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The direct and relative effects of preferential market access ☆

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ABSTRACT

The proliferation of preferential trade agreements has resulted in a complex system of preferences in which market access conditions are often discriminatory. In this paper we investigate how market access conditions have evolved between 2000 and 2009, and how this has affected international trade. Our results show that the proliferation of preferential access has increased bilateral trade not only due to lower tariffs but also because preferential access often resulted in higher preferential margins vis-à-vis foreign competitors. The results also indicate that the evolution of the system of preferences has been disadvantageous for countries that did not actively engage in forming new trade agreements.

1. Introduction

Over the past 30 years, trade liberalization has been used as an effective development tool, based on the evidence that there are many benefits that a country can gain from more active participation in world trade. While tariff liberalization was initially pursued multilaterally, preferential trade agreements (PTAs)[1] are the basis of the more recent trade liberalization process. The proliferation of PTAs has been impressive. In 1995, at the launch of the WTO, only 37 such agreements were in place. By 2010 more than 230 of them had been implemented, with many more in the implementation stage. Participation in regional and bilateral trade agreements is widespread, as virtually all members of the WTO participate in one or more PTAs.

As PTAs generally offer preferential tariff treatment, the proliferation of PTAs has resulted in a complex system of preferences where countries apply different tariff rates to identical products depending on their origins. In practice, this system of preferences often discriminates against trade originating from non-member countries to the advantage of trade from member countries.[2] This discriminatory element reflects in the "domino effect" of PTAs (Baldwin and Jaimovich, 2012): once a PTA is formed, trade becomes relatively more costly for non-member countries, thus providing incentives to join an existing agreement or to form new ones.

Since the seminal work of Viner (1950), the economic literature has extensively studied the effects of PTAs on international trade. Initially, most of the literature focused on the effects of PTAs both for member and non-member countries from a theoretical standpoint (e.g. Kemp and Wan, 1976; Grossman and Helpman, 1995; Krishna, 1998; Ornelas, 2005). More recently, an increasing number of empirical studies have investigated the actual effects of PTAs on trade.[3] While the literature generally points to large and positive effects of PTAs on trade flows among members[4] (e.g. Baier and Bergstrand, 2007, 2009; Magee, 2008) there is no conclusive evidence in regard

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[1] By PTA we refer to all types of preferential trade agreements.

[2] As of 2009, the intra-PTAs share of world trade is about 50 percent. However, not all preferential trade benefits from lower tariffs as part of this trade would also be duty free under the Most Favoured Nation regime. All considered, PTAs provide potential benefits (in the form of a tariff lower than MFN) to about 30 percent of world trade (WTO, 2011).

[3] Freund and Ornelas (2010) provide a thorough review of the literature related to PTAs.

[4] One dissenting study is Ghosh and Yamarik (2004). In their analysis of 12 regional trade agreements, they are skeptical about the results of the previous literature showing positive trade creation effects. The use of fixed-effect estimation in the subsequent literature has somewhat alleviated their criticism.

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to possible distortionary effects. For example, Clausing (2001) and Calvo-Pardo et al. (2009) find trade creation but no trade diversion effects with regard to the US-Canada free trade agreement (FTA) and the ASEAN regional trade agreement. Similarly, Freund (2010) does not find evidence of trade diversion effects in the analysis of six trade agreements in Latin America and Europe. On the other hand, a number of studies find both trade creation and trade diversion effects. For example, Trefler (2004) finds trade diversion effects resulting from the US-Canada FTA and Romalis (2007) finds trade diverting effects in regard to the North American FTA. Similarly, Carrère (2006) finds trade diversion when examining the effects of seven regional trade agreements and Lee and Shin (2006) find trade diversion depending upon certain characteristics of member countries in the analysis of East Asian free trade agreements.

Most of the literature has generally examined the overall impact of PTAs as a discrete event rather than focusing on tariff liberalization.[5] Although quite informative, this approach captures not only tariff changes but also any other advantage that PTAs usually imply, such as customs harmonization, trade facilitation mechanisms, and overall reductions in non-tariff measures and other trade costs. This paper adds to the existing literature by isolating the effects of tariff preferences so as to better capture the heterogeneity of trade effects across countries. More precisely, this paper provides two contributions. The first contribution consists of two indices measuring bilateral market access conditions taking into account the complex structure of tariff preferences. One index captures *direct* market access conditions (the restrictiveness of tariffs directly imposed on bilateral trade). This index is based on the work on trade restrictiveness (Anderson and Neary, 2005; Kee et al., 2008, 2009). The other index measures *relative* market access conditions (the tariff advantage or disadvantage that the system of preferences provides relative to all foreign competitors). This index builds on the work on preferential margins (Low et al., 2009; Carrère et al., 2010; and Hoekman and Nicita, 2011). The second contribution of this paper consists of an analysis of whether bilateral trade depends not only on direct market access conditions but also on relative market access conditions. The analysis is based on a gravity model augmented by the two indices.

