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Government size, intelligence and life satisfaction

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ABSTRACT

Recent studies show that psychological factors such as cognitive ability play an important role in the empirical modeling of life satisfaction and suggest that intelligence is an important proxy for political and intellectual capital. These articles, however, only explore the direct effect of intelligence on subjective wellbeing. In this study, we conjecture that intellectual capital is a mechanism through which the size of bureaucracy impacts life satisfaction. Using data from 147 countries, we find that the interaction term between nation-IQ and government size is positive and significant, suggesting that government size increases life satisfaction most in high-IQ countries and least in countries with lower levels of cognitive abilities.

1. Introduction

Throughout the past decades, improving standards of living have allowed scholars to reexamine the importance of channeling policies toward economic growth. While within societies income and life satisfaction are positively correlated there is no increase in life satisfaction across time when average income across decades rises (Easterlin, 1974). Moreover, follow-up studies have shown further that the phenomenon that 'money does not buy happiness' exists in both developed and low-income countries (Di Tella & MacCulloch, 2008). Their study argues that economic wealth is produced at the expense of resource depletion, environmental degradation and widening income inequality within society and it leads to lower wellbeing levels. As a result, mainstream literature on the causes of subjective well-being (SWB) has proliferated. One scholarly inquiry that is still in its infancy, nonetheless, is the link between governmental activities and life satisfaction. Some studies find a negative or insignificant association between government size and SWB,[1] while others suggest that government size increases life satisfaction.

These studies stem from an ongoing debate between standard neoclassical economic theory and public choice theory. The neoclassical theory posits that government sector eliminates market failures by producing important public goods and maintains legal frameworks without which economy would not operate efficiently or not function at all (Blankart, 2003). In contrast, public choice theory argues that public officials, administrators and bureaucrats as well as politicians tend to seek their personal advantage. Consequently, large public sector may cause excessively large budgets and excessive involvement in – and regulation of – the economy. Moreover, in order to be re-elected bureaucrats may misallocate resources, search for populism and satisfy interest of lobbying groups, consequently, decreasing average national level of SWB.

At the same time, a separate body of literature in psychology reports that intellectual capital is an important ingredient in economic development (Lynn & Vanhanen, 2012) and has direct positive implications for life satisfaction (Veenhoven & Choi, 2012). For example, Kanazawa (2014) reported that general intelligence in childhood is positively associated with the life-course stability of happiness. In a similar vein, Nikolaev and Salahodjaev (2016), using data from 81 countries and 50 US states, showed that intelligence leads to a more equal distribution of wellbeing within society. Moreover, at the macro-social level intelligence contributes to economic growth (Ram, 2007), quality of government institutions (Kanyama, 2014), good governance, environmental protection (Obydenkova, Nazarov, & Salohodjaev, 2016) and the wealth of nations (Rindermann, Kodila-Tedika, & Christainsen, 2015).

However, the mediating role of intelligence is another factor in the link between intelligence and SWB that remains largely unexplored by existing studies. For example, ample studies show that higher-IQ nations are associated with efficient bureaucracies and lower levels of corruption (Potrafke, 2012), while other scholars confirm the significant associations between these variables and SWB. It is therefore possible

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[1] We use "life satisfaction" and "subjective wellbeing" (SWB) interchangeably throughout the paper.

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that the impact of bureaucracy on citizens' well-being varies with nations' levels of cognitive ability. Moreover, there may very well be mutual interdependence between the size and efficiency of bureaucracy and national intelligence. For example, the ruling elite in cognitively able societies protect political rights and civil liberties and enhance the relative power of ordinary citizens (Rindermann et al., 2015). In turn, more intelligent individuals who are more actively involved in political processes are more likely to prevent the ruling elite from expropriating resources to achieve personal gain from others without reciprocating any benefits to society through wealth creation. An intelligent electorate provides a check on fraudulent and incompetent bureaucrats and motivates them to distribute wealth more equally within society.

Intelligence, education and knowledge 'broaden man's outlook, enable him to understand the need for norms of tolerance, restrain him from adhering to extremist doctrines, and increase his capacity to make rational electoral choices' (Lipset, 1960). As a result, 'stricter [political and societal] control might restrain bureaucrats' deleterious impact, lead to efficiency gains, and increase people's happiness' (Bjørnskov, Dreher, & Fischer, 2007, pp.270–271). Therefore, in high-IQ nations, public policies are more in consonance with voters' preferences. It is important to highlight that there is evidence that intelligent voters tend to elect leaders with cognitive abilities of about 20 IQ points above their general electorate. Taking into account that efficiently functioning government institutions 'depend on a public who can process complex information and actively participate in politics,' we may anticipate that the effect of the public sector on life satisfaction depends on the level of national intelligence. Moreover, research shows that average intelligence of the ruling elite is positively correlated with economic success, moral standards in the government and state spending priorities (Simonton, 1985, 2006a, 2006b). For example, governments in countries with higher IQs tend to devote less public resources to military spending (Salahodjaev, 2016), ratify international environmental agreements more frequently (Obydenkova & Salahodjaev, 2016), are more likely to invest in health care (Lv & Xu, 2016) and exhibit greater concern for less privileged share of population (Salahodjaev & Azam, 2015). As suggested by Bjørnskov et al. (2007) 'the more efficiently the government produces, the less tax payers' money is wasted, and, consequently, the more beneficial is the trade-off between taxes and public spending from the citizens' perspective. Therefore may hypothesize that the effect of government size on SWB depends positively on the effectiveness of public sector, degree of political accountability and competition and civic participation of citizens, captured by national intelligence levels.

