Journal of Public Economics 81 (2001) 279–319

JOURNAL OF PUBLIC ECONOMICS

www.elsevier.nl/locate/econbase

Tax competition and tax co-ordination under destination and origin principles: a synthesis

Ben Lockwood*

Department of Economics and CSGR, University of Warwick, Coventry CV4 7AL, UK

Received 31 May 1999; received in revised form 30 July 2000; accepted 31 July 2000

Abstract

This paper proposes a general framework for analysing commodity tax competition under destination and origin principles, based on three possible tax spillovers, the consumer price spillover, the producer price/terms of trade spillover, and rent spillovers. A model is presented which can be extended to accommodate all three spillovers. Using this model, many of the results in the existing literature can be derived, compared, and extended.

Keywords: Tax competition; Tax reform; Destination and origin principles

JEL classification: H21; H23; H77

1. Introduction

The literature on the destination and origin principles of commodity taxation has expanded enormously in recent years, along with an increase of interest in the economics of tax competition more generally. This increased interest is partly due to developments within the EU, such as the completion of the single market and EMU, which have made tax differences between countries clearer and more important to consumers and firms, but also to the reduction of trade barriers more generally. One can identify three different branches of this literature. The the

**E-mail address:* b.lockwood@warwick.ac.uk (B. Lockwood).

0047-2727/01/$ – see front matter
PII: S0047-2727(00)00131-6

earliest branch compares destination and origin principles at *fixed* tax rates, and has grown considerably since the important paper of Shibata (1967). For example, there are contributions by Whalley (1979); Grossman (1980); Georgakopoulos and Hitiris (1991, 1992); Bovenberg (1994); Lockwood et al. (1994a); Lockwood et al. (1994b); Haufler and Nielsen (1997). Two papers extend this explicit comparison to the case where for each principle, taxes are endogenously determined in non-cooperative Nash equilibrium [Lockwood (1993); Keen and Lahiri (1998)].

The second branch, initiated by the seminal paper of Mintz and Tulkens (1986), may be called the literature on *commodity tax competition*. These papers characterize Nash equilibrium in origin-based taxes in a class of models where consumers can cross-border shop at a cost, and include Crombrugghe and Tulkens (1990); Kanbur and Keen (1993); Trandel (1994); Haufler (1996, 1998) and Nielsen (1998). These papers also study welfare- and Pareto-improving tax reforms in these settings.

A third branch of the literature studies the welfare properties of a particular form of tax reform, *tax harmonization*. The formal literature in this area was initiated by Keen (1987, 1989), and subsequent papers include Keen and Lahiri (1993); Lopez-Garcia (1996); Delipalla (1996); Lockwood (1997); Lopez-Garcia (1996, 1997); Lahiri and Raimondos-Moller (1998); Keen et al. (1998). Most of this literature deals with destination-based taxes, but Lopez-Garcia (1996) studies harmonization of origin-based taxes, and this issue is also briefly addressed in Kanbur and Keen (1993).

Despite the research effort that has been expended in the last decade, it is not clear that this literature has yielded general or robust insights. One problem here is that the models used in the various papers have been extremely diverse, and some of them have been rather complex, especially those where cross-border shopping costs have been modelled. The obvious contrast here is with the even larger literature on capital tax competition, where the simplicity and flexibility of the original Wilson-Zodrow-Miezowski model of tax competition (Wilson, 1986; Zodrow and Miezowski, 1986) has lead to a situation where most researchers use this model as a vehicle for their analysis, and consequently, their results can be more easily contrasted and compared that in the commodity tax case.

Two particular problems are the following. First, the models of taxcompetition typically assume a homogenous commodity produced in both countries, whereas the literature on tax harmonization assumes differentiated commodities, and generally the structure of preferences over commodities is crucial in determining whether Pareto-improving tax reforms exist (Keen, 1989; Lockwood, 1997). Second, tax competition models (especially Mintz and Tulkens, 1986) are made complex by the fact that transport costs are explicitly modelled (and consequently the models are highly simplified in other respects), whereas the otherwise much more general models used in the tax harmonization sub-literature abstract from transport costs.

The purpose of this paper is two-fold. First, we will argue that the results in the