Firms, Dynamics, and Stumbling Blocks in Trade

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Abstract

When can integration via preferential trade agreements (PTAs) threaten the longer term project of global trade liberalization? This paper presents a model that leverages recent work on the economics and politics of heterogeneous firms in trade to provide an answer. When liberalization occurs between economically similar states that are jointly uncompetitive in a specific industry with respect to world markets, the market consolidation around the largest and most productive of these firms can empower those firms to more effectively resist future liberalization with world markets; under these conditions, PTAs are "stumbling blocks" in the process of trade liberalization. However, when liberalization within a PTA occurs between dissimilar parties, or between similar parties who can compete in world markets, the surviving firms will be amongst those most enthusiastic about further liberalization, producing a rolling ball effect in which PTAs can indeed be "building blocs" towards more open trade. Thus, the paper suggests that the question of whether PTAs are "building blocks or stumbling blocks" towards more open trade may have a PTA- and industry- specific answer, with variation explained by the economic characteristics of the states in question.

Introduction

One of the most significant unresolved questions in the international trade literature is whether or not preferential trade agreements (PTAs) are "building blocks" or "stumbling blocks" in the process of developing a more open global trading system (Bhagwati 1991,

Krishna 1998, Maggi 1999, Bagwell and Staiger 2001, Chase 2003, Limao 2006, Johnston and Trebilcock 2013, Hicks and Kim 2015). This question has gained additional salience in recent decades as multilateral negotiations at the World Trade Organization (WTO) stalled, while the number of PTAs skyrocketed from about 70 in 1990 to over 700 today (Dür et al. 2014, Baccini 2019). While much of the discussion on this issue has focused on the process of negotiating multilateral agreements, or on questions like the magnitude of "trade creation" versus "trade diversion", a perhaps more fundamental question underlying this process from a political economy standpoint is: what impact does trade liberalization within a PTA bloc have on the relative balance of power between domestic protectionist and open trade interests?

Indeed, while much of the political economy of trade literature has focused on domestic redistributive consequences (Rogowski 1989, Scheve and Slaughter 2001, Hiscox 2002, Mayda and Rodrik 2005, Osgood 2016, Kim 2017) and the conditions under which we might expect certain domestic groups to be more influential than others (Grossman and Helpman 1994, Goldberg and Maggi 1999, Gawande and Bandyopadhyay 2000, Bombardini 2008, Gawande et al. 2012), the literature on this question has often focused on state-level actors and interstate negotiations, rather than intrastate bargaining. This may be because the issue posed is fundamentally one of *dynamics* - i.e. the implications of policy choices (like joining a PTA) for the structure of politics in the future - while, with very few exceptions (Bailey et al. 1997, Hathaway 1998, Davis 2020), the theoretical political economy models that have been used to address trade are fundamentally static.

In this paper, I develop a dynamic political economy model with three important features - heterogeneous firms, technology-based differences in comparative advantage across countries, and fixed costs to lobbying - which can help address this underlying political economy

process. In the past decade or so, the trade economics literature has demonstrated that much of the "action" in international trade occurs at the firm level (Melitz 2003, Bernard et al. 2007, Melitz and Ottaviano 2008, Mayer et al. 2014), with only a small percentage of firms exporting (about 5% overall in the US, and approximately 18% of manufacturing firms). This work has begun to transform the study of the politics of trade as well in recent years, as political economists have begun to integrate the insights of this "heterogeneous firms" trade literature into empirical and theoretical models of trade policymaking (Bombardini 2008, Osgood 2016, Kim 2017, Baccini et al. 2017). By extending this analysis into a dynamic setting, this paper can provide insight into questions about the *evolution* of trade agreements over time in a way that existing work in this domain does not.

