ELSEVIER

Journal of Development Economics
Vol. 62 (2000) 315–342

JOURNAL OF Development ECONOMICS

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Differential tariffs, growth, and welfare in a small open economy ☆

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Abstract

This paper analyzes the effects of consumption and investment tarrifs on growth and welfare. With endogenous laber supply, consumption tariffs are not growth-neutral. Instead, an increase in either tariff reduces both the short-run growth rates of key economic variables such as GDP, consumption, and foreign debt, and their common long-run equilibrium growth rate. Numerical simulations suggest that the investment tariff has a more adverse effect on growth rates and welfare than does a comparable consumption tariff. Accordingly, a revenue-neutral substitution of a consumption tariff for an investment tariff is both growth-enhancing and welfare-improving. The second-best and first-best optimal tariffs are characterized and shown to involve the heavy subsidization of investment.

JEL classification: E62; F43; O20
Keywords: Small open economy; Elastic labor supply; Endogenous growth; Tariff reform

☆ This paper was written while the first author was visiting the University of Washington, Seattle.
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0304-3878/00/$ - see front matter
PII: S0304-3878(00)00087-0

1. Introduction

The impact of tariffs on employment, the rate of capital accumulation, and growth are key issues in macroeconomic policy-making in open economies[2]. Recent approaches to this issue have been based on Ramsey-type models of capital accumulation. An early paper to develop such an analysis is Sen and Turnovsky (1989), who introduce a consumption tariff in a one-sector production model and find that it leads to a contraction in employment both in the short-run and in the long-run, accompanied by a uniform decumulation of capital.[3]

Multi-sector analyses of tariffs paint a somewhat different picture. Brock and Turnovsky (1993) adopt a two-sector factor-specific model of trade in which the import-competing sector uses capital while the export sector employs land, both in conjunction with intersectorally mobile labor. Their focus is on the differential effects of a consumption tariff vs. an investment tariff and the implications of this for programs of tariff reform. They find that a uniform increase in both tariffs leads to an unambiguous expansion in the long-run capital stock. This is because the substitution effect of the tariff induces labor to switch to the import-competing sector, thereby increasing the productivity of capital. A tariff on investment alone reduces capital, as one would expect, but paradoxically, the welfare effects of a consumption tariff can be at least as harmful as those of an investment tariff. Consequently, policy recommendations based on this type of model stress the need to lower consumption tariffs at the expense of higher investment tariffs.

The fact that the long-run growth rate is exogenous in the Ramsey model makes it inappropriate for analyzing the impact of tariffs on the long-run growth rate. For this purpose, the endogenous growth framework is more suited, and a recent paper by Osang and Pereira (1996) takes up this issue using a two-sector endogenous growth model of physical and human capital accumulation. With labor supplied inelastically, they find that long-run growth rates are unaffected by changes in the tariff on consumption goods, while higher tariffs on investment goods have a negative impact on long-run growth rates.[4] These results suggest that governments interested in stimulating long-term growth should implement a tariff reform, which under the condition of revenue-neutrality would reduce tariffs on investment good imports at the expense of higher tariffs on consumption goods. Provided that households care enough about future consumption levels, such a reform should

[2] In her Presidential Address at the 1997 AEA meeting, Krueger (1997, p 1) pointed out that ''... changing trade policy is among the essential ingredients if there is hope for improved economic performance.''

[3] This unambiguous decline in domestic activity contrasted with the earliest dynamic analysis of tariffs by Eichengreen (1981) who, employing a portfolio balance model, found that the effects of a tariff involved an intertemporal tradeoff.

[4] Results along these lines can also be found in Lee (1995) and Chyi (1999).