Journal of Development Economics 90 (2009) 244–257

Contents lists available at ScienceDirect

Journal of Development Economics

journal homepage: www.elsevier.com/locate/econbase

Rent-seeking bureaucracies, inequality, and growth

Luca Spinesi

University of Macerata, Via Crescimbeni, 20 62100 Macerata (MC), Italy

ARTICLE INFO

Article history:
Received 11 January 2007
Received in revised form 24 September 2008
Accepted 27 September 2008

JEL classification:
D31
D82
H42
O30

Keywords:
Innovation
Inequality and growth
Asymmetric information
Rent-seeking bureaucracies

ABSTRACT

This paper develops a Schumpeterian growth model in which institutional quality matters for inequality and growth. In particular, asymmetric information between political authorities and rent-seeking bureaucratic agencies diverts resources from innovative activities – crucial for development to take off in middle and low income countries – and unnecessarily exacerbates income inequality. The theoretical predictions not only match empirical facts on inequality, institutional quality and growth well documented in the literature, but are easily assessed in two groups of Latin American and African countries, as shown in the final calibration analysis.

1. Introduction

The role of human capital accumulation and of technological catching up process for development to take off in both middle and low income countries is widely recognized. The Asian Development Bank (2007) ties theory to data finding that "the value of education in development depends on the scope for technology adoption." The empirical cases show the existence of a two-way causal relationship between education and growth, conditional on the availability of new and better technology. One particularly arresting and relevant example concerns the Green Revolution period in India. Foster and Rosenzweig (1996) observed that "…more-educated households turned to high-yielding crop varieties (HYVs) more rapidly; those states that adopted HYVs experienced faster agricultural growth…". In addition, Bils and Klenow (2000) calibrate a growth model to see if it can explain the education–growth linkage. They find that most of the causality from education to growth must be explained by the influence of education on technology. From a theoretical point of view, Galor (2000) shows that in a very early stage of economic development physical capital is a prime engine for growth, while in a subsequent stage of economic development human capital accumulation becomes a prime engine for growth. Acemoglu et al. (2006) underline the importance for middle and low income countries to improve the quality and the production process of their products to fill the gap between their technological stage with the technological frontier of developed economies, and to spur their growth performance. Zhu and Trefler (2005) utilize a cost-cutting process innovation to study the Southern technology catching up process. Therefore, human capital accumulation and technology adoption aimed to improve product quality and production processes are viewed as fundamental prerequisites allowing developing countries to take off with higher growth.

During the development process, the high weight the public sector has in both production activities and employment policies in middle and low income countries is also documented. Agénor et al. (2007) analyze the role of public sector in the Middle East and North Africa (MENA) regions. The authors find that in developing countries the public sector has a fundamental role in keeping people employed. In particular, in the MENA region the Governments are often considered as 'employers of first resort' especially for people with middle and higher education levels, and in most labor-exporting MENA countries, the public sector is the dominant employer in the formal sector, with an average employment of around 36% on average. Panizza and Qiang (2005) find that in Latin American region around 35% of total employment in the formal sector has a public sector job. The same authors find that the average ability of the skilled labor force employed in the public

E-mail address: luca.spinesi@unimc.it.

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doi:10.1016/j.jdeveco.2008.09.009

sector is higher than the average ability of skilled labor employed in the private formal sector.[1] Percentages such as these are considered high by international standards, and have led to substantial surplus labor throughout the public sector (see also Adams and Page, 2003). Esfahani (2000) shows that in the past two decades, the share of public enterprises in GDP has remained about 14% in low-income economies, while it has oscillated between 8% and 10% in middle income economies and declined from 9% to 7% in industrial economies. Similar trends emerge from a comparison of employment shares. Rama (2003) and Belser and Rama (2001) state that in some cases up to half of the workforce in state-owned enterprises needs to be considered redundant, if these enterprises are to be run as private firms.

According to these empirical analyses, this paper develops a Schumpeterian ladder quality model with endogenous human capital accumulation,[2] in which the role of an inefficient public sector is explicitly accounted for. Within this framework, this paper suggests a new theoretical channel going from institutional quality to inequality and growth, and it creates a bridge between two separate strands of empirical analyses that document the existence of both an inverse relationship between institutional quality and growth and an inverse relationship between inequality and growth.

The role of institutional quality and good governance as key elements for the development and growth effectiveness of both developing and developed countries has recently been emphasized by both theoretical and empirical analyses.[3] Moreover, several empirical works underline the importance of good institutional quality for the efficiency of public sector expenditures. For example, it has been argued that merely allocating public resources to the right goods and services may not lead to desirable outcomes if budget institutions are malfunctioning (World Bank, 1999). As Rajkumar and Swaroop (2002) write: "well-functioning public institutions are critical for translating public spending into effective services." Although, the quality of public institutions is measured in a variety of ways, this work focuses on bureaucratic quality and corruption. The empirical analyses prove that bad bureaucratic quality harms both the growth performance and productivity of both developed and developing countries.[4] In studying the empirical relationship between corruption and productivity, Lamsdorff (2003, 2004) writes: "the crucial reason why corruption has an adverse impact on productivity is related to accompanying low levels of bureaucratic quality… Once including bureaucratic quality into the regressions, the influence exerted by corruption becomes insignificant. This suggests that the adverse impact of corruption on productivity largely runs via its correlation with lack bureaucratic quality."[5] From a theoretical point of view, a recent paper by Sarte (2001) suggests that the adverse effect a more inefficient bureaucracy has on economic growth depends not only on the interaction between the bureaucracies and the private market, but also on the political authority's interactions with its executive agencies. This means that the growth effects of government spending are partially linked to the agency problem between political authority and its bureaucracy.