The conclusions of the model are striking; while the limited existing work that has addressed this kind of question (Richardson 1993, Bailey et al. 1997, Hathaway 1998, Baldwin 2006) has suggested that trade liberalization within a PTA might reduce protectionist demands, this paper's model demonstrates that this conclusion is conditional on the characteristics of the parties to such an agreement, and their position relative to world markets. While international competition leads to a within-industry shift in the distribution of firms towards larger, more productive firms, when this occurs within a PTA for countries that are otherwise at a comparative disadvantage in that industry with respect to world markets, it can actually strengthen protectionist demands by politically empowering firms who would be threatened by extra-PTA foreign competition. Thus, this paper provides insight into the conditions under which PTAs can be "stumbling blocks" in the project of building a more open, multilateral trade order, while also providing insight into a broader question about dynamics and trade: under what conditions can certain kinds of liberalization actually reduce support for future liberalization? In the wake of a backlash against globalization that arrived as many were predicting that the biggest political issues surrounding trade had

largely been resolved in favor of openness, it is clear that this broader area of inquiry has implications that go beyond even the important question of how best to build a stable, multilateral trade order.

Review of Relevant Literature

An expanded version of this section coming soon! Two strands of the literature are especially worth flagging at this point. First, the work that broadly looks at the spread of PTAs over time and/or examines path dependence in their rule structure (e.g. Manger 2006, Manger et al. 2012, Manger and Pickup 2016, Manger and Peinhardt 2017, Kim and Manger 2017); this work has a dynamic character, though it approaches this broad area of inquiry in a very different way than this paper's formal exploration of how domestic politics evolves in response to PTA imposition.

Second, the work that focuses on the politics of intraindustry (rather than interindustry) trade (Gilligan 1997, Chase 2003, Manger 2005, Manger 2009, Kono 2009, Manger and Shadlen 2014, Baccini et al. 2018) is instructive, given that this paper largely discusses trade within a differentiated sector. Most of this research has been broadly optimistic about the implications of intraindustry trade, suggesting that it may be less prone to protectionist demands. Gilligan 1997 and Kono 2009 are exceptions; they suggest that in some circumstances at least, intraindustry trade can make it easier for interest groups to solve the collective action problem that can otherwise constrain lobbying for protection.

This paper contributes to this work in several ways. First, it is explicitly dynamic, looking at a two stage process in which the political equilibrium is evaluated before and after the implementation of a PTA. Second, it builds directly on the more recent theoretical trade lit-

erature on heterogeneous firms; while many of the scholars who wrote about intraindustry trade were aware that firm level differences were likely to matter, many of them wrote before economic theory had developed to provide much of a guide on the details, as recounted in Chase 2003 (p. 142):

> "While theoretical accounts of these trends are growing, economics has not yet produced a "new" trade model with the rigor to supplant established approaches. Efforts to incorporate these factors into empirical work on the political economy of trade therefore rest on a less secure theoretical foundation."

Third, while the approach of this paper has a similar flavor to Gilligan 1997 and Kono 2009, in that it looks at how the particular economic effects implied by intraindustry trade may empower groups who could seek protection, the mechanism outlined has little to do with collective action. Indeed, the model posits a new mechanism in which expanded intraindustry trade can empower protectionist interests in a dynamic setting even when collective action problems are absent.

Model

Set up

Economic Framework

This paper's model builds off the recent literature on heterogeneous firms in trade to demonstrate the implications for the political economy of trade policies implemented over time (in this case, for liberalization in the context of PTAs). The Melitz and Ottaviano (2008) model - which is becoming a bit of a workhorse model in the political economy literature that deals with heterogeneous firms (see Osgood 2016, Kim 2017) - establishes the economic framework that the political economy model of this paper leverages. Melitz and Ottaviano (2008)

distinguishes itself from other models in the heterogeneous firms literature - most notably, the original model in Melitz (2003) - by specifying a model of consumer behavior that induces variable mark-ups by firms in equilibrium, rather than the constant markups implied by the constant elasticity of substitution (CES) framework that was used by Krugman (1980) in his work on "New Trade Theory" and built on by Melitz (2003) in is his work establishing the foundation of "New New Trade Theory".

