

ESGnomics





Foreword

Climate change, reduced inequality and better governance are all challenges to making our world more just and sustainable in the future, and Rothschild & Co is committed to this goal.

The Group's economic research is part of this approach, providing analysis on the main risks and opportunities to which economic players are exposed. ESGnomics aims to convey in an educational manner the contributions of economics to the discussion of Environmental, Social and Governance issues.

The damaging effects of corruption in the fight against global warming



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Addressing climate change requires citizens who understand the science and are willing to take action to improve the environment. Correspondingly, education plays a pivotal role in raising awareness and sensitivity about global warming.

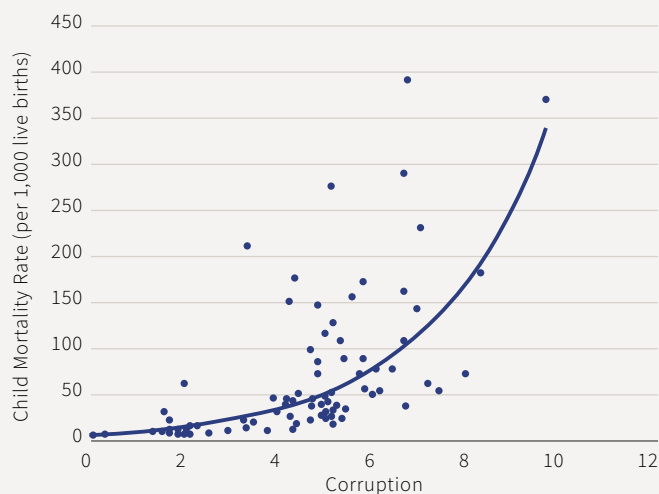
Corruption can lead to lower education spending...

Economic performance is determined by several factors, but as discussed in a prior edition of ESGnomics, there is a close relationship between growth and good governance. For instance, the latter is seen as stimulate investment by reducing uncertainty and creating an attractive investment environment.

Furthermore, governance is considered key to achieving sustainable development and empirical studies show that good governance has strong positive effects on measures of social trust, life satisfaction, peace and political legitimacy. In fact, countries where governance principles and structures are in place also provide less opportunity for corruption, and in turn government institutions that are reasonably free from corruption have a strong positive impact on a large set of outcomes related to human well-being⁽¹⁾.

“Governance is considered key to achieving sustainable development...”

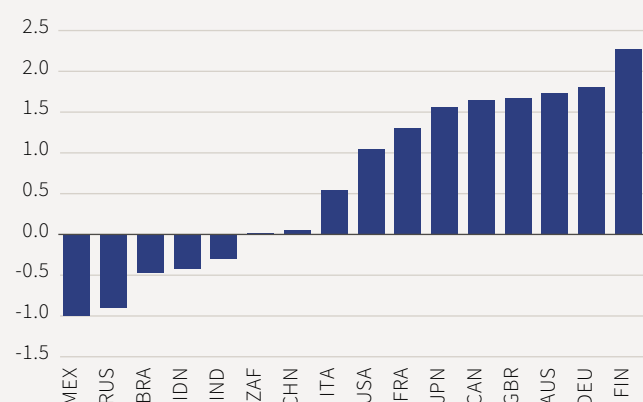
World – Corruption and Child Mortality



Source: International Monetary Fund (IMF), 2000.

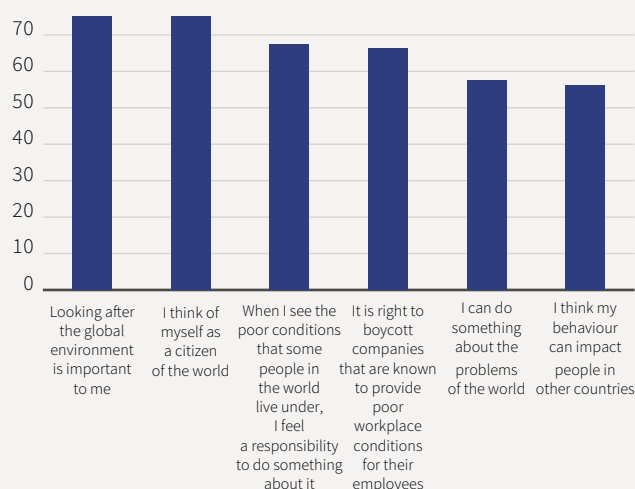
(1) UNODC, “Corruption and bad governance”, 2017.

