Public sector efficiency

Estimating efficiency concerns the assessment of the relationship between inputs invested and outputs produced with those resources. The improvement of this measure as a way of controlling expenditures is a key objective of OECD governments. The fiscal crises faced by many countries both before and after the great economic and financial recession put public sector performance at the forefront.

Efficiency indicators compare output measures with input measures. Together, they are able to express efficiency in its two dimensions, i.e. technical (or operational) and allocative efficiency. Performance assessments and measurement should be based on economic (or cost) efficiency, i.e. the product of both operational and allocative efficiency.

Efficiency indicators are presented for: health care, education, justice and tax administration, where both input and output data exist and there is a developing consensus among countries on how to measure efficiency in an internationally comparable way.

Health care

There are several measures of health care efficiency in the sector, among which a key figure is the average length of stay (ALOS) in hospitals. All other factors being constant, a shorter stay is expected to reduce the cost per discharge and transfer care from inpatient care to less expensive recovery settings. However, shorter stays tend to be more service intensive and more costly per day. Too short a length of stay may also cause adverse effects on health outcomes, or reduce the comfort and recovery of the patient. In 2011 the average length of stay in hospitals for all conditions reached an OECD average of eight days. Mexico and Turkey had the shortest length of stay, at less than half the OECD average. On the other side, hospital stays were highest in Japan, where it reached almost 18 days, more than double the OECD average. In most countries, ALOS has fallen over the past decade, from an average of 9.2 days in 2000 to 8.0 days in 2011. At the system level, factors such as practice guidelines or payment systems affect ALOS in hospitals. In Japan, for example, the abundant supply of beds and the structure of hospital payments provide incentives to keep patients longer.

Justice sector

Governments are under great pressure to deliver efficient and responsive judicial services in order to avoid additional time and monetary costs for citizens seeking justice, including the expenses of legal representation. A pivotal indicator of efficiency of the civil judicial systems can be obtained by associating the cost of trial as a percentage of the value of the claim (i.e. the input) to the national average trial length of the first instance (i.e. the output). Slower courts decrease confidence in the justice sector and in the long run can increase costs for businesses and deter private investments. In addition, longer trials also mean a greater economic burden for both citizens and the state. The cost

of trial amounts on average to 19% of the value of the claim in OECD member countries, while first instances last on average around eight months. Korea, New Zealand and Norway prove to be at the top of performance scale, while longer and more expensive trials are held in the Slovak Republic. Furthermore, institutional frictions and an uneven geographical distribution of judicial resources seem to be the main causes for the remarkable length of Italian first instances. However, efficiency comparisons in the sector should not be considered as measures of quality of service and due process, or of the quality of the court's decision.

Education

Human capital development and accumulation is essential to ensure the creation of a highly-skilled workforce, well-equipped to compete in the international labour market and to become active citizens of responsive democracies. Educational attainments of individuals are considered a suitable measure of output of human capital production. When compared to the national cumulative expenditure per student (i.e. the educational input), they can offer an insight into which systems are able to deliver more efficient services. The PISA (Programme for International Student Assessment) measure of proficiency in reading and mathematics is positively correlated to expenditure for both primary and secondary studies, though the relationship seems to hold particularly for low levels of cumulative expenditure per student (*OECD PISA in Focus 13*). In addition to expenditures, student performance also depends on the quality of teachers, individual socio-economic backgrounds and school management practices, among other factors. Countries such as Finland, Korea and New Zealand spend less than the OECD average per student, but achieve better performances. On the other hand, Austria and Luxembourg have higher per student expenditures although their scores are below average.