The constant mark-ups induced by the CES framework result in the somewhat peculiar implication that a whole host of important measures - e.g. the cutoff for firm exit, the productivity distribution of firms in the market, etc. - are completely invariant to market size. Instead, what induces a reallocation of market shares towards larger firms is the existence of trade costs and export markets that are only accessible by the most productive firms - consequently, trade liberalization needs to be modeled as a shift in these costs in order to capture the important characteristics of firm heterogeneity in trade that this paper seeks to integrate into a discussion of the dynamic political economy of liberalization. By adopting the Melitz and Ottaviano (2008) framework instead, the key features of firm heterogeneity models (i.e. the reallocation of shares and profits) are also generated by increases in market size, which ensures that full liberalization within a bloc still produces these features, and allows for the liberalization process itself to be characterized in this paper more simply as a complete removal of barriers to trade, rather than as a reduction in trade costs.

Consumers in the Melitz and Ottaviano (2008) model exhibit several characteristics that are important for firm behavior: (1) they have *preferences for variety* (parameterized by γ) in a differentiated sector; (2) they have quasilinear preferences between this differentiated sector and a homogeneous numeraire good; (3) they have quadratic preferences across product varieties within the differentiated sector. They face a continuum of goods Ω in the

differentiated sector, leading to a utility function for the representative consumer as follows:

$$U = q_0^c + \alpha \int_{i \in \Omega} q_i^c di - \frac{1}{2}\gamma \int_{i \in \Omega} (q_i^c)^2 di - \frac{1}{2}\eta \left(\int_{i \in \Omega} q_i^c di \right)^2$$

Where q_0^c and q_i^c represent individual consumption of the numeraire good and variety i, while $\alpha, \eta, \gamma > 0$ characterize the substitution pattern between differentiated varieties and the numeraire. As noted earlier: γ indexes the "love of variety" of consumers (or equivalently, the degree of product differentiation) : $\gamma = 0$ implies that varieties are perfect substitutes, while higher levels of γ imply that consumers care more about particular varieties.

Solving the implied utility maximization Lagrangian using the above produces the following inverse demand curve (price as a function of quantity) for each product variety:

$$p_i = \alpha - \gamma q_i^c - \eta \int_{i \in \Omega} q_i^c di$$

This, in turn, defines a "choke price" above which demand for a quantity is zero.

$$\hat{p}_i = \frac{1}{\eta N + \gamma}(\gamma \alpha + \eta N \bar{p}_i)$$

Where N is the number of varieties, and $\bar{p}_i$ is the average price. This choke price is used to determine when firms exit. In this setup, because all consumers are identical, aggregate demand for any variety is simply $q_i = L q_i^c$.

Firms have a singular factor of production, L, which also indexes the size of the market. The market is characterized by monopolistic competition and constant returns to scale, with a fixed cost of E to enter the market, and a unit cost of labor of c. As is generally the case with monopolistic competition models, each firm produces its own variety of good in the differentiated sector, and the existence of multiple firms in the market is sustained by consumers'

love of variety.

Firms are heterogeneous in the cost parameter c, which is distributed $G(c)$ with support on some interval $(a,b) \in \mathbb{R}^+$. Firms need to choose whether to enter the market before observing their cost draw c. Once they observe their cost, if it exceeds the choke price characterized above, they immediately exit the market, as they are unable to generate positive profits. This defines a cutoff productivity draw $c_D = \hat{p}$, and allows the profit of any individual firm to be written as a function of c_D and c:

$$\pi(c) = \frac{L}{4\gamma}(c_D - c)^2$$

Where we can determine the equilibrium c_D by defining a *free entry condition*. In particular, in equilibrium, it must be the case that a firm's *expected* profits are zero; i.e. it must be the case that:

$$\int_a^{c_D} \pi(c) dG(c) - E = \frac{L}{4\gamma} \int_a^{c_D} (c_D - c)^2 dG(c) - E = 0 \tag{1}$$

If this condition is not met, more firms will enter the market, driving down the profits of firms in expectation until there is no longer an incentive to enter. Hence "free entry"; this condition is analogous to the standard "zero profits" condition from monopolistic competition models without firm heterogeneity, but slightly modified to account for the uncertainty over future productivity.

