

Well-being and resource-efficiency at the meso level

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Short abstract

A resource efficient society should provide high well-being at a low cost to the environment while preserving the natural system/natural resources for future generations. Traditionally, well-being has always been assessed on the national level. In contrast, the economic system consists of specific sector with specific functions for the society ranging from providing food to education to health services. The DESIRE project will test the assumption that the performance of sectors is more relevant for attainment of welfare of nations and the well-being of its citizens than the gross output of economies (GDP) or value added of sectors. This calls for other measures of sector performance than value added. Resource use and environmental impacts of sectors can then be related to this new sector performance measures and thus allow to evaluate the resource efficiency of services to society provided by the sectors. This will further contribute to the discussion in the "Resource efficiency beyond GDP" special session.

Long abstract

In the past fifty years humans have consumed more goods and services than in all previous generations put together. Various sources estimate that in a business as usual scenario global population and wealth growth until 2050 may lead to an annual resource extraction that is 2 to 4 times higher as in 2000. This is a trajectory that could 'crash the economy against the Earth'.

The Europe 2020 Strategy establishes resource efficiency as one of its fundamental Flagship Initiatives for ensuring the smart, sustainable and inclusive growth of Europe. The Resource Efficiency Flagship should "help the EU to prosper in a low-carbon, resource constrained world while preventing environmental degradation, biodiversity loss and unsustainable use of resources".

This challenge of addressing multiple resource constraints implies that the EU policy agenda in the next decades needs an excellent insight in how resources are used in society, and particularly how access to and efficient use can be fostered. Several key aspects need to be considered: A consistent framework of resource indicators should be made available. Indicators for resource efficiency of production processes should be consistent with indicators for the resource efficiency of consumption patterns and these again should be consistent with how the development of resource efficiency is tracked on the national, EU and global level. Such a framework allows to link consumption to production and to evaluate the contribution of innovations to resource efficiency. Indicators should look deeper than just the national level. The role of global trade in enhancing resource utilization needs to be adequately considered.

The aim of DESIRE project is to improve the research-policy link by making a methodologically robust and concrete proposal to bridge the gap between the roadmap to develop a better measurement of progress and the Resource Efficiency Roadmap. In a first step, DESIRE will test the assumption that the performance of sectors (as quality and quantity of services delivered to citizens) is more relevant for attainment of welfare of nations and the well-being of its citizens than the gross output of economies (GDP) or value added of sectors. At sector level, we will investigate what useful alternative

references can be employed in order to develop a framework for performance/outcome-oriented indicators at sector level ('Beyond value added'). The work will address the delivery of service to the population, the quality of the service, and the build-up and maintenance of manufactured, social and human capital as it can be tied to specific economic activities. The basic concept here is that the indicators track the performance of sectors to deliver the desired outcomes to the society as well as its efficiency. For the education sector, for example, the value added consists mainly of the salaries of the employed staff. Evidently, the salaries of employed staff in the education sector do not sufficiently reflect societal objectives, which are connected to educational performance. A more meaningful performance/outcome indicator would measure rather the candidates produced or, even better, the quality of the education delivered. Outcomes, which could be connected to the transport and energy sector could be the heating provided for housing, the transport services provided to household and industry, etc. In many cases outcomes such as education are not only influenced by economic supply and use relations but also depend on a number of intangible cultural and social factors. Thus, a particular challenge for measuring resource efficiency will be to delineate a specific outcome of a sector, so that, for example, it can be placed in relation to resource inputs.

Within the DESIRE project we aim to identify potential performance/outcome-oriented indicators for economic activities with a focus on key sectors and populations. A framework for describing and measuring the performance of economic activities at the sector level will be elaborated. Based on this framework the DESIRE project aims to describe linkages of of sector-level outcome and performance to overall measures of well-being as well as social and environmental progress.