

## 11. CORE GOVERNMENT RESULTS

### Public sector cost effectiveness

Public sector cost effectiveness can be measured by looking at the relationship between inputs and broader outcomes in each sector. Generally speaking, outcomes refer to the effects of public programmes and services on citizens, in terms of welfare gains, health gains, educational/learning gains, and so on. While these outcomes can certainly be affected by the quality of programmes and services provided, they can also be affected by other factors, such as the socioeconomic background of the population and individual behavioural factors.

#### Health care

Measuring the outcomes of health care activities and spending is important not only because this matters directly to patients, but also because, since health expenditure represents a significant and growing share of public spending, there is a need for governments and health care providers to demonstrate that these expenditures are put to good use. Life expectancy at birth is one of the most widely used measures of health outcomes, but it has the disadvantage of only measuring the length of life and not the health-related quality of life of people alive. It is also affected by many other factors beyond health care activities and spending (e.g. the living and working conditions of people, the physical environment, behavioural factors such as smoking alcohol consumption, nutrition, etc.).

There is a positive relationship between total health expenditure per capita and life expectancy, suggesting that higher health spending tends to be associated with longer lives, although the relationship generally becomes weaker as health spending increases. Japan, Iceland, Italy and Spain have relatively high life expectancy relative to their expenditure. On the other hand, Hungary, Mexico, the Slovak Republic and the United States have a lower life expectancy than what might be “predicted” given their level of health spending.

Similar results are also found if only public spending on health is taken into account rather than total expenditure, which include also private spending. However, the extent to which Mexico and the United States have a relatively low life expectancy compared to the OECD average is reduced when only public spending on health care is taken into account, because a greater share of spending in these two countries comes from private sources (about half of all spending).

#### Education

Every three years, the OECD Programme for International Student Assessment (PISA) measures the performance of 15 years-old students in three domains: reading, mathematics and science. The comparison between the learning outcomes of student based on PISA scores and the cumulative expenditure per student between 6 and 15 years of age on education provides an aggregate measure of the cost effectiveness of education systems.

PISA scores in reading and mathematics are positively correlated to expenditures although the relationship seems to hold particularly for low levels of cumulative expenditures per student. Above a certain threshold (around 80 000 USD

PPP), student performance seems to depend on other factors such as the quality of teachers, the socio-economic backgrounds of students and school management practices, among others. Countries such as Korea, Canada and New Zealand spend less than the OECD average per student, but achieve better performances. On the other hand, Austria, Norway and Luxembourg have higher per student expenditures although their scores in reading and mathematics tests are below average.

#### Methodology and definitions

Life expectancy measures how long on average people would live based on a given set of age-specific death rates. Total expenditure on health measures the final consumption of health goods and services (i.e. current expenditure), plus capital investment in health care infrastructure. This includes spending by both public and private sources on medical services and goods, public health and prevention programmes, and administration.

Data on expenditures per student refer to the 2011 financial year. Spending per student equals the total expenditure by education institutions (both public and private) divided by the corresponding full-time equivalent enrolment and includes both core and ancillary services. Due to differences across countries in the duration of courses, annual spending per student may not fully reflect the total spent on a student. The achievement scores were based on the 2012 PISA assessments of 15-year olds in reading and mathematics.

Figure 11.13, Life expectancy at birth and total public expenditure on health per capita (2012), is available on line at <http://dx.doi.org/10.1787/888933249340>.

#### Further reading

OECD (2013), *Health at a Glance 2013*, OECD, Paris, [http://dx.doi.org/10.1787/health\\_glance-2013-en](http://dx.doi.org/10.1787/health_glance-2013-en).

OECD (2014), *Education at a Glance 2014*, OECD, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.

OECD (2014), *PISA 2012 Results: What Students Know and Can Do – Student Performance in Mathematics, Reading and Science (Volume I)*, OECD, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.

