

Countries with intelligent people perform better

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Research seems to show that on average countries with an intelligence population do well across most if not all socio-economic indicators.

“Cognitive ability (equivalent to cognitive competence) comprises the ability to think (intelligence), knowledge (true and relevant knowledge) and the intelligent use of this knowledge. A broad concept of “intelligence” also includes knowledge aspects (“crystallized intelligence”). Cognitive ability enhances the individual’s understanding of concepts and causal relationships, it increases insight, foresight, and rationality. It leads to proximal consequences, such as higher quality of work and more reasonable decisions in everyday life.

Higher cognitive ability also improves individuals’ access to better environments and enables individuals, institutions, societies, and cultures to improve the quality of the available environment. Cognitive ability also brings about other consequences, such as greater wealth and health; a more democratic society; political and economic liberty; a more complex culture; and longitudinally, by backward effects of these environmental factors, again enhanced cognitive ability (e.g. Rindermann, 2012; Rindermann & Meisenberg, 2009; Rindermann & Thompson, 2011)” (Rindermann, 2012).

What does the evidence say of the relationship between intelligence (cognitive ability) and national outcomes? In this short presentation, we summarize the major research findings.

1. Educational Attainments

National IQ correlated with Literacy rate-2008, Secondary enrollment-2010, and Tertiary-2009

Dependent variable	N (No. of countries)	Pearson Correlation
Adult literacy rate 2008	197	0.638
Secondary enrolment-2010	134	0.666
Tertiary-2009	192	0.773

Source: Lynn and Vanhanen (2012)

Moderate and strong positive correlations between national IQ and the three indicators of educational attainment lead to the conclusion that global disparities in educational attainments are principally due to differences in national IQs, although some environmental variables seem to have had some impact on these indicators independently from national IQ.

2. Researchers in research and Development (R&D)

Researchers in research and development per million people in 1990-2003 (R&D), which measures the application of education and intelligence to research work is correlated at 0.666 with IQ (Lynn and Vanhanen, 2012). More intelligent nations have been much more effective in the application of education and intellectual resources to inventions and research activities than less intelligent nations. A national IQ level of 90 seems to constitute a threshold above which the relative number of researchers in R&D starts to rise.

3. Intelligence and Per Capita Income across Nations

The correlations between national IQ and Purchasing Power Parity- Gross National Income (PPP-GNI-08) confirm previous studies on the positive relationship between national IQ and per capita income. All correlations are moderate or strong ranging between 0.592 to 0.695, and the explained part of variation varies from 35 to 62 per cent (Lynn and Vanhanen, 2012).

4. There is a positive and significant relationship between national IQ and economic growth except for the periods 1987-1998 and 1995-1998 where the correlations are zero.

Economic growth variables	N Countries	r x IQ	Reference
GDP per capita, 1890 - 1910	28	.21	Lynn & Vanhanen, 2002
GDP per capita, 1910 - 1992	47	.53	Lynn & Vanhanen, 2002
GDP per capita, 1950 - 1990	166	.45	Lynn & Vanhanen, 2002
GDP per capita, 1976 - 1998	148	.45	Lynn & Vanhanen, 2002
GDP per capita, 1983 - 1996	181	.28	Lynn & Vanhanen, 2002
GDP per capita, 1987 - 1998	127	-.01	Lynn & Vanhanen, 2002
GDP per capita, 1995 - 1998	123	-.01	Lynn & Vanhanen, 2002
GDP per capita, 1500 - 2000	109	.71	Lynn & Vanhanen, 2006
GDP per capita %, 1950 - 2001	132	.39	Lynn & Vanhanen, 2006
GDP per capita \$, 1950 - 2001	132	.75	Lynn & Vanhanen, 2006
GDP per capita, 1990 - 2002	145	-.06	Lynn & Vanhanen, 2006
Economic growth, 1950 - 1990	185	.44	Rindermann, 2008
Economic growth, 1975 - 2005	126	.37	Meisenberg, 2011
Economic growth, 1975 - 2005	71	.47	Meisenberg & Lynn, 2011

The principal conclusion to be drawn from these studies is that national IQs predict economic growth rates over very long periods, such as 1500-2000 given in row 10, for which the correlation is .71. Over shorter periods such as 1950-1990 given in row 14, the correlation is lower at .44. Over very short periods such as 1990-2002, the correlation is zero (-.06). The explanation for this is that various shocks such as wars, large increases in the price of oil and so on, reduce the growth rate of some countries in the short term, but over the long term these have little effect and national IQ emerges as the major determinant of economic growth rates.

