COMMENTS ON SESSION 2:
EVALUATING THE EFFICIENCY AND EFFECTS OF PUBLIC SPENDING

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The three papers that I will be discussing are quite different in nature. While the one by Rezk is essentially a macroeconomic paper attempting to define the optimal size of the Argentina government using an endogenous growth model, the two following ones deal with a rather microeconomic approach to expenditure efficiency. Afonso and St. Aubyn develop an application of non-parametric approaches to education and health expenditure efficiency in OECD Countries. Salinas-Jiménez, Pedraja-Chaparro and Smith analyze constructively critical issues and methodologies related to the application of non-parametric approaches, such as the ones presented in the previous paper, to assess public sector efficiency.

What do these three different papers have in common? Firstly, they focus on efficiency, and not effectiveness, of public spending. In other words they look to see if things are being done well, as opposed to asking whether those are the right things to do. Secondly, they use a conceptual input/output framework for analysis, implicitly treating the public sector like a private firm. Thirdly, they measure inefficiency by the "distance" from an efficiency frontier (or optimal state). Fourthly, they treat the congestion aspect of public goods (rival and excludable); as opposed to using the "pure" public good Samuelsonian approach to public goods. And finally, they focus on quantitative rather than qualitative aspects of public spending.

In the paper by Rezk on Argentina, public spending is considered as an input entering the production function. The model allows for defining the government size, measured by the ratio of public spending to GDP, which maximizes the per capita growth rate, considered as the final output. It introduces the revenue side of the public budget constraint, and allows for dynamic considerations. The model presents a consistency framework that could be easily applied to other countries as well.

The non-parametric approaches to expenditure efficiency, used by Afonso and St. Aubyn in the analysis of OECD countries, entail an undefined production function with assumptions about the input/output process. This is often the case in this kind of approaches, as indicated by Salinas-Jiménez, Pedraja-Chaparro and Smith more generally in their paper. The study presents different measures of output, related to health and education, without any revenue considerations, and using an analysis purely static.

Before turning into a broader discussion, I would like to make some specific comments on each one of the papers. The Argentina model establishes a clear link

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between spending and revenues, within a long run fiscal sustainability framework and growth objectives. This framework, which leads very nicely to tax policy recommendations, is very appropriate for Argentina, especially at a time when the country is emerging from a severe financial and currency crisis, because it redirects the attention to the revenues that can be generated internally given the needs for public spending. The paper accomplishes its objectives well although it does not allow for a differentiation among different sectors/levels of public spending and does not enter into public spending effectiveness considerations.

The study by Afonso and St. Aubyn about OECD countries presents an interesting international cross-country comparison for developed countries, using homogenous and reliable data. By suggesting two alternative non-parametric methodologies, DEA ands FHD, which they apply masterfully, the authors are able to show the implications of imposing (or not imposing) an efficiency frontier to the data and the difference in the results obtained using both methodologies. Since they find harder to show efficiency under DEA, comparing to FDH, they seem to imply that assuming the convexity of the efficiency function leads to less optimistic results and more cautious implications for policy makers deciding about budget allocations.

Another interesting aspect of this paper can be found in the introduction of intermediary outcomes (called in the paper "quantity inputs"), which are by definition closer to final outputs. The choice of variables (inputs, intermediary outcomes, outputs) used to compare education and health indicators in order to assess welfare, seems to be very comprehensive and appropriate.

The limitations of their approach go well beyond the paper itself. First of all, the methodology attempts to measure, not to explain, efficiency. Therefore the question of which inputs/outputs may be critical remains unanswered. Second, it over-simplifies the problem of attribution since other sector inputs (including private) and outcomes may also influence the final impact on education/health (example of Mexico). Third, it does not introduce external factors, different in all countries, which may also affect education and health outcomes. Finally, the static analysis may be somehow limited since final impact on the welfare of the population, measured by health and education indicators, usually requires a longer term horizon to materialize and a dynamic analysis illustrating trade-offs among different sectors (for example, basic infrastructure and access to water also affect health outcomes) may be needed.

The third paper by Salinas-Jiménez, Pedraja-Chaparro and Smith on issues and methodologies highlights most of the limitations encountered by the non-parametric approaches to efficiency analysis, of which the previous paper is a very good example. The study sets up the stage on public sector considerations very nicely, making the reader aware of the differences from private sector decision units. It presents a very thorough review of the literature and methodologies, and explains in detail the limitations of using the DEA approach.

In my general remarks, I would like to focus rather on the last two papers and interrogate the audience about the following question: How suitable are the non

parametric cross country approaches to assess public spending efficiency in developing countries?

Developing countries often lack the kind of reliable and homogenous data needed for DE and FHD, and present a great diversity of exogenous factors that make international comparison difficult. Moreover, the trade-offs among sectors are of critical importance for the design of public expenditure programs, and effectiveness of spending is as important, if not more, as efficiency. Finally, the longer term horizon needed to find impact on the ground and final results often covers many more years than in developed countries, due to weak institutional capacities and sometimes political instability.

In our discussion, I would like to suggest that we think about public spending using a broader framework, which I call the "three tiers of performance measuring". In the efficiency tier (lowest level), one would find efficiency and cost-benefit ratios which measure how economically inputs (funds, resources, expertise...) are converted into outputs. Examples of outputs would be the number of schools constructed, the miles of roads built, and so on and so forth. The non-parametric approaches to efficiency presented two of the papers in this session are most useful to enlighten policy makers at this level.

In addition, at the effectiveness tier (second level), one would see intermediary outputs, using a rather multi-sectoral perspective. Performance would be measured by progress towards strategic goals, linking different sectors in the economy according to pre-established development priorities. In that respect, improvements in the health sector would be judged according to the priorities established, in connection with other sectors such as education or rural development, and not just in reference to a specific project or intervention. For example, instead of measuring the miles of roads built, the focus would be on how much access of the different groups of the population (by region, village, age, gender, occupation, etc.) has improved as a result of the overall strategy. Can nurses now make it to the hospital? Do children in remote areas use the road to attend school?

Finally, in the third and highest level tier, one would find the final growth and poverty reduction objectives, such as in the Millennium Development Goals (MDGs), including variables like GDP growth per capita, infant mortality and maternal mortality. These final goals can be achieved only as a result of improvement in the first two levels, efficiency and effectiveness. Not only things must be done right and efficiently, but actions need to be taken in the key priority areas for development, in an integrated manner. Trade offs among sectors are key to determine final results due to the numerous linkages among them.

The main message that I would like to convey to this audience is that in addition to searching for the best methodologies to assess public expenditure efficiency, we should also intensify our efforts to determine the factors that would trigger higher effectiveness and contribute to achieving ambitious final results, as reflected in the MDGs. Efficiency alone will not be enough to halve the population living in extreme poverty and improve the education and health standards of the poorest.