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Social values and economic dynamics

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ABSTRACT

Social values/belief systems can be viewed as a stock of non-productive ideas that are collectively shared in a non-rivalrous way and evolve through experience/participation at the aggregate social level. While they are separate from the stock of scientific ideas that are essential to production, history shows that social values and scientific ideas are interdependent. This paper explores the relationship between social values and long-run growth in an endogenous growth framework and highlights the underlying mechanism. We view both scientific ideas and social values as some sort of social capital that accumulates through a society's aggregate experience and also as goods that generate utility flows with "rational addiction" or "habit formation" at the social level when combined with individuals' time investment (learning-by-doing). We demonstrate the mechanism through which social values affect long-run economic growth. In particular, (i) we derive the conditions under which either the economy grows with social values as in the usual modern economies or it is dominated by social values with economic distress; and (ii) finally we show the applicability of the model to some episodes.

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1. Introduction

Traditionally, economics tends to abstract from "values" in analysis. This is presumably because the convention in economics has been to consciously keep research value-free, and instead focus on offering objective discussions of economic issues.² In addition, the difficulty of properly handling values, both theoretically and empirically, may be another reason for such a tendency. Although it is difficult, and often controversial, to deal with values in typical economic models, we cannot say that values are unimportant for economic outcomes, given that values reflect the very structure of preferences. If preferences have been affected by a particular set of values in a society, the resource allocation of that society obviously depends on the value system.³ While most modern economies with advanced technology appear to be unconcerned with values, they maintain a

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² To avoid controversy regarding values, modern economic analyses focus on self-interest and rationality, areas on which various social science disciplines cast doubt. Counter-examples would include the religion-based conflicts between Western and Islamic values, and the debate on Asian values and economic performance during the 1997 Asian financial crisis.

³ The past few decades have seen some progress in dealing with values in economics. See the literature on social capital (e.g., Coleman, 1988; Putnam et al., 1993; Fukuyama, 1995); the literature on experimental economics (e.g., Andreoni, 1989; Fehr and Schmidt, 2006); and the literature on the economics of religion (e.g., lannaccone, 1998; lannaccone et al., 2005; lyer, 2008).

surprisingly stable balance between scientific activities and activities related to values (e.g., religious beliefs, ideologies, and more broadly, ideas not directly related to production). In contrast, quite a few countries adopt overly strong values and experience economic distress currently as well as historically.⁴ Such economies may simply be blamed for having irrational values, but we try to present a possible mechanism leading to such negative outcomes. To do this, we incorporate values into a neoclassical framework and analyze the interaction between values and the usual economic variables in a long-run dynamic context.

We consider social values in the following general setting. Individuals draw utility not only from material consumption for physical needs but also from non-material consumption of "abstract ideas," which we classify as scientific knowledge (productive ideas) and values (non-productive or less productive ideas).⁵ We focus on social values, treating private values as an individual idiosyncrasy that is orthogonal to social values requiring social interactions.⁶ In contrast to material consumption based on rivalrous private market transactions, consumption of abstract ideas happens "non-rivalrously" through social participation involving time taken to participate in social gatherings (e.g., scientific or religious meetings) to use the existing stock of abstract ideas without pecuniary costs. An example of the consumption of social values would be time spent accommodating the society's values by participating in religious meetings to satisfy participants' non-scientific mental needs. The rest of the endowed time is devoted to producing the final good for material consumption. We view both scientific ideas and social values as some sort of "social capital"⁷ that accumulates respectively through a society's aggregate experience and also as non-rivalrous goods that generate utility flows when combined with individuals' time in using existing stocks. This is essentially equivalent to "rational addiction" or "habit formation" in a collectively shared good based on learning-by-doing.⁸

Under this general setting, this paper studies the interaction between productive ideas and non-productive (or less productive) ideas, which are formalized as scientific ideas and values, respectively. To do that, we analyze the individual activities that are devoted to creating them and highlight the key mechanism determining whether values contribute to the economy or lead to decay. Then, we demonstrate that the degree of complementarity between productive and unproductive ideas in utility is the key parameter that determines whether societies will end up gradually growing both stocks, or end up specializing in just one.

