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Valuation of public investment to support bicycling (FV-09)

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In this paper we develop a framework to value public investments with the purpose of increasing bicycling that explicitly accounts internal costs of bicycling, which are typically neglected in current established approaches that value bicycle spending by means of gross health benefits alone, as are inframarginal benefits to existing cyclists. By monetizing internal costs independent of health benefits, we can assess the degree of internalization of private benefits and/or the internalization of external benefits such as environmental improvements due to altruistic preferences by cyclists. Our framework further conceptualizes the complementarity between “hard” (investments in infrastructure) and “soft” measures (informational campaigns) in bicycle policy. Finally, we propose an empirical method for identifying internal costs using a latent variable approach and apply it to eight Swiss cities. Our results imply that Swiss cyclists internalize more than mortality-based benefits. However, because data for some important bicycle mode choice determinants are not available, our results cannot inform policy directly at the current stage. Instead, the contributions of our paper are the development of an economically consistent framework to value public bicycle investments and the identification of crucial data needs for the development of comprehensive assessments informing bicycle policy decisions.

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