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Jeffrey Kucik Date

The Political Economy of Designing International Trade Institutions

By

Jeffrey Kucik
Doctor of Philosophy

Political Science

_____

Eric Reinhardt
Adviser

_____

Mark Hallerberg
Committee Member

_____

Clifford Carrubba
Committee Member

_____

Alexander Hicks
Committee Member

Accepted:

_____

Lisa A. Tedesco
Dean of the James T. Laney School of Graduate Studies

_____

Date

The Political Economy of Designing International Trade Institutions

By

Jeffrey Kucik
MA, University of Manchester, 2005
BA, NC State University, 2003

Adviser: Eric Reinhardt, PhD

An abstract of
a dissertation submitted to the Faculty of the
James T. Laney School of Graduate Studies of Emory University
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Abstract

The Political Economy of Designing International Trade Institutions

By Jeffrey Kucik

Recent work emphasizes the important role contractual design plays in influencing state policy decisions. In particular, it has been argued that providing member states with opportunities to escape temporarily from their contractual obligations promotes international cooperation. However, in spite of the benefits associated with "flexible" contracts, we continue to observe wide variation in the design of international agreements. This variation is especially prevalent in the context of preferential trade agreements—formal interstate treaties in which members grant reciprocal market access to one another. In this project I offer a new explanation of institutional design that focuses on political competition between domestic interest groups. Specifically, I argue that the benefits of flexible contracts are enjoyed unevenly across the domestic market. This asymmetry divides the preferences of the market along sector lines. Import-competing industries reap the rewards from flexible contracts while their export-dependent counterparts pay a disproportionate amount of the costs. Through a large-N analysis relying on original data on the design of 330 trade agreements since 1960, I find evidence that the sector composition of the domestic market is a strong predictor of agreement design. I also show the implications that agreement design have for the strategies states can use to manage global market risk.

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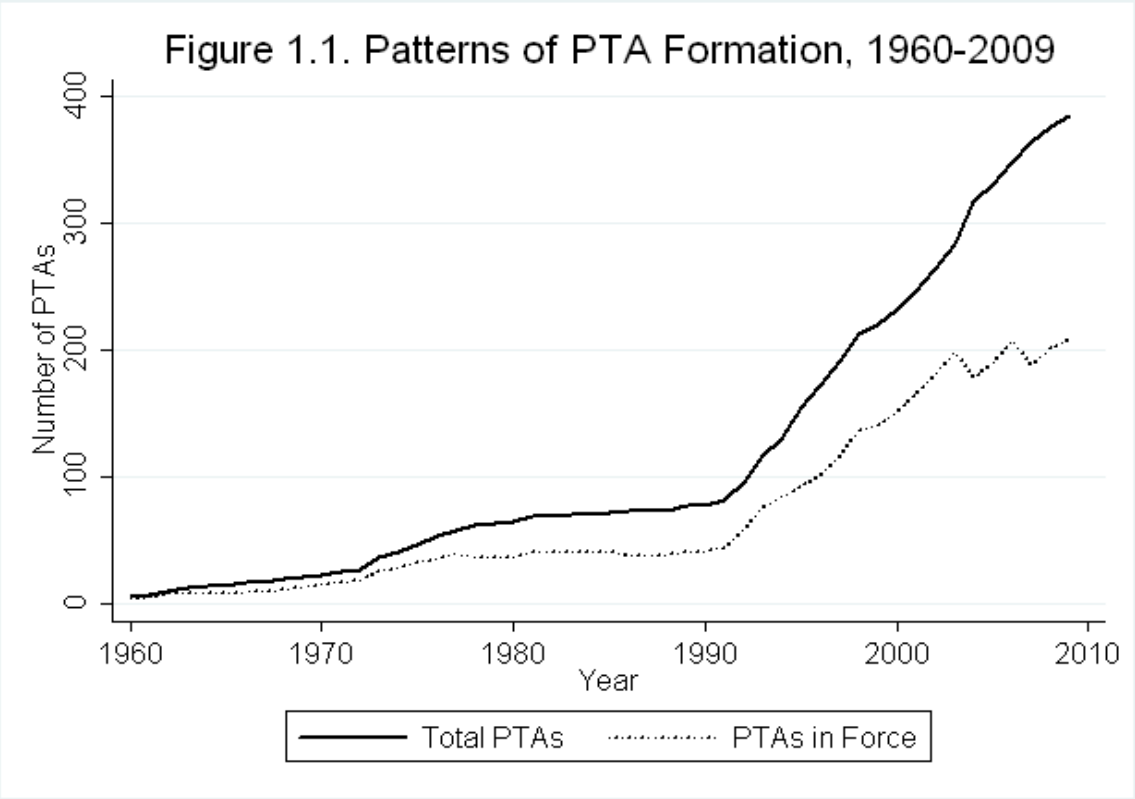
The Rise of International Trade Agreements

Preferential trade agreements (PTAs) have become an increasingly prominent feature of the global economic landscape. PTAs are formal interstate treaties in which members grant reciprocal market concessions to one another. The number of PTAs has increased dramatically in recent decades, rising from 78 to over 380 since 1990 (see Figure 1.1).[1] Even more significant is the fact that this trend is not confined to the traditional market powers. States at all levels of development and in all regions of the world are entering into PTAs with increasing frequency. As of January 2010, all but one of the WTO's 153 members is currently (or has been) a member of a PTA.

PTA mandates have grown along with their number. For several decades, trade agreements included very little beyond each member's schedule of tariff reductions. Today, it is common for PTAs to address a wide variety of issues, including intellectual property rights, sustainable development, and the free movement of labor. With their

[1] Estimates of the total number of PTAs vary. The most complete list can be found at the WTO's Regional Trade Agreements Database. The WTO places the number of PTAs at just over 420. However, this number includes agreements currently under negotiation. The number of PTAs that have entered into force is closer to 380.



increased number and broadened mandates, PTAs now play an indelible role in the governance of global markets. In 2008, PTAs governed no less than 30% of the world's total trade (up from 6% ten years earlier). It is therefore unsurprising that PTAs have received a great deal of attention from international relations scholars.

One area of growing interest is the design of PTA rules. Recent literature, led by the "rational design" project, emphasizes the role of flexibility provisions. Flexibility provisions are clauses that allow members to shirk temporarily their contractual obligations when the costs of compliance become prohibitively high.[2] These provisions (or, "escape clauses") provide members a type of international insurance. When states enter into formal agreements they cannot know whether the terms agreed to today will be

[2] Koremenos, Lipson, and Snidal 2001.

favorable in the future. By providing states avenues for escape, flexibility insures states against future uncertainty and lowers the costs of compliance.[3]

Studies show that the design of institutions has important policy implications. Providing flexibility increases the likelihood a state joins an agreement, the durability of agreements, and the depth of trade liberalization to which states commit.[4] These findings lead some scholars to conclude that flexibility promotes cooperation. Yet, in spite of flexibility's apparent benefits, PTAs exhibit wide variation in the design of their rules. This raises a puzzle: If flexibility promotes cooperation why do agreements vary so widely in the design of their rules?

In this project I advance a new theory of institutional design. Departing from existing research, I argue that flexibility's benefits are distributed unevenly across the domestic market. Institutional design outcomes generate political conflict between domestic interest groups with diverging preferences. Here I focus on domestic producers. I argue that the domestic market is divided along sector lines on the issue of flexibility. Import-competing firms demand flexibility in their government's trade agreements because it provides protection from foreign competition. However, the benefits import-competing firms accrue from flexibility come at the expense of the export-dependent sector. The reduced market access and threat of retaliation that result from flexibility are costly for export-dependent firms. Rather than flexibility, these firms prefer rigid agreements—PTAs that heavily regulate (or prohibit) the use of flexibility provisions.

Institutional design outcomes ultimately reflect a tradeoff between competing preferences. Focusing on the asymmetric distributional benefits of PTA rules provides an

[3] Ibid.
[4] Rosendorff 2005; Koremenos 2005; Kucik and Reinhardt 2005.

explanation for why agreements vary in spite of what appear to be significant benefits. Consider the following illustration.

1.1 *Turkey's PTA Commitments: An Illustration*

The current push toward greater international economic integration is being led by states like Turkey, which entered into 18 new PTAs in the last ten years.[5] Not surprisingly, the vast majority of Turkey's recent PTA commitments have been formed with Central and Eastern European states, signaling a clear effort to strengthen economic ties to the European Union and its neighboring markets. What is surprising, however, is that these PTAs vary significantly in the design of their rules.

In 1998, Turkey entered into separate trade agreements with Slovakia and Hungary. Both PTAs were deeply liberalizing. In each case, the members committed to the complete abolition of tariffs on industrial goods within three years of entry into force.[6] However, while the two agreements called for equivalent levels of trade openness, their rules varied significantly.

At one end of the spectrum, the Turkey-Slovakia FTA had a highly legalized flexibility system. The agreement included formal constraints on the use of all of the most common flexibility provisions—safeguards, anti-dumping, countervailing duties, technical barriers to trade, and sanitary and phyto-sanitary measures.[7] Among these constraints were limits on the size of an action, the duration of an action, and whether a

[5] Turkey is among the world leaders in PTA formation. No other non-EU state has formed as many new agreements as Turkey has.

[6] Under the terms of both agreements, the members eliminated tariffs on 90% of their industrial goods on the date of entry into force. The remaining trade barriers were to be eliminated over the following three years.

[7] See Chapter 2 for fuller descriptions of these policies.

preliminary investigation was necessary to authorize an action. Taken together, these rules are designed to constrain excessive and arbitrary use of the flexibility system.

At the other end of the spectrum, Turkey's agreement with Hungary included a much less legalized system. The Turkey-Hungary FTA only specified rules relating to two escape clauses—safeguards and anti-dumping. It did not include constraints on the use of any other provisions. As a result, members were free to utilize trade remedies at their discretion.[8] The contrast with the Turkey-Slovakia is stark. By not delineating clearly the boundaries of the flexibility system, Turkey and Hungary were afforded much more leeway in their decisions to escape.

The variation between these two agreements raises a question: Why would Turkey build a greater amount of flexibility into their agreement with Hungary than in their agreement with Slovakia? More generally, what explains variation in the design of international trade institutions? This question has gained a great deal of attention, particularly in the last ten years, from students of international relations. One of the dominant perspectives is that states enter into highly legalized—i.e. "rigid"—agreements as a way to lend credibility to their commitments.

In the context of trade policy, states have several incentives to signal a credible commitment to market openness. For example, states wishing to accede to multilateral organizations may need to demonstrate a capacity for international cooperation. When applying for European Union membership states must exhibit "a functioning market economy, as well as the ability to cope with the pressure of market competition and the

[8] Turkey and Hungary are both members of the GATT/WTO and are therefore, like the majority of the world's market, also subject to its rules and regulations. Any abuses of the flexibility system could therefore be redressed to the GATT/WTO dispute settlement mechanism.

market forces at work inside the Union."[9] States in the process of accession are more likely to make rigid PTA commitments that limit the use of escape and tightly bind their markets to openness.

Pressure to make credible commitments can also derive from domestic political institutions. Democratic governments, which may face strong domestic opposition to market liberalizing reforms, can use international agreements as a mechanism for "tying hands."[10] Market openness is known to be politically costly. In order to overcome resistance to liberal economic policies, states may enter into international agreements that oblige them to open their markets, thereby circumventing the public sanction politicians otherwise face.

Neither of these explanations, however, can account for the variation between Turkey's PTAs with Slovakia and Hungary. Slovakia and Hungary had equal incentives to commit credibly to market openness. By 1998, each state was deep into their EU accession processes (4 years for Slovakia and 5 for Hungary since the date of initial application). As a result, both markets had good reason to demonstrate a capacity to sustain meaningful levels of regional economic cooperation. Moreover, both states were well-established democracies at the time of agreement formation. Slovakia and Hungary are essentially equivalent across every major quantitative indicator of regime type. It is therefore not obvious that either state faced steeper institutional obstacles to liberalization. In light of these similarities, an alternative explanation of institutional design is required. I argue that an important though largely overlooked source of variation is features of the domestic market.

[9] "Conditions for Enlargement", European Commission Policy, accessed (March 10, 2010) at: http://ec.europa.eu/enlargement/the-policy/conditions-for-enlargement/index_en.htm

[10] Fearon 1997; Busch 2000.

Hungary's trade relations with Turkey look much different than do Slovakia's. To begin with, Hungary is exposed to a great deal more import competition from Turkey. Net import penetration into Hungary's market from Turkish producers amounted to $64 million in 1998. Contrast this with the $20 million worth of imports that flowed into Slovakia in the same year. When adjusted for GDP, Hungary's market is exposed to twice as much important competition. Hungary's import-competing producers are threatened much more by liberalization with Turkey than are their Slovakian counterparts.

Given this imbalance in import penetration, the sectors model of trade preferences predicts stronger opposition to liberalization in Hungary.[11] Yet, like Slovakia, Hungary committed to substantial tariff concessions. This presents a paradox: What explains Hungary's willingness to open its market in spite of the risks? During PTA negotiations, firms care about more than levels of tariff concessions. Firms also have strong preferences over agreement rules.

Liberalization exposes both traded sectors of the market to global economic risk.[12] However, each sector's preferred strategy for managing risk varies. Openness is costly for import-competing firms because introducing foreign goods into the market reduces demand for domestic products and places downward pressure on prices. Flexible rules help protect import-competing firms' interests in open markets. Specifically, flexibility

[11] Sectors models rely on the Ricardo-Viner framework in which the factors of production are specific assets. The inability to move assets across industries means that those factors tied to the export-dependent sector of the market enjoy positive returns under free trade. Factors employed by the import-competing sector, on the contrary, suffer from diminishing returns. As a result, preferences over trade liberalization divided the domestic market along sector lines. See Hiscox 2001.

[12] There is some evidence that market openness actually reduces a state's exposure to risk (Kim 2007; Egger, Egger and Greenaway 2008). However, openness increases exposure to the risk that remains, leaving states vulnerable to the vicissitudes of global markets (Mansfield and Reinhardt 2008).

allows states to introduce temporary barriers to market entry, stemming the inflow of cheaply priced foreign goods and alleviating competitive pressures.

However, the benefits import-competitors accrue from flexibility come at the expense of the export-dependent sector. Export-dependent firms are also vulnerable to risk. Market openness exposes firms to unpredictable price shocks, which generate uncertainty over entering into internationalized contracts. Flexibility provisions, however, is not a viable strategy for export-dependent firms. Flexibility is associated with a variety of costs including restricted market access and the threat of retaliation from trade partners. Both outcomes harm firms dependent on secure, stable interstate trade relations. Instead, exporters prefer rigid rules—those that bind tightly the policies of their trade partners. Rigid agreements prevent opportunistic policy shifts by partner states, which effectively reduce the likelihood that price shocks occur.

PTA rules directly affect firm welfare. Whether an agreement is flexible or rigid determines the amount of global economic risk to which firms are exposed in the future. Both traded sectors of market therefore have strong incentives to lobby for their preferred rules. I predict that the sector composition of the domestic market is a strong predictor of states' PTA design preferences. However, states are not guaranteed favorable rules. Design outcomes are the result of negotiations between states that may have very different preferences. I argue that each state's ability to secure favorable rules increases in its market power. Small markets accrue more material benefits from accessing large markets than the reverse. States with market power can leverage this asymmetry to bargain for the rules their domestic producers prefer.

How well do sector composition and market power predict the variation in flexibility between Turkey's agreements with Hungary and Slovakia? Recall that Hungary is exposed to more import competition from Turkey than is Slovakia. Based on the sector composition of Hungary and Slovakia's domestic markets, Hungary ought to demand a relatively more flexible agreement with Turkey. Moreover, Hungary's market accounts for almost 20% of the total bilateral GDP between their market and Turkey's. Slovakia's economy, conversely, is less than half that size--$20 billion versus $43 billion in 1998—and therefore accounts for only 8% of their combined GDP with Turkey. This disparity in market power has important implications for design outcomes. Hungary ought to be comparatively better able to secure their preferred rules—i.e. a flexible agreement. That is precisely what we observe—the Turkey-Hungary FTA was much more flexible than the agreement between Slovakia and Turkey, which heavily constrained the use of escape clauses.

This example is just one illustration of the wide variation in design that characterizes PTAs around the globe. In the following project I seek to explain this variation by focusing on the domestic political competition between firms with diverging preferences.

1.2 *International Trade Institutions and Market Risk*

This project builds upon a wave of recent work on the design of international institutions. At the forefront of this literature is the "rational design" project, which offers a general framework for understanding states' preferences over agreement formation. The rational design literature starts from the observation that states enter into agreements under conditions of uncertainty. Members cannot know whether the terms agreed to today are

going to be favorable in the future. As a result, states place a premium on design features that "create for themselves a kind of international insurance."[13] The most common form of insurance is flexibility.

Flexibility is defined as "any provision of an international agreement that allow a country to suspend the concessions it previously negotiated without violating or abrogating the terms of the agreement."[14] Flexibility provisions are designed to allow shirking through mutually agreed upon, officially authorized, channels. The benefit of legalizing escape is that it permits defection without precipitating a cycle of retaliation or the dissolution of the agreement. Thus, flexibility effectively reduces the costs of compliance by reassuring states that they will be able to protect their interests during times of crisis.[15]

Building flexibility into international commitments has numerous benefits. Most prominently, flexibility promotes agreement formation and enhances durability.[16] By lowering the costs of compliance, flexibility systems make it easier for states to commit to agreements and to sustain those commitments over time. Flexibility has also been shown to encourage deeper trade concessions on the part of member states.[17] In short, flexibility promotes cooperation.

However, acceptance of the rational design framework has not been universal. Critics of flexibility argue that it is simply another form of protectionism. At the margins, what looks like deeper trade concessions is really just a shift from tariffs to more sophisticated (and opaque) trade barriers. The use of flexibility provisions—most prominently anti-

[13] Koremenos 2005, 549.
[14] Rosendorff and Milner 2001, 830.
[15] Koremenos, Lipson, and Snidal 2001.
[16] Koremenos 2005; Rosendorff 2005.
[17] Kucik and Reinhardt 2008.

dumping—is welfare reducing. Studies find that, among other things, anti-dumping deters trade and raises domestic prices, resulting in a loss of consumer welfare.[18]

It is certainly true that flexibility has costs. However, difficulties measuring these costs obscure flexibility's net welfare effects. In the example provided above, the parties to both the Turkey-Slovakia and Turkey-Hungary PTAs agreed to substantial reductions in trade barriers. Yet, during the lifespan of both agreements, there was only one invocation of flexibility—an anti-dumping action by Turkey against Hungarian polyvinyl chloride (PVC) piping. If it were true that flexibility is simply another form of protectionism, then escape clauses would be used much more frequently. Thus, in this project, flexibility is viewed as insurance against future market risk, not as a substitute for traditional barriers to market entry.