Countries and Technology

In Melitz and Ottaviano (2008), technologies are characterized by a country's probability distribution of firm costs (i.e. inverse productivities), with productivity $(1/c)$ assumed to be Pareto distributed, leading to a cost distribution on $[0, m]$ of:

$$G(c) = \left(\frac{c}{m}\right)^k$$

Where k is a shape parameter that determines how skewed the cost distribution is. For simplicity, in this paper I assume that $k = 1$, such that costs are uniformly distributed. Moreover, to account for technologically based differences in comparative advantage across countries, I assume that countries' productivity distributions have differing supports. In particular, I assume that there are two countries with the following characteristics:

Country A: $c \sim U(m,n)$, $L_A = L'$

Country B: $c \sim U(m,n)$, $L_B = L'$

While the rest of the "world market" is summarized by:

Country W: $c \sim U(0,m)$, $L_W = 2L'$

All other characteristics of the markets (e.g. γ, α,η) are assumed to be identical across all countries. So, in plain language: Country A and B are identical in all respects, while Country W (world markets) is the same size as both of them combined, but with a more favorable production technology (implying a higher productivity distribution of firms). This suggests that both Country A and Country B are uncompetitive in the differentiated sector with respect to world markets.

Analysis

To begin, we can start by characterizing the cutoff value c_D for country A (label this c_D^A). To do this, we use the free-entry equation (equation 1), but with the uniform density on (m,n).

This gives us:

$$\frac{L}{4\gamma}\int_{m}^{c_D^A}(c_D^A - c)^2 \frac{1}{n-m}dc - E = 0$$

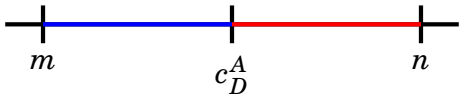
$$\frac{L(m-c_D^A)^3}{12(m-n)\gamma} = E$$

$$\leftrightarrow c_D^A = m + \left(\frac{12E\gamma(n-m)}{L}\right)^{1/3}$$

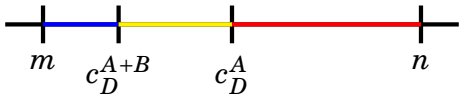
Important to note here is that the cutoff is c_D^A is thus bounded below by m. Profits for any individual firm are thus:

$$\pi(c) = \frac{L}{4\gamma}(c_D^A - c)^2$$

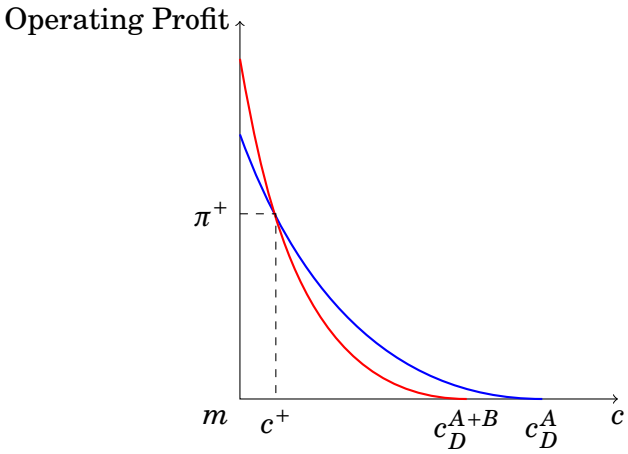
Which are clearly (1) decreasing in c; (2) positively skewed. The surviving distribution of firms in Country A is thus those firms that fall in $[m, c_D^A]$, indicated below in blue.