Tax administration

Tax collection from citizens and businesses is the main resource on which governments rely to support the provision of public services. The "cost of collection" ratio is a standard measure of efficiency often adopted by revenue bodies, comparing the annual costs of administration with the total revenue collected over the fiscal year. A downward trend of the ratio can constitute, all the other things being equal, evidence of a reduction in relative costs (improved efficiency) or improved tax compliance (improved effectiveness). For most countries, a decreasing or stable trend over time can be observed between 2005 and 2008, most likely due to decreased costs. On the other hand, some revenue bodies observed an inversion in their trend from 2008 to 2011, with ratios increasing most likely because of reduced tax receipts in the aftermath of the economic crisis.

International comparisons of the efficiency of tax administrations must be made with caution. Differences in tax rates and the overall legislated tax burden; variations in the range and in the nature of taxes collected; macroeconomic conditions affecting tax receipts; and differences in the underlying cost structures resulting from institutional arrangements (e.g. multiple bodies involved in revenue administration, as in Italy), and/or the conduct of non-tax functions (e.g. customs) are all factors affecting the efficiency ratios presented here.

Methodology and definitions

Average length of stay (ALOS) refers to the average number of days that patients spend in hospital. It is generally measured by dividing the total number of days stayed by all inpatients during a year by the number of admissions or discharges. Day cases are excluded. The data cover all inpatients cases (including not only curative/acute care cases).

Justice data on civil trials have been drawn by OECD "Judicial Performance and its Determinants: A Cross-Country Perspective". Trial length is estimated (further information on page 159). Total private cost of trial (as a share of the value of the claim) discounted of the expected probability of receiving legal aid refers to a specific civil law case, from beginning to end. It is taken from the World Bank, *Doing Business* (database) and encompasses three different types of costs necessary to resolve a commercial dispute: court fees, enforcement costs and average lawyers' fees.

Data on expenditures per student refer to the 2009 financial year. Spending per student equals the total expenditure by education institutions (both public and private, where not specified differently) 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 assessments of 15-year olds administered as part of the PISA programme.

Data on tax administration are provided by surveyed revenue bodies or extracted from official country reports. Tax administration expenditures include three categories: administrative costs, salary costs and IT costs. IT expenditure was defined as the total costs of providing IT support for all administrative operations (both tax and non-tax related). For comparison purposes, efforts have been made to separately identify the resources used and the costs of tax and non-tax related functions.

Further reading

OECD (2013a), *Tax Administration 2013: Comparative Information on OECD and other Advanced and Emerging Economies*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264200814-en*.

OECD (2013b, forthcoming), *Health at a Glance 2013: OECD Indicators*, OECD Publishing, Paris.

OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eag-2012-en*.

Palumbo, G. et al. (2013), "Judicial Performance and its Determinants: A Cross-Country Perspective", *OECD Economic Policy Papers*, No. 5, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k44x00md5g8-en*.

Figure notes

2.21: The data for Canada, Japan and the Netherlands refer to average length of stay for curative (acute) care (resulting in an underestimation). Data related to 2011: data for Australia, Belgium, Canada, Chile, China, France, Norway and the Russian Federation are for 2010; data for Iceland are for 2009; data for Greece and Indonesia are for 2008. Data related to 2000: data for China and Korea are for 1999; data for Austria and Chile are for 2001; data for Luxembourg are for 2002.

2.22: Data for the United Kingdom only cover England and Wales. For more information about the data, please refer to *Doing Business* (database).

2.23: Expenditure data for Canada are for 2008. Expenditure data for Chile are for 2010. Expenditure data for Hungary, Ireland, Italy, Poland, Portugal, Slovenia, Switzerland, Brazil and the Russian Federation refer to public institutions only.

