorer country (measured by either the fraction unskilled, the productivity of the skilled, the e¢ciency of the tax system–or any combination of these factors) and lose in the richer jurisdiction. But there is no race to the bottom in terms of systematic di¤erences in redistributive taxation between autarky and complete openness.

Up to now we have assumed that the unskilled were mobile and did not work. If instead the skilled workers were the mobile ones, it is intuitive to see that they could have a strong incentive to conglomerate in the same location. Piaser (2002) shows that in that particular case there is a full race to the bottom: no redistribution. Similarly, if the unskilled were working then the social objective would not be to maximize the demogrant but the utility of the unskilled. Mobility would then matters.

3 Conclusion

While this analysis is quite simple, it serves to demonstrate several points that have not always been clear in academic and popular discussions of tax competition in open economies.

First, factor mobility creates …scal externalities, but one must be sure that these externalities are relevant to the equilibrium outcome. Mobility of the unskilled does not a¤ect the skilled because, under the Rawlsian criterion, the taxes levied on the skilled do not depend on the size of the unskilled population unless the constraint that $u_i^s \geq u_i^u$ binds.

Second, models in which both skilled and unskilled labor are mobile factors raise a number of technical issues, including the "empty-community problem". Many researchers consider the simpler cases where only the skilled or only the unskilled are mobile. Our result demonstrates that it may matter crucially which is the mobile type. It is not always the case that similar results hold in both cases.

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