We can now consider the case of a PTA between Country A and Country B. These countries decide to fully integrate their markets - since they each face the same production technology (productivity distribution) and all other characteristics, this has the effect of simply doubling the size of the market to $L_{A+B} = 2L'$. Since $\frac{\partial c_D}{\partial L} < 0$, this implies that the cutoff productivity in this new trading bloc *decreases*, i.e. that $c_D^{A+B} < c_D^A$, which causes all firms with draws in $[c_D^{A+B}, C_D^A]$ to exit the market. This is indicated in yellow below:



Because expected profits still need to be zero in equilibrium, this implies that the surviving firms must have greater average profits, and the profit distribution must be even more skewed towards the most productive firms. Graphically, this can be represented as a shift from the blue to the red curve:



As can be seen, c^+ indexes the draw of c below which a firm is benefited by the expansion of the market size from L' to $2L'$, and thus a firm that benefits from joining the PTA. Firms with draws above c^+, whether or not they are forced to exit the market, experience lower profits under this new equilibrium.

Now, let's consider what happens to the market equilibrium if trade is fully liberalized between the PTA trade bloc (A+B) and world markets ("Country" W). First, we can note that the free entry condition required for Country W is:

$$\frac{L}{4\gamma}\int_0^{c_D^W}(c_D^W - c)^2\frac{1}{m}dc - E = 0$$

$$\frac{L(c_D^W)^3}{12m\gamma} = E$$

$$c_D^W = \left(\frac{12E\gamma m}{2L'}\right)^{1/3}$$

Which, by standard assumptions on the parameter space, will produce a cutoff on the interior of $(0, m)$. Now, let us also assume that $n = 2m$ for simplicity. As a consequence, when we merge the PTA bloc with world markets, we end up with the equivalent of a single country G, with $c \sim U(0, n)$, and $L_G = 4L'$. This produces the following cutoff:

$$\begin{aligned} c_D^G &= \left(\frac{12E\gamma 2m}{2(2L')}\right)^{1/3} \\ &= \left(\frac{12E\gamma m}{2L'}\right)^{1/3} \\ &= c_D^W \end{aligned}$$

So the cutoff value is *unchanged* from c_D^W, where $c_D^W < m$. Meanwhile, we had previously determined that c_D^{A+B} was bounded below by m. This implies that *every firm* in country A and B has to exit the market after it is integrated into world markets. Their profits after liberalization with world markets are thus zero, suggesting that they would be willing to pay any share of their profits to avoid this outcome.

Politics

Now let's consider the following sequence of events. We want to evaluate the impact of signing a PTA on future demands for protection, so we will treat that decision as exogenous to the political actors involved. Instead, what we want to do is compare the political equilibrium in Country A alone with the equilibrium once a trading bloc has been formed between A and B.

Now, we can begin to incorporate politics into the model. Consider a fixed cost to lobbying $F > \pi^+$. This implies that only firms with a cost draw below c^+ will generate enough profits to pay this cost; specifically, if we define the inverse function $c(\pi)$ from the firm profit equation, it would be those firms whose costs fall in the interval $[m, c(F)]$.

Because of the way that liberalization within the bloc leads to a reallocation of production shares to the largest firms in a way that increases the positive skew of profits, signing a PTA increases both the measure of $[m, c(F)]$ - because $c_{A+B}(F) > c_A(F)$ - and the average profits of the firms in that interval. Thus, there are more firms with the capacity to lobby as a percentage of the total, and these firms on average have more resources with which to lobby.

Now, let's consider a simple political support auction model, similar to Grossman and Helpman (1994), in which the firms in Countries A and B offer lobby contributions in exchange for favorable trade policy. Unlike in Grossman and Helpman (1994), we will model the choice here as between full liberalization or protection, rather than as between different levels of a protective tariff.