The findings of this paper indicate that direct market access conditions have generally improved during the period of analysis (2000–2009) and that relative market access conditions have evolved from a situation where few bilateral trade relationships enjoyed large preferential margins to a situation where the system of preferences is beneficial to a larger number of bilateral trade relationships but is overall less discriminatory (i.e. more numerous but lower relative preferential margins). In regard to the effects on trade, this paper finds that although direct market access conditions are of primary importance, relative market access conditions also have a significant impact. In practice, the benefits due to preferential access are often augmented by improved relative market access conditions. These results implicitly indicate that PTAs can have substantial negative effects on non-member countries for which relative market access conditions have deteriorated.

The remainder of this paper is organized as follows. The next section illustrates the empirical approach for assessing the impact of preferential access on trade flows. Section 3 briefly summarizes the data. Section 4 provides some statistics on market access measures and discusses their impact on trade flows. Section 5 concludes.

2. Market access and trade flows

In the last decade, market access conditions have increasingly been affected by bilateral trade agreements. Trade agreements generally provide trading partners with tariffs lower than the most favoured nation (MFN) rate. As a result, countries often apply different tariff rates to the same product depending on its origin. According to the data utilized in this paper, as of 2009 about 30% of the total value of trade consisted of products where countries applied three or more different tariff rates, and another 30% of trade was in products where two different tariff rates are applied. The remaining 40% of trade was subject to no discrimination, as each given country applied the same tariff to all trading partners (at the HS 6-digit level).[6]

The fact that countries apply different tariff rates to identical products depending on their origin has importance for trading partners. From an exporter's perspective, market access depends not only on any disadvantage that exporters face versus domestic producers, but also on the relative advantages or disadvantages that exporters have versus competitors from other countries. In tariff terms, the disadvantage versus domestic competitors is simply given by the tariff applied to the imported good, while the advantage or disadvantage versus foreign competitors is given by the preferential margin. In practice, the preferential margin provides a measure of the strength of preferential access. The higher the preferential margin, the larger is the advantage of a given country's exporters versus foreign competitors.

Preferential access is primarily granted with the intent to increase trade. For example, high income countries often grant non-reciprocal preferential access to least developed countries in order to facilitate the latter's economic growth by providing an incentive to their exports. Likewise, regional trade agreements are a common form of reciprocal preferential access in which lower (or zero) tariffs are applied to products originating among members, so as to foster bilateral or regional cooperation. Agreements as such, by providing some trading partners with a lower tariff, inevitably discriminate against those trading partners outside the trade agreement (Hoekman et al., 2009).

Preferential access produces diverse effects across members depending on differences in the existing tariff regimes, implementation periods and tailored exceptions. For example, some trade agreements may give great advantages because of high external tariffs; while others may have more muted effects because preferential treatment is granted to a large number of countries. Similarly, the effect of preferential access also varies across non-member countries. The differences largely depend on whether key export sectors are affected by preferences conceded to foreign competitors.[7]

The following two sections illustrate the empirical approach to measure the effect of market access on trade flows. The first section presents the two indices measuring market access conditions. One index summarizes the tariffs faced by exports; the other index measures the preferential margin at the bilateral level. The second section lays down the estimating framework utilized in assessing the contribution of the two indices to explain bilateral trade flows.

2.1. Market Access

To measure market access conditions we provide two trade policy indices: the first measure captures *direct* market access conditions (the overall tariff faced by exports); the second measure captures *relative* market access conditions (the overall tariff faced by exports relative to that faced by foreign competitors). Both measures are calculated at the bilateral level.

The first measure derives from Anderson and Neary's (1994 and 2003) mercantilist trade restrictiveness index (MTRI) and is directly related to the partial equilibrium simplification developed by

[5] One exception is a study by Robertson and Estevadeordal (2009). Their findings suggest that the tariff liberalization of Latin American countries between 1985 and 1997 caused trade-diverting effects.

[6] This is mainly because in a large number of cases MFN rates are already at zero. In these cases no PTA would have any discriminatory effect in terms of preferential tariffs.

[7] This issue also relates to preference erosion: countries that enjoy preferential access because of pre-existing agreements see their preferential margin eroded when key trading partners enter new PTAs.