

13. CORE GOVERNMENT RESULTS

Cost effectiveness

Effectiveness measures the extent to which an activity attains its desired objectives. 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 health care sectors have sufficiently well developed and internationally standardised measures of inputs and outcomes to allow their cost effectiveness to be meaningfully compared.

Health care

Health spending represents one of the largest shares of overall public spending. The constant development of new medical technologies, ageing populations in several OECD countries and the need to respond to crises such as the COVID-19 are expected to further boost future medical spending. In this context, evaluating the cost effectiveness of health systems could contribute to better targeted spending.

Health cost effectiveness is assessed by comparing countries' improvements in life expectancy (the most widely adopted and comparable outcome) to their total health expenditure per person. Life expectancy at birth can be affected by factors beyond health care activities and spending (e.g. living and working conditions, the physical environment, nutrition, and behavioural factors such as exercise, smoking and drug and alcohol consumption). Current expenditure encompasses both public and private spending; the latter is particularly high where people opt out from the system (e.g. Mexico) or where there are no comprehensive, public health schemes (e.g. the United States). Even so, there is a positive relationship between health spending and life expectancy. Some countries, such as Israel, Italy, Korea and Spain, have higher life expectancy than might be expected given their spending level. At the other end of the scale, Latvia, Lithuania and Mexico have comparatively low life expectancy for the amount they spend. Some of the factors explaining comparatively low life expectancy in Latvia and Lithuania are hazardous drinking, high exposure to air pollution and other risk factors for cardiovascular disease (OECD, 2019a). The United States also spends large amounts for the life expectancy it achieves. Privately provided health insurance in the United States tends to be expensive but other reasons such as high mortality rates from past smoking, high obesity rates and high death rates from opioid overdoses and road accidents help to explain its comparatively weak performance (Figure 13.13).

Education

Every three years, the OECD Programme for International Student Assessment (PISA) measures 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 between the ages of 6 and 15 provides an aggregate measure of the cost effectiveness of education systems.

On average, OECD countries spend about USD 100 000 PPP per student in primary and lower secondary education. Spending levels are positively correlated with PISA scores in reading, mathematics and science but the relationship is stronger at lower levels of spending and weakens as spending increases (OECD, 2019b). The effect of cumulative spending on PISA results is slightly stronger for mathematics than for reading, the two areas of knowledge considered here. Countries such as Canada, Estonia and Poland achieve comparatively high scores in view of the cumulative amount spent per student. Luxembourg, on the other hand, achieves comparatively low scores for the amount spent (Figures 13.14 and 13.15). PISA scores are also influenced by additional factors such as the amount of time students spend learning outside regular lessons (doing homework, taking additional instruction or attending private study). In addition, the family environment and wider social environment in which children grow up also influence education and its outcomes (OECD, 2020).

Methodology and definitions

Health spending measures the final consumption of health care 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 newborn 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

OECD (2019a), *Health at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/4dd50c09-en>.

OECD (2019b), *PISA 2018 Results (Volume I): What Students Know and Can Do*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/5f07c754-en>.

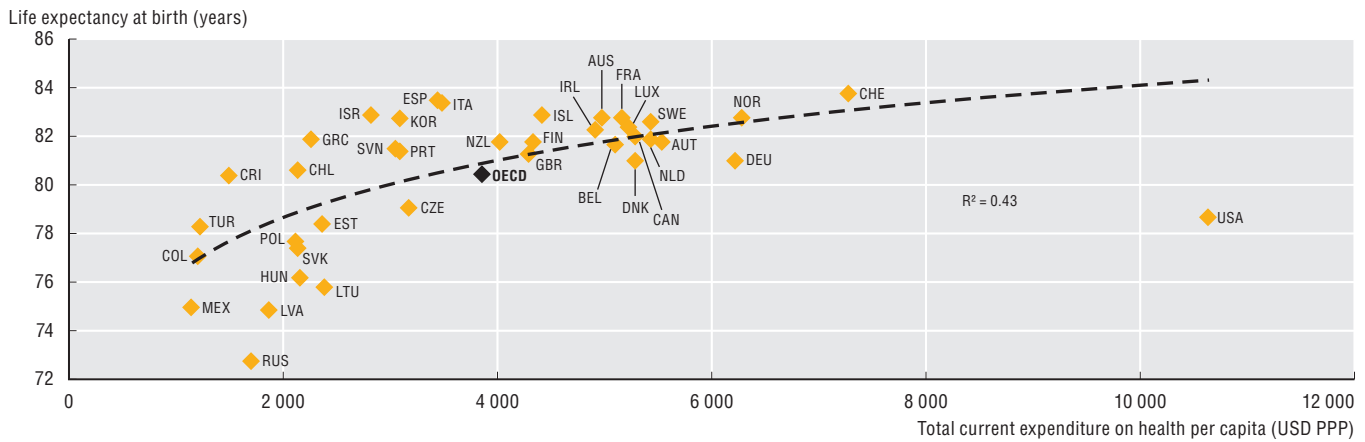
OECD (2020), *Education at a Glance 2020: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/69096873-en>.