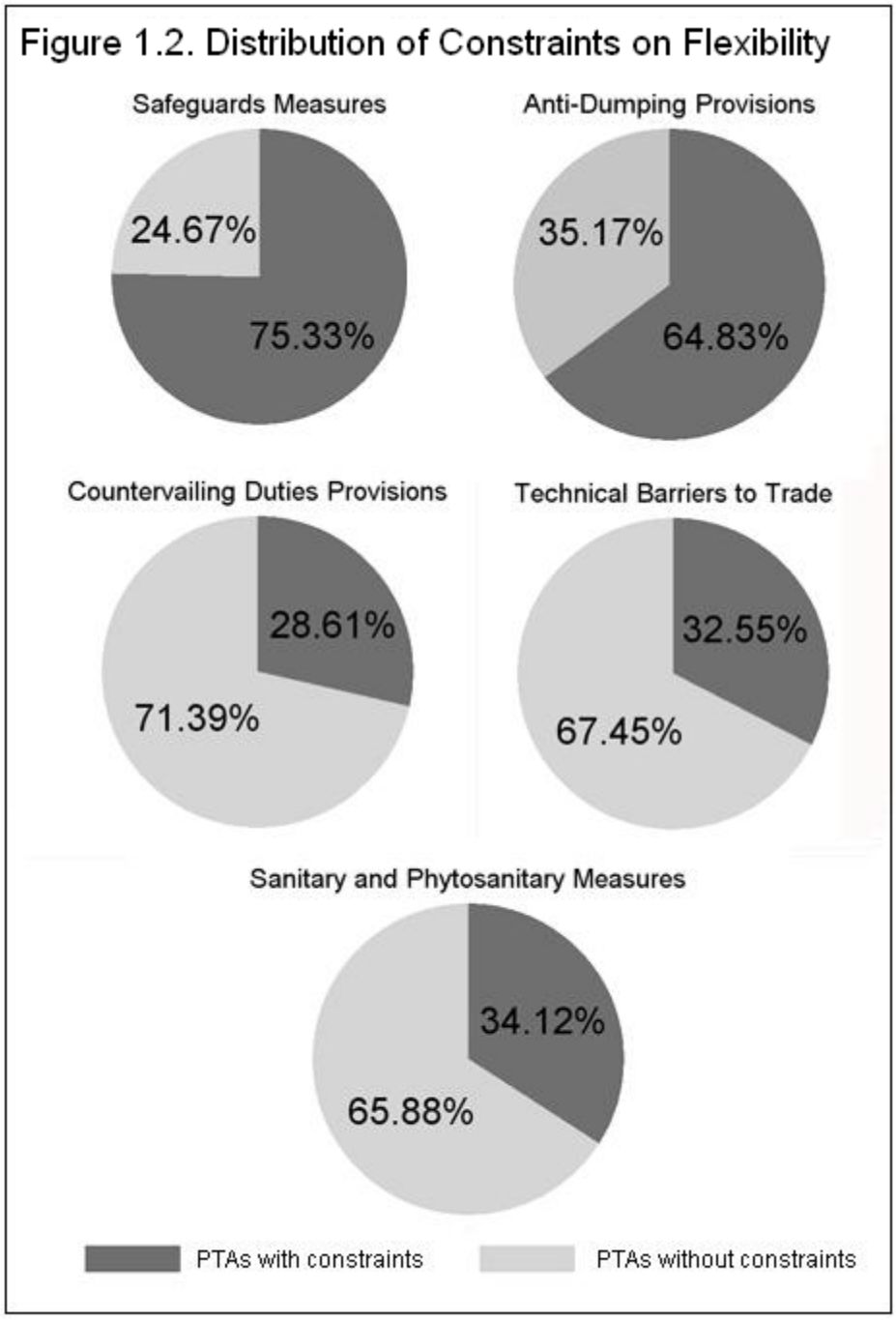
Complementary work on institutions supports this interpretation by highlighting the risk-reducing benefits of PTA membership. An emerging line of research shows that entering into PTAs actually helps insulate members from market risk and its costs.[19] PTAs do this through two channels. First, PTAs reduce the likelihood that unpredictable price shocks occur. The roots of volatility can often be traced back to *ad hoc* policy shifts of individual states. PTAs deter this opportunism by constraining members' policy autonomy and promoting the rule of international law. Second, PTAs allow members to escape their commitments via the use of flexibility. Designers of international agreements cannot realistically expect to account for every contingency when drafting PTA rules. Instead, they build flexibility into each contract, allowing members to protect themselves when exposed to global economic risk.

[18] Zanardi 2006; Prusa 2001;
[19] Mansfield and Reinhardt 2008.

The literatures on rational design and on the risk-reducing benefits of PTAs both emphasize the benefits of flexibility provisions. Yet, in spite of these benefits, international trade institutions exhibit wide variation in design. Figure 1.2 shows the percentage of PTAs that restrict use of the five major escape clauses. The data reveal significant differences across agreements and policies. The most heavily regulated escape clauses are safeguards and anti-dumping. In both cases, no less than two-thirds of PTAs specify restrictions on the use of these provisions.[20] Restrictions on the use of the other three provisions are less frequent. However, technical barriers to trade (TBTs) and sanitary and phyto-sanitary (SPS) measures are relatively new areas in international trade law.

This variation raises a question: If flexibility provisions are known to promote cooperation then why do agreements vary in their rules? What explains variation in the design of preferential trade agreements? We currently lack definitive answers to these questions. Existing research significantly advances our understandings of agreement formation and the value of providing members flexibility. However, it also suffers from important shortcomings. First, it largely overlooks variation in design. This is especially true of the work on PTA and risk reduction, which assumes that the mechanisms for reducing risk present and efficacious in all PTAs. In practice, however, PTA design varies widely.

[20] Most commonly these restrictions consist of limits on the severity and duration of safeguards and anti-dumping measures.



This variation raises a second issue: previous studies assume that the benefits of flexibility are enjoyed evenly across the market. States, which have incentives to hedge against risk, agree to build flexibility into their agreements and everyone is assumed to be better off. In this project I relax this assumption. I argue that, in practice, the benefits of

permitting escape are distributed asymmetrically. Some segments of the domestic market benefit from flexibility while others bear a disproportionate amount of the costs. As a result, fierce political competition takes place between domestic actors with diverging preferences over design.

1.3 *The Argument*

What explains variation in the design of international trade institutions? To answer this question I focus on competition between domestic interest groups. I argue that preferences over design divide the market along sector lines. Both traded sectors of the domestic market are exposed to global economic risk. However, their preferred strategies for coping with risk vary. These varied preferences over design—i.e. levels of flexibility—result in fierce political competition between industry groups.

When a state opens its market, it exposes itself to the vicissitudes of the global economy. For import-competitors, risk comes chiefly in the form of downward pressure on prices. Inflows of cheaply priced foreign goods drive down the prices of firms previously insulated from competitive pressures. This pressure can lead to a reduction in real wages and lost jobs as domestic firms try to cut costs to remain viable.

Export-dependent firms are also vulnerable to market risk. For these firms the primary source of risk is not absolute price levels per se, but unpredictable fluctuations in prices. Price shocks—or, terms of trade volatility—can dramatically change the profitability of international contracts, especially in the long term. Recent work in economics shows that volatility dampens the flow of capital and goods, leads to higher budget deficits at home, destabilizes exchange rates, and generates more frequent and

more severe business cycles.[21] In the aggregate, continued exposure to volatility stunts overall growth and development.[22]

Both sectors share a concern for market risk. However, they have very different preferences over how to cope with that risk. Import-competing firms prefer flexibility in their states' contracts. By introducing barriers to market entry, flexibility provisions can effectively insulate domestic producers when their trade partners' unfair or uncompetitive policies result in the inflow of abnormally low-priced goods. Evidence on the price effects of flexibility provisions shows that the use of escape clauses results in higher prices.[23] Moreover, these effects are not confined to the duration of a flexibility measure; the threat of invocation has been shown to deter opportunistic behaviors by trade partners.[24] Flexibility therefore offers import-competing firms a viable policy mechanism for combating risk in global markets.

The benefits import-competitors accrue from flexibility, however, come at the expense of export-dependent firms. First, flexibility measures allow states to renege on the liberalizing commitments to which they previously committed. This lost market access is always a suboptimal outcome for firms whose welfare depends crucially on openness. Second, the closure of markets is not always limited to one good or industry. The use of flexibility can spur tit-for-tat retaliatory behavior, spreading the costs to protectionism to other areas of the market. While import-competing firms are immune to these costs, they very directly diminish the welfare of export-dependent firms. Third, entry barrier retards normal patterns of trade. Flexibility use by one state deflects foreign

[21] Razin, Sadka, and Coury 2003; Buch, Doepke, and Pierdzioch 2005; Bleaney and Greenaway 2001; Combes and Saadi-Sedik 2006.

[22] Mendoza 1997; Turnovsky and Chattopadhyay 2003.

[23] Willig 1998; Anderson 1993.

[24] Blonigen and Bown 2003.

goods to other markets. Flexibility is therefore a source of the very price shocks that threaten exporters.

Instead of flexibility, export-dependent firms demand "rigid" agreements—those that tightly bind their members, limiting the amount of defection permitted. The research on PTAs and the reduction of risk shows that agreements can limit the onset of price shocks by constraining the policy autonomy of member states and enforcing the rule of law. This is essential for firms that benefit not just from securing market access abroad, but also from *stability* in their interstate trade relationships.

The preferences of the domestic market are therefore divided over the issue of institutional design. Import-competing firms demand flexible agreements while exporters demand rigid ones. Both sectors have strong material incentives to lobby for their preferred design. Thus, I expect the sector composition of the domestic market to be a strong predictor of a state's preferences over PTA design. States are more likely to enter into flexible (rigid) agreements when their markets are predominantly import-competing (export-dependent).

The sector composition of the domestic market shapes each state's preferences over design. However, PTA outcomes are ultimately a product of bargaining between states whose preferences may be very different. When interests conflict, I argue that a state's ability to secure favorable PTA terms derives from its market power. A state has market power when it is a large enough consumer of a good to affect the market price through changes in its patterns of consumption. More powerful markets ought to be in a better position to influence PTA negotiations. Their position as large economies makes access to their markets comparatively more valuable to their trade partners. Market power gives

states leverage at the bargaining table. Design outcomes ought to match more closely powerful states' preferences as a result. I predict that import-competing (export-dependent) markets enter into more flexible (rigid) PTAs agreements when they enjoy market power over their trade partners.

1.4 *The Provision of Social Insurance: An Implication of the Argument*

The theory presented here has implications for the ways in which states protect their domestic markets from risk. I depart from previous research, which argues that states rely chiefly on domestic policy mechanisms. The dominant perspective, commonly referred to as the compensation hypothesis, maintains that states offset the costs of openness through the provision of social insurance—redistributive policies designed to stabilize the incomes of those adversely affected by global economic risk.[25]

The compensation hypothesis has been the subject of a lengthy academic debate. On the one hand, studies have found a positive correlation between market openness and the size of governments.[26] On the other hand, critics of the compensation hypotheses have levied a number of charges against these findings. Most prominently, it has been argued that the evidence in favor of the theory is confined to the developed world, where states are better equipped to cope with the challenges of globalization. In the developing world, resource shortages and competitive pressures both place severe constraints on these states' abilities to compensate their domestic markets.[27]

Persistent debate over the compensation hypothesis suggests that more work has to be done before we fully understand the determinants of cross-national variation in social

[25] Burgoon 2001; Rodrik 1998, 1997; Garrett 1995, 1998.
[26] See Rodrik (1998).
[27] Rudra 2003, 2004; Rudra and Haggard 2005.

insurance provision. In this project I argue that the current debate fails to look beyond domestic policy mechanisms to the alternative strategies provided by international markets. Specifically, to the extent PTAs reduce a market's exposure to risk, they likewise reduce a state's demand for social insurance.

The compensation hypothesis identifies risk as the driving force behind demand for social insurance. Openness exposes the market to risk, which, in turn, creates uncertainty over individual incomes by reducing wages and threatening employment. This uncertainty generates widespread demand for compensation. However, this logic assumes that states cannot be proactive in shaping the amount of risk to which their markets are exposed. In fact, new evidence shows that PTA members experience significantly less volatility than nonmembers. As a result, states that enter into formal trade agreements will face less risk and devote fewer resources to erecting social safety nets.

I expect this effect to be contingent on PTA design, however. Agreements do not always match perfectly the preferences of the domestic market. Some portion of the market will always be left vulnerable to risk. I therefore add a caveat to the prediction: States devote fewer resources to social insurance when their PTA commitments match the sector preferences of their domestic market. For example, a market that is predominantly export-dependent will spend less on social insurance when it is a member of a rigid PTA.

1.5 *Implications and Contributions*

This project makes several contributions. First, I offer a novel theory of institutional design. Previous literature treats PTA formation as a "win-win" proposition—member

states are assumed to benefit equally from flexibility. I relax this assumption. I propose and support empirically the proposition that PTA design has asymmetric distributional consequences. Specifically, the benefits of flexible rules are targeted toward import-competing firms, while export-dependent firms bear a disproportionate amount of the costs. The result is domestic political competition between actors with diverging preferences over PTA design. Focusing on this competition helps explain why PTAs vary so widely in spite of the generally accepted benefits of providing flexibility.

Second, I apply one of the dominant theories of trade preferences to a new empirical domain and, in the process, I generate new predictions about the levels of trade liberalization domestic producers are willing to accept. Traditionally, the sectors model predicts that export-dependent firms support free trade while import-competitors oppose it. However, I show that in the context of PTA formation firms have preferences over levels of openness and over agreement design. In practice, we observe firms accepting suboptimal levels of liberalization in exchange for favorable PTA rules. This evidence shows that the politics of globalization are shaped not by the absolute material gains accrued from free trade, but also by a concern for risk.

Third, to measure agreement flexibility I construct an original dataset of PTA design. This data represents a significant contribution to the empirical work on international institutions. Currently, there is only limited data on the specific features of treaty texts. I offer a fine-grained coding of 330 PTAs since 1960, including the presence (or absence) of 25 individual legal provisions. The data reveals significant variation across PTAs, particularly with respect to the extent states regulate the flexibility systems included in their contracts.

Fourth, I bring together previously unrelated literatures on international institutions and global market risk in a meaningful way. I show that there are risk-reducing opportunities available in the interstate system—a point that has been largely overlooked by the existing literature on compensation. Specifically, PTA membership represents a viable alternative to traditional social insurance. This has implications for the debate over welfare systems in a globalizing world. It reveals that, counter-intuitively, states can protect themselves from market risk by utilizing the legal architecture of the global economy, rather than retreating from it.

1.6 *Structure of the Dissertation*

This project is structured as follows. In chapter 2 I review the relevant literatures on institutional formation and design as well as the emerging work on how trade agreements help protect members from risk in global markets. I pay special attention to the current literature's assumption that flexibility promotes cooperation. I argue that extant research fails to recognize the asymmetric distributional consequences of design outcomes, or how these asymmetries create diverging preferences in the market. In chapter 3 I present a new theory of institutional design. My theory focuses on political competition between domestic interest groups. I argue that PTA design outcomes directly affect firm welfare, generating strong material incentives to lobby for specific agreement rules. I test my sectors-based explanation of PTA design through a series of large-N analyses in chapter 4. I find robust evidence that the sector composition of the domestic market is a strong predictor of PTA design outcomes. This relationship is conditional on whether a state enjoys market power over its trade partners. In chapter 5 I explore the implications that

my theory and findings have for the ways in which states cope with market risk. Previous literature focuses on domestic mechanisms—i.e. the provision of social insurance. I show that PTA membership provides a viable alternative strategy, helping reduce the amount of risk to which markets are exposed and, in turn, attenuating demand for compensation. The final chapter highlights this project's contributions and suggests several avenues for future research.

2

International Cooperation, Institutional Design and Market Risk

This project seeks to explain variation in the design of international trade institutions. It begins from the proposition that flexibility provisions—clauses that allow states to renege temporarily on their contractual obligations—provide insurance against global economic risk. I draw on the existing literatures on institutional formation and design, which I survey in this chapter.

For the last decade, research on design has been led by the "rational design" project. The rational design literature provides a theoretical framework for understanding how institutional design affect compliance levels. Its core insight is that building flexibility into international contracts induces more cooperation. In the context of trade agreements, the evidence in favor of this hypothesis is strong. States taking advantage of escape clauses are more likely to enter into agreements and to make deeper commitments when doing so.

In spite of these findings, the flexibility hypothesis faces strong criticisms. Mounting evidence in economics and political economy shows that flexibility is costly. Specifically, the use of escape clauses dampens trade and results in a loss of consumer

welfare. Critics therefore cite the spread of flexibility use as a "problem in world trade."[28] This project does not attempt to measure the welfare consequences of flexibility use. However, the debate has important implications for how we view flexibility. Given the evidence, I acknowledge that flexibility has costs. However, I argue that the current evidence does not support the conclusion that permitting escape results in a net welfare loss. Flexibility is best understood as a form of international insurance, protecting states against global economic risk, rather than as a substitute for traditional tariff barriers.

This proposition is supported by emerging research on the risk reducing benefits of trade agreement membership. New evidence shows that member states experience less price volatility then non-members. Thus, perhaps counter-intuitively, international markets provide built-in mechanisms for coping with global economic risk—trade agreements.

The complementary literatures on rational design and global market risk provide a strong theoretical and empirical foundation for this project. However, both lines of research share an important shortcoming: neither can explain why, if flexibility has clear benefits, agreements vary so widely in the design of their rules. We are left with a question. What explains variation in institutional design? I conclude this chapter by introducing a novel theory of institutional design. I argue that any theory of design must account for domestic interest groups and the political competition that takes place between them.

2.1 *Trade Agreement Formation*

[28] Zanardi 2005.

Numerous theories have been offered for the formation of trade institutions. Features of the global economy, variation in domestic political institutions, market power, and national security have all been shown to influence a state's likelihood of entering into a formal interstate economic agreement. All of these theories, however, concentrate on one aspect of institutional design—the depth of trade liberalization to which members commits. They largely exclude any consideration of agreement rules or how these rules may affect the willingness of a state to enter into a PTA.

Features of global economy have been shown to be a strong determinant of PTA formation. For example, it has been argued that deeper bilateral and regional integration—through the formation of PTAs—coincides with the evolution of the multilateral trade regime. Freund argues that each new round of trade concessions made under the GATT/WTO framework has precipitated waves of PTA formation. In particular, states have increased incentives to enter into PTAs as tariffs fall because the "market share gains from [PTAs] can dominate the loss in competition to such an extent that they are preferred by member countries to free trade."[29]

Freund's argument shows that multilateral liberalization may have perverse effects, promoting the formation discriminatory regional agreements. Mansfield and Reinhardt offer a different take on the relationship between PTAs and the multilateral system. They argue that PTA formation is a strategic response by states to gain additional bargaining power in the multilateral trade regime.[30] They start from the premise that the multilateral trade regime is characterized by an uneven distribution of voice—i.e. power. A large

[29] Freund 2000.
[30] Mansfield and Reinhardt 2003.

number of members are mere bystanders as a result. Forming smaller trade blocs—through the creation of PTAs—provides a way for states to build bargaining power.