While the distribution of firms is approximated with a continuous distribution, there will clearly be a finite and discrete number of firms who can lobby. The sequencing of the game is as follows:

1. Firms simultaneously announce lobbying contribution "bids" which they are willing to pay if the Government chooses not to liberalize. Any firm that announces a positive bid pays a fixed cost F, regardless of whether their bid is ultimately accepted.

2. The Government observes these bids, and decides either to liberalize or not. If they choose to liberalize, they forgo the lobby contributions from firms.

Now, also in a manner akin to Grossman-Helpman (1994), let's assume that Government

cares both about lobby contributions from firms, and voter welfare, i.e.:

$$G = \alpha O + \beta W$$

Where W stands for voter welfare, α, β are weighting parameters, and contributions O are zero if liberalization is chosen, and are determined by the contribution schedules $o(c)$ in the following manner if protection is chosen:

$$O = \int_{m}^{c(F)} o(c)dc$$

$o(c)$ can only be positive for firms that can pay the fixed cost to lobby (i.e. those that fall in $[m, c(F)]$. Voter welfare can matter to governments for any number of reasons, including its impact on electoral prospects, or altruistic preferences of those in power. Thus, if $\Delta W > 0$ is the change in welfare from liberalizing - which is positive for standard reasons involving gains from trade (see Melitz and Trefler 2012 for an overview when firms matters) - then Government chooses to liberalize whenever:

$$\beta \Delta W > \alpha \int_{m}^{c(F)} o(c)dc$$

We can now solve for the subgame perfect Nash equilibria of this game. There are two classes of equilibria: (1) those in which no firm chooses to pay the fixed cost to lobby, and liberalization occurs; (2) those in which some subset of firms choose to lobby, and the total sum of contributions *exactly equals* the amount required to convince Government not to liberalize.[1] I focus on (2), in order to discuss variation in the ability to demand protection.

[1]To see why this is the case, consider that once it is established that the firms need to pay the Government an amount so as to make them indifferent between liberalizing and not, the first stage essentially becomes a threshold public goods game.

For any equilibrium in which protection is obtained, $o(c) < \pi(c) - F, \forall c$. We also have that:

$$\alpha \int_{m}^{c(F)} o(c) dc = \beta \Delta W$$

For any such equilibrium. Because firms lose all of their profits if liberalization occurs, there always exists an equilibrium in which protection is obtained so long as the total weighted profits of firms above the lobbying cutoff minus fixed costs exceeds the weighted welfare costs to Government. So the "protection condition" is:

$$\alpha \int_{m}^{c(F)} \pi(c) dc - F \geq \beta \Delta W$$

Which is a necessary condition for protection to occur. Since, as mentioned earlier, liberalization with the PTA bloc increases the measure of $[m, c(F)]$ and the average profits of the firms in that interval, it must also increase $\int_{m}^{c(F)} \pi(c) dc$, and thus the likelihood that this protection condition will be satisfied. This leads to the following proposition:

Proposition 1. *If liberalization occurs within a bloc of countries that are jointly uncompetitive with respect to world markets, then liberalization can increase the capacity for a protectionist coalition to lobby against later liberalization with respect to world markets.*

Proof. The proof follows from the preceding discussion. □

To summarize the intuition: with this setup, the firms that receive positive profits in equilibrium would be willing to pay any share of those profits to prevent liberalization, since they will be competed out if liberalization with world markets occurs. In this model, however, both the percentage of firms that can lobby and the average profits of those firms increases as countries A and B sign a PTA. As a consequence, their aggregate capacity to influence the government increases, and they should be able to buy government's protection from world markets in more cases (i.e. when welfare costs are higher) than they would have been able

to had there not been liberalization within the PTA prior to lobbying.