World – Control of corruption index, 2021



Source : World Bank, Rothschild & Co Asset Management Europe, 2023.

OECD – Students who agreed or strongly agreed with the following statements: in %



Source: OECD, 2021.

“A negative, significant, and robust relationship between corruption and government expenditure on education exists...”

Conversely, child mortality rates in countries with high corruption are about one-third higher than in countries with low corruption, infant mortality rate is almost twice as high⁽²⁾, and dropout rates in primary education are five times as high. In fact, corruption is associated with lower spending on health care and education services, but rising military spending.

Indeed, economic theory suggests that large bribes is more likely to occur on items produced by firms operating in markets where the degree of competition is low as the existence of rents motivate rent-seeking behaviour. What's more, the illegal nature of corruption and the ensuing need for secrecy imply that specialized, high-technology goods whose exact value is difficult to monitor will be particularly sought after. In that regard, international trade in military aircraft-high-technology goods produced by a limited number of oligopolistic firms is usually seen as particularly susceptible to corruption⁽³⁾.

By contrast, basic education only requires limited technology that can be provided by a relatively large number of suppliers. Therefore, one might expect that it will be easier to collect substantial bribes on large infrastructure projects or highly sophisticated defence equipment than on textbooks or teachers' salaries⁽⁴⁾.

As such, a negative, significant, and robust relationship between corruption and government expenditure on education exists since it does not provide as many lucrative opportunities for government officials as other components of public spending do.

Yet, not only educational attainment is an important determinant of economic growth, but schools play a central role in raising environmental awareness and pro-environmental attitudes early on as they are a key source of environmental knowledge.

For instance, a recent study showed that the level of economic, financial, and scientific literacy of the American public is modest at best⁽⁵⁾. Furthermore, scientific knowledge is highly influenced by non-knowledge variables such as religion and ideology. Thus, this represents a tremendous challenge to raise awareness and the level of understanding of issues such as global warming, and the role of education is indeed paramount. What's more, understanding the science matters.

(2) Gupta, S., H. Davoodi and E. Tiongson, "Corruption and Provision of Health Care and Education Services", The Political Economy of Corruption, 2001

(3) Hines, J., "Forbidden Payment: Foreign Bribery and American Business", NBER Working Paper, 1995

(4) Mauro, P., "Corruption and the Composition of Government Expenditure", Journal of Public Economics, 1998

(5) Nordhaus, W. and D. Rivers, "The people and the experts", NBER Working Paper, 2023

... and in turn could adversely affect climate change

In 2018, 78% of students on average across OECD countries agreed or strongly agreed that looking after the global environment is important to them⁽⁶⁾.

However, results from the Programme for International Student Assessment (PISA) have identified a strong link between performance in science on the one hand, and collective well-being and sustainable development on the other hand. Furthermore, environmental awareness and pro-environmental attitudes are also correlated with science where high scores students can recognise the correct explanation for familiar scientific phenomena⁽⁷⁾.

Students at low levels of science proficiency report greater levels of optimism towards environmental issues, which can be problematic if optimism leads to complacency, and complacency to inaction. By contrast, students that gain a deep understanding of science are more aware of environmental issues and have a stronger sense of responsibility for sustainable development⁽⁸⁾.

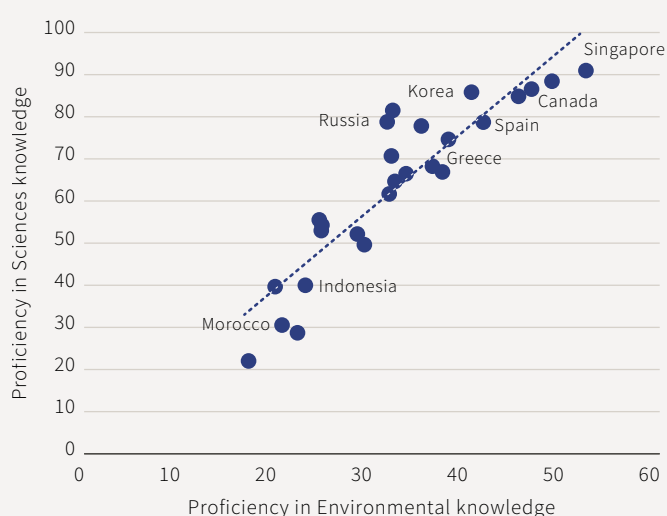
Although high levels of environmental awareness may not always lead to significant adjustments in behaviour, earlier research found that individuals with higher environmental awareness were more willing to accept costly political changes to protect the environment, such as higher fuel taxes⁽⁹⁾.