This conclusion may be surprising to economists because theoretically it would be expected that low IQ countries would have faster economic growth rates than high IQ countries because of what Weede and Kämpf (2002) call "the advantage of backwardness". This advantage should be present because of the

potential of poor countries to adopt the technologies and management practices of wealthier countries, whereas wealthier countries depend on innovation. However, the studies summarized in this section show that this is not so and that the correlation between national IQs and economic growth over the long period is positive. Meisenberg (2011) discuss this question and suggests that the explanation may be that a high IQ population is more likely to establish effective economic institutions that favour economic growth.

5. Poverty

The international criteria for defining poverty as a population living below \$1.25 a day (%) and population below \$2 a day (%), UNDP's Multidimensional Poverty Index (MPI-00-08) are used. The period covered is between 1993 to 2008. The correlations are shown below.

Dependent variable	N (No. of countries)	Pearson Correlation
Population below \$1.25 a day	101	-.667
Population below \$2 a day	101	-.710
MPI-00-08	100	-.773

All correlations are negative. National IQ explains 43-61 per cent of the variation in the three measures of poverty. The level of poverty tends to decrease when the level of national IQ rises.

6. IQ and Economic volatility

Hafer (2019) has shown that IQ is negatively correlated with economic volatility at $-.54$ even after controlling for other variables, the relationship remained. On average, high IQ countries are more likely to experience lower growth volatility.

7. Income Inequality

Two indicators are used to measure differences in the level of economic inequality within countries: Gini index and the percentage share of income or consumption of the highest 20%.

Dependent variable	N (No. of countries)	Pearson Correlation
Gini	147	-.466
Highest 20%	147	-.470

Gini and Highest 20% are negatively correlated with national IQ, but correlations are relatively weak. National IQ is related to the level of economic inequality, but the relationship is not strong.

8. IQ and Big government and Corruption

Row 1 gives a correlation of $-.47$ between national IQs and "big government" defined as government expenditure as a percentage of GDP, 1980-89. The negative correlation indicates that high IQ nations have less "big government".

Row 2 gives a correlation of .64 between national IQ and the efficiency of bureaucracy measured as quality and speed of decisions made by public officials.

Rows 3 through 10 give eight negative correlations ranging from -.27 to -.68 between national IQs and the amount of corruption measured as the Corruption Perception Index (CPI). The negative correlations show that there is less corruption in high IQ countries. The explanation for this proposed by Potrafke (2012, p. 109) is that "intelligent people have longer time horizons" and can understand that corruption is likely to have negative effects over the long term.

Variable	N Countries	r x IQ	Reference
Big government	138	-.47	Rindermann, 2008
Bureaucracy: quality	140	.64	Rindermann, 2008a
Corruption, 1999 - 2003	81	-.68	Meisenberg, 2004
Corruption, 1999 - 2003	126	-.54	Meisenberg, 2004
Corruption: 2003	132	-.59	Lynn & Vanhanen, 2006
Corruption, 1999 - 2005	55	-.62	Lynn et al., 2007
Corruption, 1980 - 2003	132	-.60	Rindermann, 2008a
Corruption, 2006	125	-.64	Potrafke, 2012
Corruption, 1996	120	-.27	Meisenberg, 2012a
Corruption, 1990 - 2000	120	-.67	Meisenberg, 2012a

9. Democracy, failed state and institutional quality

Rows 11 through 16 give six correlations ranging from .53 to .79 between national IQs and the amount of democracy measured as the extent to which countries have established democracies. Vanhanen (2009) proposed that the explanation for this is that "people in countries with low national IQs are not as able to organize themselves, to take part in national politics, and to defend their rights against those in power as people in countries with higher national IQs" (Vanhanen, 2009, p. 70). Rows 17 and 18 confirm these positive correlations (.57 and .58) using a different measure of democracy defined as the averaged scores of political rights and civil liberties and based on 126 and 82 nations.