Figure notes

13.13. Data on current expenditure were extracted from the Health Statistics database on 15 February 2021. Data for Australia are estimated. Data for Canada, Japan, New Zealand and Norway are provisional.

13.14 and 13.15. In Canada spending on primary education includes pre-primary programmes. Spending data for Colombia are for 2018 rather than 2017.

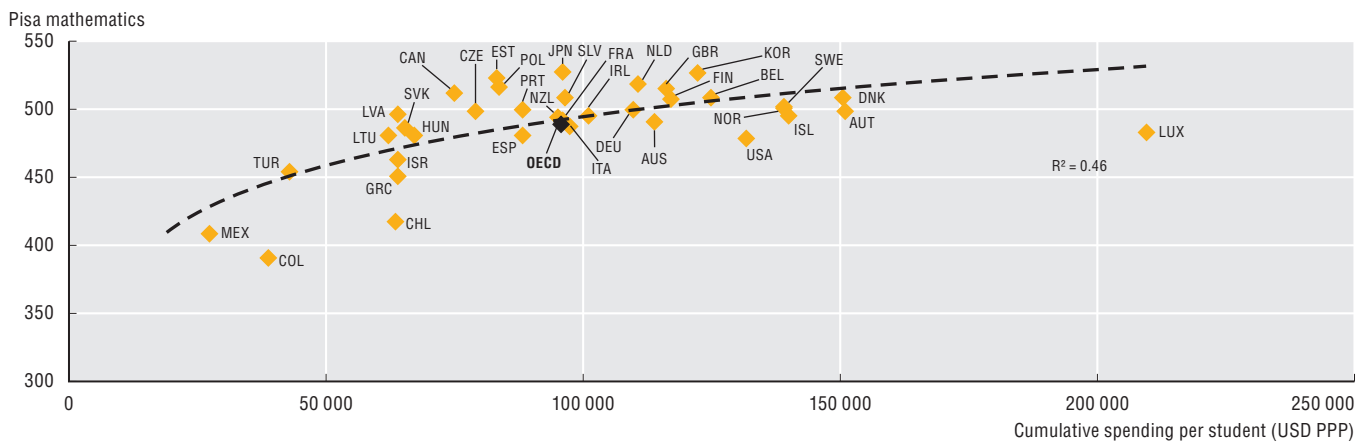
13.13. Life expectancy at birth and total current expenditure on health per capita, 2018



Source: OECD Health Statistics (database).

StatLink <https://doi.org/10.1787/888934259351>

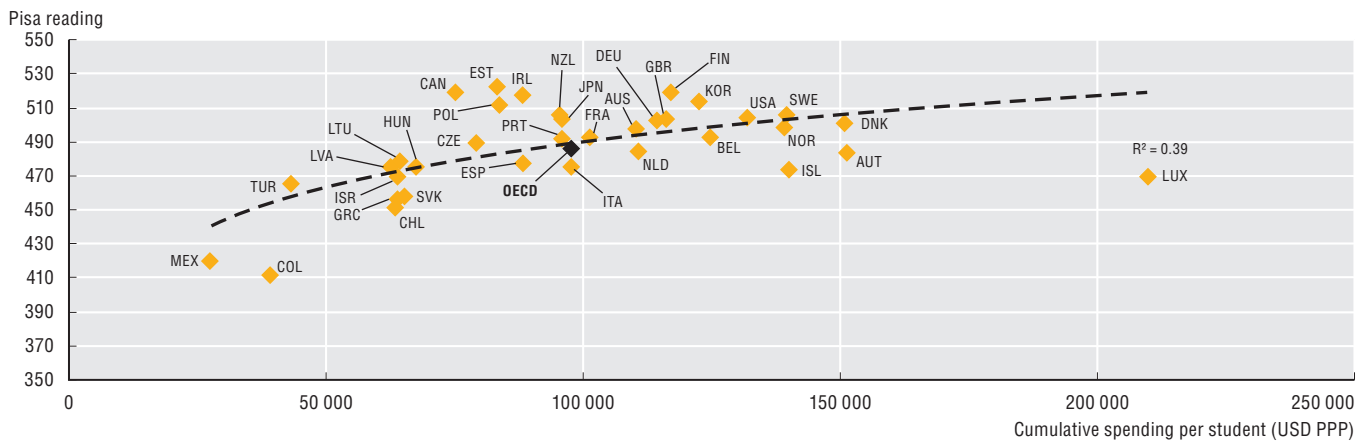
13.14. Performance in PISA (mathematics) 2018 at age 15 and cumulative expenditure per student between 6 and 15 years old, 2017



Source: OECD Education at a Glance (database).

StatLink <https://doi.org/10.1787/888934259370>

13.15. Performance in PISA (reading) 2018 at age 15 and cumulative expenditure per student between 6 and 15 years old, 2017



Source: OECD Education at a Glance (database).

StatLink <https://doi.org/10.1787/888934259389>



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