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The underground economy and underdevelopment

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Abstract

A general equilibrium model is proposed which assumes that firms hire both official and unregistered labour as imperfect substitutes, and that the efficiency of official labour can be increased by heterogeneous ability of the entrepreneurs and by Marshallian non-linear externalities, i.e., externalities arise if firms are sufficiently numerous. Two stable equilibria are possible representing a developed and an underdeveloped economy. In the "good" equilibrium the number and the size of firms, the proportion of official employment, overall output and efficiency are greater than in the "bad" equilibrium. Different kinds of policy with which to reduce the underground economy and to enhance development are studied.

JEL classification: J21; O17

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1. Introduction

The "underground economy" is an awkward subject for both economists and policy makers. Economists find the phenomenon difficult to define and to measure, for it takes very different forms and the relevant information is deliberately concealed. Indeed,

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economists produce extremely diverse estimates of the underground economy in the same country and in the same period, depending on the definitions and the method that they use (Lippert and Walker, 1997).[1] Policy makers are discomfited by the fact that the underground economy is detrimental to tax revenues and, more generally, to social order, although on the other hand they acknowledge that it is able to generate employment and income: indeed, it has even been recognised that the underground economy may incubate the entrepreneurship and skills necessary for future development (Thomas, 1992).

The ‘‘underground economy’’ — defined as economic activities which are not registered, taxed or regulated but which produce for legal markets — has been mainly explained, on the basis of standard economic arguments, as engendered by excessive taxation and regulations (Cowell, 1990; Fenn and Veljanovski, 1988; Pyle, 1989). However, recent empirical findings for different sets of countries in the world show that this explanation is less straightforward than might appear. In particular, the share of tax revenues, or even nominal tax rates, exhibit ambiguous relationships with the proportion of underground economy in Gdp (see the survey by Schneider and Enste, 2000). By contrast, the stage of economic development, as measured by per-capita Gdp has been shown to stand in a robust and negative relationship with the underground proportion of Gdp, doing so according to not only systematic studies (Johnson et al., 1998, 1999; Friedman et al., 2000; Portes, 1994), but also to surveys of case studies (de Soto, 1989; Turnham et al., 1990; Lubell, 1991; Thomas, 1992).

The theoretical literature on the underground economy in a general equilibrium setting concentrates either on the problems raised by a segmented labour market — the wage gap and unemployment especially — or on the effects of taxation and regulations and the provision of public services in determining the proportion of the underground economy. Although abundant public services may favour the official sector and are typical of the developed economies, adequate attention has not yet been paid to the characterisation of the techniques adopted in the official and underground sectors, and in the developed economies with respect to the developing ones. The underground sector typically consists of small and inefficient firms, while the official sector comprises very large ones. Developed economies are typically endowed with large and extensive networks of firms, but the developing countries suffer from a lack of them. Moreover, as Bromley (1978) observes, official and unregistered activities are often closely interconnected, even in the same firm, whereas existing models assume the complete specialisation of firms in one or other of the two activities.[2]

This paper attempts to explain the negative relationship between the underground economy and economic development. Its argument is based on the importance of entrepreneurship for the running of mixed firms, i.e. ones which employ both official and unregistered labour, and on the possibility for official labour to upgrade its skills. Insofar as this upgrading is due to greater information flows among firms, the assumption of

[1] Tanzi (1999), in surveying the literature, observes that recent estimates, in percentages of GDP, ‘‘range from 1.4 to 47.1% for Canada, and from 6.2 to 19.4% for the US [. . .] In Germany [they range] from 14.5 to 31.4%’’.

[2] Levenson and Maloney (1998) is an exception in that it studies heterogeneous firms because of a different ‘‘degree of formality’’ but ignores any heterogeneity in jobs and employment.