

11. PUBLIC SPENDING

Cost effectiveness

In economic terms, effectiveness measures the extent to which an activity meets its goals. Cost effectiveness, i.e. the ratio of an input to an intermediate or final outcome, reflects the relationship between resources spent and results achieved, and is critical for evaluating the success of government policies. The education and healthcare sectors have sufficiently well developed and internationally standardised measures of inputs and outcomes to allow their cost effectiveness to be meaningfully compared.

Healthcare

Health expenditure accounts for a significant part of overall public spending. In the future, it is expected to increase further in response to demographic trends such as ageing populations (OECD, 2021). Health cost effectiveness is assessed by comparing countries' improvements in life expectancy at birth (outcome) to their total health expenditure per capita (input). Current health expenditure comprises both public and private health spending; the latter may be particularly high in countries without comprehensive public health schemes, such as the United States. Life expectancy is a broad measure of health-spending effectiveness, as it can also be affected by factors beyond healthcare activities and spending, including life habits, physical environment and behavioural factors. Nonetheless, there is a positive relation between health spending and life expectancy at birth, with diminishing returns to health spending (Figure 11.8).

In countries such as Japan, Korea and Israel, life expectancy is relatively high given health expenditure levels. On the other hand, countries such as Mexico, Latvia and Lithuania have comparatively low life expectancy compared to other countries that spend similar amounts on health. An explanatory factor in Mexico may be comparatively high obesity rates, while substance abuse and self-harm significantly contributed to low life expectancy in both Baltic countries (Stumbrys et al., 2022). The United States has one of the lowest life expectancies (77 years), despite having by far the highest level of health expenditure per capita among OECD countries. Beyond affordability of healthcare, other factors like drug overdoses, firearm-related deaths and mental disorders may help explain this relatively low outcome (Ho, 2022).

Education

Every three years, the OECD Programme for International Student Assessment (PISA) evaluates the performance of 15-year-old students in reading, mathematics and science. Comparing the learning outcomes of students based on PISA scores, and cumulative expenditure on education per student provides an aggregate measure of the cost effectiveness of education systems.

Average cumulative expenditure on education across the OECD is USD 93 800 PPP per student in both primary and

lower secondary education (Figures 11.9 and 11.10). Overall, there is a positive relationship between expenditure and PISA results. Some countries (e.g. Estonia, Japan and Poland) achieve relatively high mathematics scores given their levels of expenditure per student. In contrast, countries such as Chile and Luxembourg achieve relatively low PISA scores in both mathematics and reading, considering the amount they spend per student. PISA scores are also influenced by additional factors such as the amount of time students spend learning outside regular lessons (homework, attending supplementary private study). Furthermore, the family and social environment in which children grow up also affect their education and its outcomes (OECD, 2022).

Methodology and definitions

Health spending measures the final consumption of healthcare goods and services (i.e. current health expenditure) including personal and collective healthcare but excluding spending on investments. Life expectancy measures how long, on average, a new born can expect to live, if current death rates do not change. It focuses on measuring the length of life and not the health-related quality of life of people alive. Reading performance in PISA measures the capacity of 15-year-old students to understand, use and reflect on written texts. Mathematical performance measures their mathematical literacy.

Further reading

Ho, J.Y. (2022), "Causes of America's lagging life expectancy: An international comparative perspective", *The Journals of Gerontology: Series B*, Vol. 77/Supplement_2, pp. S117-S126, <https://doi.org/10.1093/geronb/gbab129>.

OECD (2022), *Education at a Glance 2022: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/3197152b-en>.

Stumbrys, D., D. Jasilionis and D. Pūras (2022), "The burden of mental health-related mortality in the Baltic States in 2007-2018", *BMC Public Health*, Vol. 22/1, <https://doi.org/10.1186/s12889-022-14175-9>.

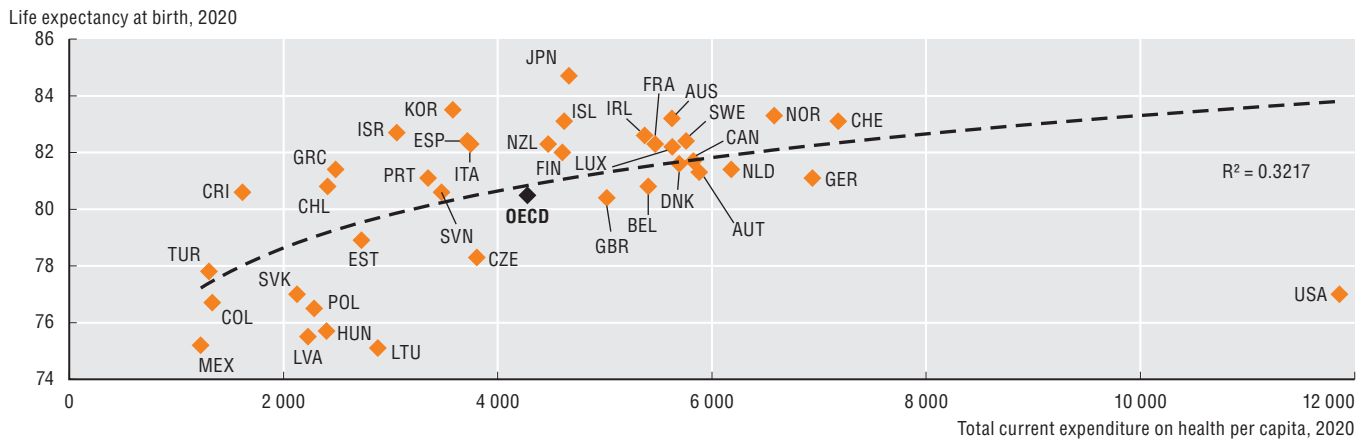
OECD (2021), *Health at a Glance 2021: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/ae3016b9-en>.