Beyond these studies, whether PTAs promote or impede liberalization has been the subject of lengthy debate. Evidence on this issue is mixed, but there is widespread opinion that PTAs can serve as "stumbling blocks" to openness.[31] Levy finds that, similar to Freund, PTAs provide larger, more targeted benefits to their members.[32] States therefore have greater incentives to limit their liberalization. Bhagwati, Saggi, and Limao report findings similar to Levy's.[33]

The empirical underpinnings of these arguments—namely, that the material benefits of PTA formation exceed multilateral commitments—is bought into question by Vamvakidis, who finds that states grow faster after "broad liberalization", implying that states should opt for multilateral concessions. This evidence matches the GATT/WTO's official position that "[preferential] trade agreements can actually support the WTO's multilateral trading system."[34] Each of these studies, in spite of their conflicting conclusions, shows that incentives to form PTAs are closely tied to features of the interstate system.

Regime type is also a strong predictor of PTA creation. Domestic political institutions directly affect a state's incentives to commit to market openness through the formation of trade agreements. Democratic states, for example, are more likely to enter into PTAs and

[31] Krueger (1999) offers a detailed discussion of the competing views on this issue. She highlights the need for further research before a definitive statement can be made about the trade-promoting effects of PTA formation. However, she stresses that most of the early signs point toward trade obstruction rather than liberalization.

[32] Levy 1997

[33] Bhagwati 1991, 1992; Saggi 2006; Limao 2006

[34] "Regionalism: Friends or Rivals?" *Understand the WTO*. Accessed online (March 9, 2010) at: http://www.wto.org/english/theWTO_e/whatis_e/tif_e/bey1_e.htm

to make deeper liberalizing commitments when doing so. Mansfield, Milner, and Rosendorff argue that the division of power between executives and legislatures unique to democracies leads them to make deeper commitments.[35] They explain this phenomenon by emphasizing the high costs of a trade war between two protectionist legislatures. This prediction is complicated, however, in later work showing that a state's likelihood of forming a PTA decreases in the number of domestic veto players.[36]

There is an additional channel through which democratic institutions may influence PTA formation. Democratic leaders may find international commitments a useful device for expediting domestic economic reforms that otherwise face staunch political opposition. Entering into PTAs can commit states to openness, effectively "tying their hands" to policy reforms.[37] Utilizing international commitments in this way allows politicians to dodge blame for passing unpopular reforms, thereby achieving policy goals without risking public sanction. It is further argued that international commitments are hard to overturn once initial commitments are made. Politicians can therefore tie successor's hands to reforms they may prefer to reverse.[38]

Scholars also highlight the role played by power, both in terms of market and military power. Large states have greater incentives to enter into PTAs. In particular, large markets are in a better position to influence the terms of agreements and are therefore more likely to secure favorable (and profitable) deals.[39] Finlayson and Zacher, for example, find that the origins of GATT's core norms can be traced back to interests of

[35] Mansfield, Milner, and Rosendorff 2000
[36] Mansfield, Milner, and Pevehouse 2007
[37] Walley 1996; Smith 1997; Staiger and Tabellini 1999
[38] Walley 1993
[39] Krasner 1991.

the world's market powers—i.e. the United States and European Union.[40] The International Monetary Fund is another example; the weighted voting system in the IMF means that richer nations enjoy greater voice in the institution's decision-making process.[41] Large states are therefore able to write the "rules of the game" in their favor.

Unsurprisingly, these differences in power result in asymmetric distribution of agreements' material benefits. It has been argued that the GATT/WTO is an "exclusive country club" in which only the largest markets reap the benefits of membership.[42] The policy implication is that larger states ought to be more willing to commit to liberalization through the formation of PTAs. It is worth noting, however, that the conclusions of other studies have been less one-sided. Goldstein, et al find that critics of the GATT/WTO grossly understate the gains smaller states make from membership.[43]

Market size is only one form of power. Incentives to form PTAs are also linked to national security interests. One interpretation of trade agreements is that they are effective vehicles for diplomacy. States with stronger economic ties are less likely to go to war.[44] Thus, creating a trade agreement with another state ought to dramatically reduce the propensity for armed conflict in the future. Indeed, integrating in an effort to ensure peace is part of the logic underlying the formation of major multilateral institutions like the EU.[45]

This strategy of using PTAs as a means for promoting peace has its limits, however. Realist scholars have argued that neo-liberal institutionalists—who argue in favor in of

[40] Finlayson and Zacher 1981.
[41] Dreyer and Schotter 1980, Oatley and Yackee 2004.
[42] Gowa and Kim 2005.
[43] Goldstein, Rivers and Tomz 2007.
[44] Oneal and Russett 1997; Copeland 1996.
[45] Schimmelfennig 2001.

the virtue of trade agreements—underestimate states' concerns for relative gains. In the context of national security, it is not enough that a state benefits from agreement membership, they want to benefit more than their partners.[46] The principal source of concern is that material gains from free trade may be directed toward the building/purchasing of arms. Under these circumstances, trade may promote insecurity rather than peace. Gowa finds that states trade significantly more and are more likely to form PTAs with allies than adversaries.[47]

Each theory generates unique predictions about PTA formation. However, they all focus on the amount of trade liberalization to which states commit. They can tell us very little about an equally important element of design: variation in PTA rules. The one exception is the work on regime type. Studies show that democracies are prone to make and sustain deeper international commitments, suggesting that democracies are more likely to enter into highly legalized trade agreements. Notwithstanding this caveat, all the perspectives mentioned here have at their core a concern for the material benefits accrued from agreement membership. Much more has to be done before we fully understand the determinants of variation in international institutional design—especially in the context of trade agreements.

2.2 *Trade Agreement Design*

This is not the first project to shift attention to the design of rules. In the last decade there has been an increased effort to explain variation in trade agreement rules. At the forefront of this literature is the rational design project. Rational design starts by observing a

[46] Snidal 1991; Powell 1991.
[47] Gowa 1995.

paradox. On the one hand, it has been argued that institutionalizing interstate relations promotes cooperation. Repeated interactions reduce the incentives to defect because states behave less opportunistically when they fear being taken advantage of in the future.[48] On the other hand, cooperation remains elusive in almost every major area of international politics, including environmental policy, labor rights, intellectual property, and trade. Why is there so little cooperation? In response to this puzzle, Lipson, Snidal and Koremenos highlight a number of factors that deter cooperation.[49] Among these factors is uncertainty in the interstate system, problems of rule enforcement, and the asymmetric distribution of benefits accrued from membership.

Uncertainty over the future state of the world is known to deter cooperation. States are vulnerable to "time-inconsistency" problems when entering into formal agreements. Unforeseen changes in international or domestic conditions can render deals made today unfavorable tomorrow.[50] As a result, states are apprehensive about making cooperative commitments whose terms may be suboptimal in the future.

Enforcement problems are also endemic. States cannot know whether the other parties to an agreement will honor their commitments. Nor can they rely on compelling other members to cooperate since institutions vary so widely in their abilities to generate costs for defection.[51] Difficulties enforcing agreements can leave states vulnerable to cheating by other members. These enforcement problems are exacerbated when the

[48] Oye 1985; Axelrod and Keohane 1985; Keohane 1984.
[49] Lipson, Snidal and Koremenos 2001.
[50] Downs and Rocke 1995; Rogoff 1999; Keohane 1988.
[51] Martin and Simmons 1995. See also Maggi (1999), Abbott and Snidal (1998), and Fearon (1998).

material benefits of membership are distributed unevenly across parties to the agreement. Individual states may have incentives to defect if their share of benefits is too small.[52]

Each of these three factors makes it "far more difficult to manage international cooperate than earlier, simplified theories would predict."[53] Koremenos, Lipson, and Snidal show that these difficulties have important implications for institutional design. Not all institutional arrangements benefit the membership; repeated interactions are not sufficient on their own to induce cooperation. Agreements must be designed in ways that address the unique obstacles to cooperation facing each group of states.[54]

Given this general framework, rational design has sought to identify design features that provide states insurance against international risk. Chief among these features are flexibility provisions—clauses that provide members to avenues for escape. Rational design's core insight is the flexibility hypothesis—permitting escape reduces the costs of compliance and to promotes cooperation.

2.3 *Forms of Trade Agreement Flexibility*

Scholars have applied the rational design framework to a number of empirical domains, including human rights agreements, environmental governance, and the global trade regime. Before discussing these findings and current debate over flexibility's welfare benefits, it is useful to introduce the most common flexibility provisions and review how each policy works.

In the context of trade agreements, there are at least five major flexibility provisions: safeguards, anti-dumping, countervailing duties, sanitary and phyto-sanitary measures

[52] Krasner 1991; Morrow 1994.
[53] Koremenos, Lipson, and Snidal 2001, 766.
[54] Koremenos 2001.

(SPS), and technical barriers to trade (TBTs). To varying degrees, each of these policy mechanisms allows members to erect temporarily trade barriers in an effort to protect domestic interests. The most commonly included flexibility provisions are safeguards. Sometimes referred to as "emergency actions," safeguards are used to block the importation of foreign goods in instances where these imports cause (or threaten to cause) injury to domestic producers. Safeguards provisions have evolved significantly over time. Since the transition from the GATT to the WTO the rules for applying safeguards have become increasingly legalized. In the WTO agreements, safeguards are limited with respect to the duration, severity, and frequency of use. There are also rules constraining the targeting of actions and requiring that any use of safeguards is made public to the membership.

A number of recent PTAs include safeguards provisions comparable to those in the GATT/WTO, including EFTA's recent agreements with Tunisia, Lebanon, and Egypt. In spite of this trend toward convergence with GATT/WTO rules, PTAs continue to exhibit wide variation. Roughly 75 percent of PTAs include some constraints on the use of flexibility. However, only 20 percent restrict the use of safeguards as heavily as the WTO does. The others contain some blend of those rules, allowing more or less discretion in the application of safeguards measures.

Another common escape clause is anti-dumping, which is by far the most commonly invoked provision. Since 1995, no more than 170 safeguards actions have been initiated under the GATT/WTO. Compare this to almost 2,200 anti-dumping actions. In fact, anti-dumping use has become so commonplace that it is becoming an area of increasing concern for scholars that caution against its trade-deterring effects (see below).

Anti-dumping allows states to erect trade barriers to the importation of goods that are sold at below normal market prices. These abnormally low prices can derive from various sources, such as overproduction or government subsidies to producers. Anti-dumping provides a mechanism for cutting off the inflow of these goods if they threaten domestic producers. However, anti-dumping is distinct from safeguards because it is designed to combat unfair trade policies, not import competition generally. Of course, this distinction naturally raises questions since designating policies as "unfair" is often a source of tension among agreement members. The provisions of PTAs dealing with anti-dumping can be very detailed as a result. In practice, there is rarely a new agreement made that does not address anti-dumping in at least some fashion (89% of agreements, or 126 out of 142 PTAs formed since 2000 include some mention of anti-dumping).

The other main line of defense against unfair trade practices is countervailing duties. Countervailing duties are designed specifically to offset the effects of foreign government subsidies. Export subsidies are commonly prohibited in trade agreements because they are considered to be anti-competitive. In fact, export subsidies are banned explicitly in 42 percent of PTAs. These subsidies are controversial because they artificially lower the price of exports to trade partners, exacerbating the risk faced by import-competing firms in partner states.

Countervailing duties, like safeguards, have been used much less frequently than anti-dumping. As of July 1st, 2009, GATT/WTO members had used 226 countervailing duties measures since the 1995 transition. Countervailing duties are also not included as frequently in the legal texts of trade agreements. Only 34% of PTAs include provisions

relating to countervailing duties. However, it is traditionally counted among the principal mechanisms for escape available to trade agreement members.

The remaining two main areas of flexibility are relatively new on the international trade policy scene. They are technical barriers to trade (TBTs) and sanitary and phyto-sanitary measures (SPS). Both TBTs and SPS deal with the cross-national standardization of good-specific trade regulations. States often use strict licensing rules, safety regulations, and health codes as non-tariff barriers to entry. For example, one source of contention between the United States and South Korea during their recent PTA negotiations was the removal of South Korea's ban on US beef imports. For several years South Korea has imposed strict limits on the importation of US beef, which they argue poses a public health risk.[55] In the US, industry leaders have defended the quality of their products, arguing that accusations of "mad cow" contamination are simply excuses for South Korean protectionism.[56]

Limits on the use TBTs and SPS are designed to prevent this kind of trade discrimination. Agreements that include provisions relating to TBTs and SPS typically call for compliance with international standards and the harmonization of regulatory codes across member states—e.g. the International Convention on Phytosanitary Protection. Common standards make it more difficult to impose new regulations for protectionist purposes.

There are a number other flexibility provisions available outside the five discussed here. For example, some PTAs provide developing states exceptions for the purposes of structural adjustment. Growing domestic infant industries from the ground up is difficult

[55] "Night covers arrival of US beef." JoongAng Daily, July 30th, 2008; "Lee accuses FTA opponents of spreading mad cow disease fears." Yonhap News, May 8th, 2008.

[56] "MBC distorted risk of US beef." Korea Times, July 29th, 2008.

under conditions of market openness. These exceptions, which can be found in nearly half of all PTAs, are typically included in agreements developing or transitioning markets. A large number of Eastern and Central European bilateral PTA include these exceptions—e.g. the Czech Republic's treaties with Lithuania, Lativa, and Romania.

A minority of PTAs also include good-specific clauses that allow states to erect entry barriers just for select industries. These are often politically sensitive segments of the market such as agriculture, which the developed world is traditionally reluctant to liberalize. In fact, 90% of agreements that contain special exceptions for the protection of specific goods or industries explicitly mention the agricultural sector. (The next most frequently named industry is textiles.)

2.4 *Conceptualizing Flexibility*

States build a variety of escape clauses into their preferential agreements. I have highlighted the most common forms of flexibility in this chapter. These policies share a common purpose: to reduce the uncertainty in the marketplace. Each provision affords members the right to protect their interests when exposure to foreign competition threatens the survival of domestic industries. Not all flexibility provisions are created equal, however. PTAs exhibit wide variation in the design of their rules. This variation is evident not just in which provisions PTAs include, but also in *the extent to which these provisions are regulated.* This second source of variation is significant. The discretion states have in using escape clauses decreases in how legalized the flexibility system is.

I conceptualize the "flexibility" or "rigidity" of each agreement as a measure of how much discretion members have in invoking each mechanism. Each PTA can be placed

along unidimensional policy space ranging from the comprehensive regulation of each escape clause (rigidity) on one end, to absence of regulations (flexibility) on the other. The precise measurement of these concepts is discussed at length in Chapter 4. By way of illustration consider the following example.

Flexible agreements afford members a great deal of discretion. For example, the European Union's agreement with Jordan, signed in 1997, states with respect to sanitary and phyto-sanitary measures that, "the parties shall focus cooperation [on] harmonization of phyto-sanitary and veterinary standards."[57] However, nowhere in the agreement are these standards listed. Nor are there any specific actions for achieving these goals enumerated. All the agreement contains is a promise; there is no burden on the members to enact any domestic reforms or to limit the use of protectionist regulatory standards in any way. This lack of specificity—or, "blank check"—provision represents a highly flexible commitment.

By contrast, the rules relating to SPS in Chile's agreement with Costa Rica include strict limits on the imposition of domestic standards. The agreement calls for compliance with a number of international codes, including those set by the WTO, the International Office of Epizoodics, the International Convention on Phytosanitary Protection, and the Codex Alimentarius Commission. In order to comply with the agreement, states must Agreements that contain this level of legalization leave states with much less policy discretion. They place hard constraints on invocations of the flexibility system, mandating that states comply with a long list of rules before any protective actions are authorized.

[57] European Communities-Jordan Euro-Mediterranean Agreement, Chapter 2, Title V, Article 71.

The open-ended SPS provisions in the EU-Jordan PTA are an example of a flexible commitment. The large burden placed on Chile and Costa Rica, by contrast, is an example of a rigid commitment. The overall flexibility or rigidity of each PTA derives from the sum of these individual provisions. With a clear idea of what flexibility provisions are and how they work I turn to the current debate over their welfare effects.

2.5 *Evidence of Flexibility's Costs and Benefits*

The core insight of the rational design literature is that allowing states to escape their commitments actually induces more cooperation. The flexibility hypothesis has been tested in a variety of empirical domains, including human rights agreements[58], environmental treaties[59], international courts and their rulings[60], and national security alliances.[61] Support for the hypothesis is mixed. In a series of papers on alliance commitments, for example, Leeds finds little evidence that the design of the contract has any perceptible effect on compliance.[62] Instead, shifts in relative power are the most crucial determinants of whether an alliance is honored.[63] Leeds' findings are not surprising given the stakes involved in honoring alliance ties. The decision to go to war in support of an ally is uniquely costly. National security agreements therefore present the most difficult case for the flexibility hypothesis. And, as Leeds' results demonstrate, exogenous factors influence compliance more than the terms of the agreement itself.

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[58] Hafner-Burton 2009, 2008; Powell and Staton 2008.
[59] Mitchell and Keilbach 2001; Wagner 2007; Mitchell 2006.
[60] Staton and Vanberg 2008; Hawkins 2008.
[61] Leeds 2003; Leeds and Savun 2007.
[62] Leeds and Anac 2005.
[63] Leeds 2003. Power is an important concern in the domain of trade agreements as well. States that enjoy market power over their trade partners are better positioned to secure favorable terms in their PTA negotiations. I develop this claim in greater detail later in this project.

In the context of trade institutions, however, the flexibility hypothesis enjoys strong theoretical and empirical support. Koremenos finds that finite duration provisions lessen states' apprehensions over long-term commitments.[64] According to Koremenos, letting states renegotiate the terms of their agreements ensures that the contract evolves along with the changing preferences of the members. In a complementary study, Rosendorff finds that flexibility in the GATT/WTO contributes to the agreement's durability.[65] The development of the dispute settlement mechanism, which Rosendorff argues has become more flexible over time, enhances the "stability" of the agreement. The current GATT/WTO mechanism provides a forum in which member states can sanction one another for breeches of contract. However, states willing to bear the costs of paying compensation *ex post* enjoy greater flexibility by effectively purchasing the ability to defect. In both cases, these studies find that "cooperation (at least in the long run) and discretion are not mutually incompatible."[66] Rather, flexibility actually induces more cooperation.

Drawing on these studies, recent work examines the behavioral consequences of the flexibility hypothesis. Kucik and Reinhardt offer one of the first in-depth studies of the effects flexibility provisions have on individual state's policies. Focusing on anti-dumping, they find that states are more likely to join the GATT/WTO if they adopt the domestic legal apparatus necessary for anti-dumping use. Their results show that states willing (and able) to take advantage of the flexibility system are more likely to enter into formal agreements. Kucik and Reinhardt also find that anti-dumping adopters commit to significantly lower tariff bindings than those who do not utilize the flexibility system.

[64] Koremenos 2005.
[65] Rosendorff 2005.
[66] Rosendorff 2005, 389.

This second finding is an important one; it demonstrates that flexibility matters for not just whether a state joins an agreement, but also the level of concessions to which states commitment.

