

Theoretical Framework

Capacity Building Workshop
 “Enhancing Capacity on Trade Policies and Negotiations in Laos”
 May 8-10, 2017
 Vientienne, Lao PDR

John Gilbert

Professor
Department of Economics and Finance
Jon M. Huntsman School of Business
Utah State University
jgilbert@usu.edu



Introduction

- We begin with a general discussion of the economic theory behind the formation of preferential trading agreements, and how it informs the analytical approaches we take in assessing them.
- The key issue is that preferential trade agreements are second-best instruments, and are thus not guaranteed to raise economic welfare.
- We can use theory to identify characteristics conducive to net gains, and the types of methods that could be used to identify them.

Trade Creation and Diversion

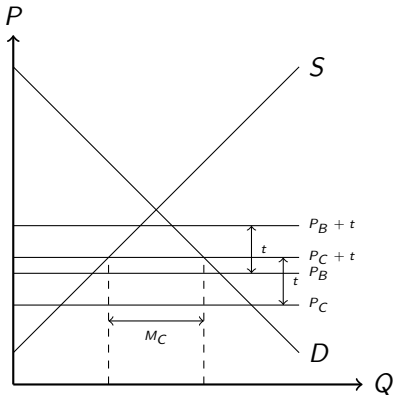
- The most basic analytical concept in the analysis of preferential trade agreements is the contrast between their trade creating and trade diverting effects.
- PTAs generally create more trade among members, but often at the expense of less trade with non-members.
- This obviously hurts non-members, but can also hurt members as well.

Trade Creation

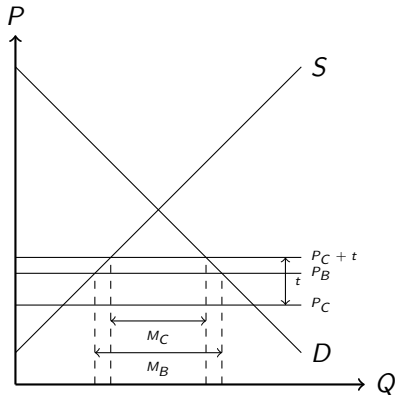
- This is defined as the welfare gain associated with expansion of imports from a relatively low cost source within the PTA.
- Trade creation reflects a partial reclamation of the deadweight (efficiency) loss associated with the initial tariffs.
- It arises as resources formerly used in producing goods available at lower cost through importation are released to more productive uses, and as consumers for whom a tariff previously rendered consumption not beneficial expand their consumption through imports.

Trade Diversion

- This is defined as the welfare loss associated with switching imports from a relatively low cost supplier outside of the PTA to a relatively high cost supplier within the PTA.
- The welfare loss occurs precisely because of the discriminatory tariffs applied to members/non-members. As the source of imports switches, the tariff revenue initially associated with imports is lost.
- Part of this is a transfer back to consumers on whom the initial tariff was effectively imposed. But to the extent that post-PTA prices exceed the tariff-exclusive initial prices, part of the loss is not transferred to consumers. It is this part of revenue that constitutes trade diversion.

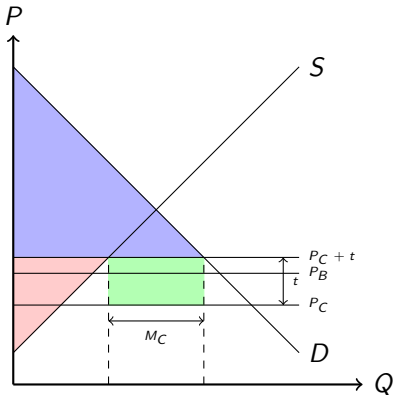


(a) Pre-PTA

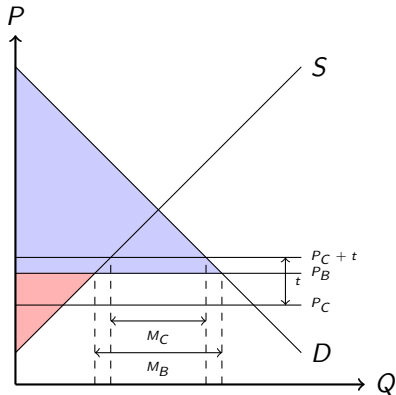


(b) Post-PTA

Figure: Production, Consumption and Import Changes with a PTA



(a) Pre-PTA



(b) Post-PTA

Figure: Economic Efficiency Changes with a PTA

Effect of Initial Protection Levels

- The higher the initial levels of protection through tariffs or other measures, the greater the scope for trade creation and the possibly the lower the potential for trade diversion (for very high tariffs).
- The reason is that the deadweight loss of a tariff increases exponentially with the size of the tariff, hence increasing the size of the area potentially reclaimed through the trade creation effect.
- Tariff revenue is a decreasing function of the size of the tariff when the tariff is sufficiently high (beyond the maximum revenue tariff).
- In the limit, where tariff are prohibitive, only trade creation can occur.