Row 19 gives a correlation of -.58 between national IQs and the Failed State Index, a measure of state vulnerability to political breakdown. Row 20 gives a correlation of .72 between national IQs and institutional quality measured by the Doing Business Index, a measure of the ease of conducting business transactions in 21Asian countries.

Variable	N Countries	r x IQ	Reference
Democracy, 2002	192	.53	Lynn & Vanhanen, 2006
Democracy, 1950 - 2004	183	.56	Rindermann, 2008a
Democracy, 1996 - 2000	17	.79	Rindermann, 2008b
Democracy	170	.65	Meisenberg, 2009
Democracy	172	.58	Vanhanen, 2009

Democracy, 1950 - 2004	84	.60	Rindermann et al., 2009
Democracy/Freedom	126	.57	Meisenberg, 2011
Democracy/Freedom	82	.58	Meisenberg, 2011
Failed state index	117	-.58	Voracek, 2011
Institutional quality	21	.70	Jones, 2011

10. Political freedom, power resources, property rights and rule of law

Rows 21 through 25 give five correlations ranging from .49 to .77 between national IQs and the amount of political freedom and citizens' legal rights. Row 26 gives a correlation of .75 between national IQs and "Power Resources" defined as an index of the equality of the distribution of important intellectual and economic power resources. The positive correlation shows that countries with higher IQs have a more equal distribution of this power. Row 27 gives a correlation of .17 between national IQs and property rights measured as security of property rights and includes the efficiency of government bureaucracy. The correlation is quite low and only statistically significant at $p < .1$.

Rows 28 through 30 give correlations ranging from .62 to .82 between national IQs and the rule of law defined as an index of the independence of the judiciary and the ability of the citizen to enforce contracts in courts of law.

Variable	N Countries	r x IQ	Reference
Political freedom	81	.65	Meisenberg, 2004
Political freedom	55	.61	Lynn et al., 2007
Political freedom/rights	17	.77	Rindermann, 2008b
Political freedom	170	.49	Meisenberg, 2009
Political freedom, 1997	86	.62	Rindermann et al., 2009
Power resources	172	.75	Vanhanen, 2009
Property rights	98	.17	Ram, 2007
Rule of law, 1970 - 2000	131	.64	Rindermann, 2008a
Rule of law, 2000	17	.82	Rindermann, 2008b
Rule of law, 1970 - 2000	84	.62	Rindermann et al., 2009

11. National IQ of political leaders and state capacity

Jones and Olken (2005), using a unique instrument for change in leadership based on deaths of leaders while in office, provide empirical evidence that leaders do cause economic growth. Besley, Montalvo and Reynal-Querol (2011) further provide empirical evidence that the educational attainment of leaders matters for economic growth. Dreher et al. (2009) show that reforms are more likely during the tenure of former entrepreneurs. Entrepreneurs belonging to a left-wing party are more successful in inducing reforms than a member of a right-wing party with the same previous profession. Former professional scientists also promote reforms, the more so, the longer they stay in office. The impact of politicians' education is not robust and depends on the method of estimation. So, does the cognitive capacity of political leaders to influence state capacity?

Kodila-Tedika (2013) found there is a positive linear relationship between the state capacity and IQ of leading politicians across the world, but in Africa, this conclusion is reversed. The correlation is .37 (p-value = .0095) for state capacity and IQ of politicians for all countries but a negative beta of -.12 for African political leaders.

12. National IQ and Health

Studies show that intelligence is positively associated with good health and low mortality among individuals and that the same association would be present across nations. Studies showing that this is the case are summarized below.

Row 1 gives a correlation of -.48 between national IQ and low birth weight defined as below 2500 gr. showing that the incidence of babies with low birth weight is greater in low IQ countries. Barber (2005) suggests the likely explanation is that the incidence of low birth weight is determined largely by the incidence of malnutrition and diseases and that these are partly determined by national IQ. Rows 2 through 8 give seven studies showing negative correlations ranging from -.21 to -.52 between national IQ and various measures of the incidence of HIV and AIDS. The negative correlations show that HIV and AIDS are more prevalent in low IQ countries.