The rational design literature shows that, at least in the context of trade agreements, contractual design matters for policy. Having access to a flexibility system positively affects (1) the likelihood of formation, (2) agreement durability, and (3) levels of commitment. In short, flexibility promotes cooperation. However, neither the theoretical framework nor rational design's core findings are accepted universally. Growing literatures in economics and political science caution against being too optimistic. Pointing to the large costs associated with flexibility, some critics conclude that escape clauses are merely a substitute for traditional tariff barriers. What appears to be more cooperation, according to this view, is simply a form of "new protectionism."[67]

Measuring the true welfare impact of flexibility use is rife with difficulties. Flexibility's costs are obscure and diffuse, prohibiting a comprehensive analysis.[68] In spite of the obstacles, a number of scholars show that flexibility has adverse welfare consequences. Most of these studies focus on the most commonly invoked flexibility provision—anti-dumping. Anti-dumping use has grown at an astonishing rate in the last two decades. In 1980, only 8 countries had the necessary domestic anti-dumping rules in place. By 2008, the number of adopting states grew to nearly 100. Anti-dumping use has exploded as a result; over the same period the number of yearly anti-dumping measures put in place rose from 18 to 200.[69]

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[67] Bhagwati 1989; Bhagwati and Panagaryia 1999; Kono 2006.

[68] Blonigen and Prusa 2003; Gallaway, Blonigen, and Flynn 1998; Lloyd, Morrissey, and Reed 1998.

[69] Tharakan notes that Australia, Canada, the US, and the EU were responsible for nearly 88% of the anti-dumping use in 1990. By 1997 this number had fallen to less than 50% and continues to drop.

The spread of anti-dumping, and flexibility generally, is criticized on both theoretical and empirical grounds. To begin with, Finger, Ng, and Wangchuk argue that an efficient escape clause ought to meet two criteria: (1) there must be a way to distinguish its effects on the domestic market; and (2) it must not sacrifice a commitment to openness in exchange for protecting domestic producers.[70] Finger, et al contends that anti-dumping fails on both accounts. By considering only the interests of producers it largely overlooks the negative impact of protectionism on consumer welfare. As a policy, therefore, it does not "treat domestic interests that would be harmed by an import restriction equally with those domestic interests that would benefit."[71]

Critics argue that flexibility provisions such as anti-dumping are blind to effects on consumers. But what exactly are the costs? In the aggregate, anti-dumping deters international trade.[72] By erecting barriers to entry, anti-dumping users close off market access to foreign goods, obstructing trade flows. The reduction of trade is visible not just during the time a measure is in force, but also during the investigation period, implying that the opportunity costs of anti-dumping go beyond what is strictly permitted.[73] The costs of anti-dumping are not confined to countries targeted by an action. Like any barrier to market entry, flexibility provisions deflect goods to unprotected economies elsewhere in the marketplace. Anti-dumping use generates risk for other states that must now absorb the residual supply of low-priced goods.[74] Taken together, it has been argued that anti-dumping reduces the value of targeted imports by as much as half[75] though other

[70] Finger, Ng, and Wangchuk 2000.
[71] Finger, Ng, and Wangchuk 2000, 161.
[72] Brenton 2001.
[73] Staiger and Wolak 1994.
[74] Prusa 1996.
[75] Prusa 2001.

estimates place this number closer to one third.[76] Regardless of the actual figure, there is strong evidence that anti-dumping use deflects trade and results in higher prices for consumers.[77] On the other hand, there is very little evidence that anti-dumping has a consistent, positive effect on trade promotion.[78]

These myriad costs are most acute in the developing world. Developing countries are significantly more likely to be targeted by anti-dumping actions.[79] This is due in large part to their lack of a credible retaliatory threat.[80] Developing countries are less likely to possess the legal and bureaucratic capacity required to maintain a domestic anti-dumping system.[81] Developed countries can therefore target these disadvantaged states without fear of response. In light of the asymmetry in access to flexibility, some scholars view the targeting of the developing world as a strategic move by developed markets to protect domestic interests through means not available to all states.[82]

Moreover, the adverse consequences of flexibility are not confined to the use of the anti-dumping. Work on other escape clauses yields similar results. Each of the five core flexibility provisions in the domain of trade are associated with reductions in trade and lost consumer welfare.[83] All of this evidence begs a question, however: Do the costs of flexibility cancel out its benefits? We currently lack the data required to answer this question definitively. However, there is little reason based on the available evidence to

[76] Lasagni 2000.
[77] Bown and Crowley 2007, 2008; Brenton 2001; Marh 1998.
[78] Moore and Zanardi 2006.
[79] Finger, Ng, and Wangchuk 2000.
[80] Blonigen and Bown 2003.
[81] Kucik and Reinhardt 2008.
[82] Lasagni 2000.
[83] See Bown and Crowley (2007) and Bown (2004) for examples.

answer in the affirmative. Rather, there are two reasons to think that the cooperative gains accrue from flexibility outweigh any losses in consumer welfare.

First, the *ex post* benefits of permitting escape are unambiguously positive. Kucik and Reinhardt show that, in the context of the GATT/WTO, adopting an anti-dumping mechanism corresponds to a 30% reduction in the average member's *applied* tariff rates.[84] States with access to flexibility do not just make deeper nominal commitments to liberalize markets they put these commitments into practice. Moreover, the gains in trade accrued from agreement membership are equally large. States enjoy a 40% increase in trade when acceding to the GATT/WTO.[85] Contrast these substantial gains with our best estimates of the *overall* trade-reducing effects of flexibility, which in the US are at 2%.[86] That is only a 2% loss, compared to a 40% increase, for what is by far the single most commonly used flexibility provision. Kucik and Reinhardt summarize the tradeoff in this way, "to be sure, the impact [of flexibility] on trade flows is only a piece of the aggregate welfare picture, but… the efficiency gains from the [GATT/WTO's] incorporation of anti-dumping may be considerable."[87]

However, even with these benefits, it still may be the case that states use flexibility in replace of traditional tariff barriers, effectively zeroing out their additional concessions. Yet, if this were true, the use of flexibility provisions would be much more prevalent. This brings us to the second point: flexibility is best understood as insurance against risk, to be used only in times of need, rather than as a new form of protectionism. Consider the differences between the two.

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[84] Kucik and Reinhardt 2008.
[85] Goldstein, Rivers, and Tomz 2007.
[86] Gallaway, Blonigen, and Flynn 1999.
[87] Kucik and Reinhardt 2008, 502.

Tariffs are set unilaterally by states. In the absence of any overarching international commitments, these barriers can be applied at any rate, to any good, for any period of time. That is not true of flexibility. Neither anti-dumping, nor countervailing duties, nor any other escape clause can be used freely and arbitrarily. These policies are designed to allow for industry-specific protection when the costs of compliance with trade agreements is prohibitively high. The WTO summarizes the role of flexibility this way, "binding tariffs, and applying them equally to all trading partners… are key to the smooth flow of trade in goods. The WTO agreements uphold the principles, but they also allow exceptions in some circumstances."[88] Thus, while flexibility allows states to protect industries threatened by liberalization, this protection has its limits. Flexibility is fundamentally a strategy for hedging against risk, not a way to back down from a commitment to market openness.

The difference is illustrated in the wide gulf between how much flexibility is used and how much would be required to offset the costs of additional tariff concessions. In the first chapter of this project, I introduced the example of Turkey's PTAs with Hungary and Slovakia. In both cases, the partners agreed to the abolition of duties on industrial goods. Yet, during the 10 years these two agreements were in force, there was only one use of the flexibility. This is just one example, but it is mirrored by the behavior of states in agreements all over the world.

The evidence supports only one conclusion: that in the context of trade agreements, the good news about compliance *is* good news about cooperation. While flexibility has

[88] "Anti-dumping, subsidies, safeguards: contingencies, etc" *Understanding the WTO: The Agreements*, access online (March 9, 2010) at: http://www.wto.org/english/theWTO_e/whatis_e/tif_e/agrm8_e.htm

nonzero costs, it is unlikely that the costs are high enough to cancel out the gains made from deeper commitments and freer trade.

2.6 *International Trade Institutions and Global Market Risk*

Recent work on trade institutions and market risk confirms that flexibility insures states against uncertainty. When states open their markets they expose the traded sectors of the domestic economy to risk. For the import-competing sector, this risk comes in the form of price competition. Liberalization exposes previously insulated domestic producers to competition from foreign goods to downward pressure on prices. Export-dependent firms are also exposed to risk. For exporters, unpredictable fluctuations in the relative prices affects dramatically the terms of internationalized, forward contracts.

These price shocks have numerous adverse consequences at all levels of the domestic market. For example, exposure to risk generates more frequent and more severe business cycles and destabilizes exchange commitments.[89] The resulting uncertainty in the policy environment deters international flows of capital and goods, which in turn generates higher budget deficits.[90] In the aggregate, risk stunts overall domestic growth and development.[91] Note that all of these findings are the strongest in the developing world, where *ex ante* resource shortages, highly specialized markets, and poor infrastructure all exacerbate the problems of risk.[92]

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[89] Razin, Sadka and Coury 2003; Buch, Doepke; and Pierdzioch 2005; Razin and Rose 1992; Bleaney and Greenaway 2001; Hau 2002.

[90] Aizenman and Marion 1999; Combes and Saadi-Sedik 2006.

[91] Mendoza 1997; Turnovsky and Chattopadhyay 2003; Easterly, Kremer, Pritchett and Summers 1993.

[92] Grimes, Easterly, and Kraay 2000; Backus and Crucini 2000; Bidarkota and Crucini 2000.

Risk's adverse effects also harm individuals. The pressure risk places on firms results in reduced real wages and heightened job insecurity. Not coincidentally, workers in internationalized industries report more apprehensions over globalization.[93] In light of these effects on individual welfare, politicians have strong incentives to protect their markets from risk. New research shows that, perhaps counter-intuitively, the international market provides built-in mechanisms for hedging against global economic risk.

Trade institutions significantly reduce the amount of risk their members face. They do this in two ways. First, PTAs deter the types of opportunistic states behaviors that generate risk in the first place. Price shocks can often be traced back to policy shifts by individual member states.[94] PTAs reduce the likelihood that shocks occur by constraining the policy autonomy of their members.[95] PTAs delineate the boundaries of legally permissible behavior. Institutionalizing trade relationships makes it easier for members to identify one another's defections, helping "focus reputational or retaliation costs on members that abrogate their treaty commitments by introducing new trade barriers."[96] Indeed, recent studies show that the constraints PTAs place on policy work; states are less likely to introduce new barriers to market entry when they are members of PTAs.[97]

PTA designers, however, cannot anticipate every possible contingency. Some amount of market risk inevitably remains to threaten agreement compliance. To help state cope with this remaining risk, institutions provide states avenues for escape via the provision of flexibility. Through these two mechanisms, institutions reduce the overall risk facing

[93] Scheve and Slaughter 2004; Traca 2005.
[94] Bagwell and Staiger 2002.
[95] Mansfield and Reinhardt 2008.
[96] Mansfield and Reinhardt 2009, 13.
[97] Busch, Raciborksi, Reinhardt 2008; Blonigen and Bown 2003.

members. In their work in this area, Mansfield and Reinhardt find strong evidence that members experience less volatility in their terms of trade than do non-member markets.[98]

2.7 *Summary: The Limits of Existing Literature*

The literature on rational design emphasizes the importance of agreement rules. Specifically, building flexibility into formal international contracts induces deeper cooperation. Flexibility provides a form of international insurance that lowers the costs of agreement compliance. State behavior supports this proposition. When states are provided the opportunity to escape they are more willing to enter into agreements and to commit to deeper trade concessions upon accession. Institutional design clearly "matters" for policy making. However, while this research provides a useful framework for understanding states' demand for flexibility, we currently know very little about the wide variation in agreement rules. We are left with a question. If flexibility promotes cooperation, then why do agreements vary so widely in the design of their rules?

Existing literature treats flexibility provisions as a "win-win" proposition. States, who are uncertain about the future costs of compliance, build flexibility into their agreements and everyone is assumed to be better off. There are strong theoretical reasons to except that states' preferences over flexibility vary. The rational design literature largely ignores the role of domestic interest groups as well as the effect these groups have on shaping state policy choices relating to institutional design. In fact, domestic interest groups play a crucial role in PTA negotiations. Flexibility is not universally beneficial. Rather, its benefits are distributed asymmetrically across the domestic market. As Krueger writes,

[98] Mansfield and Reinhardt 2008.

"protection of one group is discrimination against another."[99] Flexibility is no exception. In the following chapter I argue that design preferences divide the market, resulting in political competition between domestic interest groups with diverging interests.

[99] Krueger 1989, 6.

3

Explaining Variation in International Institutional Design

What explains variation in the design of international institutions? Recent design literature shows that the rules to which states agree have important policy implications. A core insight of this literature is that, perhaps counter-intuitively, allowing members to shirk their contractual obligations induces more cooperation. States enter into international agreements under conditions of uncertainty. They cannot know whether the terms of contracts signed today are going to be favorable tomorrow. Flexibility provisions insure states against this uncertainty by allowing members to shirk temporarily their contractual obligations.

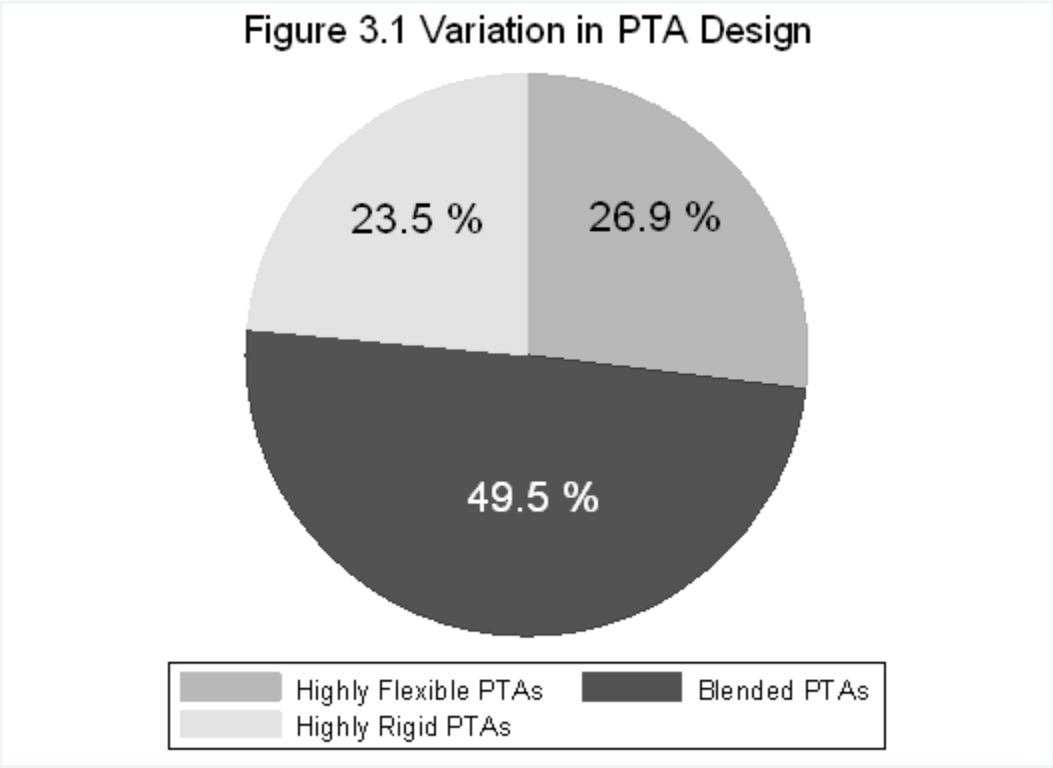
In the context of trade institutions, flexibility provisions have a number of benefits. Providing members with a system for escape increases the likelihood that states enter into agreements. It also enhances the durability of those commitments. Flexibility lowers the costs of compliance, which reduces the likelihood that members abandon agreements. Moreover, agreement rules directly affect the depth of concessions to which states commit. Members reduce their tariffs by significantly larger amounts when provided a system of flexibility in their trade agreements.

However, in spite of these benefits, we continue to observe wide variation in the design of international contracts, especially in the domain of preferential trade agreements (PTAs). PTAs are formal interstate treaties in which member states grant reciprocal market access to one another.[100] Prominent examples of PTAs include the European Union, the North American Free Trade Agreement, and the Association of South East Asian Nations (ASEAN). The variation across these agreements is significant. Of the 330 PTAs investigated in this study, the sample is divided almost evenly between highly flexible and highly inflexible—or, "rigid"—agreements (see Figure 3.1). Roughly one quarter of the sample contains very few (or no) rules to regulate the use of escape clauses.[101] In these agreements, which I argue are highly flexible, escape is left largely to the discretion of individual members. Another quarter of the sample, however, is characterized by its strict contractual rigidity. Highly legalized, "rigid" agreements heavily regulate use of the flexibility system, including rules pertaining to the size, duration, and eligible targets of flexibility actions.

The variation across PTAs presents us with a paradox. If flexibility promotes cooperation, why do trade agreements vary so widely in their design? In this chapter I offer a theory of institutional design that focuses on political competition between domestic interest groups. Existing literature treats flexibility as a "win-win" proposition. States uncertain about the future costs of compliance build escape clauses into their

[100] PTAs include free trade areas, customs unions, and partial scope accords. Free trade areas are treaties in which states agree to reduce or eliminate tariffs between the members. Customs unions are free trade areas that also specify a common external tariff. Partial scope accords are the least comprehensive; these agreements typically involve liberalization in a few select industries rather than across-the-board tariff reductions. Free trade areas and partial scope accords make up the vast majority of the world's PTAs. Customs unions are much less common—less than 10% according to GATT/WTO figures.

[101] This estimate is based on the presence or absence of constraints on the five major flexibility provisions in the domain of international trade policy discussed in Chapter 2—safeguards, anti-dumping, countervailing duties, technical barriers to trade, and sanitary and phyto-sanitary measures. The coding of each is elaborated in greater detail in Chapter 4.



contracts and everyone is assumed to be better off. I relax this assumption. I argue instead that flexibility provisions are not universally beneficial. Rather, flexibility's benefits are distributed unequally across the domestic market.

Flexibility's asymmetric benefits divide the preferences of the domestic market. In this study I focus I focus on political competition between domestic producer groups. The traded portion of the market can be divided into two sectors: import-competing and export-dependent firms. Market openness exposes both groups to global economic risk. However, each sector's preferred strategies for coping with risk varies. Import-competing firms prefer flexibility because it allows states to introduce barriers to market entry when exposure to foreign price competition threatens the survival of domestic producers. Export-dependent firms, on the contrary, prefer rigid agreements. Export-dependent firms are vulnerable to volatility in global prices. Rigid PTAs—those that limit the use of

flexibility—reduce the likelihood that price shocks occur by deterring volatility-generating policy shifts by member states.

These producer groups bring their preferences to bear on states during the negotiation process. I argue that a state's preferences are a product of the sector composition of the domestic market. States with predominately import-competing (market-dependent) markets demand more flexibility (rigidity) in their PTA commitments. However, PTA outcomes are the result of bargaining between several states whose preferences may be quite different from one another. How can we predict when a state will be able to secure favorable terms? I argue that a state's ability to influence PTA design outcomes increases in its market power—the size of its economy relative to its trade partners. Small states have greater material incentives to gain access to their larger partners' markets. Large markets can leverage this imbalance in incentives to secure their ideal terms. As a result, design outcomes are more likely to reflect the preferences of states with market power.

