

**NESTED INSTITUTIONS AND THE DYNAMIC TIME PATH ISSUE**  
**REVERSED**  
**- *WHAT DO WE KNOW ABOUT THE IMPACT OF THE MULTILATERAL***  
***TRADING SYSTEM ON REGIONALISM?***

Preliminary draft, January 2009, *please do not quote*

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## **1. INTRODUCTION**

The phenomenon of the exponentially growing number of Preferential Trade Agreements (PTAs)<sup>2</sup> is known as “regionalism”<sup>3</sup> and represents since almost two decades an ongoing social scientific puzzle for scholars in international economics, international relations and international law. The “dynamic time path issue”, or the question as to whether PTAs hamper or facilitate further liberalization within the framework of the General Agreement on Tariffs and Trade (GATT), respectively the World Trade Organization (WTO), was and continues to be one of the highly discussed subjects within this context. Literature related to that issue grows bigger by the day - to such a degree that it attracts first winking comments.<sup>4</sup> By contrast, there exists interestingly only little scholarship which debates the dynamic time path issue reversed: What do we know about the impact of GATT/WTO on regionalism?<sup>5</sup>

Most analyses on a causal relationship between developments in the multilateral arena (as independent variable) and regionalism (as dependant variable) can be subsumed under the key words “frustration-with-GATT/Regionalism-is-easier”<sup>6</sup>: Within this perspective, PTAs are presumed as to serve as vehicle for trade liberalization and catalyst of domestic interest groups’ pressure in particular then when multilateral liberalization does not progress. Several models in economics and international relations, however, take off from a diametrically opposed conjecture. They scrutinize whether it might be the GATT/WTO’s success in terms of trade liberalization and/or increased membership that accelerates the rush for regionalism.

The objective of this paper is to bring together this latter string of literature. The following section surveys literature on nested or overlapping commercial institutions in the international arena. The underlying question is: “How do different institutional settings of trade, that share some or all members, influence each other?” Section three

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<sup>2</sup> The term “preferential trade agreement” refers to bi- or minilateral free trade agreements (FTAs), customs unions (CU) and common markets. An FTA foresees a bi- or minilateral reduction of trade barriers. A CU has, in addition to an FTA a common external tariff. Common markets allow, additionally to CUs, free movements of internal factors between their member states (Balassa 1961).

<sup>3</sup> The term “regionalism” refers to the formal process of intergovernmental collaboration between at least two states, which do not necessarily have to be in the same geographical region. By contrast, the term “regionalization” refers to an increasing political or economic interdependence within a specific geographical area (Ravenhill 2005: p. 117). For a more detailed discussion on the difference between regionalism and regionalization see Mansfield & Milner (1999: p. 591).

<sup>4</sup> Sally (2008: p. 126) states: “The political-economy discussion of PTAs revolves around their roles as “building blocs” or “stumbling blocs” to multilateral liberalisation. This has become part of trade policy Duckspeak.” He explains in reference to George Orwell that “A duckspeaker is someone whose speech emerges mechanically from the larynx without engaging the higher brain cells.”

<sup>5</sup> Panagariya (2000) brought an early survey on this issue forward. Cadot, De Melo and Olarreaga (forthcoming) treat the dynamic time path issue in their excellent textbook. Freund’s (2007) edited volume reprints in its part V two of the articles discussed here.

<sup>6</sup> Baldwin (1997: p. 866)

deals explicitly with the dynamic time path issue reversed. There are three principal models that treat PTA-formation as endogenous and as a consequence of effective multilateral liberalization. The first contribution is a three-country-Cournot-model by Caroline Freund (1998). This model considers a PTA between two countries to absorb oligopoly-rents from the third country, at precondition of successful previous multilateral liberalization. The second model is made by Ethier (1998) and predicts multilateral liberalization to create externalities. These externalities incentivize regionalism as a framework for investment from advanced to less developed countries and for policy reform within the latter. The third model, by Mansfield & Reinhardt (2003) assumes regionalism not to be an alternative for GATT/WTO, but an auxiliary means to maximize the gains from multilateral liberalization. A summary concludes and provides remarks for further research.

## **2. NESTED INSTITUTIONS AND THE DYNAMIC TIME PATH ISSUE**

Institutions are “...the sets of working rules that are used to determine who is eligible to make decisions in some arena, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or must not be provided, and what payoffs will be assigned...” (Ostrom 1990: p. 50). Or as it is commonly and more concisely put: institutions are the “rules of the game” (North 1990: p. 3). By contrast, organizations can be defined as the “players within the game”. Given these definitions GATT, and eventually the General Agreement of Trade in Services (GATS) and the Agreement of Trade Related Aspects of Property Rights (TRIPs) are clearly institutional frameworks which set the “dos” and “don’ts” for international trade. The establishment of the WTO did not only extend the institutional framework of the GATT by the latter two agreements but also added –as suggested by the name- an organizational aspect to the multilateral trade regime. This organizational aspect is represented by the WTO’s secretary but is, admittedly, limited: The WTO is a member driven organization and its secretary is more a moderator than a player.

The concepts of “nested” and “overlapping” institutions allow bringing different, but interlinked institutions analytically together.<sup>7</sup> “Nesting” mainly describes one or more entities that are subsets of at least one larger entity, like Russian Matryoshkas<sup>8</sup>. In international economics and international relations, nesting can be defined as: “...a

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<sup>7</sup> For extensive literature reviews on these concepts see Alter & Meunier (2006) and Aggarwal (2005).

