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Cultural attributes, national saving and economic outcomes

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ABSTRACT

Economic and financial researchers rarely use culture as an exploratory variable for economic and financial events. This paper explores the role of cultural attributes in a nation's welfare. First, we use a theoretical model to show that the higher a nation's long term orientation, the more it chooses to save. We also show that nations with higher long term orientation enjoy a higher level of welfare. We complement the theoretical model with empirical analysis using a panel of data for 86 countries, from 1999 to 2009. The results from the empirical study support our proposition that nations with a higher long term orientation have higher saving rates.

1. Introduction

Economic and financial researchers rarely use culture as an exploratory variable for economic and financial events. The main explanation given is that culture is too broad and difficult to define. Furthermore, opponents of using culture as a variable claim that culture and the economic environment are in constant interaction. For this reason, any effort to draw causal relationships between elements of both sets will be undermined by problems of endogeneity (Guiso et al., 2006).

Despite the difficulties we have dealing with culture in economics and finance, it is important to overcome the obstacles, because culture is very important for determining our actions. For example, if we compare an average Chinese citizen and an average American citizen with the same objective variables (interest rate, age, etc.), it is most likely that the Chinese citizen's marginal propensity to save part of his free income will be much higher than the American's.

Culture is usually defined as the mindset of values and beliefs that distinguishes one social group from another (Hofstede, 1980; House et al., 2004, 2007). Guiso et al. (2006) add that culture is also transmitted across ages and generations. Hofstede and Bond (1988, p. 6) claim, "Specific nations have specific cultural traits that are rather sticky and difficult to change in any basic fashion, although they can often be modified."

To emphasize the exogeneity of culture, we have chosen one quote, out of many possibilities. In his Nobel prize lecture, North (1993) said:

> . . .the kind of learning that the individuals in a society acquired through time. Time in this context entails not only current experiences and learning but also the cumulative experience of past generations that is embodied in culture. Collective learning – a term used by Hayek – consists of those experiences that have passed the slow test of time and are embodied in our language, institutions, technology, and ways of doing things. It is "the transmission in time of our accumulated stock of knowledge" (Hayek, 1960, p. 27). It is culture that provides the key to path dependence – a term used to describe the powerful influence of the past on the present and future.

To summarize, culture is actually an exogenous variable because it does not change in accordance with short-term shocks to the economy. Neglecting culture in economic/financial research can lead to defective explanations. For example, research has shown that cultural values play an important role in determining the inclination to save. Cultural differences in the extent that children are taught thriftiness have been shown to explain as much of the cross-country variation in savings behavior as the life cycle model (Guiso et al., 2006). Tabellini (2005) measures culture by using the World Values Survey. He documents that cultural values have a very significant impact on both GDP per capita and growth. The main problem

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in cultural research is finding proxy variables for culture that are not contaminated by the economic variables themselves.

In our research, we investigate the impact of culture on savings through discount rates. The global economic downturn is our main motivation for studying savings. The importance of obtaining a better understanding of savings behavior has been enhanced by the global economic downturn of 2008 (Shoham et al., 2010). The primary factor that caused the global crisis was the low rates of savings in the western world, particularly in the United States (Shoham, 2009, 2011). As a result of the crisis, there is awareness that we need a better understanding of what causes people to save. The phenomena of the diminishing personal savings cannot be explained simply by the variables studied in the current economic literature, such as institutions, interest rates, age of population, and wealth as expressed by GDP per capita. The low levels of personal and federal government savings in the US at the beginning of the millennium created a trade deficit in the US and a surplus in nations like China, as the savings investment identity proves (we will use the identity in our analytical model). The different saving rates in different nations were the real economic roots of the 2008 global crisis.

The remainder of this article is organized as follows. Section 2 presents a short literature review regarding future-orientated culture, discount rates and savings that will be the basis for the analytical model presented at Section 3. Section 4 contains empirical research that supports the main equilibrium of the model. Finally, Section 5 concludes the paper with a discussion on the main findings and implications of our model and empirical work.