Yet, to prevent severe climate change, the world needs to rapidly reduce global greenhouse gas (GHG) emissions. While innovation is key, behavioural changes is also paramount and carbon taxes could be one of the most efficient and cost-effective way to address the problem of global warming.

The latter imposes huge costs on future generations who will suffer the consequences of climate change. However, these costs are not being reflected in current market prices for goods and services. For instance, businesses and households that produce GHG emissions by driving cars or generating electricity do not pay directly for the losses and damage caused by that pollution. To overcome this market failure, governments might need to internalise the costs of future environmental damage by putting a price on what causes it – namely GHG emissions.

“Schools play a central role in raising environmental awareness and pro-environmental attitudes...”

World – Proficiency in sciences and environmental knowledge in %, PISA



Source: OECD, "PISA 2018 Results (Volume I): What Students Know and Can Do", 2019.

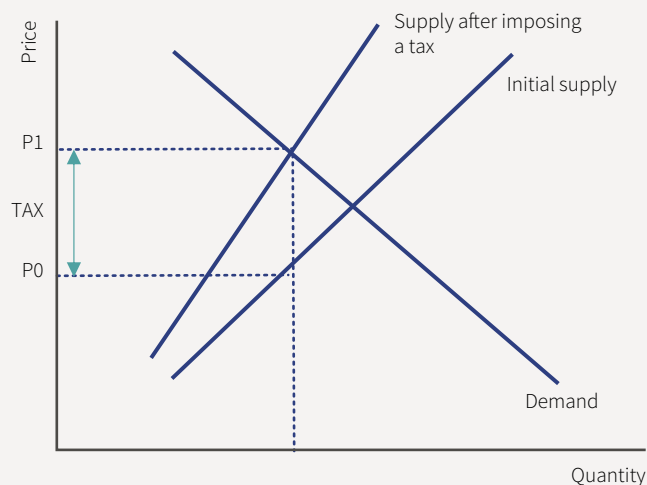
(6) OECD, "PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?", 2020

(7) OECD, "PISA 2018 Results (Volume I): What Students Know and Can Do", 2019

(8) OECD, "Spotlight #24. Think green: Education and climate change", 2021

(9) Diekmann, A. and P. Preisendörfer, "Persönliches Umweltverhalten", Kölner Zeitschrift für Soziologie und Sozialpsychologie, 1992

Supply-demand balance when imposing a tax



Source: Rothschild & Co Asset Management Europe, September 2022.

That said, there are several reasons why some countries have failed to implement carbon taxes, such as lobbying by fossil fuel stakeholders and opposition from the public because a tax will raise prices.

Overall, the international scientific community warned that, if current practices continue, the world will face many negative consequences, including water and food shortages, loss of biodiversity, and forced migration. Correspondingly, education plays a pivotal role as it provides the foundational knowledge and skills to identify and resolve environmental challenges, and shape attitudes and behaviours that lead to both individual and collective action.

“To prevent severe climate change, the world needs to rapidly reduce global greenhouse gas (GHG) emissions...”

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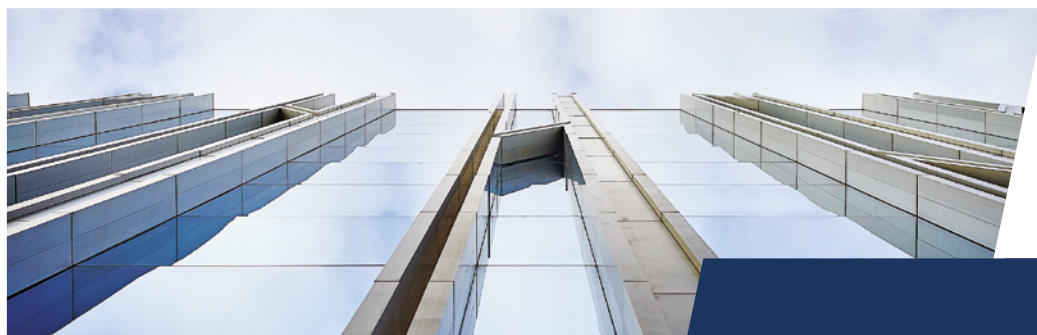
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