

Public Capital and International Trade: A Dynamic Analysis ^{*}

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Abstract

This paper develops a dynamic trade model with a public intermediate good whose stock has a positive effect on private sectors' productivity. Under the assumptions of one primary factor (labor), the national government that determines the level of the public good using Lindahl pricing, and the stock of the public intermediate good as a kind of "unpaid factors", this paper examines the economy's trade pattern and the long-run effects of trade. It is shown that a country with a lower (resp. higher) labor endowment tends to become an exporter of a good which is more (resp. less) dependent on the stock of the public intermediate good. Depending on the country's trade pattern, trade affects the steady-state stock of the public intermediate good and thereby induces a biased technological change. Specifically, in comparison with the autarkic steady state, free trade expands (resp. shrinks) the long-run production possibilities frontier in a country exporting a good that is more (resp. less) dependent on the public intermediate good. This implies that a smaller country unambiguously gains from trade in the long run, whereas a larger country may lose from trade in the long run.

Key Words: Public intermediate good; Dynamic Lindahl pricing; Trade pattern; Long-run PPF; Gains/losses from trade

JEL classification: F11; H41

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