<sup>8</sup> The first use of this metaphor is due to Alter & Meunier (2006). Barkun referred earlier to nested “Chinese boxes” (Barkun 1968: p. 17 quoted in Aggarwal 2005: p. 2).

situation where regional or issue-specific international institutions are themselves part of a multilateral framework that involve more states or multiple issues” (Alter & Meunier 2006: p. 363). The terms “cross-cutting” or “overlapping” are often synonymously used for a slightly different but somewhat similar concept. These latter terms describe entities that are not entirely part of another entity, but intersecting in a horizontal sense, like intertwined Olympic rings. In this sense, overlapping “...exist when multiple institutions have authority over an issue, where each regime can create authoritative rules and interpretations. The agreements are not mutually exclusive, nor is one agreement subsidiary to another.” (Alter & Meunier 2007: p. 3 et seq.)

### *Nested Rules*

A large array of scholarly work, following Putnam’s (1988) concept of multiple games, analyzes the interplay of different actors between domestic and international institutional settings. This aspect is neglected in the further discussion of this paper which focuses only on nesting and overlapping in international institutions of trade. Early appraisal on causal effects between nested international institutions was propounded by Vinod K. Aggarwal (1981, 1983, 1985). Aggarwal focused in his studies on the determinants of multilateral textile arrangements which were nested within the broader GATT (which, in turn, was nested in the international security system). One of his main arguments is similar to what Elinor Ostrom called later “nested rules” (Ostrom 1990, Aggarwal 2005: p. 3) and which concerns a hierarchy of nested institutions: “One would expect ‘higher-level’ systems to be given more importance and thus that countries will endeavor to bring subsystemic behaviour into line with objectives in higher-level systems” (Aggarwal 1983: p. 620).<sup>9</sup> Accordingly, Aggarwal argues that the development and the changes of the different textile regimes reflect the interests and constraints of the relevant actors (United States, the European Community and Least Developed Countries) in the higher level forum of the GATT. The GATT, again, mirrors the actors’ preferences in the higher level of international security. Other relevant factors besides “nesting” are according to his analysis transaction costs of information, control and organization (Aggarwal 1983: p. 643).

A number of studies focus on the legal constraints or opportunities created by nested trade institutions. Alter & Meunier (2006), for instance, refer to different legal settings to explain the transatlantic banana trade dispute between the European Community and

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<sup>9</sup> Aggarwal (1983) does not use the term institution but “system” in a synonymous way.

the United States. The complexity of this 11 year long dispute about policies on trade in bananas resulted, as Alter & Meunier show, from conflicting nested or overlapping judicial rules of domestic law in EC-member states, European law, the European Community's obligations within the Lomé convention and international trade law first under the auspices of GATT, then under the WTO. Additional complexity was brought into the dispute by linked games with negotiations on investment or competition issues. The authors state (2006: p. 376): "This complicated case is an example of the new trade politics – multilayered, multi-venue, with provisions imbricated within and across multiple international agreements".

### *Forum Shopping*

When overlapping and nested institutions provide different dispute settlement mechanisms, actors might have an opportunity to strategically choose a venue for litigation. This so-called "forum shopping" traditionally attracts the attention of legal scholars (Bell 2003: pp. 23-26). The overlapping trade dispute mechanisms of GATT/WTO and different PTAs, in particular the NAFTA, were objects of research in international law and international political economy (Gantz 1999, Reif 2001, Walders & Pratt 2003, Busch 2007).

Bush (2007) presents a two-dimensional spatial model to illustrate a complainant's choice for a venue in a trade dispute undertaking. His analysis takes off from two puzzling observations. In the late 1990s Mexico suited the US through the NAFTA dispute settlement mechanism to challenge the latter's safeguard measures on corn brooms. Legal scholars were astonished since Colombia, a WTO- but not a NAFTA-member, was concerned by the same token and could have represented an ally to Mexico in a WTO-dispute settlement procedure (Busch 2007: p. 753). At about the same time the US challenged Canada in a trade dispute. The cause for conflict was Canadian measures to reduce the imports of US-periodicals, or more generally speaking, protectionism for the Canadian cultural industry. NAFTA provides a specific clause (Article 2106) with a provision on compensation on this subject. Therefore, several experts would have expected NAFTA to be the venue for judicial procedure (Busch 2007: p. 755). However, the US chose the WTO dispute settlement procedure as a forum for litigation.

Bush's model elucidates these puzzles. A complaint's choice for the venue of dispute settlement is assumed to be a function of two variables. These variables are "expected

outcome” and “expected future value of a precedent”. The first variable is intuitively clear and predicts the plaintiff to consider which mechanism promises the most favorable outcome for its case. The novelty of Bush’s model is to incorporate the second variable. Bush argues here “...that a complainant’s choice of forum depends on whether it prefers to set a regional or multilateral precedent, or no precedent at all. Setting precedent means adding to an institution’s body of case law concerning the obligation(s) in dispute. The incentive for a complainant to do this is that [...] a precedent can facilitate future litigation, and encourage more ex ante settlement” (Bush 2007: p. 736). According to this, the US’ choice for the multilateral forum in the “measures on periodicals”-case was in order to create a precedent in WTO trade-law. A successful challenge, consequently, could serve in future trade disputes on cultural industry protection with other WTO-members. On the contrary, Mexico has chosen the regional venue for exactly the opposite reasons. A successful challenge at the NAFTA dispute settlement would not allow more liberal countries to use the case as a precedent against Mexico in future WTO-trade disputes.

