Summary

This paper provides an integrated approach which combines measures of efficiency in the production of a given public good and the monetary assessment of social welfare impacts related to public policy reforms. According to duality theory, two equivalent measures of social welfare are deduced. The first measure is obtained from the cost function, while the second is derived from the production function. The authors find a relationship, in monetary terms, between the changes in social welfare and the overall efficiency in the production function as well as in the cost function. Thus, they find a monetary valuation of the changes in the overall efficiency and highlight elements to explore the well-known trade-off between equity and efficiency.

Main Comments:

I believe the overall goal of the analysis is worthwhile. The paper deals with an important issue. The theoretical analysis conducted in this paper appears to me to be algebraically correct. I have, however, some concerns and suggestions.

- 1. Performance assessment within the public sector is a challenging exercise, certainly more than within the private sector. Public sector managers face different objectives and constraints compared to private sector managers. Profit maximization is not an appropriate behavioural goal in the public sector. Public sector managers are compelled in their capacity to allocate resources and services in an efficient manner, they do not have the complete control over the goods and services they provide. Moreover, they deal with different competitive conditions and ownership structures. For these reasons, I have some doubts about the methodology adopted by the authors. For instance, they start from Myrick-Freeman and Harrington's (1990) analysis to find the relationship between the production function and the changes in welfare computed when the degree of efficiency is modified. It is not clear how this framework, suitable for private goods, can be extended in a public sector context.
- 2. Measuring the public sector performance, both theoretically and empirically, requires the debate of issues that are not exhaustively discussed in the paper. First, there is frequently disagreement concerning how to define the public sector output. Health care, education and public safety provide good examples. Second, the services and goods provided by the public sector are often unpriced. Prices are frequently missing or distorted to serve other objectives. Thus, without market prices it would be impossible to obtain monetary valuations (the choice between market prices and shadow prices must be discussed in the paper). Caves et al. (1980) and Grosskopf et al. (1995), among others, derive shadow prices to construct a railroad productivity index and a distance function for hospital, respectively.
- 3. It would be interesting to expand the analysis by including a services quality indicator. A relevant aspect in efficiency assessment is the degree to which services are considered of acceptable quality from consumers. Public sector may be able to satisfy efficiency requirements, but consumers may not be satisfied with the quality of the provided services. In Fox (2013), Rolf Färe, Shawna Grosskopf and Pontus Roos constructed a "Malmquist-type" productivity index which allows the derivation of a quality-change component.

4. When exploring the results on social welfare changes over time (section 3.4), it is unclear to me what the implications of points (i) and (ii) are.

References

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Grosskopf, S., Margaritis, D., & Valdmanis, V. (1995). Estimating output substitutability of hospital services: A distance function approach. European Journal of Operational Research, 80(3), 575-587.