Effect of Competitiveness in Member Economies

- The lower the prices at which member economies are able to supply the needs of the PTA, the greater the scope for trade creation and the lower the potential for trade diversion.
- In the limiting case, if a member country is most efficient world supplier, and hence the initial supplier pre-PTA, trade diversion is impossible and trade creation is maximized.

Effect of Number of Members

- The greater the number of members of the agreement, the more likely it becomes to contain an efficient producer of any given commodity.
- In the limit, a global PTA covering all goods is equivalent to global free trade.

Effect of Sectoral Coverage

- While broad sectoral coverage might appear desirable (and is a requirement of Article XXIV of the WTO, which governs preferential trading agreements), this is not necessarily the case.
- Trade creation/diversion effects must be assessed at the sectoral level.
- In general, it will be welfare superior to form an agreement covering sectors only when trade creation effects in that sector dominate trade diversion effects.

Effect of Barriers to Non-Members

- As a general principle, the lower the barriers to trade with non-members, the less the potential for diverting trade patterns.
- In fact, it should be possible to guarantee that trade creation effects are greater than trade diversion effects, if barriers to non-members are lowered by enough.

Terms of Trade Effects

- These are relevant when intra-PTA demand cannot be met by intra-PTA supply without increasing prices, and/or when changes in the pattern of extra-PTA pattern of trade are sufficiently large to alter the terms-of-trade with respect to non-members.
- Intra-PTA movements may create a gain for a partner country that is able to expand into an export market through preferential treatment.
- Extra-PTA movements occur whenever trade diversion occurs and the PTA is large. The terms of trade shift in favor of the PTA.
- This has a positive welfare implications for the PTA, but again the overall effect remains ambiguous.
- Preference erosion occurs when a member of an existing PTA forms a new agreement with other countries. This can have the effect of shifting the terms of trade against existing partners.

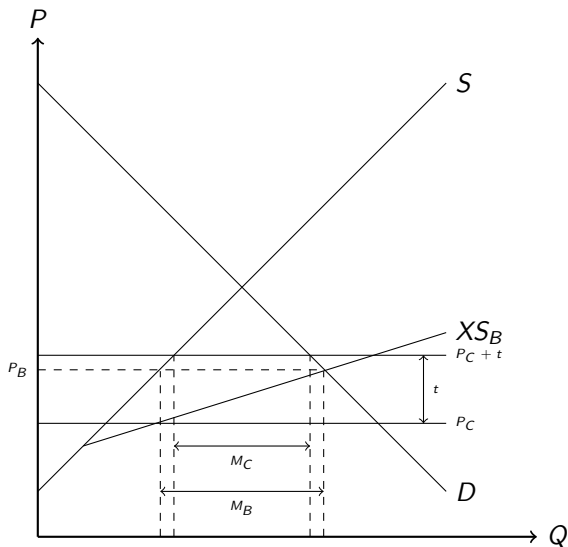


Figure: PTA with Terms of Trade Effects

Dynamic Effects

- Trade creation and diversion static in nature.
- It is also sometimes argued that PTAs can have dynamic effects, both positive and negative.
- Arguments for positive dynamic effects are based on the idea that a net trade-creating PTA will generate higher incomes. Part of that income may be invested, which generates still higher growth.
- Negative dynamic effects are associated with adjustment costs. It may be generally assumed that there is a cost involved in moving from one equilibrium to another. This cost, while temporary, is nonetheless of policy interest.

Linking the Ideas to Analytical Methods

- Empirical studies of PTAs seek to do one of two things. Either they attempt to determine whether or not a proposed arrangement is likely to raise/lower welfare for the members/non-members (*ex ante* analysis), or they attempt to determine whether a given agreement did in fact raise/lower welfare for the members/non-members (*ex post* analysis).
- Studies may also, of course, attempt to address broader economic issues such as development, income inequality, sectoral transformation, and so on.

- The use of trade indices pre-PTA is in essence an attempt to indirectly gauge the extent to which a given proposal is likely to have positive consequences by matching real world data to theoretical characteristics that would promote such an outcome
- The use of trade indices post-PTA is in essence a search for signs that trade diversion/creation (or some other economic outcome) did in fact occur, and in what degree.
- For example, it might be argued that the potential for trade creation is high if there is a strong overlap between the import and export profiles of the trade partners. Indices are a basic way of using data to assess possible outcomes.

Simulation Methods

- Simulation methods have the same objective, but increase the role of theory in describing a wider range of possible outcomes.
- A partial equilibrium simulation model will specify aspect of demand and supply in a market, fit to known data about that market, and attempt to quantify the magnitude of the changes in trade, revenue, economic surplus, and so on. Predictions ay be used to infer other outcomes – large predicted shifts in imports may suggest significant adjustment costs that may need to be managed, and so on.
- Computable general equilibrium models up the degree of sophistication considerably, by attempting to model an entire economic system. Again though, the fundamental objective is the same – utilize theory and data to attempt to quantify the magnitude and direction of economic changes that are likely to occur with a PTA.