2.24: SSC and excises are not included for the Czech Republic, France, Germany, Poland, Portugal and the Slovak Republic. SSC are not included for Austria, Belgium, Japan, Korea, Luxembourg, Mexico and Spain. Excises are not included for Finland, Indonesia, New Zealand and Slovenia. For Brazil, Ireland and South Africa costs include customs. For Estonia costs include customs for 2005. For Spain costs include customs for 2008 and 2011. For Chile and Sweden costs exclude debt collection. For Switzerland VAT administration only is considered. For Iceland the computed ratios for these years are understated as not all costs appear to have been quantified for survey reporting purposes. For Italy the computed ratios for these years significantly understate the true ratio as they do not take account of expenditure incurred on tax related work carried out by other agencies that have not been quantified. For the United States ratios indicated vary from IRS-published ratios owing to use of "net" and not "gross" revenue collections as the denominator. Data for Italy does not reflect the undergoing fiscal reform to streamline the revenue collection.
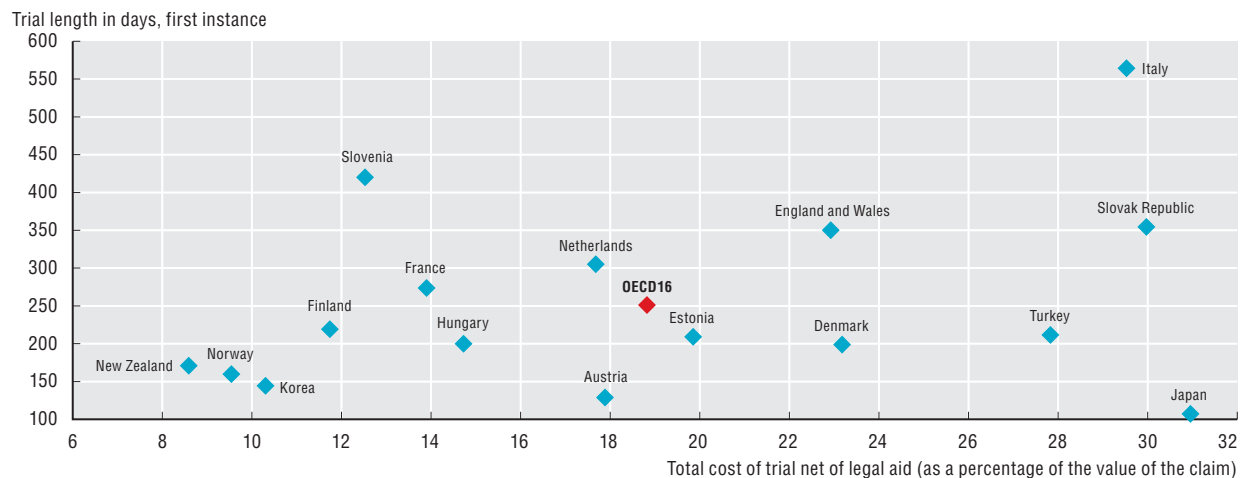
Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

2.21. Average length of stay for all conditions (2000 and 2011)
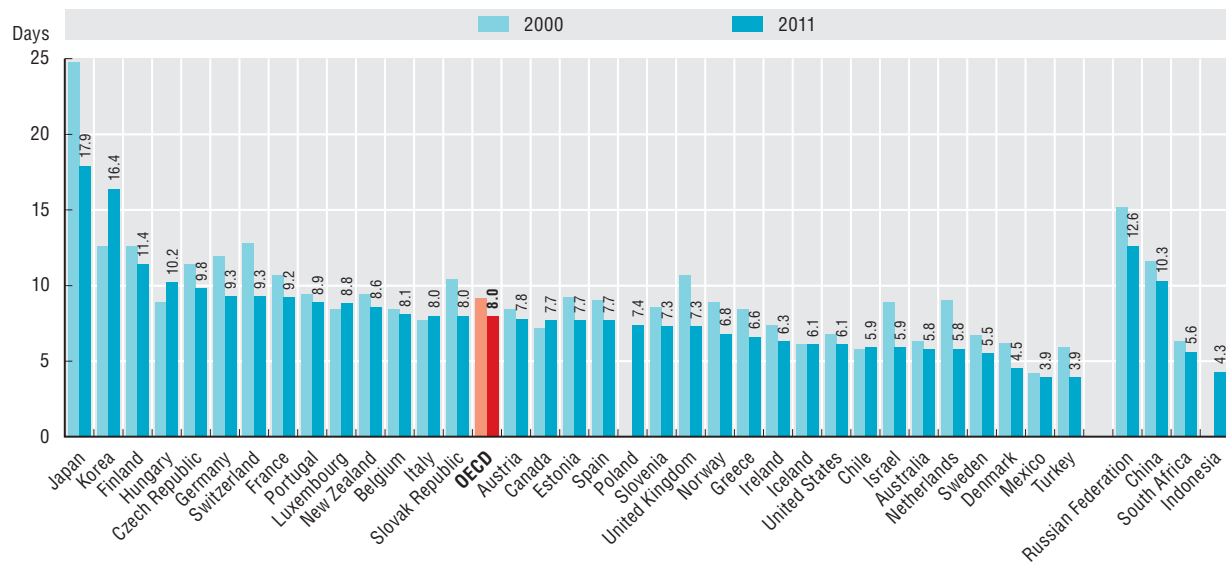
Source: OECD Health Statistics 2013.