Variable	N Countries	r x IQ	Reference
Low birth weight	81	-.48	Barber, 2005
HIV/AIDS	129	-.46	Templer, 2008
HIV: percent, 2001 - 3	165	-.48	Rindermann, 2008a
HIV: percent	165	-.48	Rindermann & Meisenberg, 2009
HIV: percent	82	-.30	Rindermann et al., 2009
AIDS: percent, 2001 - 3	83	-.21	Rindermann et al., 2009
HIV: percent	113	-.52	Rushton & Templer, 2009
HIV/AIDS: death	104	-.47	Reeve, 2009
Infant mortality	81	-.34	Barber, 2005
Infant mortality	149	-.77	Lynn & Vanhanen, 2006

Rows 9 through 14 give six studies showing negative correlations ranging from -.34 to -.84 between national IQ and rates of infant mortality. The negative correlations show that rates of infant mortality are higher in low IQ countries. Kanazawa (2006) reports a negative correlation of -.84 based on 126 countries and notes that "the unstandardized regression coefficient of 22.5816 for national IQ . . . means that each additional point in the mean IQ of a population saves more than two and half infants from death per 1,000 live births." Rows 15 through 22 give eight studies showing positive correlations ranging from .51 to .84 between national IQ and life expectancy. Row 23 gives a negative correlation of -.49 between national IQs and the percentage of children with malnutrition. Nations with low IQs have low per capita income (r = -.74) and these populations are unable to provide their children with good quality nutrition. Rows 24 and 25 give negative correlations -.72 and -.65 between national IQ and maternal mortality probably reflecting the greater prevalence of infectious diseases and lower health care in low IQ countries.

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Variable	N Countries	r x IQ	Reference
Infant mortality	126	-.84	Kanazawa, 2006
Infant mortality	129	-.84	Templer, 2008
Infant mortality	116	-.67	Rushton & Templer, 2009
Infant mortality	191	-.69	Reeve, 2009
Life expectancy, 2002	192	.75	Lynn & Vanhanen, 2006
Life expectancy, men	126	.78	Kanazawa, 2006
Life expectancy, women	126	.82	Kanazawa, 2006
Life expectancy	56	.76	Lynn et al., 2007
Life expectancy	98	.51	Ram, 2007
Life expectancy	129	.84	Templer, 2008
Life expectancy	116	.74	Rushton & Templer, 2009
Life expectancy	190	.75	Reeve, 2009
Malnutrition	120	-.49	Lynn & Meisenberg, 2011
Mortality: maternal	149	-.73	Lynn & Vanhanen, 2006
Mortality: maternal	131	-.65	Reeve, 2009

13. Intelligence and Fertility

There is a negative association between national IQ and fertility – a phenomenon that is now known as dysgenic fertility first observed by Galton.

Variable	N Countries	r x IQ	Reference
Fertility	57	-.80	Lynn et al., 2007
Fertility	192	-.73	Lynn & Harvey, 2008
Fertility	111	-.71	Shatz, 2008
Fertility, 1960 - 84	130	-.73	Rindermann, 2008a
Fertility	192	-.73	Reeve, 2009
Fertility, 2000 - 2005	170	-.83	Meisenberg, 2009
Fertility	192	-.72	Dama, 2011
Birth rate	129	-.85	Templer, 2008
Birth rate	116	-.76	Rushton & Templer, 2009
Maternal age	172	.29	Dama, 2011
Population growth rate	111	-.52	Shatz, 2008
Population pyramids	162	.81	Lynn & Vanhanen, 2006
Sex ratio	192	.57	Dama, 2011

14. Crime and Intelligence

There is a negative relationship between national IQ and crime rate.

Variable	N Countries	r x IQ	Reference
Homicide, 1970s	70	-.50	Lester, 2003
Homicide, 1990s	-	-.82	Templer et al., 2007

Homicide, 1990s	116	-.25	Rushton & Templer, 2009
Rape, 1990s	116	-.29	Rushton & Templer, 2009
Assault, 1990s	116	-.21	Rushton & Templer, 2009

15. National IQ and Liberalism-Conservatism

There is a liberalism-conservatism dimension of political and social values. Liberalism can be defined as a syndrome of values including sympathetic attitudes to the poor, the unemployed, immigrants, criminals, alcoholics, drug addicts, the mentally retarded, and people with AIDS, toleration of homosexuality, prostitution and others with different views, support for abortion, lack of respect for authority, and lack of belief in religion. Conservatism consists of holding the opposite of these values. It has been shown by Kanazawa (2010) that liberalism is associated with intelligence. He reported that those who identified themselves as "very liberal" had a childhood IQ of 106.4, while those who identified themselves as "very conservative" had a childhood IQ of 94.8. Below are studies showing the relationship between national IQ and liberalism.