#### *Layered governance and overlapping institution building*

Christina L. Davis (2007) proposes an analytical trichotomy with regard to the “layered governance” (Yarbrough & Yarbrough 1994) of commerce. Davis differentiates between three different levels where nested or overlapping institutions influence trade policy making. The first level is the level of venue. Trade policy makers decide, based upon two or more-level game dynamics, which international venue to choose for negotiating trade liberalization. The venue can be regional or multilateral. The second level concerns the content of agreements. For instance, bringing new issues to the table within regional trade negotiations can represent a trial run for future multilateral negotiations. Or, the negotiation of PTAs can be part of a negotiation strategy in the multilateral arena. This argument was tested by Mansfield and Reinhardt (2003) and will be described in more detail below. The third level concerns the enforcement of compliance. This aspect is directly linked to the possibility of forum shopping illustrated above. The question with regard to this level is, whether nested and overlapping institutions enforce compliance or create loopholes for non-compliance. Davis’ assumes that a violation of rules in one forum might decrease a state’s bargaining position in other fora: “Overlapping institutions may also promote greater compliance by increasing incentives to maintain a good reputation” (Davis 2007: p. 8). To put it in game-theoretic

terms: One play has an impact on other plays' payoff. A loophole for non-compliance, by contrary, is provided when states justify non-compliance by referring to a different nested or overlapping jurisdiction.

In a detailed inductive study on the sequence of commercial cooperation, Estevadeordal and Suominen (2008) examine a dataset with more than 13000 international agreements over the time period from 1875 to 2006. They propose three functionalist arguments on how agreements might generate "overlapping institution building" in other areas. The first point is related to transaction costs. The cooperation in trade involves in most cases multiple and multilayered issues. This can reduce transaction cost and create opportunities for institution building in other domains. The authors state in this regard (2008: p. 126): "Today's TAs [trade agreements] are often more multifaceted than are many other types of international agreements, extending to such areas as competition policy and intellectual property rights. As such, they could be hypothesized to open ample opportunities for states to engage in issue-linkages and log-rolling, which, in turn, could facilitate the attainment for further cooperation agreements." The second argument is based upon positive externalities. These, for instance in form of efficiency gains, might strengthen domestic actors that support international cooperation also in other sectors. The third argument bears on negative externalities. The latter, for example ecological degradation, can incentivize the creation of overlapping or nested institutions to circumvent or reduce negative effects.

### *The Dynamic Time Path Issue*

The most prominent as well as most controversial string in the literature on nested and overlapping trade institutions is on the dynamic time path issue. The expression was coined by Jagdish Bhagwati (1993) against the backdrop of the second wave of regionalism in the early 1990ies to distinguish it from "static approaches" that analyze à la Viner welfare effects of PTAs. The dynamic time path issue deals with the question whether regionalism is benign or malign for the process of multilateral liberalization. Important contributions, which became modern classics in trade theory, have been written during the 1990s and the early 2000s and the subject has not ceased to attract scholarly attention since. However, the main ideas of this literature are much too well known to be resumed here. Excellent compendia are, to name only a few, Bhagwati; Greenway & Panagariya (1998), Winters (1996) or Panagariya (2000).

### **3. THE DYNAMIC TIME PATH ISSUE REVERSED**

Interestingly, there exist much less literature on the topsy-turvy question or how the GATT/WTO might influence the spread of PTAs. “[...W]hat are the problems of the GATT that lead countries to turn to their neighbourhood instead?” - This interrogative by Paul Krugman (1993: p. 73) mirrors the most common approach to the dynamic time path issue reversed. It is the consideration that the multilateral system’s failures, its long and back-braking negotiations and dissatisfactory results drive countries to engage in smaller and exclusive clubs. Legal scholar John H. Jackson has put this in pre-WTO era into the following words (1993: p. 124): “[...C]ountries have become more frustrated with GATT. The large numbers and wide diversity of economic and trading systems represented, coupled with a ‘lowest common denominator’ approach partially encouraged by the [mf n] clause, have made it sometimes difficult to achieve progress within the GATT towards resolving some of the issues that world trade developments have posed. This has been particularly true for new areas needing international discipline, such as trade in services or intellectual property. Other issues that have arisen include environmental rules, competition policy, dumping rules and, of course, the ongoing concern about trade in agricultural goods. The GATT dispute settlement system and its institutional structure have been criticized as inadequate for many new developments in world economic relations [...]. All of these factors have led groups of countries to consider moving beyond the GATT/multilateral system to develop tighter knit and deeper regulation concerning economic relations for small groups of nations on a preferential basis.” This explanation sounds perspicuous but is not uncontested. Baldwin (1997), for instance, shows in a process tracing analysis of after-war trade history that the “frustration-with-GATT”-argument does not hold in the case of US-American and European regionalism. Baldwin shows that the nations which routed early multilateralism were also engaging in regionalism. In addition, a failure of GATT-rounds was -in this context- accompanied by a failure of the regionalism route.

