ELSEVIER European Economic Review 46 (2002) 1559–1568

EUROPEAN ECONOMIC REVIEW

www.elsevier.com/locate/econbase

Tax principles and tax harmonization under imperfect competition: A cautionary example

Michael Keen[a,b], Sajal Lahiri[b,*], Pascalis Raimondos-Møller[c,d]

[a] *Fiscal Affairs Department, International Monetary Fund, Washington, DC 20431, USA*
[b] *Department of Economics, University of Essex, Colchester CO4 3SQ, UK*
[c] *Institute of Economics and EPRU, University of Copenhagen, Studiestrade 6, 1455 Copenhagen K., Denmark*
[d] *Centre for Economic Policy and Research, London, UK*

Received 1 February 2001; accepted 1 August 2001

Abstract

This paper shows that under imperfect competition, the welfare effects of indirect tax harmonization may depend crucially on whether taxes are levied by the destination or the origin principle. In a standard model of imperfect competition, while harmonization always makes at least one country better off, and may be Pareto-improving, when taxes are levied under the destination principle (which currently applies in the European Union), harmonization of origin-based taxes (as recently proposed by the European Commission) is *certain* to be Pareto-*worsening* when the preferences in the two countries are identical, and is likely to be so even when they differ.

JEL classification: H1.

Keywords: Harmonization; Destination principle; Origin principle; Commodity taxation

1. Introduction

In 1997, the European Commission proposed a radical reform of value-added taxation that, in essence, can be decomposed in two parts: (a) a shift

* Corresponding author. Fax: +44-1206-872724.
E-mail address: lahiri@essex.ac.uk (S. Lahiri).

0014-2921/02/$ - see front matter
PII: S0014-2921(01)00189-1

from the current destination principle (under which taxes are paid in the country where the good is consumed) to the origin principle (under which taxes are paid in the country where the good is produced) and (b) harmonization of tax rates across member states. [1] While each part of such a reform can be (and has been) addressed as a policy issue in its own right, this paper presents an example which shows very starkly that they should not be considered in isolation. In particular it is shown that when product markets are characterized by imperfect competition, the welfare implications of step (b) depend crucially on the principle of taxation applied in step (a).

The literature comparing destination and origin-based commodity taxation is now extensive: see Lockwood (2001) for a thorough and unified account. The comparative effects of tax harmonization under the two principles, however, have not been fully explored. It is known that with perfectly competitive product markets, a harmonization of commodity taxes towards an appropriately weighted average of their initial values in the participating countries is potentially Pareto-improving under both destination and origin principles (see Keen (1987, 1989) for the former and Lopez-Garcia (1994) for the latter): that is, with appropriate compensating payments between them, all countries can gain from such a reform. [2] In the competitive case, the principle by which taxes are levied is thus irrelevant to the efficiency case for their harmonization. However, knowledge of the welfare implications of commodity tax harmonization when product markets are imperfectly competitive remains limited. For a simple duopoly model, Keen and Lahiri (1993) show that the same form of harmonization continues to be potentially improving under the destination principle; and Keen and Lahiri (1998) analyze the welfare effect of a shift from destination to origin principles. [3] But neither paper considers tax harmonization under the origin principle. [4]

Using the model of Keen and Lahiri (1993, 1998), the paper shows that when preferences are identical across countries, whereas harmonization of destination-based commodity taxes (starting from the non-cooperative equilibrium) always makes one country better off and may be Pareto-improving, any harmonization of origin-based taxes (again, from the non-cooperative equilibrium) is *sure* to lead to a strict Pareto-*worsening*. Even when preferences are not identical, we find that the same result is likely to hold under reasonable assumptions. This striking result adds a note of caution to the ongoing discussion on commodity tax reform in the European Union. For here is a

[1] The proposal was not well received by all member states.

[2] The analysis is extended to include a government revenue constraint in Delipalla (1997), Lockwood (1997), Lopez-Garcia (1998) and Lahiri and Raimondos-Møller (1998).

[3] Haufler et al. (2000) extend the Keen and Lahiri (1998) analysis to include trade costs.

[4] Nor does Lockwood (2001), whose model has the feature that equilibrium taxes do not differ across countries under the origin principle.