Variable	N Countries	r x IQ	Reference
Liberalism	127	.51	Kanazawa, 2009
Modernism	45	.74	Meisenberg, 2004
Post-Modernism	45	.43	Meisenberg, 2004
Interpersonal trust	41	.49	Rindermann, 2008a
Polygyny	187	-.61	Kanazawa, 2009
Polygyny	119	-.53	Dama, 2011
Son preference	119	.18	Dama, 2011

Row 4 gives a positive correlation of .49 between national IQ and "interpersonal trust" defined as the extent to which people trust each other to behave honestly in transactions. Apparently, "interpersonal trust" is stronger in more liberal and modern populations.

Row 5 gives a negative correlation of -.61 between national IQ and polygyny, a system in which one man is married to several women, and row 6 confirms this negative correlation of (-.53).

16. National IQ and its cognitive expression

Variable	N Countries	r x IQ	Reference
Acquiescence	79	-.55	Meisenberg & Williams, 2008
Extremity	79	-.78	Meisenberg & Williams, 2008
Books in home	63	.59	Rindermann, 2008
Speed of life	31	.59	Rindermann, 2008a
War	186	-.22	Rindermann, 2008a
Time preference	10	.70	Jones, 2011

Row 1 gives a negative correlation of -.55 between national IQ and "acquiescence" defined as the agreement with statements presented in opinion surveys. The negative correlation shows that people in

low IQ countries are more likely to acquiesce. Meisenberg and Williams (2008) report that acquiescence is associated at the individual level with low IQ, predict that the same association should be present across nations, and demonstrate that this is the case. Row 2 gives a negative correlation of $-.78$ between national IQ and "extremity" defined as the preferential use of the endpoints of the scale in statements presented in opinion surveys. Meisenberg and Williams (2008) note that extremity is associated at the individual level with low IQ, predict that the same association should be present across nations, and verify the prediction.

Row 3 gives a positive correlation of $.59$ between national IQ and the number of books in the home, largely reflecting the higher literacy in high IQ countries. Row 4 gives a positive correlation of $.59$ between national IQ and the speed of life as the speed of service at post offices, walking speed and the accuracy of clocks. The positive correlation suggests that the populations of high IQ countries are more energetic and alert.

Row 5 shows a negative correlation of $-.22$ between national IQ and war measured as participation, intensity and destructive effects of war in the years 1960-2000, including civil wars. The negative correlation shows that high IQ countries have less engagement in war. Row 6 shows a correlation of $.70$ between national IQ and low time preference in 10 Asian countries. Time preference was measured by responses to the question "Would you prefer \$3400 this month or \$3800 next month?" Choosing the second option indicates low time preference or in psychological terms, present orientation, delay discounting and a capacity to delay gratification. It has been shown in a meta-analysis of 24 studies that a low time preference (a capacity to delay gratification) is correlated with IQ at $.23$ (Shamosh and Gray, 2008)

17. National IQ and happiness

Across various measures of happiness, there is a positive and significant correlation with national IQ.

Variable	N	Pearson correlation	Spearman rank correlation
Happiness-Veenhoven	148	.640	.619
Satisfaction-Veenhoven	136	.631	.608
Satisfaction-GWP	147	.648	.647
WVS-1+2	57	.373	.480

Note: GWP – Gallup World Poll 2010, WVS – World Values Survey

Conclusion

While some of the research findings presented in this paper may sound controversial, one clear thing is that working on the cognitive development of a nation is key to socio-economic development. Governments need to invest in those interventions that enhance the cognitive ability of citizens especially children; better health, better nutrition and emotional stress-free environments.

Main Source:

Intelligence A Unifying Construct for the Social Sciences; Richard Lynn and Tatu Vanhanen (2012)

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