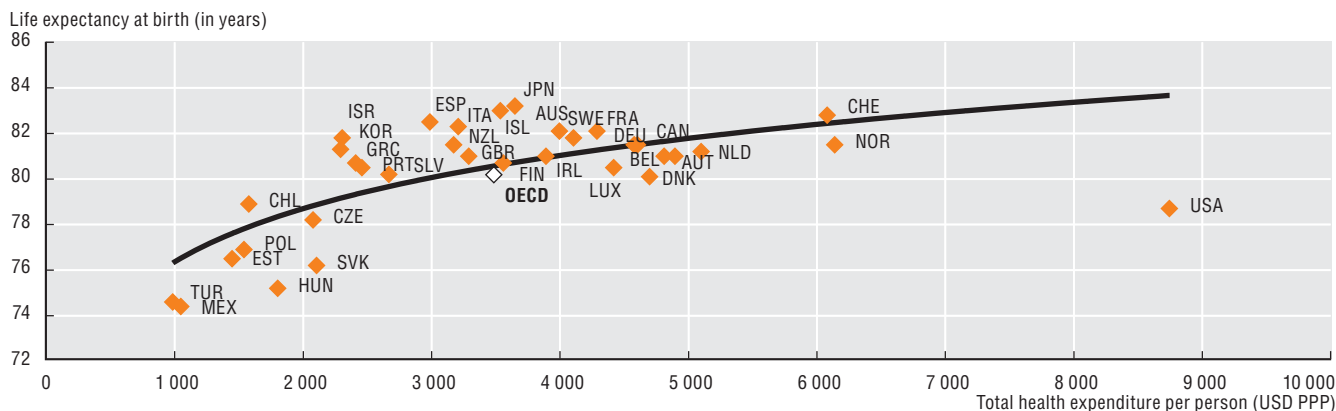
#### Figure notes

11.11: Data on health expenditure for Belgium, the Netherlands, New Zealand and Portugal excludes investment (current expenditure only). Data for Australia and New Zealand are for 2011 rather than 2012. Data for Chile, Finland, Germany, Iceland, Italy, Korea, the Netherlands and Norway are for 2013 rather than 2012. Data on life expectancy for Canada and the United States are for 2011 rather than 2012. Data for Mexico are for 2013 rather than 2012.

11.12: Data on cumulative expenditure for Greece are not available.

Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

11.11. Life expectancy at birth and total expenditure on health per capita, 2012

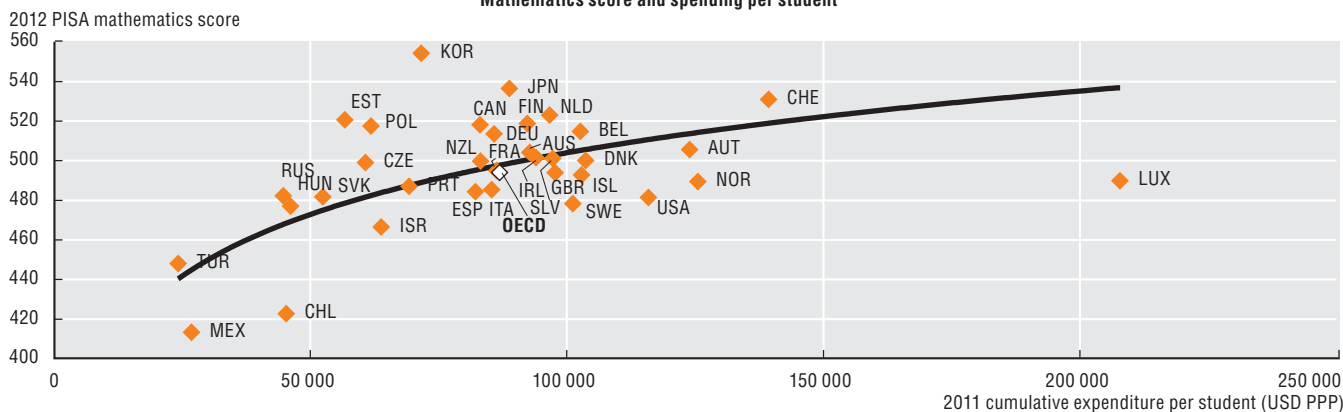


Source: OECD (2014), Health Statistics (database).

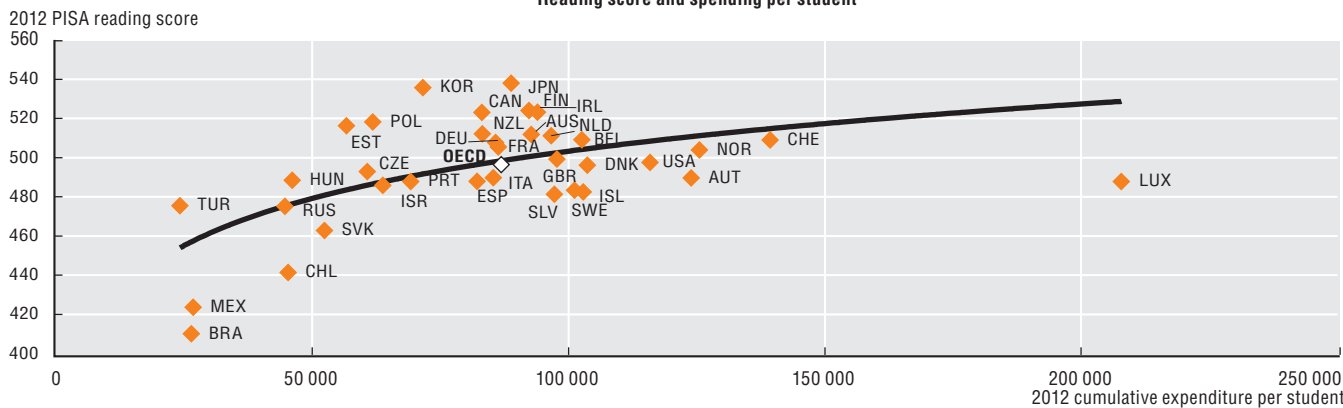
StatLink <http://dx.doi.org/10.1787/888933249324>

11.12. Performance in 2012 PISA scores and cumulative expenditure per student between 6 and 15 years old on education, 2011

Mathematics score and spending per student



Reading score and spending per student



Source: OECD (2014), Education at a Glance, 2014, OECD, Paris; PISA 2012 Results: What Students Know and Can Do – Student Performance in Mathematics, Reading and Science (Volume I), OECD, Paris.

StatLink <http://dx.doi.org/10.1787/888933249332>



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