A different string of theoretical literature models the impact of GATT/WTO on PTA-formation from an opposed conjecture. The priori statement is: The GATT/WTO provides a prolific framework for trade liberalization and it is its success that creates incentives for nested regional arrangements. In this context three principal models, which are resumed in the following sub-sections, can be referred to.

*The Freund Model of Oligopolistic Trade and Endogenous PTA Formation*

Caroline L. Freund (1999; henceforth Freund) presents an oligopolistic partial-equilibrium model to demonstrate the impact of the GATT/WTO on trade arrangements in the bi- or minilateral arena. The starting point of her analysis is the evident success of the multilateral trade system in terms of tariff-reduction. In 1947, the founding year of GATT, the average level of industrial tariffs imposed by developed countries was around 40 percent. Almost five decades and seven rounds of negotiations later it was reduced to only 4 percent (Winham 2005: p. 103). From this observation Freund deduces the question whether this success might have expedited the mushrooming of PTA formation.

To scrutinize this question she develops a model of imperfect competition, which shares several features of the Brander-Krugman (1983) reciprocal dumping model, the Brander-Spencer (1984) export subsidy model and the Krishna dynamic time path issue model (1998). A la Viner the existence of three countries, country A, country B and Country C is assumed. There is only one firm in each country and each firm produces a tradable good that is a perfect substitute to the goods produced by the other firms. The “segmented market assumption” (Helpman 1984) applies. This signifies that each firm makes distinct production decisions for each market. Transport costs and fixed costs are assumed away and marginal costs are constant. Firm behavior is Cournot with the following three assumptions: First, the quantity to be produced is the firm’s only strategic variable. Second, conjectural variations are zero. That is that all firms maximize expected profits assuming a fixed output of the other firms in each market. Third, it is assumed that all firms make production decisions at the same time. The country’s welfare is assumed to be a function of the consumption of the numeraire and the utility of the good’s consumption. Demand in each country is assumed to be quasilinear. This implies that the quantity consumed depends not on the consumer’s income but only on the good’s relative price. Thus, the inverse demand function and the resulting equilibrium price in each market are assumed to be also linear. The government has one strategic variable to influence government revenue and aggregate utility: it can implement a positive tariff on imports from foreign country. It is assumed that tariffs are symmetric. The profit of each firm is a function of the quantity sold given the equilibrium price in each market, minus production costs and minus tariffs that have to be paid by entering into a foreign market. Producers choose, according to the above mentioned constraints, their production volume in order to maximize profit in each

market. Each country's numeraire is the sum of tariff revenue, the domestic firms profit minus expenditure. Each country's aggregate utility consists of government revenue, producer surplus and consumer surplus. Opposed to Krishna (1998), who models producer surplus as binary political support function against or for a specific tariff rate, Freund assumes the government being utility maximizing. As Helpman & Krugman (1989) demonstrated such a government can be expected, given a Cournot oligopoly, to implement a positive tariff. Freund comes to the same conclusion and assesses the tariff-rate that optimizes aggregate utility. The implementation of the optimal tariff represents, however, a pareto-inferior Nash-Equilibrium: "...if each country does so everyone is worse off" (p. 9).

The paragraph above described the static setting of the model. Freund then uses a repeated game framework to compute equilibria in a dynamic setting. She demonstrates that the incentives for PTA-formation are different against the backdrop of high or low mfn-tariff-rates. There is an initial period where mfn-tariff-rates are presupposed to be high. In this phase there are little incentives for PTA-formation. Panagariya (2000: p. 324) expresses this in the following notion: "The logic behind [...] can be best understood by considering the case when the initial multilateral tariff is near autarky. In this case, when two countries form an FTA, there is no room for exploiting the third country via better terms of trade: at zero trade with the latter, the gain from improved terms of trade is also near zero." But there are incentives for multilateral liberalization: A multilateral reduction of the mfn-tariff-rate increases competition and brings each economy closer to its efficiency point. This efficiency gains result in decreasing prices and increasing consumer surplus. The overall outcome in this setting is pareto-superior and results in a positive welfare effect, albeit reduced producer profits and (the autarky assumption aside) less governmental tariff revenue.

Now the period after multilateral liberalization is considered. Freund's argumentation is algebraic though its intuition can be resumed in the two graphs below, which illustrate demand in market A.<sup>10</sup> Figure 1 depicts (in blue) the equilibrium against the backdrop of low mfn-tariffs. Because of the Cournot-assumption the equilibrium price  $P_A$  is higher than the sum of tariff and production costs. The tariff  $t_A$  which is symmetric for imports from country C and country B  $(q_A^C + q_A^B)$  generates country A's government revenue

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<sup>10</sup> And, by consequence of its trading partner country B.

(GR). Domestic consumer surplus (CS) and the different oligopolic producer surpluses (PS C, PS B and PS A) in market A are indicated.