Figure notes

11.8. Expenditure data are provisional for Israel, Japan, Lithuania and Sweden. The New Zealand value is estimated. Life expectancies for the United Kingdom and Japan are estimated. Turkish life expectancy is for 2019.

11.9 and 11.10. All the data are unavailable for Costa Rica. Expenditure data are missing for Canada, Israel and Switzerland. PISA reading scores for Slovenia are missing.

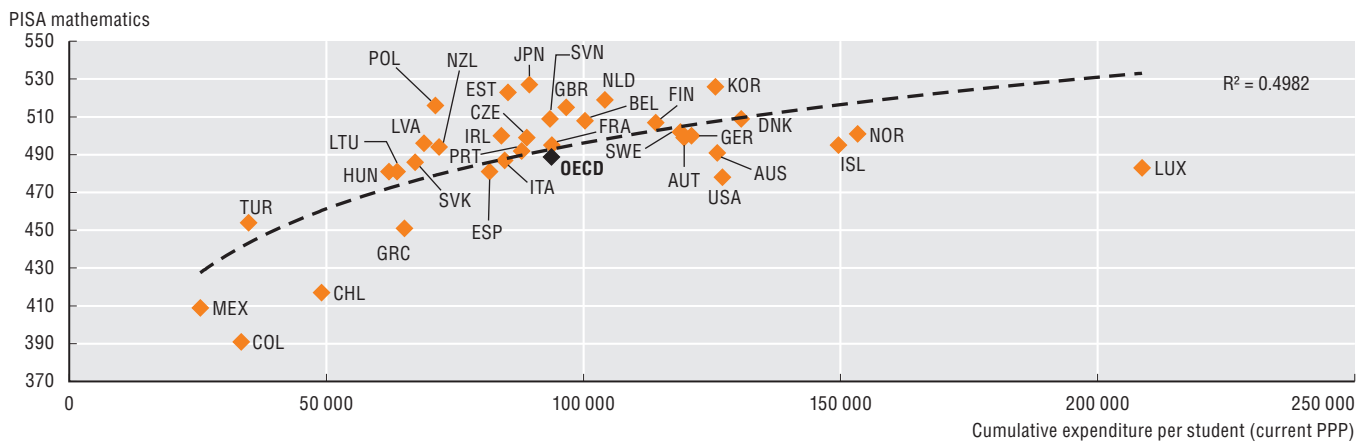
11.8. Life expectancy at birth and total current expenditure on health per capita, 2020



Source: OECD Health Statistics (database).

StatLink <https://stat.link/ivmgt9>

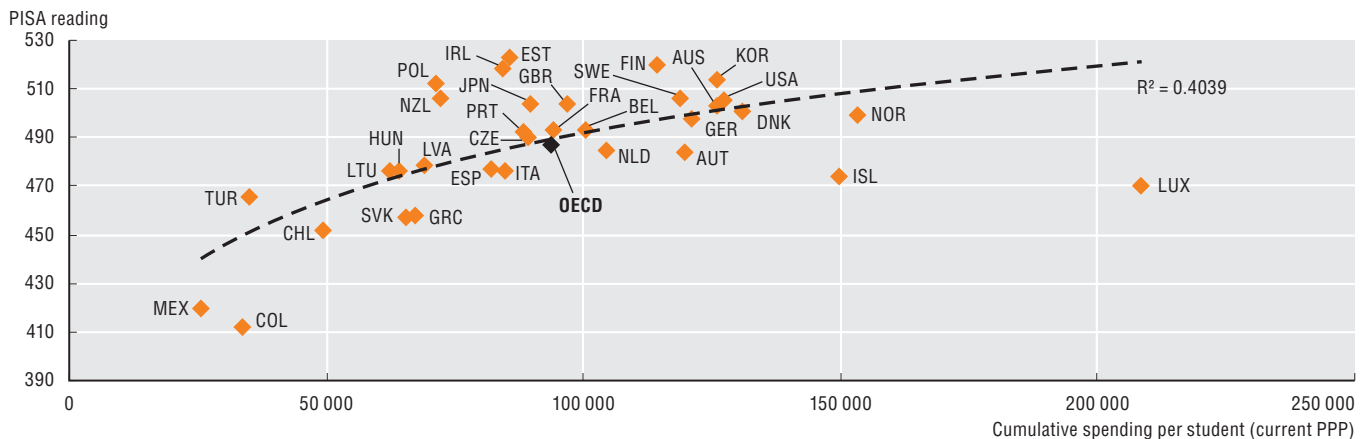
11.9. Performance in PISA (mathematics) 2018 at age 15 and cumulative expenditure per student between 6 and 15 years old, 2019



Source: OECD Education at a Glance (database).

StatLink <https://stat.link/h87wiz>

11.10. Performance in PISA (reading) 2018 at age 15 and cumulative expenditure per student between 6 and 15 years old, 2019



Source: OECD Education at a Glance (database).

StatLink <https://stat.link/patd08>



From:
Government at a Glance 2023

Access the complete publication at:
<https://doi.org/10.1787/3d5c5d31-en>

Please cite this chapter as:

OECD (2023), "Cost effectiveness", in *Government at a Glance 2023*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/58878226-en>

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.