In this chapter I lay out the logic of these claims in detail. I start with a discussion of the risks to which each sector is exposed. I then argue that risk generates unique preferences over design. I conclude by enumerating the testable predictions of the theory as well as foreshadowing the implications it has for policy choices relating to social insurance, which are explored in Chapter 5.

3.1 *Market Openness and Global Economic Risk*

Market openness exposes both traded sectors of the domestic market to global economic risk. For import-competitors, this risk manifests itself primarily in the form of price competition. Inflows of cheaply priced foreign goods reduce demand for domestic

products. Declining demand, in turn, places downward pressure on prices. In an effort to remain competitive, import-competing firms are forced to adjust production costs. Studies by numerous economists show that continued exposure to price competition has a variety of adverse welfare consequences, including reductions in real wages, lost jobs, and firm closure.

The developed world's textiles and apparel industries provide just one example of these dynamics at work. The manufacturing sector is traditionally viewed as the segment of the market most sensitive to global market risk. This is particularly true of textiles and apparel industries because of the low-skilled labor they employ.[102] The availability of cheaper inputs abroad makes it difficult for firms in the developed world to compete in open markets. The threat liberalization poses for these industries has important policy implications. For several decades, textiles and apparel firms lobbied successfully for protection from excessive import penetration through a variety of domestic and international policies. The most high profile of these is the Agreement on Textiles and Clothing (ATC), or "Multi Fiber Agreement," which capped the amount of exports the developing world could send to developed nations.[103]

The ATC's expiration in 2005 opened developed markets to imports from around the world. In the wake of this liberalization, increased competition from foreign producers has led to a sharp downturn in the textiles and apparel industries in the EU, the United States, Canada, and Japan, among others.[104] The story is similar in the US. Whereas textiles and apparel once enjoyed oligopolistic control over prices, the dissolution of

[102] Egger and Egger 2006; Geishecker 2002; Freeman 1995.

[103] Krishna and Tan 1998; Spinanger 1998.

[104] Raff and Wagner (2009) show that in the short-term, the dismantling of the ATC has resulted in significant job loses and several high profile firm closures in Germany. See also Conway and Fugazza (2009).

ATC import quotas has resulted in, "downsizing, layoffs, and a reduction of domestic market share."[105] These adverse effects are a direct result of reduced demand for domestic goods.[106] Revenga summarizes risk as follows, "a change in import competition that shifts industry product demand will tend to shift employment in the same direction."[107] Around the developed world, therefore, we expect to see significant contraction in the textiles and apparel industries as import competition rises. In the US, this contraction has already been dramatic. Textiles production has dropped by more than one third and employment by more than one half, which industry leaders attribute directly to price competition, stating that, "low prices have led to the worst crisis in the industry's history."[108]

Around the world, numerous other import-competing industries face the same risks. Any firm that has to compete with cheap foreign imports has strong incentives to protect itself from downward pressure on prices. Below I argue that flexibility provisions are a viable strategy for combating risk.

The export-dependent sector is also vulnerable to market risk. Exporters benefit not only from securing market access abroad but also from *stability* in their trade relationships. Unpredictable fluctuations in the relative prices of traded goods—referred to as "terms of trade volatility"—are costly for firms. In the same way foreign exchange risk generates uncertainty over contracts, fluctuations in relative prices increase the costs of doing business abroad. A representative of Kenyan coffee growers, who, like many other commodities traders have traditionally experienced high volatility, summarizes the

[105] Conway 2009.
[106] Conway 2006.
[107] Revenga 1992, 258.
[108] Witness statement of Mr. Cass Johnson, President of the National Council of Textile Organizations, House Committee on Small Business, November 1st, 2007.

difficulties of doing business in unpredictable markets, "volatility has been a major problem because you cannot plan or budget with sharp variation in prices… this [uncertainty] works against everyone."[109] Similar sentiments have been expressed by agricultural firms in the United Kingdom[110], the forestry industry in New Zealand[111], and a variety of other industries, leading one commentator to remark that in the context of the recent economic downturn, "there is a clear sense of nervousness on the global market…volatility remains the only certainty."[112]

Export-dependent firms' wariness of risk is not unwarranted. Work in economics shows that price volatility adversely affects welfare at all levels of the market. In the aggregate, volatility creates uncertainty in the international marketplace, dampening the flows of cross-border capital and goods. It also generates higher budget deficits[113], destabilizes exchange rate commitments[114], and spurs more frequent and more severe business cycles.[115] In the long-term, persistent exposure to volatility in the prices of traded goods will stunt economic growth and development.[116] At the individual level, volatility creates uncertainty over personal incomes and job security, generating widespread opposition to market liberalizing policies.[117]

In light of these adverse consequences volatility has received increasing attention from industry groups and policymakers, particularly during the recent economic

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[109] "Coffee farmers to reap from stable global pries," *Africa News,* October 6th, 2009.

[110] "Risk control amid volatility," *Farmers' Guardian*, February 20th, 2009.

[111] "Finance markets to unsettle foresters," *Dominion Post*, November 20th, 2008.

[112] "Farming: volatility is the name of the game for world beef prices," *The Scotsman*, January 24th, 2009.

[113] Combes and Saadi-Sedik 2006.

[114] Bleaney and Greenaway 2001; Hau 2002; Broda 2004.

[115] Razin, Sadka, and Coury 2003; Buch, Doepke, and Pierdzioch 2005; Razin and Rose 1992.

[116] Mendoza 197; Turnovsky and Chattopadhyay 2003; Easterly, Kremer, Pritchett, and Summers 1993.

[117] Scheve and Slaughter 2004; Traca 2005.

downturn. South Korea is just one example where volatility is a growing concern. According to one commentator, "the increase in economic instability curtails the efficiency of resource allocation and lowers the level of economic agents' welfare… thus, the stable operation of the economy is one of the most significant policy tasks."[118]

Global economic risk is therefore of central importance to firms. The amount of risk to which domestic producers are exposed directly affects firm welfare. Moreover, risk has important implications for the design of trade agreements. Each firm's preference over the design of PTAs derives from how the firm prefers to combat risk.

3.2 *A Sectors-Based Explanation of Design*

The traditional sectors model predicts that free trade drives a wedge between industries.[119] Import-competitors are threatened by openness and therefore oppose market-liberalizing policies. Export-dependent firms, on the contrary, benefit from access to foreign markets and lobby in favor of free trade. In this project, I argue that levels of trade openness are not the only issue relevant during PTA negotiations. Whether firms "win" or "lose" from PTAs is determined in large part by the agreement rules—i.e. the level of flexibility built into each contract.

Preferences over PTA design derive from each sector's preferred strategy for coping with market risk. For import-competing firms, flexibility provides a viable option for hedging against risk. Flexibility permits the introduction of temporary barriers to market entry when inflows of foreign goods threaten domestic firms. These entry barriers effectively insulate the domestic market from price competition, temporarily alleviating

[118] "Challenges to curb macroeconomic volatility," *Korea Herald*, October 9th, 2008.
[119] See Magee (1978) for one prominent example.

the pressure liberalization places on import-competitors.[120] Studies show that anti-dumping use, for example, reduces the amount of competition to which domestic producers are exposed.[121] States that impose, or threaten to impose, anti-dumping duties deter trade partners from pursuing uncompetitive policies.[122]

Insulation from competition directly benefits domestic import-competing producers. To begin with, closing off market access to foreign goods results in significantly higher domestic prices.[123] Anti-dumping use also increases the market value of the firm. Estimates of US firms show that the average firm enjoys a boost in market value of nearly $50 million when it petitions for an anti-dumping action.[124] Moreover, complementary work shows that anti-dumping use increases market power.[125] In light of these benefits, import-competing firms prefer flexible PTA commitments. Building flexibility into trade agreements insures import-competing firms against risk. It reassures firms that they can petition their domestic governments for protection when competitive pressures threaten their survival.

The use of flexibility provisions does carry some risk. Evidence shows that, while anti-dumping measures block imports from countries named in petitions, they may also lead to an increase in imports from unnamed markets.[126] These additional imports may offset the protection gained by any newly erected entry barriers. However, in spite of these risks, import-competing firms around the world continue to express strong

[120] Bekker 2006; Lawrence 1998.
[121] Webb 1992; Asche 2001.
[122] Finger and Nogues 1987.
[123] Asche 2001; Harrison 1991.
[124] Marsh 1998
[125] Konings and Vandenbussche 2004.
[126] Asche 2001; Prusa 1997; Staiger and Wolak 1994.

preferences for insurance through anti-dumping as well as the other primary escape clauses.

For example, industry leaders in Australia have been vocal in their concerns during the ongoing PTA negotiations with China. Citing a wide imbalance in bilateral trade flows and impending import competition from the emerging Chinese steel industry, Australian industry leaders have lobbied hard for stronger domestic anti-dumping rules. A leading industry group argues that, "any watering down of our anti-dumping system will only add to this pressure on Australian industry. This will lead to higher consumer prices, the loss of industrial capacity in Australia and increased job losses."[127] Similar issues have been raised by import-competing industries around the world, including farmers in South East Asia[128], household appliances in India[129], furniture makers in the US[130], and countless others. The efforts of these industries demonstrate that import-competing firms have strong material incentives to lobby for flexible PTA rules.

The benefits import-competitors accrue from flexibility, however, come at the expense of the export-dependent sector. Exporters are similarly exposed to risk in global markets. Unfortunately, flexibility provisions do not help protect export-dependent firms' interests. Use of flexibility provisions disadvantages export-dependent firms in at least three ways. First, flexibility permits the introduction of entry barriers, closing off markets that were previously committed to openness. This lost market access is always costly for firms whose welfare depends on free trade. The use of flexibility therefore directly harms

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[127] "Anti-Dumping System" Australia Industry Group, accessed at (Feb. 19th, 2010): http://www.aigroup.com.au/trade/anti_dumping/

[128] "Asian farmers cal for more 'pro-small farmer' measures in WTO and FTAs," Press release from the Asian Farmer's Association for Sustainable Development, June 23rd, 2006.

[129] "FTAs and safety standards," *Economic Times*, January 1st, 2008.

[130] Testimony before the Subcommittee on Trade, Ways and Means Committee, U.S. House of Representatives, 110-15, 62.

the export-dependent firms affected by new entry barriers. Second, flexibility's costs are not always confined to targeted industries. Under certain conditions, invoking the flexibility system causes subsequent use to spiral.[131] In particular, states outside the GATT/WTO and those lacking a credible retaliatory threat are much more likely to be targeted by flexibility measures.[132] Third, flexibility use, while it insulates import-competing firms from competition, may actually *generate risk* for exporters. Flexibility deflects trade. While this benefits import-competing firms, it also causes a shift in trade flows to unprotected markets. Third parties are left to soak up the low-priced imports blocked by flexibility use. These shifts in trade patterns affect the prices of traded goods, generating additional uncertainty in the marketplace.

Taken together, flexibility harms export-dependent firms. It results in a loss of market access, its costs are pervasive, and it generates uncertainty in the market. Export-dependent firms therefore have strong incentives to lobby against flexibility. To take one example, ASEAN members have been wary of the EU's anti-dumping laws during their bilateral PTA negotiations. The EU, according to ASEAN trade representatives, has used a variety of flexibility provisions in the past to limit market access. Citing fears that they will be unfairly targeted, export-dependent industries across ASEAN markets have called for the "tightening up" of EU trade remedies, including both anti-dumping[133] and sanitary and phyto-sanitary measures laws.[134] One commentator summarizes the problem as follows,

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[131] Anderson 1993; Prusa and Skeath 2001.
[132] Blonigen and Bown 2003; Prusa 2005; Francois and Niels 2004.
[133] "Sceptics fear political ties that bind free trade," *Financial Express*, September 10th, 2006.
[134] "Empty coasts, barren seas," *Seedling,* GRAIN, July 2009.

> "Due to the increasingly complex requirements for food safety assurance and traceability set by the EU market, ASEAN will be forced to comply with high [standards] before fish and fishery products can enter the EU market. This would not only ultimately bar ordinary produce from small fishers but also gives the EU more leverage to refuse shipment of any product that didn't comply with its standards. In a nutshell, what the FTA does is create unfair competition, having *lopsided rules that favor the EU's fishing and market conditions*" (emphasis added).[135]

Rather than flexible PTAs, exporters prefer to combat market risk through rigid agreements. Rigid agreements place hard constraints on the use of the flexibility system. These constraints typically include, among other things, (1) which members or industries can be targeted by an action; (2) the burden of proof states must meet for an action is authorized; (3) the duration of time an action can be in force; (4) the size of the entry barrier that can be erected; and (5) whether actions can be extended beyond the initial enforcement. Each provision is designed to limit *ad hoc* use (or abuse) of escape clauses.

These limits are important because they help insulate the export-dependent sector of the domestic market from risk. Price volatility can often be traced back to the behaviors of individual trade partners. The imposition of opportunistic trade barriers, through the use of flexibility or otherwise, has significant effects on prices.[136] By delineating clearly the boundaries of legally permissible behavior, rigid PTAs reduce the likelihood that states shirk and, by extension, the amounts of risk to which members are exposed.

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[135] Ibid.
[136] Bagwell and Staiger 2002.

Indeed, there is evidence that trade agreements play a significant role in deterring protectionism. States are less likely to impose new entry barriers against fellow PTA members.[137]

Import-competing and export-dependent firms have very different strategies for coping with risk. Import-competing firms have strong material incentives to lobby for flexibility. Flexibility allows domestic producers to protect themselves from price competition by erecting barriers to entry. When governments renege on their liberalizing commitments, however, it is costly for export-dependent firms. Instead of flexibility, export-dependent firms prefer rigid agreements that constrain members' policy autonomy and reduce volatility in market prices. The domestic politics of institutional design are highly contentions as a result. Recent debate between industry representatives in the US illustrates this tension.

In statements strikingly similar to those expressed by the Australian steel industry, US firms, which are likewise concerned about the rise of Chinese manufacturing capacity, have lobbied hard for the strengthening of domestic anti-dumping laws. Citing unfairly low-priced imports from China as a chief source of lost revenues and jobs, representatives insist that, "we must preserve our anti-dumping and anti-subsidy laws in the face of efforts to weaken them."[138] These sentiments are shared by other industries, such as furniture makers, who have also called for greater vigilance on the part of the US government to protect domestic producers through the enforcement of anti-dumping measures.[139]

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[137] Fancois and Niels 2004; Blonigen and Bown 2003.

[138] Testimony before the Subcommittee on Trade, Ways and Means Committee, US House of Representatives, 110-15, 44.

[139] Ibid. 62.

These efforts have met staunch opposition from export-dependent industries. The comments of the US poultry industry perfectly summarize the incentives export-dependent firms have to lobby against flexibility,

> "…our industry has become a victim, and one of the reasons this has occurred, and this is no secret, is that the predominant user of US anti-dumping is our steel industry. And the steel industry doesn't export [a lot], so they use these procedures often with reckless abandon. Often, other countries have suffered because of this overuse, and their own industries have learned to be just as aggressive with their anti-dumping laws… so those US industries that do export, like poultry and other agricultural commodities, have become vulnerable to attack."[140]

These debate, which are currently taking place around the world, show that firms care about more than the levels of openness to which their states commit. They also have strong incentives to lobby for the ideal PTA rules. PTA design outcomes must ultimately be understood in light of the political competition that takes place between these diverging domestic interest groups.

3.3 *Interstate Bargaining: The Role of Market Power*

Sector affiliation is a key determinate of firms' preferences over design. States with predominately import-competing (export-dependent) markets prefer more flexible (rigid) PTAs. However, states may not always secure their ideal terms. PTA design outcomes

[140] James Summer, *The Antidumping Epidemic*, CATO Institute Policy Forum, October 30, 2001

are the result of bargaining between states that may have very different preferences over design. How can we predict which states "win" or "lose" during negotiations?

I argue that a state's bargaining power increases in the size of its market—or, its "market power." Market power is measured as each state's ability to affect the market price of a good through shifts in levels of consumption. It is important to note that market power is not just a status enjoyed by a few highly developed states. In the context of bilateral or regional PTA negotiations even comparatively small states on the global stage can hold market power over their principal trade partners.[141] As a result, we can assume market power is at play in even PTA negotiation, not just in those that involve traditional powers like the United States or the European Community.

States with market power are more likely to get their way during agreement negotiations. In the context of the GATT/WTO, large markets were responsible for shaping the norms that govern the agreement.[142] Similar dynamics ought to apply to PTAs. The logic is straightforward. Larger markets mean more opportunity to sell exports. It is comparatively more profitable to penetrate large markets than small ones. As a result, the balance of bargaining power is tipped toward bigger economies. Since their trade partners have more to gain (and lose), states with market power are in a stronger negotiating position.

Examples of states leveraging their market power are commonplace. One recent example is the concessions made by South Korea in their ongoing trade negotiations with the US. The Korea-US FTA (KORUS) promises expanded market access for a large number of Korean export-oriented industries. The net benefit to these industries is

[141] Mansfield and Reinhardt 2008; Bagwell and Staiger 2006.
[142] Finalyson and Zacher 1981.

estimated to be a 12% increase in export volume per year.[143] The US has seized upon this fact to secure a variety of favorable rules. Namely, US automakers lobbied successfully for special safeguard clauses to guard against import competition from Korean firms. South Korea currently exports 700,000 cars per year to the US while importing roughly 6,000.[144] In an effort to correct for this imbalance, the US has demanded (1) the dismantling of Korean entry barriers in the automotive sector as well as (2) safeguards to protect the ailing US industry. Similar concessions have been made concerning US beef, a key export-dependent industry, which convinced Korea to begin dismantling their sanitary and phyto-sanitary measures against US food products in exchange for greater market access for pharmaceuticals and other exports.

Market power plays a crucial role in determining PTA design outcomes. In particular, it conditions whether the PTAs that states enter into match the preferences of the domestic market. This argument generates an empirically testable hypothesis: States with predominately import-competing (export-dependent) markets enter into more flexible (rigid) PTAs when their markets are sufficiently large to influence negotiations.[145]

3.5 *Summary and Hypotheses*

In this chapter I present a new theory of institutional design outcomes. I argue that a fuller understanding of design outcomes must consider political competition between

[143] South Korea/US: FTA jumps major hurdles faces others," *New York Times*, April 3rd, 2007.

[144] "South Korea's auto trade with US," *Korea Herald*, November 11th, 2008.

[145] This theory focuses on sector of employment as the chief determinant of design preferences. However, recent research shows that factor of employment is an equally, if not more powerful predictor of individual's macroeconomic policy preferences (Scheve and Slaughter 2004). I do not deny that factor of employment matters. The core insight of this project is that domestic interest groups matter. Here I focus on the traded sectors of the domestic market. However, there are a number of other domestic interests in play, most notable consumers. As a result, domestic cleavages may divide the market along several dimensions. Nevertheless, evidence supports the claim that in the current global economy, sector of employment is the appropriate model of preferences (Hiscox 2001).

domestic interest groups. In the context of trade agreements, PTA rules directly affect firm welfare. Moreover, the costs and benefits of PTA membership are not spread evenly across the market. Design features have targeted benefits. I argue that import-competing firms prefer flexible agreements while their export-dependent counterparts prefer rigidity.