Fig. 1: Period after multilateral liberalization

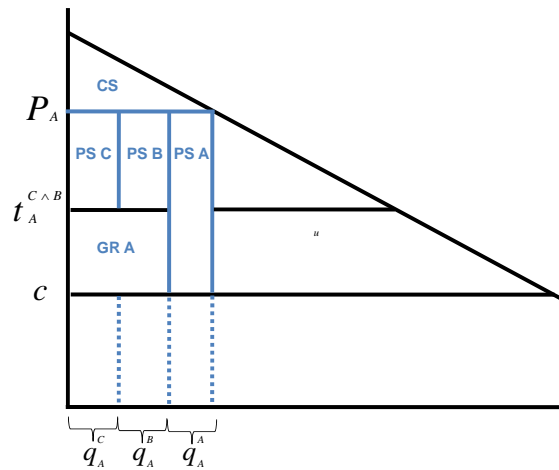
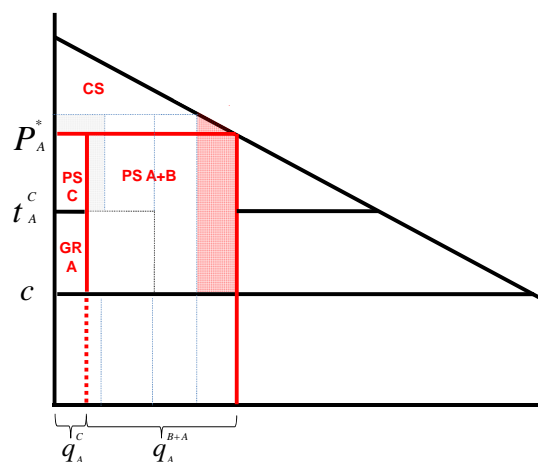


Fig. 2: Period after multi- and bilateral liberalization



Sources: Freund figure 3; Cadot et al. (forthcoming.)

According to the Freund model two countries have now, with low multilateral tariff rates, an incentive to establish a PTA. The reason becomes apparent in Figure 2 which depicts (in red) the equilibrium after establishment of a bilateral PTA of country A and B (thin blue or black lines repeat Fig. 1). PTA-formation results in increased competition and higher efficiency which results in a lower price  $P_A^*$ . Trade diversion reduces the imports from the outsider country C. Government revenue shrinks. A part of producer surplus is transferred to domestic consumers. These latter and the PTA's producers gain from efficiency effects (the rose shaded areas). The main argument in the Freund model on endogenous PTA formation is, however, on "redistributive effects": The PTA's it

improves its members' terms-of-trade and its producers and consumers capture a part of the oligopoly-rents of Country C! These redistributed shares are shaded in grey in Fig. 2.

At high multilateral tariff levels this redistribution would be much costlier since a terms-of-trade improvement with regard to the third country would lead to significantly more important losses of tariffs and firm profits. According to the Freund model, the risk that a PTA-member cheats on the other member in such a high tariff environment by re-establishing its initial tariff rate is elevated. The other PTA-member's dominant strategy would be to return as close as mfn-rules allow to its optimal tariff: Although the PTA formally continues to exist it would be but an empty shell. Anecdotal evidence on past PTAs that failed in an early GATT-context but were newly founded and persist in a similar formation under the late GATT/WTO, corresponds to this view. Still, the author specifies (p.5): "While this simple framework is useful to illustrate the different impacts of multilateral and bilateral liberalization, it should be underlined that the model is highly specialized and the results should be interpreted with some caution. In general, PTAs and multilateral tariff reduction affect more than one sector, and the impacts on the exporting sector and the import-competing sector are quite different. A general equilibrium model (...) might lead to different conclusions. Still, to the extent that PTAs are associated with significant intraindustry trade and imperfect competition, this model may help to explain the recent rise in regionalism."

#### *The Ethier Model of Investment and Policy Change*

With regard to commercial regionalism it is conventional wisdom that strategic political choices often outweigh considerations on trade liberalization alone (Bhagwati & Panagariya 1996: 52 et seqq., Baldwin & Venables 1995). A recurring argument is that governments chose regional economic agreements to "tie their hands" in intrastate policy design processes (Fernandez & Portez 1997). This idea is based upon the concept of "time inconsistency" (Kydland & Prescott 1977). When reforms are linked to binding international obligations, domestic interest groups have a harder deal to reverse these reforms. Domestic structural changes are "locked in" via the international agreement and uncertainty concerning policy inconsistency in time is reduced. Ethier (1998; henceforth Ethier) develops from this conjecture an insightful model on regionalism and multilateralism.

His analytical starting point is the observation that the new regionalism from the 1990s on and its context differs qualitatively from the old regionalism of the Vinerian era in the 1950s. Multilateral liberalization has progressed and flows of international foreign direct investment have increased since. Additionally, autarky in trade politics became the exception rather than the rule. The stylized facts of new regionalism are the following: The preferential agreement is made between an industrial country and a less advanced country. The less advanced country has engaged in domestic policy reform. The agreement is “trade +”, that is it includes aspects other than trade, political or military cooperation or cultural issues, but above all investment issues. The degree of trade liberalization made by the industrial country is modest while the less advanced country is willing to make the major concessions for cooperation. This leads to the puzzling question on the motivation of the less advanced country for regionalism. Ethier’s explanation is that the small country engages, at the precondition of a low multilateral tariff environment, in reform to attract FDI. The PTA with the developed country represents an anchoring device to lock this reform in.

The model’s set up begins with a number of advanced countries (ACs) and a number of less advanced countries (LACs). The factors of production in advanced countries are skilled labor, unskilled labor and human capital. Each AC produces non-tradable goods, which are referred to as commodity, and tradable goods, which are imperfect substitutes for those produced in other countries. The untraded commodities are produced using skilled and unskilled labor. The tradable good is produced in a two-step procedure. In a first step, which mandatorily takes place domestically, human capital is the production factor. In a second and final step skilled labor is the production factor. This step of production can take place at home but it can also be delocalized to another country. It is important to note that this second step is assumed to hold for increasing returns to scale. These economies of scale are international and do not depend neither on the size of skilled labor used in a firm nor in a country, but globally (Ethier 1979 & 1982).

