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Regulation, market structure and service trade liberalization ☆

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Abstract

In this paper, we develop a theoretical method to quantify the importance of regulation and market structure on the success of service trade liberalization. For this purpose, we incorporate a single imperfectly competitive service sector that can take on various market structures into a standard computational general equilibrium model. We apply our framework to analyze the impact of partial telecom liberalization in Tunisia. We show that if the regulatory environment guarantees competition, Tunisia's welfare can improve up to 0.65%. If a cartel is formed between the domestic incumbent and foreign entrant, however, Tunisia's welfare can drop up to 0.25%. Our results thus call for Tunisia among other developing countries to step up its pro-competitive regulatory reforms while liberalizing its telecom sector.

JEL classification: F12; F13; F23

Keywords: Service trade liberalization; Regulation; Market structure; Imperfect competition; CGE

1. Introduction

Within a long tradition of multilateral trade policy, negotiations on services trade is the 'new kid on the block.' First introduced about 25 years ago at the 1982 GATT Ministerial Meeting, the services

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policy agenda remains a sideline to more traditional cross-border trade negotiations. This is surprising as globalization relies on the availability of backbone services such as telecommunications, transportation, insurance, and financial services. A substantial multilateral agreement to liberalize trade in services therefore has the potential to unleash economic growth far beyond that achievable through the further reduction of trade barriers for goods such agriculture, electronics, or textiles.

Perhaps a reason why service trade liberalization has remained on the sideline is that the potential gains (and losses) from service trade liberalization are not well understood. While the importance of services is increasingly recognized by international trade economists, empirical studies remain in scant supply for a number of reasons (Hoekman, 2006).[1] For one, it is difficult to measure the international flow of services provision as multiple modes of delivery are involved. For example, certain services (e.g., local telecommunications) can only be provided through the establishment of a domestic presence. Yet, national income accounts do not systematically include data on employment, output, or sales of foreign subsidiaries. Second, international activities in key services industries are subject to restrictions on market entry, foreign ownership, and other regulatory barriers. This in combination with the high fixed costs in services sectors make service sectors imperfectly competitive. Quantifying the outcome of service trade liberalization is thus more difficult than would be implied by an estimation of a tariff or other ad valorem equivalent. It not only depends on pre-reform conditions but also on the type of new entrants, the competitive behavior of the foreign licensees upon entry into the market and the profit allocation by the foreign entrants. As a result, when an imperfectly competitive service sector is liberalized, it may lead to different market structures. It can lead to an increase in competition, but it also can induce the foreign entrant(s) to join a cartel with the domestic incumbent(s) (Francois and Wooton, 2001). Foreign firms may also share in the collection of real economic rents, and may shift these rents abroad.

In this paper, we develop a theoretical method to model the joint effect of regulation and market structure on services liberalization within a computational general equilibrium (CGE) context. Existing CGE studies on service trade liberalization have largely neglected the role of market structure on the success of service trade liberalization due to theoretical complications related to introducing imperfect competition into a CGE framework. To model service trade liberalization, studies have generally incorporated tariff equivalents of impediments to service trade into standard CGE trade models. Brown et al. (1996), for example, convert Hoekman's (1996) frequency indices into an ad-valorem tariff equivalent and use this approach to simulate service trade liberalization in their multi-country Michigan Model of World Production and Trade. Hertel (1999) approximates cross-border barriers with Francois and Hoekman's (1999) gravity-equation estimates and simulates service trade liberalization in the multi-country GTAP model. Dee and Hanslow (2001), Brown and Stern (2001) and Jensen et al. (2004) take similar approaches in CGE models with endogenous FDI flows.

This approach does not allow one to analyze the role of strategic behavior and market structure on the success of service trade liberalization (Whalley, 2004). In the CGE models discussed above, it is assumed that the service sectors are governed by perfect competition or large-group Dixit–Stiglitz monopolistic competition both before and after service trade liberalization. Service trade liberalization is modeled as the removal of the *ad valorem* tariff equivalents of the impediments of services trade. This approach is inappropriate to analyze the effects of trade liberalization in service sectors where domestic regulation limits market entry to both domestic and foreign providers for two reasons. First, especially in developing countries many backbone services sectors such as telecommunications, finance and insurance are governed by few large players. Second, recent service liberalization discussions have

[1] A notable exception is Arnold et al. (2007).