I aggregate these sector preferences to the level of the state. States whose markets are predominately import-competing (export-dependent) prefer flexible (rigid) PTA commitments. However, I also argue that each state's ability to secure favorable terms is conditioned by their market power. When a state enjoys market power over its trade partners, it has greater bargaining power during PTA negotiations. As a result, I predict that,

H1. *States with import-competing (export-dependent) markets enter into more flexible (rigid) agreements when they have market power over their trade partners.*

In the following chapters I test the validity of this claim through a series of large-N analyses.

4

Domestic Producers, Market Power, and the Design of Trade Agreements

What explains variation in the design of trade institutions? Recent literature shows that institutional design outcomes have important policy implications. This literature, led by the rational design project, emphasizes the role played by flexibility provisions. Flexibility provisions are clauses that allow states to shirk temporarily their contractual obligations without violating the rules of agreements. Providing members with outlets for escape reduces the costs of the compliance by insuring states against future risk. Flexibility increases the likelihood that states enter into agreements and contributes to agreement durability. In the context of trade institutions, flexibility also encourages states to make deeper liberalizing commitments.

This evidence has led some scholars to conclude that flexibility promotes cooperation. Yet, in spite of these benefits, agreements vary significantly in the amount of flexibility they provide members. In this project I offer a new explanation of this variation. I focus on political competition between domestic interest groups with diverging preferences over PTA rules. Market openness exposes both traded sectors of the domestic market to global economic risk. For import-competitors, exposure to foreign competition places downward pressure on domestic prices, forcing firms to adjust their

costs. For export-dependent, price shocks create uncertainty in global markets, making it difficult for internationalized firms to conduct business efficiently.

Exposure to risk can result in lost wages, job insecurity, and eventually firm closure. Therefore both traded sectors of the market have incentives to protect themselves from risk. However, each sector's preferred strategy for coping with risk varies. Import-competing firms prefer protection through the use of flexibility provisions. Flexibility allows states to erect temporary barriers to market entry, stemming the inflows of cheaply priced foreign imports. Flexibility forestalls declining demand for domestic goods otherwise brought on by market openness. Studies show that flexibility use deters dumping by trade partners and results in higher prices.

However, the benefits that import-competitors accrue from flexibility come at the expense of export-dependent firms. Flexibility helps protect import-competing producers but it generates costs for other segments of the marketplace. Specifically, export-dependent firms lose from the restricted market access and uncertainty flexibility provisions cause. Instead, export-dependent firms prefer agreements that tightly bind member state behavior. The origins of volatility can often be traced back to opportunistic shifts in policy by individual states. Rigid agreements—PTAs that place hard constraints on the use of flexibility provisions—deter states from introducing new barriers to market entry, effectively reducing the likelihood that shocks occur in the first place.

The sectors model helps us understand the origins of conflicting preferences over design. However, design outcomes are the result of negotiations between countries that may have very different preferences. I argue that states that enjoy market power over their trade partners are better equipped to secure favorable PTA terms. States with market

power are able to use their large markets as a "carrot," enticing small markets to agree to potentially suboptimal rules in exchange for valuable market access. Market power conditions the effect of sector composition on PTA design outcomes. This theory generates an empirically testable hypothesis: States with more import-competing (export-dependent) markets enter into more flexible (rigid) PTAs when they enjoy market power over their trade partners.

I test the validity of this claim using original data on the design of 330 preferential trade agreements since 1960. Through a series of large-N analyses, I find strong support for my hypothesis. The sector composition of the domestic market is a powerful predictor of design outcomes when a state is large enough to influence PTA negotiations. The results are consistent across a wide variety of alternative model specifications.

These findings show that domestic interest groups play an integral part in the design of the international institutions. I relax the assumption that flexibility's benefits are shared equally across the market. Instead, I argue that producers have diverging preferences over design. The resulting political conflict explains why, in spite of the supposed benefits of flexibility, PTAs vary so widely in their design.

4.1 *Data and Variables*

I construct an original data set with one observation per country *i* in PTA agreement *j* for all the states that have entered into at least one PTA since 1960. The data set includes the year of PTA formation (or subsequent accession) for each member state. I include only those PTAs that have entered into force. This consists of agreements that have subsequently dissolved—e.g. agreements that European states were in before they entered

the EU. However, the data *excludes* agreements currently under negotiation and those that were signed but never ratified.[146] The data set totals 330 PTAs with over 2,800 individual members.[147]

4.1.1 *Dependent Variable*

To measure the level of flexibility in each PTA I develop two original design variables. The first is based on a detailed index of each agreement's individual legal provisions. The second is based on the total word length of the flexibility provisions.

Flexibility provisions, to reiterate, are features of agreements that provide members with legally sanctioned mechanisms to shirk temporarily their contractual obligations. The five primary flexibility provisions in the context of trade are safeguards, anti-dumping, countervailing duties, technical barriers to trade, and sanitary and phyto-sanitary standards. Other common provisions are exceptions for structural adjustment, balance of payments crises, and provisions designed specifically to protect the domestic infant industries or particular goods.

Large-N analysis requires a measure of the total level of flexibility in each PTA as it derives from a variety of individual provisions. Several strategies are available for creating this variable. One option is recording whether an agreement includes any mention of the core flexibility provisions. However, this method would miss a great deal of substantively interesting variation *within* flexibility provisions. Not all escape clauses are created equal. Some provisions are much more detailed than others. For example, the

[146] Note that I also exclude the GATT/WTO from the sample the world's only multilateral trade regime.

[147] Estimates of the total number of PTAs vary. The most comprehensive list is available through the GATT/WTO's Regional Trade Agreements Database, which puts the total number of PTAs around 420. However, that number includes agreements currently being negotiated.

safeguards clause in the Common Market for Eastern and Southern Africa (COMESA) limits only the length of time that a safeguard measure can be in force. However, ASEAN's recent agreement with China specifies a process for authorization, it limits the severity of the action, and it enumerates the states and goods that can be targeted. A simple coding of whether safeguards are mentioned in each text is therefore insufficient.[148]

Another strategy is creating a weighted index. It is probably true that some provisions are "more flexible" than others. To take one example, states use anti-dumping ten times more frequently than the next most commonly invoked provision. The frequency of anti-dumping use suggests that it is the preferred policy of states seeking escape. Anti-dumping's popularity may justify weighting its inclusion in each PTA more heavily than any of the other escape clauses. However, devising a weighting scheme of this type raises more questions than it answers. What weights, exactly, should be given to each provision? And how do we determine these weights? We lack *a priori* benchmarks to make valid weighting judgments. Ultimately, even if some provisions are more important than others, it is not obvious *how much* more important they are.

Given the limitations of these two alternatives, I instead create a detailed, un-weighted index of each agreement's rules. The variable is a count of select flexibility-related provisions in each PTA (Table 4.1 lists the individual component parts of the measure). Notice that I do not code merely whether an agreement contains a specific flexibility provision. Rather, I code the individual rules and regulations related to that provision.

[148] In robustness tests I run my baseline equation with precisely this variable. The results are consistent with my core findings (see below).

Table 4.1 Individual Components of RIGIDITY

Flexibility Provision	Sign
Safeguards	
An investigation is required for authorization	+
State must prove that demonstrate injury or threat of injury	+
Dumped good must meet for a exceed a certain volume of total trade	+
Safeguards only allowed during transition period	+
Limit on size of safeguard measure	+
Limit on duration of safeguard measure	+
User can apply for an extension of the measure	-
Anti-dumping (AD)	
Investigation is required for authorization	+
State must prove that demonstrate injury or threat of injury	+
Method for meeting burden of proof is specified	+
Limit on size of AD measure	+
Limit on duration of AD measure	+
Countervailing Duties (CVD)	
Investigation is required for authorization	+
State must prove that demonstrate injury or threat of injury	+
Limit on size of CVD measure	+
Limit on duration of CVD measure	+
Technical Barriers to Trade (TBT)	
Committee to review TBTs is established	+
Committee holds consultations to harmonize TBT standards	+
Compliance with international standards required	+
Process for conformity assessment specified	+
TBT issues eligible for dispute settlement	+
Phyto and Phyto-Sanitary Measures (SPS)	
Committee to review SPS is established	+
Committee holds consultations to harmonize SPS standards	+
Compliance with international standards required	+
Process for conformity assessment specified	+
SPS issues eligible for dispute settlement	+

Table 4.1 Individual Components of RIGIDITY (cont.)

Flexibility Provision	Sign
Other	
Balance of payments exceptions included	-
Balance of payments expcetions bound by IMF or GATT/WTO rules	+
General exceptions (health, public safety, national security, etc.)	-
Good-specific exceptions	-
Member-specific exceptions other than structural adjustment	-
Member-specific exceptions for the purpose of structural adjustment	-

Each individual clause is coded dichotomously "1" or "0" corresponding to its presence or absence in the agreement. Each provision is then assigned a positive or negative sign. Positive signs are given to provisions that are flexibility *constraining* (that is, more rigid) while negative signs are given to flexibility enhancing provisions. Notice that nearly all provisions are assigned a positive value. In practice, almost every clause relating to a PTA's flexibility system is a rule constraining the system's use. Thus, the summed index, RIGIDITY_j, is increasing in rigidity. Consider one example of the coding scheme.

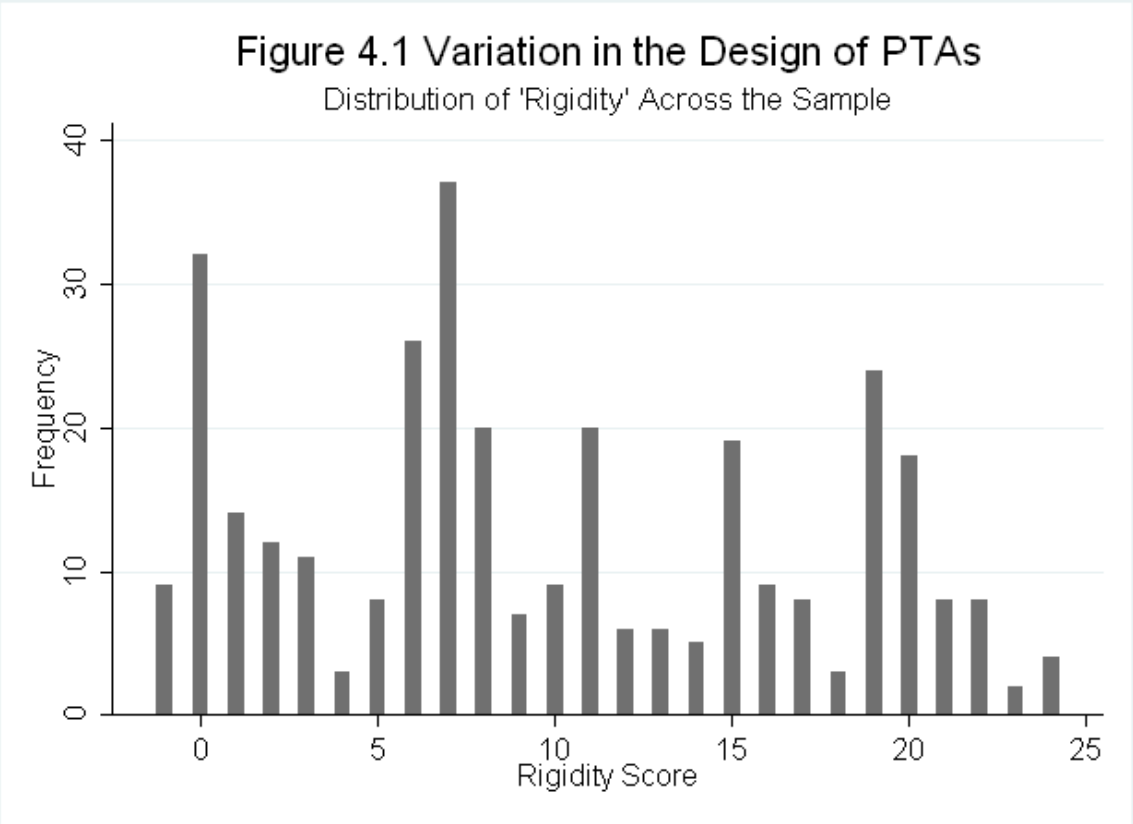
The provisions relating to technical barriers to trade (TBTs) in the Southern African Development Community (SADC) are highly flexible. The key provisions read as follows,

> "Each Member State shall use relevant international standards as a basis for its standards-related measures, except where such standards would be an ineffective or inappropriate means to fulfill its legitimate objectives…Member States shall, to the greatest extent practicable, make compatible their respective standards-related measures… A Member State shall, upon request of another Member State, seek through appropriate measures, to promote the compatibility of specific standards or conformity assessment procedures…"[149]

These provisions place a very light burden on the membership. Nowhere is there a mandate to establish a supervisory committee. Nor is any oversight authority delegated to any institutional body. While the agreement does call for the harmonization of standards, there are no rules to clearly delineate the boundaries of permissible behavior. For example, what qualifies as "appropriate measures" or "legitimate objectives?" In the absence of any additional rules or regulations, these provisions are decidedly open-ended. According to the coding scheme, this provision receives a 1 out of a possible 5 points for TBT provisions, receiving +1 point for promoting the harmonization of standards but 0 points for any additional rules for compliance (see Table 4.1).

After each provision is coded and assigned a positive or negative sign, I add them together to create one index. The index measure, $RIGIDITY_j$, ranges from 0 to 25, where 25 denotes PTAs with heavily regulated—i.e. rigid—flexibility systems. Figure 4.1 shows the frequency of each score. The multi-modal distribution shows that there is indeed significant variation in the design of PTAs. Interestingly, this variation is evident

[149] Protocol on Trade in the Southern African Development Community. Part Four, Article 17, Paragraphs 1-5.



in spite of the strong regional contagion that appears in the sample. Bilateral trade agreements between Central and Eastern European states are strikingly similar. Yet, in spite of the large number of copycat agreements between these states, $RIGIDITY_j$ exhibits wide variation.[150]

I use $RIGIDITY_j$ as my principal indicator of PTA design. However, for the purposes of robustness testing I also use the total word count of each flexibility provision. There is precedent for this approach in the literature on delegation. Huber and Shipan show that the length of legislation is highly correlated with how much discretion politicians want to

[150] In this analysis I do not seek to explain the diffusion of different PTA forms. However, a careful reading of the agreement texts does reveal strong groupings region and level of development. I leave a more detailed analysis of these patterns to future research. Instead, I address these factors through a variety of control variables.

delegate to bureaucrats.[151] The same logic can be applied in the context of PTAs. In practice, longer provisions are those contain more constraints on the use of flexibility—i.e. less discretion. I create an alternative measure, $WORDS_j$, that is the total word length of each agreement's flexibility provisions. The measure ranges from 0 to 46,560, (with a mean of 13,795 and standard deviation of 13,060). In practice, the longest agreements are those that adopt wholesale the legal architecture of the GATT/WTO, such as Chile's recent agreements with Costa Rica, South Korea, and India, all with flexibility systems numbering of 40,000 words.

4.1.2 *Validating the Dependent Variable*

Before presenting the baseline model results it is useful to test the validity of my design measure, particularly given the availability of alternative coding schemes. One question we might ask is: Do states in rigid agreements use escape clauses less often? Substantively my measure is designed to reflect the relative ease with which members can invoke an agreement's flexibility system. Higher RIGIDITY scores are assigned to PTAs with heavy constraints on flexibility use. I therefore expect the use of flexibility to *decrease* in RIGIDITY.[152]

To test this claim I use data on anti-dumping measures. Throughout this project anti-dumping has been cited as the most prominent flexibility provision. Both its adoption and use have increased dramatically in the last twenty years and it is by far the most commonly invoked escape clause. If my measure accurately captures constraints on

[151] Huber and Shipan 2002.

[152] As a discipline we still know comparatively little about the behavioral consequences of institutional design outcomes. More work must be done before we fully understand how PTA rules affect members' policy decisions.

flexibility then we ought to observe states in rigid agreements using less anti-dumping. This indeed turns out to be the case.

I conduct an OLS regression of the effect RIGIDITY has on anti-dumping behavior. The dependent variable, DUMPING, is measured as the change in the five-year average of anti-dumping use before and after the formation of each PTA. I use the five-year average for three reasons. First, many PTAs provide states a window of time to bring their trade policies into compliance. It is therefore unlikely that changes in anti-dumping use are observed immediately after agreement formation. Second, the anti-dumping measures we observe in force are the result of a lengthy process that involves firms filing petitions and investigations by government authorities. This process can take several years to complete. Third, using the average also helps eliminate the possibility that year-to-year volatility in anti-dumping use clouds the results.

A simple regression of the difference between the five-year average of anti-dumping use before and after the formation of a PTA reveals that states are less likely to use flexibility under rigid agreements. On average, anti-dumping use decreases by 2 measures as RIGIDITY moves from its minimum (0) to its maximum (25). For members of the most flexible agreements anti-dumping use is predicted to be .48 [.39, .57]. For members of rigid agreement it is -1.65 [-1.95, -1.34].

There are limits to this preliminary analysis. To begin with, the dependent variable is based on an average of *all* of a state's anti-dumping measures. It is not limited to just those measures against their PTA partners. Moreover, it only focuses on one of several possible avenues for escape. The use of safeguards, countervailing duties, and other

policies may exhibit unique patterns. Notwithstanding these concerns, I find clear evidence that PTA design affects state behavior and it does so in the predicted direction.

4.1.3 *Independent Variables*

My theory focuses on political competition between domestic producer groups. The preferences of the market are divided between the export-dependent and import-competing sectors. At the level of the state, preferences are shaped by the sector composition of the domestic market. I therefore construct variables designed measure the relative sizes of both sectors.

Measuring the export-dependent sector is straightforward. I start with bilateral trade data (at the 3-digit product level) taken from the United Nations' COMTRADE database. I sum state *i*'s total exports to all other members of PTA *j*. For example, I sum the United States' total exports to Canada and Mexico in 1994, the year NAFTA enters into force. I then repeat the process for every member of every PTA in the year of formation (or accession if a state joins later) to create the measure $EXPORTS_i$.

Creating a comparable measure of the import-competing sector is more complex. Some percentage of every market's total imports is intra-industry trade by multinational firms. Failing to correct for intra-industry trade causes two problems. First, it overstates the actual amount of import penetration into a market. Intra-industry trade includes imports that are used as inputs in the manufacturing of finished goods that are then sent abroad. Second, I predict that the preferences of multinational firms are diametrically opposed to import-competitors. All internationalized firms share an interest in reducing volatility in global market prices. By extension, intra-industry trade is conducted by firms

that prefer rigid PTA rules. Including the volume of intra-industry trade in my measure of imports would therefore undermine the substantive validity of the measure.[153] Unfortunately, there are no perfect measures of intra-industry trade available.[154] In the absence of more detailed data, economists have devised alternative measures. One widely accepted measure assumes the following form:

$$z_k = 1 - \frac{|\, x_k - m_k \,|}{x_k + m_k}$$

where x and m represent the exports and imports of industry k.[155] The measure is constructed so that values closer to 1 represent more balanced overall trade flows.