StatLink ⬛ http://dx.doi.org/10.1787/888932941177

2.22. Trial length in days of first instance and trial cost (as a share of the value of the claim, 2012)

Source: World Bank, *Doing Business* (database); and Palumbo, G. et al. (2013), "Judicial Performance and its Determinants: A Cross-Country Perspective", *OECD Economic Policy Papers*, No. 5, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k44x00md5g8-en.*

StatLink ⬛ http://dx.doi.org/10.1787/888932941196

2.23. Performance in PISA scores and cumulative expenditure per student between 6 and 15 years old education in USD PPP (2009)

Reading score and spending per student

Mathematics score and spending per student
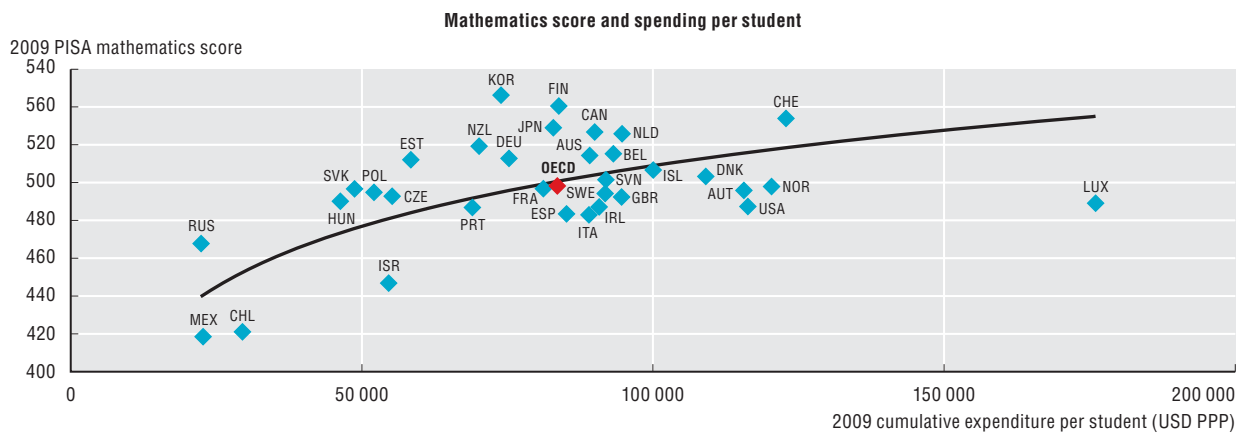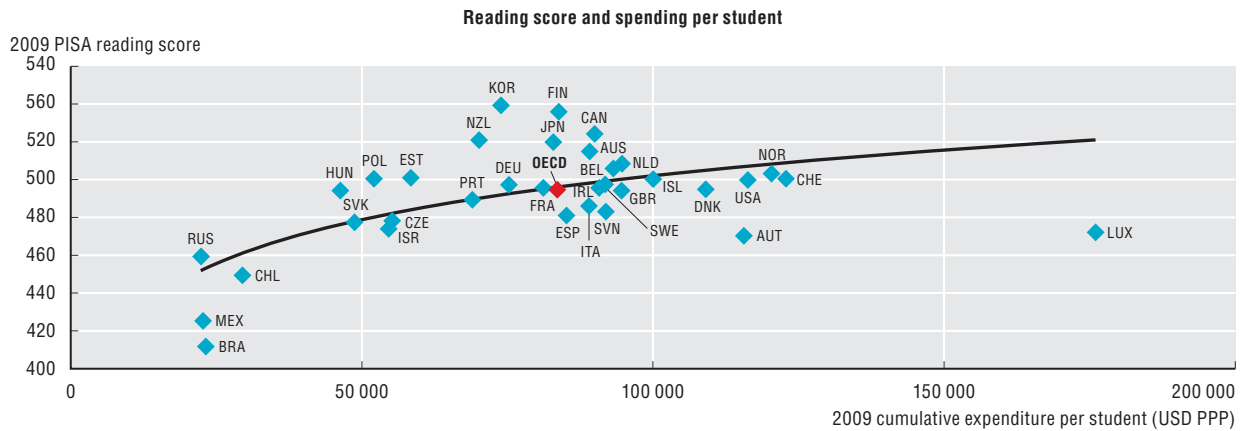
Source: OECD (2012), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eag-2012-en*, Table B1.3b; and OECD (2010), *PISA 2009 Results: What Students Know and Can Do – Student Performance in Reading, Mathematics and Science (Volume I)*, PISA, OECD Publishing, Paris, Table I.2.3, *http://dx.doi.org/10.1787/9789264091450-en*.

