



RESEARCH ARTICLE

INTELLIGENCE REFLECTS HUMAN CAPITAL ACROSS COUNTRIES

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ABSTRACT

The aim of this study is to test if intelligence is a proxy for human capital across nations. Our findings show that cognitive abilities are significantly correlated with HDI, literacy and PISA scores across countries. Moreover, we find that that human capital is correlated with economic development. Our results suggest that IQs simply captures the quality of human capital across nations.

Key words:

Human capital,
IQ, Development.

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INTRODUCTION

Over the past decade there has been ongoing debate on the importance of intelligence and cognitive abilities in the societal development (Voracek, 2013; Burhan *et al.*, 2014). While some studies argue that intelligence is inherited, there is plenty emerging evidence from scholars in the field of economic that intelligence (IQ, cognitive abilities) is ultimately another proxy for human capital and educational differences across countries and regions (Weede and Kampf, 2002). For example, Salahodjaev (2015 p. 133) reinforces the argument that intelligence in this sense captures education by arguing that "[the effect of IQ on shadow economy] should not be treated as direct evidence that a more intelligent population is a prerequisite to constrain shadow economy ... [but] ... educated electorates are more likely to recognize and penalize rent-seeking behavior". In a follow up study, Salahodjaev (2016 p. 26) when investigating the link between cognitive abilities and deforestation, also suggests that "investing in human skills that ultimately leads to better institutions will reduce environmental degradation such as deforestation and improve sustainability". Therefore, numerous studies by Salahodjaev and others such as Jones and Schneider (2006), Azam (2017) suggest that differences in intelligence levels across individuals and societies should be treated as differences in education and human skills but not genetic or racial differences.

Indeed, empirical evidence from educational field shows that IQ is a significant correlated of educational performance. For example, Yale *et al.* (1982) documents the correlation between IQs and educational attainment in English classes in Britain is 0.61. In a follow up study, Deary (2004), uses data from more than 20,000 students at the average age of 16, finds that correlation coefficient between IQs and marks in the public GCSE (General Certificate of Education, consisting of an examination typically in five to nine subjects) is 0.74. Moreover, these results is obtained for cross-country data, when Barber (2006) correlated IQs to reading scores at the age 10 in a sample of 35 countries. Meisenberg (2009) revisits the hypothesis that IQ is a measure of human capital by correlating it with adult literacy rates. The study finds that in a sample of 187 nations IQs positively related to literacy levels. Moreover, in a different study Morse (2008) investigates the link between academic performance and intelligence at a national level. The study finds that IQs across countries significantly predict academic publications. The correlation is 0.87. Therefore, the aim of this study is to contribute to extant research in two ways. First, we show that IQs is ultimately an alternative proxy for human capital and education by showing how it is correlated to other conventional measures of human capital. Second, we test the link between human capital and economic development for various human capital measures to see of intelligence has similar impact on economic development.

Data and methods

Our main variable of interest is Lynn and Vanhanen (2012) data for more than 180 countries.

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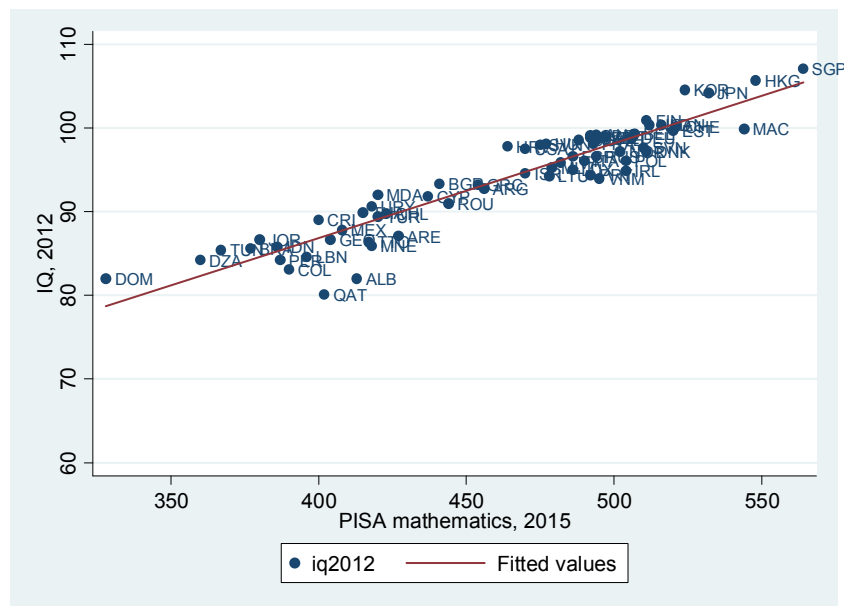


Figure 1. Scatterplot between PISA mathematics score and IQs Correlation coefficient: 0.94

