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Respect, responsibility, and development☆

Janice Boucher Breuer, John McDermott *

Department of Economics, Moore School of Business, University of South Carolina Columbia, SC 29208, USA

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ABSTRACT

We develop a theory that explains how two core values – *Respect for others* and *Responsibility* – affect productivity, the accumulation of capital, and output per worker. Using data from the *World Values Survey*, we empirically test the model using a panel dataset that includes 82 countries over six distinct years. We find that these two core values are important to production and that their impact is substantial. We also show that *Respect* and *Responsibility* reduce the influence of trust and mitigate the negative macroeconomic effects associated with fractionalized societies. Our results are robust to various treatments for endogeneity and under alternative samples.

1. Introduction

In an influential paper, Hall and Jones (1999) argue that the enormous variation in output per worker across countries is driven by differences in social infrastructure. They show that countries with stronger institutions achieve higher levels of investment in human and physical capital, greater productivity, and higher levels of output per worker. In this paper, we consider two cultural values – *Respect for others* and *Responsibility* – that we believe may be as fundamental to prosperity as other forms of social capital, or legal and political institutions. We call these *core values* because we believe that they reflect deeply-held beliefs that guide one's behavior and are fundamental elements of culture.

The literature linking cultural values to institutions and to economic development is growing. Tabellini (2010) finds that culture and institutions affect economic development. In his presidential address to the European Economic Association, Tabellini (2008a) called for more research on how individual values influence institutional outcomes. Guiso et al. (2006) summarize recent research relating culture to economic behavior and outcomes. They define culture as a set of unchangeable values and beliefs and identify religious faith and ethnicity as the key exogenous determinants of institutions and economic activity. More recently, Siegel et al. (2011) were able to explain international capital flows using a measure of distance in attitudes toward egalitarianism. And Balan and Knack (2012) showed that economic outcomes were systematically related to the within-country correlation between morality and ability. There is, moreover, a large literature on the effect of trust and social capital on living standards.[1]

In this paper, we construct a theoretical model based on the idea that core values are deep determinants of productivity, physical and human capital accumulation, and output per worker. We think of *Respect for others* and *Responsibility*, like *Trust*, as components of social capital. *Respect for others* is a rough measure of how seriously people take the Golden Rule. This code of conduct, prominent in nearly all religions, encourages individuals to be trustworthy when dealing with others, regardless of social distance. *Respect for others* discourages shirking, cheating, and corruption in economic exchange. It raises the level of trust in society as in

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* Corresponding author. Tel.: +1 803 777 4939; fax: +1 803 777 6876.
E-mail address: dynamo@moore.sc.edu (J. McDermott).

[1] Examples include the pioneering work of Mauro (1995) on corruption, Knack and Keefer (1997) on trust, and Acemoglu et al. (2001) on colonial development.

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Breuer and McDermott (2012), which facilitates exchange and increases scale.[2] Productivity, capital accumulation, and output per worker are enhanced.

Responsibility is also important.[3] We model individuals who place value on responsibility as having a low subjective discount rate. A low rate of time preference is the essence of responsibility. When individuals place a greater value on the future at the expense of the present, they are likely to invest in physical and human capital. Thus, we believe accumulation and productivity will be high in societies where responsibility is high. If this is true, output per worker will also be high.

We test our model using survey data on *Respect for others* and *Responsibility* from six waves of the *World Values Survey (2009)* across 82 countries. We follow a methodology similar to Hall and Jones (1999) where we investigate the impact of our two values on output per worker and its three component parts — productivity, capital intensity, and human capital. We find consistent evidence that these two values matter. The pattern of results remains when we consider alternative specifications and samples.

Trust is considered an element of social capital and an important determinant of economic outcomes. So, we include it in our regressions alongside our two core values. Our results show a smaller role for *Trust* once *Respect* and *Responsibility* are included while *Respect* and *Responsibility's* impact remains.

It has also been argued that fractionalization retards economic development because societal divisions may bring civil conflict, corruption, mistrust, and oppression not experienced in more homogeneous societies (Mauro, 1995). To test this idea, we include a measure of *Ethnic Fractionalization* in our regressions. We find that core values substantially reduce the negative impact of fractionalization on human capital accumulation, productivity, and output per worker — enough to offset its effects.