For reasons of simplicity only one factor of production is considered in less advanced countries: skilled labor. Consequently, LACs can also perform the second step of the tradable good’s production. However, it is assumed that they do not have the possibilities to perform the first step. Under autarky their products remain therefore abecedarian substitutes for the tradable goods produced in advanced countries. This leads to the political economy dimension. In LACs the government’s choice on commercial policy is binary: autarky or reform. Reform opens the country to foreign

direct investors from ACs. These investors might delocalize the second step of production to an LAC. In such a case, a final product is considered as a perfect substitute to those entirely produced in ACs. The inner state political economy process in LACs is not modeled in detail. But it is assumed that domestic interest groups capture rents under autarky and therefore oppose reform. However, when the parameter designing the gains from openness becomes amply dimensioned the government attempts reform. The instrument of commercial policy in ACs is an ad-valorem tariff. Main players in the domestic process of trade policy making are the government and the group representing unskilled labor. The political economy process is simplified to the assumption that the government weights income of the group representing unskilled labor against overall welfare.

Ethier's model is far more complex than this précis might suggest, but the basic idea behind his approach to the dynamic time path issue reversed is then the following: First, multilateralism is about internalizing an externality. When advanced countries multilaterally lower their tariffs, demand for the tradable good increases. This lifts the production and yields a positive externality: the above mentioned scale effects in the second step of producing the tradable good. Since all players in the multilateral arena gain from these scale economies, welfare maximizing governments in ACs engage in GATT/WTO.

Second, multilateralism increases the probability of reform in LACs. When tariffs are lower and trade becomes less costly, firms in advanced countries have growing interest to shift the second step of production to less advanced countries. The ameliorated opportunity to attract this foreign direct investment has an impact on the political economy dynamic in less advanced countries. Although specific domestic groups will lose from openness, governments in LACs increasingly attempt to reform. Some of these attempts might fail, but the overall probability of reform increases. The ACs lose some jobs in the second step of production, but the gains in the positive externality weight these losses out. Therefore, advanced countries benefit from reform in less advanced countries which, in turn, strengthens their commitment to the multilateral system.

Third, regionalism is a mechanism to lock in reform. An LAC-government that aims to reform has two options, which are unilateral liberalization or regionalism. When it liberalizes unilaterally but fails to attract FDI, the domestic reform process will be overturned. A bilateral liberalization with an AC in the framework of a PTA gives it a

marginal advantage over other LACs. This marginal advantage results in two effects that Ethier calls in analogy to the Vinerian terms “investment diversion” and “investment creation”. When investment flows are diverted from LACs outside of the PTA to the one inside, investment diversion takes place. Investment creation occurs when the PTA triggers incentives for FDI that would not have taken place otherwise. The AC does not gain much from the PTA. It gains from investment creation in the partner-LAC, but loses tariff revenue. But, neither is it disadvantageous to enter into the PTA. In addition, the PTA avoids a situation, where all LACs have an agreement with other ACs, which then can produce at lower costs. By contrary, the marginal advantage of a PTA makes the big difference for the partner LAC, which explains why it is willing to make major concessions. The overall impact on policy reform is ambiguous. The PTA might be the initial reason to guarantee reform in the participating LAC (“reform creation”). However, the investment diversion might cause reforms to fail in LACs that are excluded from the PTA (“reform destruction”).

Though, the overall welfare effect is positive (Ethier: p.1242): “The regional arrangements, by in effect internalizing a critical externality, help spread the benefits of the multilateral trading system around the globe and enhance its value to all participants, thereby reinforcing, rather than undermining, support for multilateralism.”

#### *The Mansfield & Reinhardt Model of Bargaining Power and Insurance Mechanism*

The previous model considers strategic “trade plus” considerations in the domestic arena. The other side of the coin is to explain the establishment of PTAs by strategic considerations in respect of processes in the international arena. A major reason for countries to seek the formation of PTAs is, according to Mansfield and Reinhardt (2003; henceforth Mansfield and Reinhardt or M & R), to secure their negotiation position in the multilateral trade arena. In this regard PTAs are not an end by their self but means for the multilateral liberalization process. Otherwise put, “...states form PTAS to ensure the greatest possible gains from the multilateral regime itself” (M & R: p. 834). M&R base this argument on two main hypotheses: the “bargaining power” and the “insurance mechanism” hypotheses.

The bargaining power hypothesis is intuitively graspable. It assumes countries to increase their bargaining power in international negotiations by pooling their market’s size and by aggregating their interests. The sole possibility of future regional arrangements, to speak in negotiation research jargon, can strengthen a country’s “best

alternative to a negotiated agreement” during multilateral talks. An amelioration of the alternatives to a multilateral outcome decreases the country’s win set, which is the set of theoretically possible international agreements that would obtain domestic ratification (Putnam 1988: p. 437). The country can behave more demanding and improve its bargaining position. The argument was earlier depicted by, among others, Whalley (1996: p. 19): “[D]uring the Uruguay Round, it was widely thought that it was to the U.S. advantage to have regional trade negotiations underway, so that in dealing with recalcitrant multilateral negotiating partners, the U.S. could threaten or actually play the bilateral card, and engage in active discussions with prospective regional partners. If multilateral partners were slow to react, initiation of regional negotiations would be the result.”

