Available online at www.sciencedirect.com

SCIENCE DIRECT®

Journal of Business Research 58 (2005) 1741–1749

JOURNAL OF BUSINESS RESEARCH

NAFTA effects and the level of development

Walid Hejazi*, A.E. Safarian

Rotman School of Management, University of Toronto, 105 St. George St, Toronto, Ontario, Canada M5S 3E6

Received 30 May 2004; accepted 23 September 2004

Abstract

Much attention has been given to the impact that free trade agreements have had on member countries. There has been relatively little attention given to the impact on nonmembers, especially as it relates to both trade and FDI. This paper uses a gravity model framework to estimate the impact that the North American Free Trade Agreement (NAFTA) had on U.S. trade and FDI relationships with both member and nonmember countries. The estimated impacts are refined to account for each country's level of development. The results confirm many previous studies on the ability of the standard gravity model to explain trade and FDI patterns. This study goes further and establishes that there are additional impacts related to both membership in the NAFTA and levels of development.

Keywords: Trade; FDI; NAFTA

1. Introduction

Regional trade agreements have become increasingly common in recent years. They have been hailed by some as contributing to the liberalization process by going further and faster than treaties involving many countries, while others insist that they are not only inherently discriminatory but they limit the expansion of more generalized treaties. One of the important questions is how such regional agreements impact those countries outside the treaty. This is usually studied in terms of how far the preferential reduction of barriers to the partners creates or diverts trade with respect to third parties.

One reason to study third-party effects is that they have received far less attention than do the often very detailed studies for those in the treaty. A second reason is to consider the effects on FDI, as most studies focus on trade effects. A third reason is the interest in the ways in which increased regionalisation affects different kinds of countries. More particularly, have the regional treaties had a differential impact on outside countries with varying levels of per capita GDP and, hence, affected the convergence of such levels?

This paper reviews the theory of third-party effects, as well as some existing empirical studies. It then focuses on how U.S. trade and outward FDI patterns with third parties were impacted as a result of the North American Free Trade Agreement (NAFTA). The test is made within a gravity model framework for trade and FDI, which takes into account the effects of GDP, GDP per capita, geographic and cultural distance, transport costs, and exchange rates. Regional dummies are also considered.

Special attention is given to the NAFTA and how it has affected U.S. trade and FDI patterns. In addition to a NAFTA dummy to capture the direct effects, interactive terms are used to capture to what extent these impacts accrued to countries within North America as opposed to globally and also how the impacts relate to a country's level of development. The results indicate clearly that most of the trade benefits have accrued to insiders and that the gains to outsiders are positively related to that country's level of development. Furthermore, the NAFTA has resulted in reduced outward FDI from the United States, with this effect being much stronger within North America. The results also indicate, for countries outside the NAFTA area, that the extent to which NAFTA increased U.S. outward FDI is a

* Corresponding author. Tel.: +1 416 946 7042; fax: +1 416 978 5433.
E-mail address: hejazi@rotman.utoronto.ca (W. Hejazi).

0148-2963/$ - see front matter
doi:10.1016/j.jbusres.2004.09.002

decreasing function of each nonmembers levels of development. That is, the most developed countries outside of NAFTA benefited least from the NAFTA vis-à-vis FDI.

The format of this paper is as follows. Section 2 provides a brief literature review. Section 3 describes U.S. trade and FDI relations with a sample of 52 countries. Section 4 presents the model used, and Section 5 the empirical estimates. Section 6 concludes and discusses policy implications.

2. Background and literature review

There is a significant theoretical literature on the effects of regional integration going back to the book of Viner (1950). Such integration may include only trade between the parties (free trade area), involve also a common external tariff (customs union), encompass factor movements (common market), and harmonize a variety of fiscal–monetary–regulatory policies, while stopping well short of a nation state (economic union). The first discriminates between member and nonmembers on trade alone, the last on a wide variety of fronts.

Just how far nonmembers are affected depends on several variables. The first is how much trade is created and how much is diverted by the removal of tariffs and other protective devices among the members and by any harmonization of such devices against nonmembers, which, in turn, depends, in part, on the height of member tariffs and the industry structure of protection. Such treaties create trade because they remove or reduce barriers to trade among members. In this sense, they can raise world, as well as member, welfare. They can also divert trade from lower-cost nonmembers to higher-cost members, since protection is removed only for the latter. In this sense, they can reduce world welfare and increase member welfare. In particular, nonmembers will tend to reduce export prices to the new preferential trade area in an effort to retain market share.

The second impact on nonmembers depends on how far the freer trade among members actually increases the size of the internal market with scale, competition, and productivity effects. These effects may not only raise the level of income but could increase the growth rate. All of this is much harder to measure, but some studies for the deepening of the EU market suggest that they swamp static effects of regional integration of members (Baldwin, 1989). The effects on nonmembers is not only to increase demands for their exports but also improve the competitiveness of many firms in member countries.

The third impact depends on how far nontrade variables are liberalized. Freeing up factor movements and harmonizing some other policies can have substantial further impacts on income in the member countries and, hence, on nonmembers. Of particular interest for present purposes is the possible diversion of FDI to or from the new preferential area because of the effects of the latter, both directly in terms of any provisions regarding FDI in the treaty and indirectly because of the treaty's overall effects. The NAFTA went beyond trade to liberalize FDI policies significantly.

Fourth, the particular design of the treaty can impact nonmembers in a variety of ways. One aspect of importance in a free trade area where members maintain different trade barriers with nonmembers is the rules of origin required to prevent imports into low-tariff members from moving to higher-tariff members. Depken and Ford (1999) point out that tariff reductions can be offset by the costs involved in obtaining a certificate of origin, costs that are likely to fall more heavily on smaller firms. Indeed, they note that the design of such regulations in some cases can be an effective method of raising the costs of rival firms in nonmember countries. A study by Herin (1986) estimates that the cost to European FTA members for documenting origin to enter the EU duty free averaged 3% to 5% of the value of the exports.

Over 200 pages in the NAFTA are devoted to rules of origin. A detailed discussion of these can be found in Morici (1993) and LaNasa (1993). These rules are in addition to rules of origin that the importer must document for a variety of other purposes, such as for countries not in the WTO. The procedures under the NAFTA generally require two steps. First, there must be sufficient transformation to achieve a change in tariff classification, which can vary from two to eight digits, depending on the product group. A second regional value-added test may apply, either 60% of the transaction costs (f.o.b price) or 50% of the net cost (transactions cost minus nonoriginating components). The latter method is mandatory for automotive products, and either 60% or 62.5% is required. Moreover, in this sector, the importer must trace the value of components through the various stages of transformation. Special origin provisions that raise the required percentages apply also to some other sectors, such as garments, shoes, and some chemicals.

Fifth, some writers have argued that preferential agreements are more likely to increase welfare if they are between "natural" trading partners, i.e., between those in close proximity, such as the NAFTA members with low transport costs and high initial volume. Bhagwati and Panagariya (1996) have criticized the view that trade diversion is necessarily lower in such cases; for example, the precise functional form chosen in many empirical studies significantly affects the estimated welfare effects.

The effects of a preferential trading agreement on nonmembers depends ultimately on whether such agreements speed or slow multilateral liberalization more generally. Krueger (1999) has outlined the literature and arguments underlying these two outcomes. This larger issue is in the background of any study of the type undertaken here.

In terms of empirical results, the effects of regional arrangements on nonmembers depend very much on the type of model used for the tests. Much research has used computable general equilibrium models. Two results stand