2. Literature review

If we return to the grassroots of consumer savings and discount rates, we could claim that an interest rate is compensation for delayed gratification. The Agio Theory of interest presented by Eugen von Böhm-Bawerk in the late 19th century claims that individuals prefer present gratification to future enjoyment. Viewed from the present, future satisfaction is discounted. Interest is the discount which must be paid in order to induce people to lend money and therefore postpone present satisfaction to a future date. In other words, the greater the willingness to trade present goods for future goods, or to outlay a given amount of money today in order to receive a specified, greater amount at a particular point in the future – the greater the preparedness to wait – the lower the natural rate of interest.

The culture of a nation could be good source of understanding for the willingness to postpone current consumption. Out of the entirety of a nation's culture, one dimension is important in this case, long term orientation (LTO).

Long term orientation is the degree to which a society rewards delaying gratification (House et al., 1999). Keough et al. (1999), who researched smoking, drinking and drug-use, claim that people in a culture with a high present orientation are unwilling to plan in order to achieve their desired goals. In addition, they may not comprehend current negative signals regarding future outcomes. In economic/financial jargon, these societies have "myopia utility."

House et al. (2004) in the GLOBE study define long term orientation as,

> The extent to which members of a society or an organization believe that their current actions will influence their future, focus on investment in their future, believe that they will have a future that matters, believe in planning for developing their future, and look far into the future for assessing the effects of their current actions.

Ashkanasy et al. (2004) state that present oriented individuals and cultures strive to simplify their lives and rely more on others. They also claim, based on previous studies that long term orientation emerges as a key factor guiding human behavior.

As a result, cultural environment causes members of a highly LTO society to save at higher rates than members of a lower LTO society, given the same interest rate. In a less LTO culture, an individual needs more pecuniary compensation to save. Hofstede (2001) also reports that the LTO dimension correlated positively with Read's (1993) measure of marginal propensity to save.

In the next section, we use an analytical model to support the claim that cultures with a high LTO orientation will save more than those with a lower LTO orientation. The purpose of the model is to illustrate the theoretical relation between LTO and the level of savings and the nation's welfare.

3. The model

The main goal of the model is to support the idea that the long term orientation (LTO) of a culture is a central factor in determining the saving propensity of a specific social community. We are using a nation as our basic social community, because the average LTO affects economic variables, such as interest rates, that have an impact on the whole country.

For simplicity's sake, we use a two period model, in which "0" represents the current time period and "1" represents the future time period. In the model, the welfare of a nation's economy is determined by the present value of its consumption. Eq. (1) formalizes the present value of the aggregate welfare of the nation.

$$W = (C_0)^{\alpha} + \mu(C_1)^{\alpha} \tag{1}$$

where W, the total present value (PV) of the nation's welfare; C_0, current consumption of the nation, including private and public consumption; C_1, future consumption of the nation; α, common assumption of decreasing marginal utility from consumption $0 < \alpha < 1$; μ, discount factor based on the LTO of the nation $0 < \mu < 1$.

A higher μ implies a higher level of LTO, $\partial\mu/\partial\text{LTO} > 0$.

The explanation for this is straight forward. If the culture has a higher LTO, it means that individuals assign a higher weight to future consumption, so μ will be higher.

The nation's private and public sectors choose the level of savings in period 0 that leaves consumption described by Eq. (2), which represents the consumption function at time 0:

$$C_0 = Y_0 - S \tag{2}$$

where S, national savings in period 0 and Y_0, domestic product in period 0.

At this stage, we will use the basic macroeconomic identity regarding saving and economic investments:

$$S \equiv I + \text{NX}$$

where I, level of real investment in the economy at time 0; NX, export–import (net export).

We assume that the level of NX is zero, therefore $S = I$.

If the economy allocates a certain amount of resources to savings (S) it is actually determining the level of investment (I) in the economy. We assume that investments yield a return of (a) in the second period. Therefore, investment I in the first period will generate resources equivalent to AI in the second period, assuming that $A = 1 + a$ and that $A > 1$.

This will generate consumption described by Eq. (3), which represents consumption function at time 1:

$$C_1 = y_0 + AI \tag{3}$$