This leads to the second hypothesis, or the “insurance mechanism hypothesis”, which is interlinked with the first and which credits PTAs with a bumper function: Countries do not only consider the formation of or the entry into PTAs to increase their bargaining power in the multilateral arena but also to mitigate unwelcome developments in the latter. A similar argument was brought forward in earlier study by Mansfield (1998). A major reason for PTA formation is, according to this, to assure the continuance of commercial relations with specific trade partners in the future. Perroni & Whalley (2000) argue in the same vein that small countries actuate regional arrangements –and are willing to bear its major costs- with big trading partners to insure their access to the latter’s markets. Bagwell & Staiger (1997) implicitly deal with an insurance mechanism in their “tariff discrimination effect”-argument: countries assure themselves against countries that free ride via the most favorite nation-clause by excluding them from regional arrangements. The underlying argument of the Mansfield & Reinhardt model is that specific developments in the multilateral arena, such as the entrance of new GATT/WTO-members or trade disputes, represent shocks for domestic political economy equilibria. Domestic actors that would be hurt by these shocks mobilize to insure themselves to minimize these risks: The entry into or the formation of a PTA would represent such insurance.

Mansfield & Reinhardt deduce from the “bargaining power” and the “insurance mechanism” hypotheses a model on the “dynamic time path issue reversed”. The authors use a definition of preferential trade agreement that includes all reciprocal commercial arrangements notified to GATT/WTO.  $PTA_{ij}^t$  is a dummy variable equaling 1 if countries  $i$  and  $j$  conclude a new PTA that enters into force at time  $t$ . The variable equals 0 if this is not the case. The model’s explanandum is the probability  $P_{ij}^t$  that

$PTA_{ij}^t = 1$ . Consequently, the Mansfield & Reinhardt model can be recapitulated in form of a binomial logit or probit model such as

$$(i) \quad P_t^{ij} = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{Z_i} e^{-s^2/2} ds$$

Where  $s$  is a standardized normal variable (Studenmund 2006: p. 462). The equation (i) can be rewritten as

$$(ii) \quad Z_i = \Phi^{-1}(P_t^{ij})$$

With  $\Phi^{-1}$  being the inverse of the normal cumulative distribution function. The model's gist is of course the choice of explanatory variables. Mansfield & Reinhardt focus on four explanatory variables that are deduced out of their above mentioned hypotheses:

First, countries are particularly interested in upgrading their negotiation position (or to create insurances) when multilateral negotiations are en route. This explains the variable "round of negotiations" or  $R_t$ . The variable is binary and takes the value 1 if multilateral negotiations are taking place at time  $t$  and the value 0 if not.

The second explanatory variable  $N_{t-1}$  itemizes the number of GATT/WTO members at one period before time  $t$ . The underlying assumption is that a growing number of member states increases the number of state actors and as a matter of course the number of domestically involved interest groups. The heterogeneity of preferences is amplified. Furthermore, according to the Olson asymmetry (1965) it is assumed that a rising number of member states enhance the risk of collective action problems. M & R conclude in this regard: "Faced with heightened difficulty arriving at any overarching agreement on economic matters as the number of member grows, parties to GATT/WTO may find it advantageous to form smaller, preferential arrangements composed of states with common interests on trade policy" (M & R: p. 839).

Furthermore, it is assumed that the entrance into a dispute settlement or the loss of the latter represent idiosyncratic shocks that are considered to make a country seek insurance mechanisms. The third explanatory variable  $ND_{t-1}^{ij}$  depicts therefore the participation (as complainant or defendant) of country  $i$  or country  $j$  in a new dispute with a third party at time  $t-1$ . The fourth explanatory variable  $DL_t^{ij}$  indicates country  $i$  or country  $j$  losing a dispute settlement at time  $t$ . To control for other factors, M & R introduce some variables that have been previously identified as determinants for PTA formation such as, for instance, geographical proximity or trade flows between  $i$  and  $j$ .

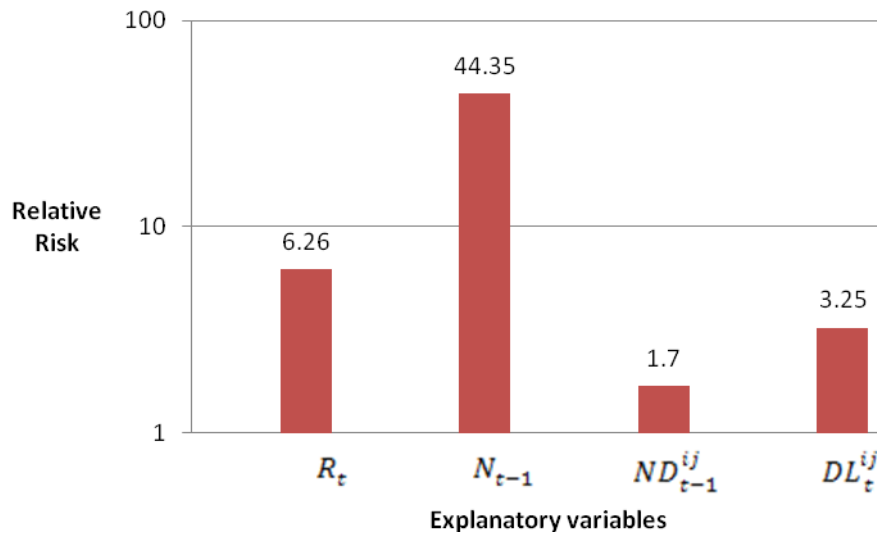
$CV$  is a vector of these different control variables. The independent variables are then plugged in equation (ii) which yields:

$$(iii) \quad Z_i = \Phi^{-1}(P_t^{ij}) = \alpha + \beta_1 R_t + \beta_2 N_{t-1} + \beta_3 ND_{t-1}^{ij} + \beta_4 DL_t^{ij} + \beta_5 CV + \varepsilon$$