In the third part of the paper, we confront the issue of endogeneity. The core values we propose may be endogenous because we have omitted other relevant observables or unobservables that are correlated with the included variables, because of measurement error, or because of simultaneity with our outcome variables. We address these issues in several ways: by expanding the set of regressors to include other qualities from the *World Values Survey (2009)*, by investigating selection on observables, by using demographically-adjusted response rates to the survey questions on values; and with the standard treatment — instrumental variables estimation. Our instruments are measures of religious observance and institutional development. Regardless of the treatment we employ, we find the pattern established in the OLS results largely remains.

The paper is organized as follows. In Section 2 we construct a model of endogenous growth based on culture-determined scale and time preference. In Section 3 we describe our data and its sources. In Section 4 we estimate the basic model and report baseline results from OLS regressions where *Respect* and *Responsibility* are the main regressors. Here, we also investigate the influence of trust and ethnic fractionalization on output in the presence of core values. In Section 5, we address concerns about potential endogeneity and the robustness of our results using several approaches. Section 6 concludes.

2. A theoretical framework

In this section we outline a theoretical framework to explain why we think respect and responsibility are important for economic development. The full model is available as an online appendix.

2.1. Respect, responsibility, and growth

In his book *The Moral Foundation of Economic Behavior*, Rose (2011) argues that prosperity depends on having a trustworthy society. Trustworthiness discourages opportunism and creates the basis for trust, which encourages scale in production and exchange. He explains that trustworthy behavior is necessary to overcome the common dilemma and what he calls "the empathy problem" — both of which increase as an economy grows and impersonal, faceless exchange becomes more prevalent. At the same time, honest behavior deters "golden opportunities to cheat" that arise more frequently in production as specialization and localized knowledge are required for producing efficiently.

What is the source of trustworthiness? Our view is that it arises, at least in part, from historical and persistent cultural traits. We refer to this dimension of culture as *respect for others*. Where children are taught to be honest, even with those who are different from themselves, trust flourishes. In his work on regional growth in Europe, Tabellini (2010) identifies social capital with both trust and respect. He considers this kind of social capital a key cultural characteristic.

Using a model of labor teams cooperating with capital, it can be shown that aggregate productivity depends on scale generated by respect. Consider the standard production function for Country j:

$$Y_j = K_j^{\alpha}\left(A_j H_j\right)^{1-\alpha} \tag{1}$$

where K is physical capital, $H \equiv hL$ is aggregate human capital (L is labor and h is individual human capital) and A is factor productivity. As usual, the parameter $\alpha < 1$. The key feature of our model is that A depends on *respect* through scale.

The model is presented in detail in the online appendix, but the key idea is that there is a limit to the number of people that any firm can employ. The strict limit on employee size reflects the idea that in some societies reliable workers can be drawn from a very small pool, a circle of trusted family members, perhaps, or friends who are bound to employers by years of service or past favors. In other societies, where there is a culture of respect for others – so that employers have a reasonable expectation that golden opportunities in Rose's sense will not be taken by their employees – it is possible to have a much larger workforce in any firm. Given a firm production function that rewards labor variety, national output will rise if firms can be larger. *Respect* allows greater firm size, which will show up in the national statistics as greater productivity and greater output per capita.

In *The Moral Sense*, Wilson (1993) identifies four key cultural traits that shape society. One of them, *self-control*, is very close to what we have in mind with *responsibility*: the ability to resist immediate gratification for a great future reward. Adam Smith called this virtue *self-command* and considered it the virtue of most use to the individual (Smith, 1794; Part 4, IV, 17). More recently, Doepke and Zilibotti (2008) use the concept of *patience* in the same cultural sense.

People who are *Responsible* are willing to spend time and effort today to earn a future reward or avoid a future cost. Irresponsible people do not sustain effort with the future in mind. They are impatient and often neglect making investments that will make them better off. Children are taught to be responsible by delaying consumption in order to increase it later. They are taught to be punctual, do their work, pay their bills on time, live within their means, and not break the law. It is difficult to conceive of any definition of responsibility that does not involve thinking about the future. This logic

[2] In our earlier paper, we claimed that the societal level of both trustworthiness and trust depended on the underlying distribution of caution in a society. We argued that more cautious individuals are more likely to be trustworthy because they desire to avoid punishment associated with acting opportunistically. But, more cautious individuals are also likely to be *less* trusting of others. This creates some tension in the model because trustworthiness is a basis for trust. That is, we demonstrate that more cautious societies may be less or *more* trusting. This is because the direct effect of caution on trust may be overcome by the indirect effect of caution on trustworthy behavior which effects the extent of trust.

[3] President Obama made *Responsibility* a centerpiece of his speech given to school children on September 8, 2009; see http://www.whitehouse.gov/MediaResources/PreparedSchoolRemarks.