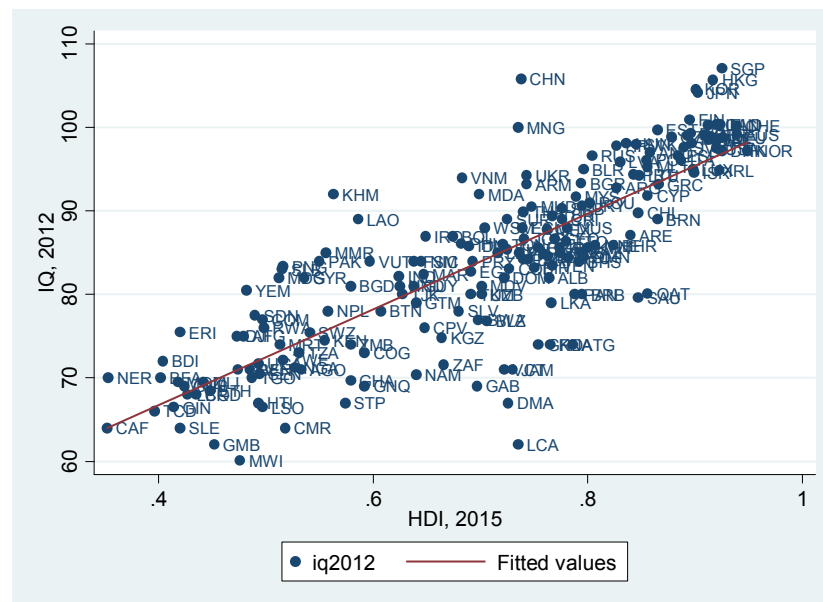


Figure 2. Scatterplot between HDI and IQ Correlation coefficient: 0.82

In their study, collected intelligence, education and other schooling tests for different countries. Moreover, the authors used literacy rates to estimated IQs for countries with missing data. They have calculated these IQs in relation to a British mean of 100 and standard deviation of 15. Lynn and Vanhanen (2012) also argue that IQs have been increasing in all economically developed countries and in less developed countries including Brazil, Sudan and Dominica (Colom, Flores-Mendoza and Abad, 2006; Khaleefa, Sulman and Lynn, 2009; Meisenberg, Lawless, Lambert and Newton, 2006). Therefore, thus further may signal that improving nutrition and education system is responsible for that increase and intelligence is a proxy for human capital. Apart from Lynn and Vanhanen (2012) data, we also use data on, HDI index from UN, PISA scores¹ and literacy rates from World Bank. PISA measures student performance in mathematics, reading, and science literacy.

Conducted every 3 years, each PISA data cycle assesses one of the three core subject areas in depth (considered the major or focal subject), although all three core subjects are assessed in each cycle (the other two subjects are considered minor domains for that assessment year). Figures 1 -3 present the correlation between PISA scores, literacy rates and IQs. As expected we find that the correlation between IQs and these variables is very strong. For example, the correlation between intelligence and PISA mathematics score is 0.94. This implies that cross-national differences in IQs are by in large capturing cross-national differences in mathematic skills. Moreover, the correlation coefficient between IQ and literacy rates and HDI is 0.69 and 0.82 respectively. We next test the relationship between various measures of human capital and GDP per capita in 2017. The main results are reported in Table 1. We find that overall all measures of human capital are significantly correlated with economic development. Moreover, the beta-coefficient for IQs falls in between the estimates for other measures of human capital.

¹ The data is obtained from https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp

- Jones, G., & Schneider, W. J. 2006. Intelligence, human capital, and economic growth: A Bayesian averaging of classical estimates (BACE) approach. *Journal of economic growth*, 11(1), 71-93.
- Khaleefa, O., Sulman, A. and Lynn, R. 2009. An increase of WAIS-R IQ in Sudan, 1987-2007. *Journal of Biosocial Science*, 41, 279-283.
- Lynn, R., Vanhanen, T. 2012. *Intelligence. A Unifying Construct for the Social Sciences*. UlsterInstitute for Social Research, London.
- Meisenberg, G., & Lynn, R. 2011. Intelligence: A measure of human capital in nations. *The Journal of Social, Political, and Economic Studies*, 36(4), 421.
- Meisenberg, G. 2009. Wealth, intelligence, politics and global fertility differentials. *Journal of Biosocial Science*, 41, 519-536.
- Meisenberg, G., Lawless, E., Lambert, E. and Newton, A. 2005. The Flynn effect in the Caribbean: generational change in test performance in Dominica. *Mankind Quarterly*, 46, 29-70.
- Morse, S. 2008. The geography of tyranny and despair: development indicators and the hypothesis of genetic inevitability of national inequality. *The Geographical Journal*, 174, 195-206.
- Salahodjaev, R. 2015. Intelligence and shadow economy: A cross-country empirical assessment. *Intelligence*, 49, 129-133.
- Salahodjaev, R. 2016. Intelligence and deforestation: International data. *Forest Policy and Economics*, 63, 20-27.
- Voracek, M. 2013. National intelligence estimates and the failed state index. *Psychological reports*, 113(2), 519-524.
- Weede, E., & Kämpf, S. 2002. The impact of intelligence and institutional improvements on economic growth. *Kyklos*, 55(3), 361-380.
- Yale, W., Gold, R. D. and Busch, C. 1982. Long-term predictive validity of the WPPSI: An 11-year follow-up study. *Personality and Individual Differences*, 3, 65-71.