Where  $\varepsilon$  stands for the stochastic error term and other Greek letters for the respective regression coefficients. Mansfield & Reinhardt are the first, to the best of the author's knowledge, to carry out an econometric test on the dynamic time path issue reversed.

Although Mansfield & Reinhardt's statistical methods will not be recapitulated here, the results (pp. 848-853) of their test will be resumed. Their model's four explanatory variables reveal to be significant at the  $p < .01$  level. The null hypothesis can be rejected with  $p < .001$ . Consequently, there is substantive evidence which indorses the Mansfield & Reinhardt model on the dynamic time path issue reversed!<sup>11</sup> For an interpretation of their results the authors compute the impact of each independent dummy variable, holding the other variables equal, on the "relative risk" that country  $i$  and country  $j$  form a PTA. The figure below depicts this relative risk on a logarithmic scale.

Fig. 3: Relative risk of PTA-formation



Source: Mansfield & Reinhardt figure 3

Seven rounds of negotiation took place within the framework of GATT/WTO between 1948 and 1998. Altogether, 25 years of this period were dedicated to multilateral trade

<sup>11</sup> The authors refer to the evident problem of collinearity, in particular of "number of GATT/WTO-members" ( $N_{t-1}$ ) and "time" (t) at page 848. For questions on robustness see p. 851.

talks. The fact that trade negotiations are taking place increases, according to the estimates of Mansfield & Reinhardt, the probability that a pair of countries establish a PTA by more than six times. A particular important role on countries' decision to form a PTA seems to play the growing number of GATT/WTO-members. To interpret the estimated regression coefficient the authors increase the variable's mean by one standard deviation and divide the resulting probability by the probability using the variable's mean.<sup>12</sup> This increase of one standard deviation boosts the likelihood of PTA-formation by more than factor 40. The probability that countries  $i$  and  $j$  conclude a PTA almost duplicates when one entered into a trade dispute with a third party at  $t - 1$  and more then triples when one loses a trade dispute. Given the comparably huge sample size of country-pairs Mansfield & Reinhardt resume (p. 851): "Even if none of these variables add more than 0.1 percent to the chance of any two states entering a PTA, as many as eight additional bilateral PTAs would form in a single year as a result [...]".

#### **4. OUTLOOK**

Regionalism is here to stay. It is interesting to note, but not astonishing, that the dynamic time path issue attracted and attracts so much more scholarly attention then does what is called here the dynamic time path issue reversed. The dynamic time path issue is (as static approaches are) about a very normative concern. The undisputed initial point is that multilateralism is good for global welfare and the dynamic time path issue is about the first order impact of regionalism. The dynamic time path issue reversed, by contrary, does not have this genuine normative weight. Under the assumption of a negative relationship, one gets back to the static issue and the question of trade diversion remains valid. But regionalism appears to be a complement rather than a substitute to multilateralism. Under the assumption of a positive relationship, as made by the three models reviewed in this text, regionalism is a consequence of multilateralism, but not a substitute neither.

The three models, although very different in their approach, have one aspect in common: The political economy process remains a black box. The models deal not, or in a very simplified fashion only, with the interaction between government and domestic interest groups. To further elucidate the inner-state dynamics of the relevant two-level games represents a challenge for future research. Another interesting question, based

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<sup>12</sup> The interpretation of estimated logit and probit coefficients require specific techniques, such as this one used by the authors. The observation of a one unit increase in the explanatory variable would yield, different to the interpretation of linear probability model coefficients, inaccurate estimates of the variable's impact.

upon the Mansfield & Reinhardt model is, whether the bargaining/insurance-function of PTAs has diminishing returns or not: Will it become less interesting at the margin to create a new PTA in a regionalized world? Or, by contrary and in accordance with the on-going regionalism à la “competitive liberalization”, can every new PTA expected to give a slight advantage in the bargaining process?

From a policy perspective, however, it might be otiose to ask whether in the years to come the mushrooming of regionalism will continue at a steep or a *very* steep rate. In this regard, the words of de Melo and Panagariya (1993: p.9) are today as actual as they have been one a half decades ago: “a more constructive approach is to ask whether mechanisms can be devised to ensure that regionalism complements multilateralism and does not fragment the world into inward-looking blocks”. Do the surveyed models on the dynamic time path issue teach us anything about this concern? Maybe the Ethier model with its focus on investment is the most pertinent in the context of current policy debates. The question on a better multilateral structure for investment issues is a complex and recurrent one. For instance, Collier (2008: p.154) recently called for an international investment charter, international investment arbitration and investor insurance. To analyze whether such investment multilateralism (within the WTO or in different fora) has an impact on investment creation, reform creation and PTA-formation seems to be another promising field for future research.

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