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Social Value of Travel Time Savings in Sub-Saharan Africa

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Abstract : The significance of transport infrastructure investments for economic growth and development has been central to the World Bank's strategy for poverty reduction. Among the conventional surface transport infrastructures, road infrastructure is significant in facilitating the movement of human capital goods and services. When transport projects (i.e., roads, super-highways) are implemented, they come along with some negative social values (costs), such as increased noise and air pollution for local residents living near these facilities, displaced individuals, etc. However, these projects also facilitate better utilization of existing capital stock and generate other observable benefits that can be easily quantified. For example, the improvement or construction of roads creates employment, stimulates revenue generation (toll), reduces vehicle operating costs and accidents, increases accessibility, trade expansion, safety improvement, etc. Aside from these benefits, travel time savings (TTSs) which are the major economic benefits of urban and inter-urban transport projects and therefore integral in the economic assessment of transport projects, are often overlooked and omitted when estimating the benefits of transport projects, especially in developing countries. The absence of current and reliable domestic travel data and the inability of replicated models from the developed world to capture the actual value of travel time savings due to the large unemployment, underemployment, and other labor-induced distortions has contributed to the failure to assign value to travel time savings when estimating the benefits of transport schemes in developing countries. This omission of the value of travel time savings from the benefits of transport projects in developing countries poses problems for investors and stakeholders to either accept or dismiss projects based on schemes that favor reduced vehicular operating costs and other parameters rather than those that ease congestion, increase average speed, facilitate walking and handloading, and thus save travel time. Given the complex reality in the estimation of the value of travel time savings and the presence of widespread informal labour activities in Sub-Saharan Africa, we construct a "nationally ranked distribution of time values" and estimate the value of travel time savings based on the area beneath the distribution. Compared with other approaches, our method captures both formal sector workers and individuals/people who work outside the formal sector and hence changes in their time allocation occur in the informal economy and household production activities. The dataset for the estimations is sourced from the World Bank, the International Labour Organization, etc.

Keywords : road infrastructure, transport projects, travel time savings, congestion, Sub-Sahara Africa
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