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ScienceDirect
European Journal of Political Economy 22 (2006) 771–786
European Journal of POLITICAL ECONOMY
www.elsevier.com/locate/ejpe

Market size and antidumping in duopolistic competition

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Received 25 June 2004; received in revised form 12 October 2004; accepted 13 July 2005
Available online 27 December 2005

Abstract

We consider the incentives that the existence of an Antidumping Law provides for strategic behaviour on the part of duopolistic firms selling in each other's segmented markets. Firms have identical costs, but are located in countries with different market sizes (maximum willingness to pay). In free trade the firm from the larger market dumps in the other market, providing incentives for both firms to manipulate their sales in the two markets to influence any future antidumping duty. We show that for small (large) differences in market size, the dumping (other) firm's strategic actions dominate, and the dumping margin is reduced (increased) relative to free trade. We also consider a price undertaking as an alternative to the duty, and show that the outcome depends on which firms have input into the policy choice.

JEL classification: F13; D43
Keywords: Antidumping; Price undertaking; Strategic behaviour

1. Introduction

The decline in standard trade barriers, as a result of both unilateral liberalisations and multilateral agreements within the GATT/WTO framework, has left antidumping (AD) actions as the major remaining available protective instrument. This explains their increasing popularity, both in terms of frequency of use and numbers of users (Zanardi, 2004). A product is considered as being dumped "…if the export price…is less than the comparable price...for consumption in the exporting country" (Article 2.1 WTO Antidumping Agreement). Where dumping has occurred and caused "material" injury to the domestic industry, an AD duty can be imposed on

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doi:10.1016/j.ejpoleco.2005.07.003

the relevant imports. As Pauwels et al. (2001) note, this means that AD protection is unlike other types of tariff protection in that the level of duty can be endogenously determined by the firms involved. The incentives that the existence of this statute provides for strategic behaviour on the part of oligopolistic firms selling in each others' segmented national markets is our main interest in this paper.

Most studies view dumping as a sign of price discrimination across national markets, and that is the approach we take here. We consider a world composed of two country markets, with one firm located in each. Both firms are Cournot competitors, producing a homogeneous product which they sell in both markets. The countries differ in terms of maximum willingness to pay (WTP), and markets are segmented. In the free trade equilibrium the country with the larger WTP has the higher price and the firm located in that country "dumps" on the other market. We then consider a two period version of the model, and suppose that the smaller country has in place an AD Law under which dumping in the first period would result in an AD duty being imposed in the second, with the duty equal to the dumping margin in the first period.

The existence of the AD law provides an incentive for both firms to act strategically in the first period. The dumping (home) firm reduces its exports and increases its sales in its domestic market so as to reduce the dumping margin. The firm based in the dumped market (the foreign firm) reduces its exports and increases its domestic sales in order to increase the dumping margin and hence the second period duty faced by its rival. Trade falls, but the price outcomes depend on which firm's actions dominate. If the difference in WTP is small, we show that the dumper's strategic actions dominate and this results in the equalisation of prices in the two markets in the first period. For slightly larger differences, the first period dumping margin is reduced, although not eliminated. But once the WTP difference is large enough it is the foreign firm's strategic actions that dominate, and we observe a larger dumping margin than would occur in free trade, bounded by the prohibitive duty. For even larger differences the first period equilibrium is as in free trade, and the dumping firm is taxed out of the foreign market in the second period.

We then consider a price undertaking on the part of the dumping firm as an alternative outcome to the AD duty. In many jurisdictions a dumping firm can avoid the duty if it agrees to eliminate the dumping margin. This has typically been investigated in the literature as a means of supporting more collusive behaviour between the firms. Here we have a different focus. We suppose that the price undertaking given by the dumping firm requires that it does not export at a price below that in its domestic market. In effect the dumping firm is then committed to equalising prices in the two markets (i.e. eliminating the dumping margin ex post). We show that there is a range of WTP differences for which the dumping firm will be able to deliver on such an undertaking and a smaller range over which it will prefer this outcome to the corresponding equilibrium duty. We also show that the foreign firm has lower profits under a price undertaking than under free trade. Hence the second period outcome will depend on whether the foreign firm must agree for a price undertaking to be accepted. If so, then the foreign firm will never agree and we will observe the duty outcome. If not, then this firm will never petition for relief from dumping in circumstances where the dumper will choose the undertaking alternative.

The remainder of this paper is structured as follows. Section 2 reviews the related literature. Section 3 sets up the model where AD policy is absent, solves for the equilibrium outcomes and identifies the conditions under which one firm dumps in the other country. Section 4 describes the AD outcome in the second period. In Section 5, we incorporate the AD duty and show how this influences the strategic actions of the firms and equilibrium outcomes. The following section introduces the price undertaking option, and shows how this can reduce the likelihood of AD petitions. Section 7 provides summary and conclusions.