Using cross-sectional data covering 147 developed and developing countries, we empirically explore the relationship between government involvement, intelligence and life satisfaction. Investigating the effect of intelligence and government size on life satisfaction contributes greatly to the social sciences; in this vain, the paper explores how the relationship between government and SWB is influenced by a country's average level of intelligence. Our proxy for intelligence is average nation-IQ from Lynn and Vanhanen (2012). To measure government size, we use governments' final consumption expenditures as a percentage of gross domestic product (GDP).

In line with extant literature, we find that intelligence has a direct, positive effect on SWB. In the same way, increase in the government size is positively associated with life satisfaction. More importantly, the conditional marginal effect of government involvement in the economy indicates that the level of national intelligence moderates the link between government size and life satisfaction.

2. Empirical approach and data

The hypothesis to be tested is whether the effect of government size on life satisfaction varies with the level of intelligence. Our measure of life satisfaction comes from the World Happiness Report by Helliwell, Layard, and Sachs (2015). We measure life satisfaction by the responses to the Cantril ladder question: 'Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?' Their study is based on nearly 3000 respondents in each of more than 150 countries.

As a measure of government size, we calculate general government consumption expenditure as a percentage of GDP. The general government consumption expenditure (formerly general government consumption) includes all current government expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security. To reduce the effect of economic cycles, we average government consumption for the period 2010–2015. In our study, government size ranges from 2.8% to 82.4% with higher values representing a larger government sector in the country. Timor-Leste has the largest government size, while Zambia has the lowest.

Our main variable of interest is intelligence as measured by national IQs. The data come from Lynn and Vanhanen (2012). In their first study, Lynn and Vanhanen (2002) compiled country-specific studies in which intelligence tests have been administered. Based on the results of these studies, they estimated national IQs for 81 countries. In their follow-up studies, Lynn and Vanhanen (2006, 2012) estimated national IQs for 111 additional countries, bringing their dataset of national IQs to 192 countries. For interpretation purposes, Lynn and Vanhanen (2002) rescaled the IQ scores by setting the IQ in the UK at 100 (standard deviation = 15) and adjust the IQs for remaining countries to this scale. In Table 1, we cluster countries the countries by their average index of cognitive abilities and find that life satisfaction is increasing with nation's IQ.

We also control for GDP per capita, as economic development is positively correlated with intelligence (Meisenberg, 2012) and life satisfaction (Kacapyr, 2008). Moreover, GDP per capita is also associated with improved living standards, higher wages and technological improvements; it can serve as a catch-all variable. To control for the effect of income inequality, we use the Gini index. The GINI index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. Finally, we also control for ethnic diversity and a dichotomous variable for African countries.

Altogether, we estimate the variants of the following specification to be:

$$LS_i = \alpha_0 + \alpha_1 GS_i + \alpha_2 IQ_i + \alpha_3 (IQ * GS)_i + \alpha_4 GDP_i + \alpha_5 GINI_i + \alpha_6 ETHNIC_i + \alpha_7 AFRICA_i + \varepsilon_i \quad (1)$$

where life satisfaction (LS) in "i"th country is a function of government size (GS), intelligence (IQ), the interaction term for government size and intelligence, economic development (GDP), income inequality (GINI), ethnic diversity (ETHNIC), geographical location (AFRICA) and a random error term (ε). In our estimations, we use the ordinary least squares (OLS) estimator. We also mean-center the variables forming interaction term to avoid the problem of multicollinearity (Kraemer & Blasey, 2004; Afshartous & Preston, 2011). The descriptive statistics and correlation matrix are presented in Tables 2 and 3. With respect to our main variables of interest we find that cognitive abilities are strongly correlated with life satisfaction, while the correlation between government size and SWB is very moderate (Table 3). In addition the correlations reported in Table 3 do not suggest any potential multicollinearity problem in our empirical exercise.

3. Results

The importance of intelligence in determining the effect of government size on life satisfaction may be seen from Figs. 1–2 where the

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