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ASSESSING REGIONAL TRADE ARRANGEMENTS: ARE SOUTH-SOUTH RTAS MORE TRADE DIVERTING?

by

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ABSTRACT

It has generally been argued that regional trade agreements (RTAs) among developing countries may induce potential adverse effects on trade patterns among RTA members and between them and third countries. Using an expanded gravity model this paper estimates for a number of regional trade arrangements among developing countries the gross trade creation and diversion effects resulting from RTA formation. This paper brings evidence in favor of the idea that South-South RTAs, and African RTAs in particular, are not more trade diverting than other RTAs. This evidence suggests that increased trade with both regional partners and third countries in the case of South-South RTAs might be explained by the removal of "invisible" trade barriers as a result of trade facilitation measures favored by RTA formation.

JEL classification numbers: F13, F15, C31 Keywords: regional trade agreements, gravity model, trade creation, trade diversion, African RTAs

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I. INTRODUCTION

The past decade has witnessed a renewed interest in regional trade agreements (RTAs), with many policymakers and academics questioning the impact RTAs have had on members and third countries.¹ A particular distinction in this debate was drawn between RTAs involving developing countries only (South-South RTAs) and those between developed and developing countries (North-South RTAs). Initially, regional cooperation schemes among developing countries were also encouraged by international organizations as a means toward regional stability and development. In this context it was also argued that regionalism could serve as an elite-socialization process and as a lock-in mechanism for domestic political and economic reforms in the less developed RTA members (Whalley, 1996).

The early theoretical and empirical work started in the 1950s with Viner's seminal work (Viner 1950).² Viner opened new ground when he advanced the idea that the welfare effects stemming from the formation of an RTA is ambiguous. In a simple partial equilibrium model under perfect competition RTA may increase the level of trade between members at the expense of less efficient domestic producers (trade creation) but also of more efficient third countries (trade diversion). The net effect of RTA on trade (as a proxy for welfare) thus depends on the relative size of these two effects. Further refinements were brought when dynamic effects were incorporated into this stylized static approach to regional integration. The dynamic effects resulting from regional integration usually cited are competition effects and scale effects. These dynamic effects of regional integration are often used to justify the formation of such trading arrangements. Both the European Union project and NAFTA have been justified on economies of scale that not only allowed RTA members to increase their intraregional exports but also their trade with the rest of the world.³ Recent multi-country computable general equilibrium (CGE) models incorporate information about levels of protection not only in RTA members but also in nonmembers. Simulations of these models accounting to some extent for the overall effects of regional integration arrangements attributable to extra-regional levels of protection.

Despite these analytical advances, however, the initial Vinerian ambivalent conclusion that RTAs could enhance or reduce welfare remains.⁴ The issue of the net effect of RTAs on the welfare of the member States and on the world economy is therefore an empirical issue. Moreover, even if there was a clear-cut analytical answer to the question of the sign of the effects, the magnitude of these effects would still be of interest.

The attempts to clarify empirically the ambiguous effects of RTAs predicted theoretically have so far failed to solve the puzzle. Several studies advanced pessimistic conclusions about the impact of RTAs in Africa. A recent World Bank research project on regionalism concluded that South-South regional blocs are problematic in several respects (World Bank 2000a). According to the World Bank study, apart from doubtful non-economic benefits, South-South RTAs between two or more poor countries is very likely to generate trade diversion, especially when external tariffs are high (World Bank 2000a: 42). Similarly, Yeats (1998) looked at detailed trade data from Sub-Saharan Africa and concluded that, judged by the variance in their trade patterns from what current comparative advantage would predict, intra-regional trade has potential adverse effects on members and on third countries. He concludes that "preferences for African intra-trade do not appear to have the potential to make an important impact on these countries' trade ... [and] they may have a negative impact on Africa's industrialization and growth if they divert regional imports from low to higher cost sources" (Yeats 1998: 116). Based on a homogenous goods assumption, the same conclusion is advanced by Schiff (1997) who argues that any RTA between small developing countries will most likely induce a replacement of cheaper imports from the rest of the world with more expensive intra-RTA products from less efficient suppliers. Arguing from a rather different perspective Park (1995) states that "the smaller the intra-regional shares in total trade ... the more likely the trading blocs would become trade diverting". Given the lower intratrade shares of South-South RTAs (especially African RTAs) compared to North-North or North-South RTAs, the suggestion is once again that South-South RTAs are potentially more trade diverting than other RTAs. Negative impacts of South-South RTAs were found or predicted not only in Africa but also in Latin America.5

An equal amount of dissenting opinions are put forward by other studies. For instance, Elbadawi (1997:213) notes that "economic integration [in Africa] could generate the threshold scales necessary to trigger the much-needed strategic complementarities...within the region". Other scholars used CGE analysis and found that trade creation is prevalent in the case of certain South-South RTAs. For instance Evans (1998) and Lewis et al. (1999) found positive net effects of regional integration initiatives in Southern Africa, while Flores (1997) advances similar conclusions about MERCOSUR.

This paper takes on these conclusions and tests them empirically using an expanded gravity model, able to identify both trade creation and trade diversion effects arising from several RTAs. The paper is organized as follows: section 1 briefly presents the main gravity model used to estimate the trade effects of regional trade arrangements and its variants. Section 2 explains the actual model used in this paper. Section 3 presents the results and discusses the main findings. Section 4 proposes an explanation for the gravity model results that contradict the view that African RTAs are most likely to have negative effects of both intraand extra-trade patterns of their members. Starting from the basic theory of regional integration arrangements, it suggests a further explanation based on the impact of RTAs on eliminating transaction costs and non-tariff trade barriers.

II. THE GRAVITY MODEL

When it comes to empirical estimates of the RTA effects, the standard Vinerian analysis is very often replaced by a variety of methods to quantify the effects of economic integration upon the volume and direction of international trade flows. One such method is the gravity model, which has been used widely as a baseline model for estimating the impact of a variety of policy issues, such as, political blocs, patent rights, regional trading groups and various trade distortions.6 The widespread use of gravity equations in estimating the trade effects arising from RTA formation is despite the fact that initially they have tended to lack strong theoretical bases. Most early articles using gravity models were ad hoc rather than being based on solid theoretical foundations. Exceptions to this trend include later work by Anderson (1979), Bergstrand (1990), Deardorff (1998), and Feenstra, Markusen and Rose (1998).7

Typically, in the case of gravity model of trade, bilateral trade flows are dependent upon the size of the two economies and the distance between them:

$$X_{ij}^{t} = f\left(Y_{i}^{t}, Y_{j}^{t}, D_{ij}\right)$$

$$\tag{1}$$

where V t are exports from country i to

country suggests higher demand and therefore, higher imports. Therefore both Y_i^t and Y_j^t should be positively correlated with the level of bilateral exports. Since distance increases transport costs, its coefficient is expected to be negative.

For estimation purposes, the basic gravity model is most often used in its log-linear form:

$$\log(X_{ij}^{t}) = \alpha + \beta_{i} \log(Y_{i}^{t}) + \beta_{j} \log(Y_{j}^{t}) + \gamma D_{ij} + \varepsilon_{ij}$$
(2)

where ε_{ij} is the log normally-distributed error term.

It is also common to expand the basic gravity model by adding other variables, which are thought to explain the impact of various policy issues on trade flows. In the case of gravity equations used to estimate the impact of regional trade arrangements dummy variables are added for each RTA under scrutiny. Furthermore, in order to avoid capturing by these dummy variables the impact of other influences on trade, other dummy variables are added to control for common language and common border.⁸

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