NAFTA and the Auto Industry

NAFTA provides an illustrative example of the interaction between PTAs and the politics of future liberalization with world markets. Currently, the US maintains tariffs on vehicles originating from outside the NAFTA bloc of 2.5% for most vehicles, and 25% for light trucks and vans. More recently, the Trump administration has proposed dramatically expanding tariffs on vehicles via the Section 232 provision in US trade law on "national security" (by as much as 25%) with this also being used as leverage to extract other kinds of protectionist commitments, such as demands that Japan limit automobile exports to the US.[2] While the outcome of this process remains uncertain (at the time of writing this, the Section 232 authorization has expired and attentions have shifted to the global pandemic), it is clear that there remain at least some latent protectionist impulses on behalf of the auto industry in the United States.

This requires us to assess the counterfactual: what would the situation look like if the NAFTA trading bloc had never developed? While it is impossible to know this with certainty, according to economist Gordon Hanson[3], who has written extensively on the agreement's effects on the auto industry (Hanson 1996, Hanson 1996, Hanson 2001, Hanson et al. 2005), the expansion of market size and vertical FDI that NAFTA allowed may have kept the US from losing the auto industry entirely. "There was a concern 20 years ago that an auto industry production chain would develop across Asia, including China and Taiwan and Southeast Asia. Maybe NAFTA saved us from that."

[2]Peterson Institute: https://www.piie.com/blogs/trade-investment-policy-watch/next-trade-wars-autos

[3]New York Times March 29 2016

Marc Melitz has also leveraged his recent work on firm heterogeneity to suggest similar conclusions about the industry, noting that "NAFTA has enabled very large productivity gains for the automotive sector by consolidating the production of different parts across the three countries".[4] Key to these scholars conclusions is the claim that much of these gains in productivity were due to reallocations of production from less productive firms to more productive firms (Trefler 2004, Melitz and Trefler 2012).

If, in the absence of NAFTA, the auto industry had either ceased to exist entirely, or had shrunk significantly, with smaller firms and lower aggregate productivity, it is reasonable to assume that it would not be nearly as powerful a political force as it is now. However, it remains probable that Japanese and German automobile firms (for instance) remain on average more productive than American firms, which can create incentives for even a relatively strengthened US industry to pursue protection in ways they would not be able to if, as in the extreme case, they had ceased to exist.

Conclusion

This paper presented a simplified model that integrated some of the key insights of the heterogeneous firms literature in international trade with a stylized treatment of politics in a dynamic (two stage) setting. In so doing, the paper has demonstrated that liberalization within a trade bloc will not always necessarily reduce future demands for protection, and indeed can strengthen domestic groups' ability to demand protection, should they be sufficiently uncompetitive with respect to world markets that protection is preferred. While extreme differences in productivity between the PTA countries and world markets were

[4]Econofact, January 29 2017. https://econofact.org/driving-home-the-importance-of-nafta

posited to simplify some of the modeling in this paper, it should be clear that such an extreme setup is unnecessary for this conclusion to hold: after integration with world markets, there will always be some cutoff (c^+ in this model) above which the firms lose from liberalizing markets, and far more of these firms will be drawn from the less productive country.

The paper leaves many promising areas of inquiry left to explore. Some of the most prominent firm-level theories of industrial growth within a PTA, for instance, focus not on firm size or export decisions, but on firm structure and supply chains (Helpman et al. 2004). Indeed, as has been discussed in Osgood (2018), global supply chains as a general matter significantly complicate the politics of trade liberalization, with many vertically integrated multinational firms focusing more on reducing protection on source inputs than on preventing competition from international competitors in final goods sales. This paper is not intended to be a comprehensive account, but is instead a "first cut" at how these kinds of firm-level factors might work within a dynamic framework.

One thing this paper suggests quite strongly, however, is that the relationship between PTA formation and future demands for protection is a conditional one, rather than a straightforward "positive feedback" effect. As we learn more about the politics and economics of heterogeneous firms, it is likely we will be better positioned to identify the contours of these conditions.

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