In this framework, individuals with heterogeneous ability endogenously choose to acquire skills or to remain unskilled. The government – i.e. the political authority – uses tax proceeds levied on consumers to supply a subset of the existing goods and services to final consumers. However, these publicly provided products are acquired through bureaucratic agencies. Public sector inefficiency shows up at this level. The bureaus have an informational advantage over the political authority about the quality of final products, and they act to maximize their discretionary budget.[6] The government attempts to limit this informational gap through oversight agencies, with the aim of economizing on total government outlays. The public sector inefficiency generates a waste of resources by diverting them from productive activities toward unproductive ones. This wasting concerns both skilled and unskilled resources and negatively affects income inequality, consumption level inequality between skilled and unskilled workers, and the per capita output growth rate of the economy. Therefore, an inverse relationship between inequality and growth due to bad institutional quality emerges. The existence of such an inverse relationship is documented by the empirical evidence. In their seminal paper, Persson and Tabellini (1994) showed that inequality harms the growth performance of a country. Although the existence of a negative relationship between inequality and growth is not unanimously recognized in the literature, in a recent paper Banerjee and Duflo (2003) maintain: "…the conclusions of Forbes (2000) and Li and Zou (1998) are not warranted: there is no evidence in the data that increases in inequality are good for growth. In fact, the bulk of the evidence goes in the opposite direction."[7]

Although these mechanisms can be at work in both developed and developing economies – as also indicated by empirical analyses – they can be more severe in middle and low income countries. In such economies, the technological catching up requires a cost to adapt the top quality products existing elsewhere to local conditions and customs. The adaptation of the state-of-the-art products is an endogenous process that needs skills and human capital accumulation.[8] Therefore, bad bureaucratic quality produces a waste of relatively scarce resources that can severely exacerbate income inequality, and can damage the development performance of such countries. This

[1] In particular, Panizza and Qiang (2005) find that 50% (on average) of the women employed in the formal sector (which represent around 35% of total employment in that sector) have a public sector job, while the share for men is around 26%. The authors also find that women employed in the formal sector tend to have higher average skills than men employed in the formal sector. Then, since women with a public job represent around 50% of the total employment in the formal sector, this means that the average skill level in public jobs is higher than in private jobs when the formal sector is considered.

[2] See Anant et al. (1990), Grossman and Helpman (1991), Aghion and Howitt 1992, Segerstrom (1998), Dinopoulos and Segerstrom (1999).

[3] See the World Bank programs as an example of research on this topic. The quality of institutions in a country concerns many aspects such as government stability, corruption, bureaucratic quality, civil liberties, law and order, government repudiation of contracts, risk of expropriation, rule of law, etc.

[4] See, for example, Lamsdorff (2004), Sarte (2001), Chong and Calderon (2000) for the existence of a negative relationship between bad bureaucratic quality and growth. Grigorian and Martinez (2001) find evidence that a higher level of bureaucratic quality has a positive impact on industrial growth through total factor productivity (the authors use a sample of 27 Asian and Latin American countries containing data from 1982 to 1997). Rodrik (1997) finds that better institutional quality – and therefore also better bureaucratic quality – positively affects total factor productivity growth. Tanzi and Davoodi (1997) provide evidence that corruption actually increases public investment, especially in unproductive projects, and squeezes public expenditure allocations for operations and maintenance, thereby lowering the productivity of the public capital stock. Gupta et al. (2001) find that countries with high levels of corruption are associated with the lower quality public health care and education.

[5] Lamsdorff (2003) writes: "An increase in corruption by one point on a scale from 10 (highly clean) to 0 (highly corrupt) lowers productivity by 2 percent...A reduction of Tanzania's level of corruption to that of United Kingdom would increase productivity by 10 percent, leading to a 20 percent increase in the GDP. Decomposing this impact reveals that bureaucratic quality is the crucial determinant…". Lamsdorff (2004) comes to the same results.

[6] In this setting, bureaus have better information with respect to the government about costs and technology of the existing products. See Niskanen (1971, 1994), and Sarte (2001).

[7] Following the work of Persson and Tabellini (1994), other empirical analyses showed the existence of a negative relationship between inequality and growth due to a variety of mechanisms and factors such as the redistributive pressures of voters, social conflicts, expropriation, and financial market imperfections (see among others, Alesina and Rodrik, 1994; Benhabib and Rustichini, 1996; Benabou, 1996). This paper adds a complementary theoretical channel to these papers. Instead, among others, Forbes (2000), and Barro (2000) do not find a clear negative relationship between inequality and growth.

[8] See Glass and Saggi (2002) as one of the first models in which imitation is costly. In Cozzi (2007) and Parello (2008) imitation and technological adoption of top quality products require skills and human capital accumulation. Cozzi (2007) argues that, in developing economies, R&D is often best interpreted as an activity aimed at adapting more advanced methods, discovered elsewhere, to the local conditions. This implies that imitation requires some form of investment and cost, at least for the adaptation process.