StatLink 📊 *http://dx.doi.org/10.1787/888932941215*

2.24. Cost of collection ratios (administrative costs/net revenue collection) (2005, 2008 and 2011)
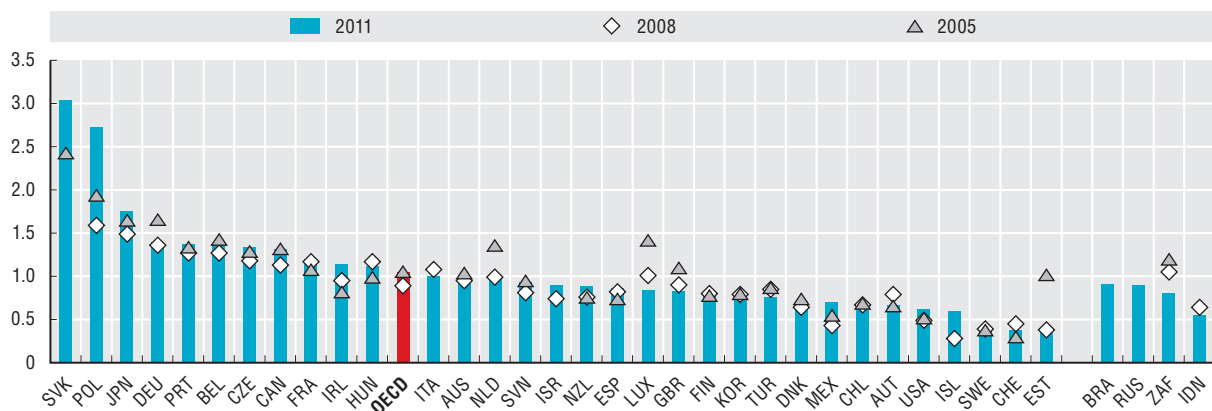
Source: OECD (2013), *Tax Administration 2013: Comparative Information on OECD and other Advanced and Emerging Economies*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264200814-en*.

StatLink 📊 *http://dx.doi.org/10.1787/888932941234*

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