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PRESS RELEASE

The efficiency frontier as a method for gauging the performance of public expenditure: a Belgian case study

by Bruno Eugène

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The analysis of general government efficiency aims to compare the means employed by the general government on the one hand and the performance of the public services in terms of achieving their objectives on the other hand. Efficiency can thus be defined as when the best possible performance is achieved using as few inputs as possible.

There are several reasons for looking at general government efficiency. First, the high share of public expenditure in GDP generates distortive taxation. In that sense, any inefficient use of public resources weighs on the economy as a whole. The second reason is also of a budgetary nature, as an ambitious fiscal policy is required to be able to deal with the costs of an ageing population and the challenge of climate change in the longer term. Given the high share of public expenditure in Belgium, therein lies a potentially large source of savings that needs to be addressed. Finally, a public sector that functions well is also important in the wider context of efforts to improve the competitiveness of the economy.

The objective of this working paper is to measure to what extent the Belgian general government is efficient or not in its role as provider of health care, education and public order and safety. In this context, the paper is limited to the measurement of productive efficiency. The purpose is not to address directly equity considerations or macroeconomic considerations such as growth or employment targets. Nor does it attempt to explain the reasons for the relative efficiency or inefficiency of Belgian general government.

The analysis presented here is based on the Free Disposal Hull framework, which has simple principles and is easy to interpret. Efficiency is established in relation to other countries' general government sectors, comparing resources deployed and the value of production. A country with a high production value and limited costs is thus more efficient than a country with a lower production value and higher costs. Taking all the efficient countries together enables an efficiency frontier to be established as a target for the other countries to meet.

Compared with other studies on the subject that have used the same theoretical framework, the originality of this working paper lies, on the one hand, in the importance that it attaches to the choice of appropriate outcome indicators, as well as the way in which these indicators are aggregated. On the other hand, the accent is clearly on the efficiency of the Belgian public sector.

Because the value of general government sector production is not usually determined by market forces, it has to be estimated with the help of other elements. These elements, referred to as outcome, should be a measure of the extent to which public authorities meet their targets. A first set of limitations to this framework has to do with the aggregation of the various outcome measurements. Indeed, the plethora of objectives pursued has to be aggregated into one single outcome indicator, as the costs of meeting the different objectives are not divisible. We show that aggregating the various sub-indicators into one single synthetic outcome indicator cannot avoid some degree of subjectivity, reflected in the weight given to each of the sub-indicators. There is nothing wrong with the idea of giving them an identical weighting, but it is certainly not guarantee of objectivity.

The second series of limitations is related to the indicators themselves, as the measurements made in this way are still not perfect and should therefore be treated with caution.

These words of caution aside, the analysis reveals that Belgium is relatively efficient in the field of health care when compared with the other countries considered, namely the EU-15, Japan, the United States and Poland. Only four European countries (Spain, Sweden, Luxembourg and Austria) along with Japan are found to be more efficient than Belgium. The latter has opted for relatively high expenditure in order to gain an equally high outcome. Limiting the synthetic outcome indicator to hard data only - (healthy) life expectancy and infant mortality - would give a less favourable picture for Belgium. There is some margin for improvement in the field of health care - which is somewhat more expensive than the EU-15 average - but not as much as in the other general government sector services analysed.

As a whole, the Belgian education system is more expensive but also produces better results than the European average. However, a clear distinction appears between the efficiency of the French Community's education system and that of the Flemish Community. An analysis based on a limited set of indicators reveals that Belgium's French-speaking education sector is less efficient. French Community pupils' performance in the PISA indicators in reading, mathematics and sciences is weak. The French Community therefore has a potential margin for improvement. The Flemish Community's efficiency in education is better, without however reaching the efficiency frontier.

As far as public order and safety are concerned, this paper concludes that improvements could and should be made, either to improve service or cut costs.