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Corruption, fertility, and human capital☆

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ABSTRACT

We build an overlapping generations model in which reproductive households face a child quantity–child quality trade-off and bureaucrats are delegated with the task of delivering public services that support the accumulation of human capital. By integrating the theoretical analyses of endogenous growth, corruption and fertility choices, we show that the negative relation between fertility and economic development may also be affected by differences in the magnitude of bureaucratic corruption.

1. Introduction

The relation between corruption and economic activity has always been at the forefront of the research agenda on the economics of development. Despite the fact that some earlier studies asserted that corruption may benefit economic growth through the role of bribery as 'speed money' that reduces the costs associated with red tape (Leff, 1964), the most recent evidence establishes a negative association between the incidence of corruption and economic growth. Indeed, a plethora of analyses, such as those by Mauro (1995), Keefer and Knack (1997), Gyimah-Brempong (2002), Aidt (2009), and Bhattacharyya and Hodler (2010), have revealed different mechanisms through which the various manifestations of corruption are serious impediments to the long-term prospects of developing economies.[1] It is for this reason that the World Bank has identified corruption as "the single greatest obstacle to economic and social development."[2]

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[1] Gundlach and Paldam (2009) argue that this relation is two-way causal. In particular, they show that corruption is more prevalent in less developed countries.

[2] http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTEMPOWERMENT/0,,contentMDK:20312308~menuPK:543262~pagePK:148956~piPK:216618~theSitePK:486411~isCURL:Y,00.html.

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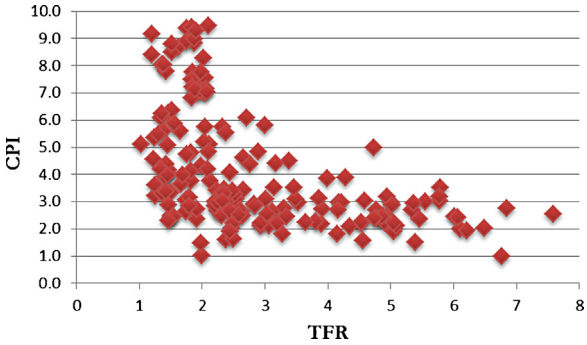

Fig. 1. Cross-country correlation between the CPI and the TFR (2012).

The purpose of our paper is to reveal a previously unexplored link between corruption and economic activity. This link is related to one of the most striking aspects in the comparison between developed and developing economies, i.e., the differences in their demographic characteristics and, in particular, differences in fertility rates. In Fig. 1, we plot data that illustrate cross-country differences between fertility rates and corruption during 2012. As a measure of fertility, we use data on the Total Fertility Rate (TFR) extracted from the World Bank, whereas the measure of corruption is Transparency International's Corruption Perception Index (CPI). Taking account that higher corruption is associated with a lower CPI score, the plot depicts a clear positive correlation between corruption and fertility rates.[3] In our analysis, we shall employ a theoretical model to contend that there are reasonable and intuitive arguments to support a causal relation behind the correlation emerging from Fig. 1. In this respect, our claim is that corruption may contribute, together with other factors that have already been identified in the literature (e.g., Soares, 2005; Azarnert, 2008; Varvarigos and Zakaria, 2013; Neanidis and Papadopoulou, 2013) in determining differences in fertility rates among different (groups of) countries.[4]

The mechanism we propose is the following. The return to the resources that parents offer for the mental development of their children (for example, their human capital) is supported by the delivery of such productive services as public education, public health and other forms of public infrastructure investment. Insofar as bureaucratic corruption hinders the delivery and the quality of such services, parents will have a reduced incentive in providing resources that support child quality. Hence, they will find optimal to divert their resources towards child quantity. As the incidence of bureaucratic corruption may decline at advanced stages of economic development, lower fertility rates may occur as a direct outcome of reduced corruption in the public sector of the economy.

We verify this assertion in the context of an overlapping generations model in which households face a child quantity–child quality trade-off and bureaucrats are delegated with the task of procuring public services that support the accumulation of human capital. At low stages of development, some bureaucrats find optimal to choose low quality public projects because this allows them to embezzle part of the funds that are otherwise devoted to the procurement of public services. At higher stages of development, the incentive for this type of malversation disappears. As a result of the two-way causal effects between economic growth and the incidence of corruption, the model admits a threshold effect that is responsible for multiple growth equilibria. Furthermore, this threshold effect is translated into differences in fertility rates that are attributed to the fall in the incidence of bureaucratic corruption: as the economy grows, the endogenous decline in corruption will improve the provision of productive public services, thus inducing households to substitute child quality for child quantity.[5]

It should be noted that our results do not rest on any alien assumptions regarding preferences or technologies. In fact, when it comes to the parental choices of child rearing and education per child, we adopt the same specification of utility that has been employed by all the existing papers for which the quantity–quality trade-off is an important element in the theoretical explanation of broad issues regarding the process of economic development (e.g., Galor and Weil, 2000; Hazan and Berdugo, 2002; Kalemli-Ozcan, 2003; Soares, 2005; Lagerlöf, 2006; de la Croix and Doepke, 2009; Fioroni, 2010; Galor, 2011). This specification of utility may admit a wide range of interpretations to explain why parents care about both the

[3] The data includes 178 countries for which both a CPI score and data on the TFR were available for 2012. It should be noted that this is the latest year for which, at the time of this manuscript's preparation, the World Bank had available data for the TFR.

[4] Blackburn and Sarmah (2008) analyse demography and corruption in a growth model, but they do not consider endogenous fertility. In their framework, each parent gives birth to one child exogenously and demographic changes are only due to variations in life expectancy. Our framework is rather different in that we focus on an aspect of demographic transition for which the endogeneity of fertility choices is of paramount importance.

[5] The theoretical model of Fioroni (2010) makes a distinction between private and public spending towards human capital improvements. Under the private education regime, unfavourable initial conditions may lead to a poverty (Malthusian) trap. Moreover, reductions in child mortality can cause an increase in fertility and a reduction in private human capital investment, thus inhibiting economic growth. Under the public education regime the poverty trap disappears, while the absence of a child quantity–child quality trade-off implies that reductions in child mortality do not inhibit economic growth. Our model differs in that, apart from incorporating the issue of corruption, we consider the case where the resources of both the private and the public sector contribute to the accumulation of human capital. Furthermore, we abscond from the issue of child mortality.