Using COMTRADE's bilateral import data, I reconstruct this measure by summing the import and export data over the PTA membership. The resulting number approaches 1 where product-specific trade is more "balanced"—that is, volumes of imports and exports are similar. The number is 0 for products that are only imported or exported. I subtract z_k from 1 and multiply it by m_k, which leaves the portion of the total imports into state i from the members of PTA j that are truly import-competing (IMPORTS_i).

With the individual measures of each sector created, I aggregate the information into one indicator of whether a market is net export-dependent or net import-competing, NETX_i, and divide by the gross domestic product:

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[153] Marvel and Ray 1987.

[154] Comprehensive bilateral foreign direct investment data would offer one possible solution. However, this data does not exist for a sufficiently large portion of the world. See Manger (2009) for a recent alternative.

[155] Marvel and Ray 1987; Ray 1991, 1987.

$$NETX_i = \frac{(EXPORTS_i - IMPORTS_i)}{GDP_i} * 100$$

Creating a unified measure makes interpreting the results simpler. However, I also conduct the analysis with the individual sectors measures and show that the results are consistent.

The sector composition of the domestic market is not the only determinant of PTA design outcomes. Agreement rules are also shaped by the balance of market power between negotiating states. To create a measure of market power I divide state *i*'s GDP in constant year 1995 US dollars by the total GDP of the PTA. This produces the percentage of the total PTA market accounted for by state *i*'s economy. The resulting variable, $GDPSHARE_i$, is then multiplied by $NETX_i$ to produce the principal explanatory variable NETX X $GDPSHARE_i$. I expect that $RIGIDITY_j$ increases in NET X $GDPSHARE_i$, because higher values of the interaction term represent states that are (1) primarily export-dependent and (2) possess market power over their trade partners. These states have the strongest preference for rigid PTAs and the highest likelihood of bargaining successfully.

4.1.4 *Control Variables*

It is necessary to control for alternative explanations of PTA design. First, I expect that the designs of states' previous PTAs are strong predictors of their subsequent commitments. I include a measure of the average rigidity of all members in PTA *j*,

excluding state *i*. This variable, PREVIOUS RIGIDITY, ought to be positively correlated with RIGIDITY_j.

I also include several predictors of PTA formation that may also affect design outcomes. First, democracies are more likely to enter into PTAs.[156] Moreover, it has been argued that democracies, particularly newly formed democracies, make deeper commitments to liberalization. States emerging from democratic transitions may use PTAs as a way to signal a credible commitment to market openness and free trade.[157] I include two measures of regime type, both of which are taken from Cheibub, Gandhi, and Vreeland's recent data.[158] The first measure, DEMOCRACY_i, is a dichotomous indicator of whether state *i* is a democratic regime.[159] In light of previous work, democracies should make more rigid commitments all else equal.[160] The second measure, TRANSITION_i, is a dichotomous indicator of whether state *i* has undergone a democratic transition in the previous 5 years. Having gone through a transition should also have a positive impact on the rigidity of agreements.

An additional domestic political institution is also likely to influence PTA design. States with high number of veto players are known to have greater difficulty making reforms in an array of policy areas.[161] In the context of trade policy there is conflicting evidence. However, recent work shows that the number of veto players in domestic

[156] Mansfield, Milner, and Rosendorff 2000.

[157] See Fernandez and Portes (1998) for an extensive discussion of the recent wave of PTA formation in the transitioning economies of Central and Eastern Europe.

[158] Cheibub, Gandhi, and Vreeland 2009.

[159] The results reported below are robust to the substitution of Polity's measures.

[160] Mansfield, Milner, and Rosendorff 2000.

[161] Tsebelis 2002.

government, not just regime type, affects states' willingness to enter into PTAs.[162] I include a measure of veto players, $VETO_i$, taken from Henisz's data.[163]

Finally, I include two measures designed to capture additional features of the domestic market. The first is the log of per capita income recorded in constant year 1995 US dollars. This variable, $INCOME_i$, controls for whether wealthier states systematically make more rigid or more flexible commitments. The other measure is $HERF_i$, a Herfindahl index of state *i*'s exports to the members of PTA *j*. States with more diverse export markets should be better equipped to deal with global economic risk.[164] These states are more likely to make rigid commitments since the risk they face in global markets is attenuated by their export diversity.

4.2 *Analysis and Results*

My main hypothesis is that import-competing (export-dependent) markets enter into flexible (rigid) agreements when they are powerful enough to influence PTA negotiations. In this section I subject this claim to a series of large-N analyses. I begin by presenting a set of baseline ordinary least squares regressions. The evidence lends strong support to my hypothesis. I then explore the durability of the baseline results. I use alternative specifications of both the dependent and independent variables and find evidence consistent with my preliminary results.

I conclude by testing the proposition that selection effects bias my results. There are strong reasons to suspect that the sector composition of the domestic market determines a

[162] Mansfield, Milner, and Pevehouse 2007.

[163] Henisz 2010.

[164] Export diversification is associated with positive growth at the state level (Al-Marhubi 2000; Gutierrez de Pineres and Ferrantino 1997; Derosa 1992). At the firm level, diversification reduces the risk faced by individual corporations (Hirsch and Lev 1971).

state's willingness to enter into a PTA in the first place. The traditional sectors model of trade preferences predicts that import-competing markets oppose free trade. Import-competing markets are therefore less likely to enter into PTAs of any type. I estimate a two-stage selection equation to test whether states select themselves out of PTA formation. I find evidence that export-dependent markets are more likely to enter into PTAs, as the traditional sectors model predicts. However, my baseline results remain constant when correcting for selection bias. Consistent across all model specifications, sector composition and market power are strong predictors of institutional design outcomes.

4.2.1 Model 1

I test my hypothesis using the following baseline equation,

$$\begin{aligned} \text{RIGIDITY}_j = \quad & \beta_0 + \beta_1 * \text{NETX}_i + \beta_2 * \text{GDPSHARE}_i + \beta_3 * \text{NET X GDPSHARE}_i + \\ & \beta_4 * \text{DEMOCRACY}_i + B_5 * \text{TRANSITION}_i + \beta_6 * \text{VETO}_i + \beta_7 * \\ & \text{INCOME}_i + \beta_8 * \text{PREVIOUS RIGIDITY}_j + \beta_9 * \text{HERF}_i + \mu \end{aligned}$$

In this model I employ the combined sectors variable NETX interacted with the market power variable GDPSHARE. The results are reported in Table 4.2. The model provides a good overall fit with an R-squared of approximately 30 percent. Moreover, there is little risk of multicollinearity, which we might other otherwise expect given the nature of the independent variables. The variance inflation factor (VIF) is only 1.7.

Table 4.2 Baseline Results

	Model 1	*Model 2*
Variables	RIGIDITY	RIGIDITY
$NETX_i$	-6.393 ***	___
	(1.825)	
$GDPSHARE_i$	-0.157 ***	-0.015 ***
	(0.003)	(0.004)
NET X $GDPSHARE_i$	0.113 ***	___
	(0.036)	
$EXPORTS_i$	___	-6.632 ***
		(2.154)
$IMPORTS_i$	___	6.444 ***
		(1.845)
EXP X $GDPSHARE_i$	___	0.114 ***
		(0.039)
IMP X $GDPSHARE_i$	___	-0.132 ***
		(0.042)
$DEMOCRACY_i$	2.751 ***	2.739 ***
	(0.518)	(0.524)
$TRANSITION_i$	-2.068 ***	-2.061 ***
	(0.647)	(0.648)
$VETO_i$	0.784	0.778
	(0.991)	(0.991)
$INCOME_i$	0.292 **	0.294 **
	(0.119)	(0.121)
PERVIOUS $RIGIDITY_j$	0.399 ***	0.397 ***
	(0.024)	(0.024)
$HERF_i$	-0.225	-0.379
	(0.628)	(0.647)
Constant	1.569 *	1.658
	(0.929)	(0.933) *
N	1317	1317
R-Squared	0.282	0.282

*Notes: *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests*

Additionally, a close look at the distribution of the residuals reveals very little evidence of heteroskedasticity.[165]

Focusing first on the control variables, DEMOCRACY has a significant positive effect to RIGIDITY. This finding supports the argument that democracies enter into deeper international commitments. However, to measure agreement depth precisely we need more detailed data on the trade liberalizing commitments each member makes under their PTAs (see below). Interestingly, states undergoing democratic transitions do not appear to use PTAs as a commitment device. Rather, they enter into more flexible agreements (P>0.001) according to the Model 1 estimates.

One possible explanation is that new democracies are disproportionately small, developing markets. As a result, they are more likely to enjoy special exceptions in their PTAs for the purposes of structural adjustment and for the protection of domestic infant industries. The data support this story. Transitioning markets are 20% smaller on average than established democracies. Smaller markets, in turn, are five times more likely to secure special exceptions to promote domestic growth and development. As a result, the agreements that states in transition join are more flexible because of the special exceptions these markets are afforded.

My measure of preexisting PTA commitments also has a strong effect on design outcomes. The rigidity of agreement *j* is increasing in the average rigidity of the PTA membership's previous commitments, which accords with my prediction. Additionally, richer countries enter into more rigid PTAs, which may be a result of their being better equipped to absorb global economic risk.

[165] After conducting a Breusch-Pagan test for heteroskedasticity I fail to reject the null hypothesis of constant variance across the sample.

Turning to the main explanatory variables, the Model 1 results provide strong preliminary support for my hypothesis. The sector composition of the domestic market is a powerful predictor of PTA design when interacted with market power. The direction and magnitude of this effect is illustrated in Figure 4.2. The graph shows the effect that an increase in market power has on the predicted design outcomes for both import-competing and export-dependent markets (graphed separately). I generated the points by using the 10th percentile value of NETX as my baseline import-competing market and the 90th percentile for a market that is export-dependent.[166]

As predicted, PTA rigidity is inversely correlated with market power for import-competing states. An import-competing state with no market power enters into PTAs near the center of the RIGIDITY scale.[167] However, as market power increases the predicted design outcome becomes *more flexible*. As market power increase to 50%, RIGIDITY falls from 12.04 [10.18, 13.90] to 8.31 [6.93, 9.69].[168] At the maximum value of market power, when I expect states to have to most influence in PTA negotiations, the predicted outcome is 4.58 [1.79, 7.37], representing a total decline of 7.5 points over the range of market power. This evidence shows that import-competitors, when they are powerful enough to negotiate effectively, enter into significantly more flexible PTAs.

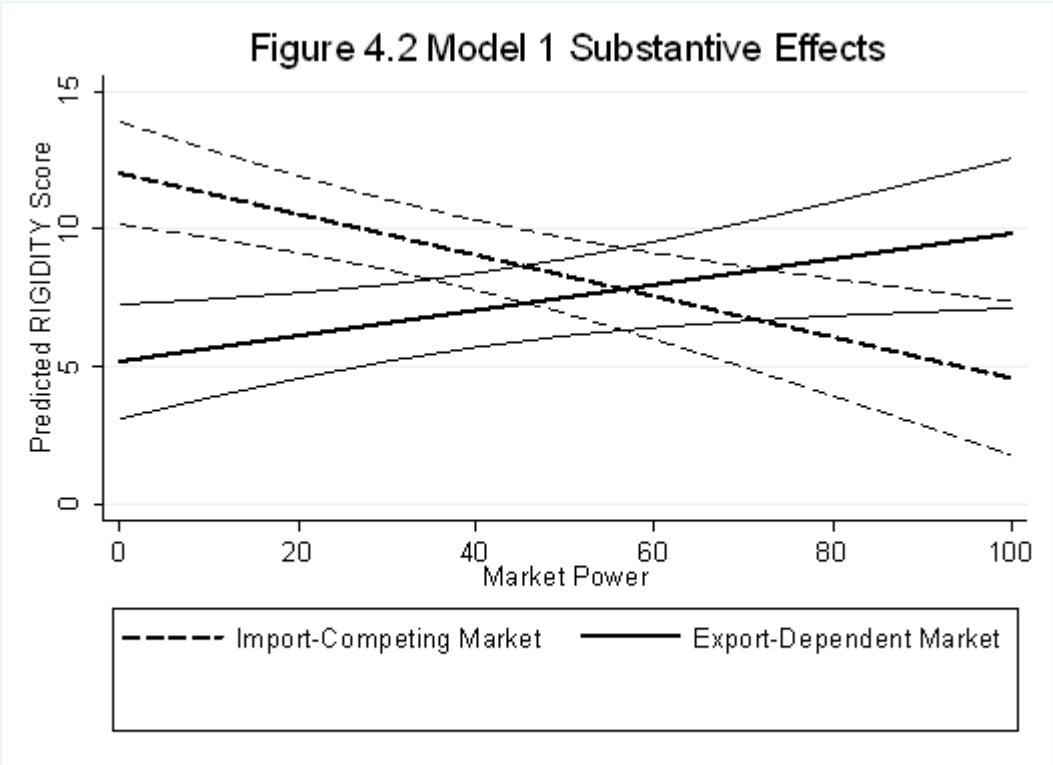
The reverse is true for export-dependent markets. Export-dependent markets also get "bad deals" when they lack market power. Using the 90th percentile value of NETX and holding all control variables at their means, an export-dependent state with no market

[166] I choose the 10th and 90th percentile as cutoff points, rather than the minimum and maximum, to ensure that outliers are not driving the results.

[167] The predicted design outcome for an import-competing state with no market power is 12.04, roughly in the middle of the 25-point scale. However, 12.024 is actually in the top 75th percentile of PTA scores, implying that import-competing markets get decidedly bad deals when they lack market power.

[168] All results reported with 95% confidence intervals.

power enters into PTAs with a predicted RIGIDITY score of 5.20 [3.12, 7.27]. As market



power increases, however, PTA outcomes become increasingly rigid. The predicted design outcome increases from 5.20 to 9.85 [7.13, 12.57] over the range of market power—a boost of 4.5 points. States with export-dependent markets enter into much more rigid agreements when they are powerful enough to influence negotiations.

4.2.2 Model 2

For ease of interpretation Model 1 employed a combined measure of the domestic market's sector composition. The combined measure NETX is designed to capture the relative balance between these two sectors. However, the variable obscures the absolute size of each sector. A state that does a lot of trade may have large import-competing and export-dependent sectors. In situations where the sectors are comparable in size, the

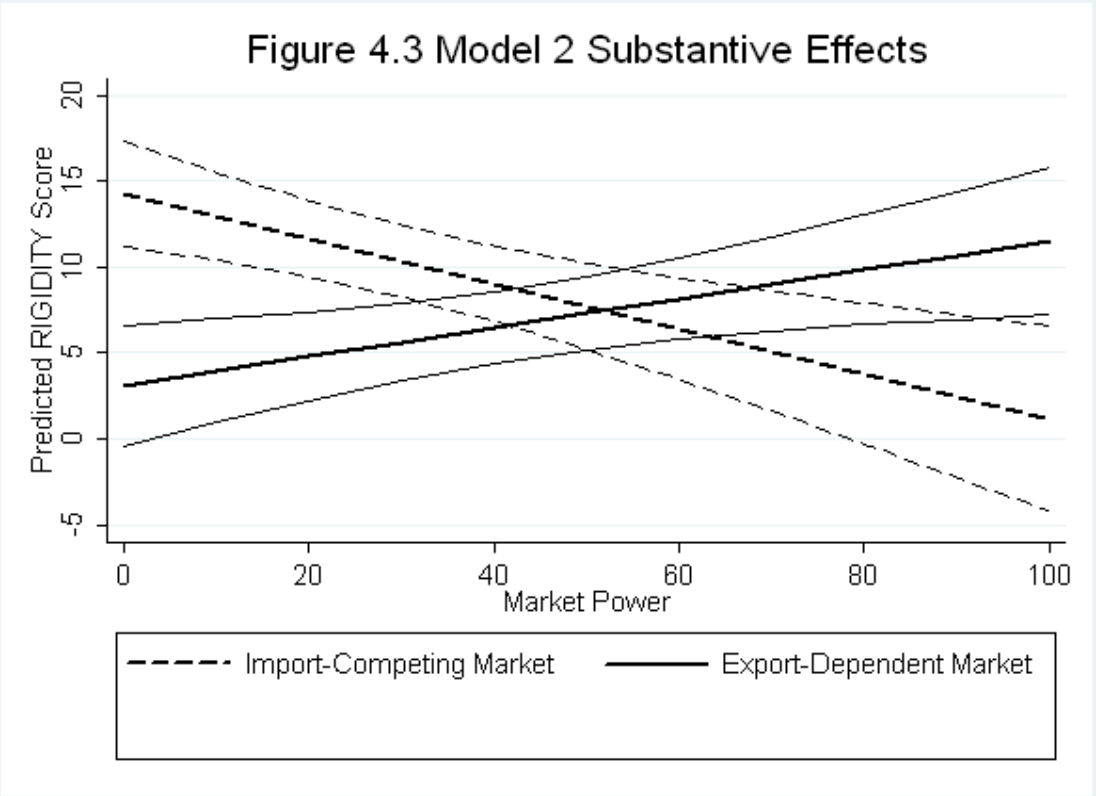
difference between the two sectors approaches zero. As a result, NETX assumes that preferences of both sectors are weighted evenly.

We can relax this assumption by employing separate variables for the import-competing and export-dependent sectors. Using separate sectors variables, along with their corresponding interactions, allows us to isolate the independent effect of each domestic interest group. Model 2 is specified as follows,

$$\begin{aligned}\text{RIGIDITY}_j = {} & \beta_0 + \beta_1 * \text{EXPORTS}_i + \beta_2 * \text{IMPORTS}_i + \beta_3 * \text{GDPSHARE}_i + \beta_4 * \\ & \text{EXP X GDPSHARE}_i + B_5 * \text{IMP X GDPSHARE}_i + \beta_6 * \\ & \text{DEMOCRACY}_i + \beta_7 * \text{TRANSITION}_i + \beta_8 * \text{VETO}_i + \beta_9 * \\ & \text{INCOME}_i + \beta_{10} * \text{PREVIOUS RIGIDITY}_j + \beta_{11} * \text{HERF}_i + \mu\end{aligned}$$

The results of this specification are consistent with Model 1 (see Table 4.2). However, they are even more dramatic when using the separate sectors variables. The substantive effects are displayed in Figure 4.3. Import-competing markets enjoy a 12 point decrease in their predicted PTA outcome as market power increases, falling from 14.26 [11.23, 17.29] to 2.50 [-2.24, 7.22]. This 12 point drop represents a move across nearly 50% of the range of RIGIDITY. The same upward shift in market power increases RIGIDITY by 8 points, from 3.13 [-.38, 6.64] to 11.52 [7.24, 15.81], for an export-dependent market.

These findings confirm the baseline result. The traded sectors of the domestic market have clear, diverging preferences over the design of PTAs. Moreover, these diverging preferences have important policy implications. When states enjoy market power over



their trade partners, the sector composition of the domestic market is a strong predictor of agreement flexibility. Import-competing markets enter into much more flexible PTAs while export-dependent markets enter into more rigid agreements.