The main mechanism is as follows. Individuals are atomistic, and hence, when making decisions, they do not take into account the externalities generated by their time allocations to either productive or unproductive activity. The satisfaction an individual derives from these activities is increasing in the *stock* of capital (i.e., scientific ideas and social values) he or she has accumulated in the past from these activities. If the two activities are complementary enough, we find that the system is intrinsically stable for the following intuition: a high level of material consumption arising from a high stock of scientific ideas induces a high level of activities related to values, resulting in a high stock of values, and vice versa, i.e., there is comovement between economic growth and scientific ideas and social values. In contrast, if the two activities are substitutable, the system is inherently unbalanced. Starting with a higher stock of values relative to that of scientific ideas will eventually lead to decay and collapse for the following reason: the high relative returns to the activities related to social values continually outstrip those related to scientific ideas/production, and eventually everyone deviates from productive activities and engages in the activities related to social values, leading to economic collapse.

Despite its simplicity, we think that this mechanism can offer useful implications and, in some instances, can account for some interesting episodes. First, values are crucial for long-run economic growth. Even if social values are unproductive, their complementary association with scientific ideas is essential for economic growth. Second, our model can account for (i) a balance between scientific activities and activities related to values in modern economies. It is also consistent with episodes such as (ii) the religious reformation and economic growth and (iii) the collapse or poor economic performance of some economies that adopt overly strong ideologies or religious sectarianism.

The extensions of the basic model greatly benefit from the recent endogenous growth models with social capital (Roseta-Palma et al., 2010; Sequeira and Ferreira-Lopes, 2011, 2013) (henceforth, SF) in which social capital enters in both the utility and the

⁴ Arguably, some historical examples would include Easter Island, and the Cultural Revolution; contemporary examples would include the North Korean regime based on the Juche idea, extreme religious sects in parts of Middle Eastern countries, etc.

⁵ Iannaccone et al. (2005) support this classification: "... Then you will listen to Richard Hooker: 'Man doth seek a triple perfection: first, a material... then an intellectual...Man doth not seem to rest satisfied...but doth further covet...somewhat divine and heavenly...' (*Of the Laws of Ecclesiastical Polity*, 1593, First Book, XI, 4, pp. 205–206)."

⁶ We note a possible interaction between private and social values in the context of Beugelsdijk and Smulders (2009). They address the more micro roles of social capital, i.e., bonding and bridging, to differentiate between social capital used for leisure time (and thus harmful for economic growth) and social capital used for networks, which could potentially bring benefits for economic growth. In order to express these two opposite implications using a single variable of social values, we view social values as a stock of values that is neutral to production in the basic model, and later in the extended model, we view them as contributing to production to a limited extent, i.e., to a lesser degree than scientific ideas do.

^{&#}x27; Social capital is often viewed as relations among individuals (e.g., Coleman, 1988; Putnam et al., 1993; Putnam, 2000). Social capital here is elaborated in the economics context: it refers to capital that is accumulated through collective experience at the aggregate public level and, like public goods, is non-rivalrously accessible to individuals. Of course, scientific ideas are related in concept to human capital (e.g., Lucas, 1988), but we focus on the following features that, historically, scientific ideas have evolved through social and non-commercial processes that are highlighted by accumulation through a society's aggregate experience/institutions, collective sharing of them for production and intellectual satisfaction, rather than through individual and commercial processes that are highlighted by profit-making and embodiedness at the individual level. See Lindberg (2008) and Westfall (1983) for the traditional roles of scientists. See also Bowie (1994) evaluating the modern university-industry relationships that have arisen since 1970s.

⁸ For a formal model and analysis of rational addiction, refer to Becker and Murphy (1988). They define a good with addiction as follows: Past consumption of the good affects current utility through a process of "learning by doing." Iannaccone (1998) also noted this feature in religious activities.

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