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Application Driven Variable Reordering and an Example in Reachability Analysis

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Kurzfassung

Aims/Background: This study measures the performance of the health system in 165 countries and its relationship with public financing. **Methods:** We use value efficiency analysis (VEA), a refinement of data envelopment analysis (DEA), to measure the efficiency of the health systems using data on healthy life expectancy and disability adjusted life years as health outcomes. Expenditure on health and education are used as inputs to the health system. **Results:** The group of high income OECD countries shows the largest indexes of efficiency and also the lowest dispersion. In contrast, low income countries also have the most inefficient health systems, which implies that there are more opportunities for improvement. The average efficiency score is 0.96 for high income countries, 0.83 for upper-middle income countries, 0.86 for lower-middle income countries and only 0.76 for low income countries. Only 17 countries have a score equal to 1 and therefore are completely efficient and can be taken as referents. The index of efficiency is found to be positively associated with government expenditure on health as a percentage of total expenditure on health. **Conclusions:** The analysis of the results shows that the public share in health expenditure and the weight of health expenditure in public budgets are two factors positively associated with the performance of the health systems. The study also highlights the advantages of using VEA over DEA in the measurement of performance.