The results also imply that import-competitors enjoy a larger benefit from an increase in market power than do export-dependent firms. In Model 1, moving market power from its minimum to its maximum results in a 7.5-point decrease in RIGIDITY. For exporters the benefit was only a 4.5-point increase. The same pattern holds in Model 2. Over the range of market power, import-competitors get a 12-point decrease to export-dependent firms' 8-point increase. This disparity in the size of the effects across sectors makes sense in light of previous literature.

While there is some conflicting evidence, studies show that "import-competing industries receive more trade policy support than exporting industries."[169] Central government budget constraints, lack of voter sophistication, and difficulties raising corporate tax revenues have all been offered as explanations for this stylized fact.[170] One might also expect that collective action problems and domestic institutional contexts tip the balance of political power toward one sector. I do not test these propositions directly in this project. However, the import-competing sector's apparent ability to secure more favorable PTA terms is a question worthy of future research.

4.2.3 Robustness Checks

To explore the durability of these findings I conduct a series of additional analyses. To begin with, I employ an alternative form of the dependent variable. Recall that RIGIDITY is an index measure created by summing 25 individual agreement provisions. It is important to ensure that the results presented here are not simply an artifact of this variable construction. One alternative is a variable based on the length of text devoted to flexibility in each PTA. I construct a measure, WORDS, that is a count of the total number of words relating to the flexibility system. Substantively, longer provisions are those that place heavier constraints on the use of the flexibility system. Therefore higher values of WORDS represent more rigid PTAs. My measure of word length is correlated with RIGIDITY at 89%, implying a strong but not perfect relationship between the two dependent variables.

[169] Matschke 2008, 154.
[170] Krueger 1989, 1993, 1996; Matschke 2008.

Using WORDS as the dependent variable does not change the core results (see Model 3 in Table 4.3). The significant and positively signed interaction term again suggests that sector composition and market power have a strong effect on PTA design. An import-competing market enters into PTAs that is 77% shorter (read: more flexible) when it has market power than when it does not (a difference of 15,000 words). An export-dependent market, on the contrary, enters into agreements that are 77% *longer* when they enjoy market power over their trade partners.

Changes in the number of words are difficult to interpret without a reference point. The average safeguard provision, to take one example, is approximately 900 words long. The average anti-dumping and countervailing duties provisions are 7,000 and 5,000 words long, respectively.[171] The changes for both import-competing and export-dependent markets reported here are approximately 15,000 words. That is equivalent, therefore, to deleting (or adding) the average safeguards, anti-dumping, and countervailing duties provisions in an agreement.[172]

I also rerun Models 1 and 2 using a simple count of whether a PTA includes any mention of the five principal flexibility provisions. The measure, CONDENSED, ranges from 0 to 5, rather than from 0 to 25. An agreement gets 1-point for the inclusion of safeguards, anti-dumping, countervailing duties, technical barriers to trade, and sanitary and phyto-sanitary measures provisions, totaling 5 possible points. The significant of the results changes slightly when using this alternative specification of the dependent variable (see Models 4 and 5 in Table 4.3). However, the core result remains.

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[171] These averages are inflated because a large number of PTAs adopt the lengthy GATT/WTO articles relating to both provisions. The GATT/WTO anti-dumping provision is currently 10,800 words and their countervailing duties provision is 17,400 words.

[172] In an unreported robustness test I use the log of WORDS rather than the absolute value. This substitution does not affect the results.

Table 4.3 Robustness Tests (Alternative DVs)

	Model 3	*Model 4*	*Model 5*
Variables	WORDS	CONDENSED	CONDENSED
$NETX_i$	-14353.77 ***	-4.839	___
	(3722.116)	(3.357)	
$GDPSHARE_i$	-11.963	-0.005	-0.001
	(7.884)	(0.007)	(0.007)
NET X $GDPSHARE_i$	262.664 ***	0.17 **	___
	(74.467)	(0.067)	
$EXPORTS_i$	___	___	-2.545
			(3.981)
$IMPORTS_i$	___	___	5.295
			(3.391)
EXP X $GDPSHARE_i$	___	___	0.141 **
			(0.072)
IMP X $GDPSHARE_i$	___	___	-0.178 **
			(0.077)
$DEMOCRACY_i$	2747.948 ***	2.203 **	2.359 **
	(1057.311)	(0.955)	(0.966)
$TRANSITION_i$	-3016.336 **	-1.546	-1.586
	(1320.35)	(1.189)	(1.189)
$VETO_i$	1321.017	-1.514	-1.569
	(2019.85)	(1.833)	(1.211)
$INCOME_i$	719.982 ***	-0.345	-0.389 *
	(242.643)	(0.219)	(0.223)
PERVIOUS $RIGIDITY_j$	997.029 ***	0.261 ***	0.267 ***
	(48.95)	(0.044)	(0.044)
$HERF_i$	1184.562	-1.23	-1.066
	(1281.036)	(1.176)	(1.211)
Constant	-2813.254	3.735 **	3.686 **
	(1894.945)	(1.713)	(1.722)
N	1317	1219	1219
R-Squared	0.312	0.044	0.045

*Notes: *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests*

Sector composition is a powerful predictor of design even when using this reduced form of the dependent variable.

As a final robustness check I test for the possibility that the baseline results are contaminated by selection bias. The results presented in this chapter show that sector composition of the domestic market shapes the design of each state's PTA commitments. However, sector composition should also affect the likelihood that a state joins a PTA in the first place. For example, import-competing markets ought to oppose market openness, including the formation of any formal international agreements that commit their government to liberalization. If it is true that sector composition selects some states out of the sample of PTA members, then the baseline estimates presented in this chapter may be biased.

To correct for selection bias I employ a Heckman two-stage approach. I construct a dataset with one row per directed-dyad year. The data includes all dyads for which bilateral trade flows are available. The first stage outcome is PTA formation. I construct a variable, PTA, which is a dichotomous indicator of whether a pair of states enters into a PTA together in a given year. The independent variables for sector composition, market power, as well as their interaction, as constructed in the same way as before, except that they are all based on bilateral relationship within the dyad, rather than the PTA.

The selection equation includes the same measures of regime type (DEMOCRACY and TRANSITION) and per capita income (INCOME) as the baseline specification in Model 1. I also include known indicators of PTA formation. For example, I include the logged distance between capital cities, DISTANCE, to control for the effect that geographic proximity has on trade flows and the subsequent likelihood of PTA

formation. Additionally, I include a measure of whether both states in the dyad have previously entered into PTAs. States that enter into PTAs are more likely to join additional agreements. I therefore include a dichotomous indicator, PREVIOUS PTA. Finally, to account for duration dependence, I include a variable that counts the number of years, starting in 1960, until a dyad enters into a PTA (TIME).

Note that the inclusion of DISTANCE and TIME ensure that the model is properly identified. Both variables are powerful predictors of PTA formation ($p < .01$). However, they are not statistically significant when included in the second stage equation.

Before discussing the results notice that the directed-dyad setup significantly expands the number of observations in the dataset. I therefore cluster the standard errors by dyad to effectively reduce the number of observations. The Heckman results support the intuition that PTA formation and design are explained in part by the same process. We can reject the null that the equations are independent at the 0.00 level. The first stage estimates show that sector composition and market power are significant predictors of the likelihood of PTA formation. States with export-dependent markets are much more likely to form PTAs than their import-competing counterparts (-1.01 [-1.83, -0.18] as opposed to -4.03 (-4.89, -3.23)].

This evidence demonstrates that certain markets are selecting themselves in (or out) of preferential trade agreements. However, when correcting for selection bias in the baseline model estimates the core results remain intact. Sector composition and market power are strong predictors of design. When import-competing states enjoy market power over their trade partners, they enter into significantly less rigid PTAs (9.47 [6.45, 12.50] with market power versus 16.50 [14.00, 19.00] without it). Export-dependent markets get

Table 4.4 Robustness Tests (Heckman Selection Estimates)

	Model 6	
Variables	PTA	RIGIDITY
$NETX_i$	___	-3.278 ***
		(0.909)
$GDPSHARE_i$	___	0.016 ***
		(0.003)
NET X $GDPSHARE_i$	___	0.064 ***
		(0.017)
NETX_Dyad	-0.217 ***	___
	(0.069)	
GDPSHARE_Dyad	-0.000	___
	(0.000)	
NET X GDPSHARE_Dyad	0.004 ***	___
	(0.001)	
$DEMOCRACY_i$	-0.133 ***	-0.386 *
	(0.019)	(0.214)
$TRANSITION_i$	0.282 ***	-1.739 ***
	(0.021)	(0.206)
$VETO_i$	0.259 ***	2.625 ***
	(0.027)	(0.297)
$INCOME_i$	-0.024 ***	0.008
	(0.004)	(0.062)
PERVIOUS $RIGIDITY_j$	0.217 ***	0.537 ***
	(0.017)	(0.022)
$HERF_i$	___	-0.556 **
		(0.273)
DISTANCE	-0.301 ***	___
	(0.007)	
COUNTER	0.109 ***	___
	(0.008)	
Constant	-0.218 ***	1.658 ***
	(0.072)	(0.933)
N	571139	
rho	-0.554 (0.027)	
Model fit test	χ^2 (9) = 1701.45 ***	

*Notes: *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests*

an even bigger boost. Moving across the range of market power results in a 24-point leap from 0.82 (-5.45, 7.10) to 24.61 (17.80, 31.42).

Across all of these model specifications the baseline result remains constant. States with predominately import-competing (export-dependent) markets enter into significantly more flexible (rigid) agreements when they have market power.

4.3 *Summary and Conclusions*

This chapter addresses an important question in global economic governance: What explains variation in the design of international trade institutions? Institutional design outcomes have important implications for macroeconomic policy choices. Previous literature argues that states are more likely to enter and remain committed to agreements that provide opportunities for escape. However, the existing research cannot explain why, in light of flexibility's proposed benefits, trade agreements exhibit wide variation in the design of their rules. I propose and test empirically a new explanation of design. I argue that flexibility's benefits are distributed unevenly across the domestic market. The traded sectors of the domestic market have very different preferences over agreement design. Import-competing firms prefer flexible rules while export-dependent firms prefer rigid ones. I argue further that each state's ability to secure favorable rules is conditioned by their level of market power.

I test the validity of my hypothesis by conducting the first large-N analysis of variation in the design of preferential trade agreements—an increasingly prominent feature of the global economic landscape. I find strong support for my predictions. States with import-competing markets enter into significantly more flexible agreements than

their export-dependent counterparts. These effects are most dramatic when states enjoy market power over their trade partners. States can leverage their market power to negotiate more effectively for their ideal PTA rules. Through a series of complementary analyses I show that my core findings are highly durable. The effects of sector composition and market power are robust to alternative specifications of the dependent and independent variables, as well as to additional controls and corrections for selection bias.

These findings contribute to the existing literature in a number of ways. First, I show that PTA membership creates "winners" and "losers" in the domestic market. The traded sectors of the market have diametrically opposed preferences over PTA design. Import-competitors demand flexible PTAs while export-dependent firms prefer rigid ones. Whether firms benefit from PTA membership is therefore contingent upon the agreement's design. Drawing attention to these diverging preferences helps explain why PTAs vary in spite of the generally accepted benefits of flexible rules. Second, I show that the politics of globalization are shaped by risk as well as reward. Levels of tariff concessions are not the only issue on the table during PTA negotiations. Firms are also motivated by their concern for risk. Third, I create a new dataset on PTA design. This data includes the most detailed record of the individual legal provisions in 330 PTAs since 1960. With this data I am conduct the first large-N analysis of the variation in PTA design.

This analysis is not the final word on trade agreement design. It raises areas for future research. I argue, for example, that preferences are conditioned by market power. However, there are a large number of additional factors worthy of more detailed

investigation. Domestic political institutions and government ideology are among the myriad factors that are likely to influence whether firms lobby successfully for their preferred design outcomes. Moreover, we currently lack detailed data on the nominal trade concessions to which states commit under each PTA. Without a measure of liberalization it is impossible to model the precise nature of the tradeoff states make between their ideal levels trade concessions and rules. I enumerate these issues in more detail in the concluding chapter.

5

Implications for Domestic Welfare Policy

This project represents a departure from previous work on how states cope with global economic risk. Existing research focuses primarily on domestic policy mechanisms. The dominant perspective, commonly referred to as the compensation hypothesis, maintains that states offset the costs of market openness through the provision of social insurance. Social insurance is a broad label for a variety of redistributive policies and social investments. These typically include education and healthcare subsidies, unemployment benefits, job retraining programs, and state-sponsored pension schemes. All of these policies share a common aim: to stabilize the incomes of individuals adversely affected by risk.

The compensation hypothesis emerges out of the work on embedded liberalism, which argues for a compromise between free market economics and government intervention in the economy.[173] Trade openness exposes domestic markets to the vicissitudes of the global economy. Exposure to risk creates uncertainty over individual incomes, which in turn generates widespread demand for compensation. In support of the compensation hypothesis, a number of studies find that social insurance expenditures

[173] Ruggie 1982. See also Cameron (1978) and Katzenstein (1985).

increase in market openness.[174] Similarly, states with larger social insurance programs are more likely to open their markets *ex ante*.[175] However, notwithstanding these findings, the relationship between market openness and social spending is a source of persistent debate.

Opponents of the compensation hypothesis advance several critiques. First, there is evidence that government intervention in the market is unsustainable in a globalizing world. Under conditions of market openness, states cannot generate the revenue needed to fund social insurance because firms abandon markets with high corporate taxes. International competitive pressures create a "race to the bottom" in which states are compelled to dismantle social safety nets in an effort to maximize efficiency.[176] Second, empirical support for the compensation hypothesis is largely confined to the developed world. In the developing world, where the need for compensation is greatest, governments are less well equipped to provide social insurance.[177] Shortages of material and bureaucratic resources severely limit the developing world's ability to protect itself from risk's adverse effects.

Enduring debate over the compensation hypothesis suggests that more work has to be done before we fully understand cross-national variation in social insurance provision. In this chapter, I offer a new explanation of how states cope with market risk. I argue that PTA membership attenuates demand for social insurance by reducing the amount of risk to which the domestic market is exposed. Firms are traditionally thought to oppose any policies that raise the costs of doing business—i.e. redistributive programs funded

[174] Rodrik 1997, 1998; Garrett 1995, 1998; Garrett and Mitchell 2001; Burgoon 2001.
[175] Bates, Bock and Tiefenthaler 1991.
[176] Stopford and Strange 1993; Strange 1997; McKenzie and Lee 1991; Cerny 1990.
[177] Rudra 2008, 2002; Rudra and Haggard 2005.

through corporate taxation.[178] However, recent work relaxes this long-standing assumption. New studies show that firms support social insurance when they are exposed to global economic risk.[179] Under conditions of uncertainty, labor is less willing to invest in specialized skills. Firms seeking highly skilled labor will find it difficult to meet their needs. As a result, risk increases firms' incentives to support social insurance. The logical extension of this argument is that states dedicate fewer resources to social insurance when their markets face less risk. I argue that states can effectively shape the amount of risk to which they are exposed.

Emerging research shows that global markets provide built-in mechanisms for reducing risk.[180] Specifically, members of preferential trade agreements experience significantly less price volatility than nonmembers. The risk-reducing benefits of PTA membership imply that states do not have to rely exclusively on correcting for risk's negative impact on the domestic market. Rather, by entering into international trade institutions, states play an active role in determining their levels of future risk. By implication, PTA members, because they experience less risk, ought to dedicate fewer resources to social insurance than nonmembers.

I add one important caveat to this argument: the benefits of PTA membership are contingent on agreement design. In the previous chapter I found that firms have diverging preferences over PTA rules. On the one hand, import-competitors prefer flexible agreements. Flexibility allows states to introduce temporary barriers to market entry when price competition from foreign goods threatens domestic firms. Export-dependent firms, on the other hand, prefer rigid agreements. Rigidity tightly binds member states to

[178] Esping-Andersen 1985.
[179] Mares 2003, 2001, 2000.
[180] Mansfield and Reinhardt 2008.

openness, effectively reducing the likelihood that members introduce new entry barriers against one another. These diverging preferences have implications for social insurance policy. I expect that, in the aggregate, states with predominately import-competing (export-dependent) markets experience less risk only when they are members of flexible (rigid) agreements. As a result, I predict that PTA members spend less on social insurance when the agreement's rules match the preferences of the domestic market. I test this claim using original data on the design of trade agreements and common indicators of social insurance spending. I find strong evidence that PTA membership reduces social insurance expenditures on average.

This chapter makes several contributions to the existing literature. First, I offer a new explanation of social insurance spending. I show that the form of a state's international commitments bears directly on domestic demand for social insurance. Second, and related, this research shows that states' options are not limited to domestic policies. Preferential trade agreements represent a viable alternative strategy for coping with risk. Thus, perhaps counter intuitively, committing to interstate economic cooperation helps mitigate the costs of market openness. Third, the findings show that states do not have to be passive when dealing with risk. The literatures on the compensation hypothesis and the race to the bottom assume that risk is exogenously determined. I argue instead that by entering into PTAs states play an active role in determining the levels of risk to which they are exposed.

5.1 *Debating the Compensation Hypothesis*

Until recently, research on how states cope with global economic risk focused exclusively on domestic policy mechanisms. The dominant perspective, deriving from the work on embedded liberalism, argues that states offset the costs of market openness by providing social insurance.[181] Globalization exposes the domestic market to global economic risk. Risk, particularly in the form of unpredictable fluctuations in relative prices, creates uncertainty over wages and jobs. This uncertainty drives down consumption and, in the long run, stunts economic growth and development. These adverse welfare effects have important policy implications. The compensation hypothesis maintains that states offset the costs of market openness through the provision of social insurance.[182] Social insurance is designed to stabilize incomes and forestall risk's welfare reducing effects both at the individual level and in the aggregate. US Federal Reserve Chief Ben Bernanke summarizes the role of social insurance when he suggests, in reference to Asian economies, that, "one way to increase [household] consumption would be for countries like China to increase social insurance programs and reduce the uncertainty that hangs over many consumers."[183]

These adverse welfare effects have important policy implications. Continued exposure to risk generates widespread demand for social insurance. Garrett states the core proposition as follows,

> "Social insurance directly supports those adversely affected by market risk. The public provision of social services not only provides benefits to consumers irrespective of their ability to pay but also generates a source of employment that

[181] Ruggie 1982; Katzenstein 1985; Cameron 1978.
[182] Rodrik 1997, 1998.
[183] "Fed chief warns of need to curb trade imbalances" International Herald Tribune Oct 20th 2009.

> is less vulnerable to the vicissitudes of market competition… The welfare state redistributes wealth and risk, thereby dampening popular opposition to free markets."[184]

Social insurance protects individual welfare in two ways. The first is through increases government consumption. The relative safety of the public sector stabilizes the portion of each household's income that derives from government consumption.[185] As consumption levels increase, net incomes, which contain both private and public components, become less volatile. Second, social insurance can play a more direct role in redistribution. Certain policies target benefits directly to those harmed by market openness. Worker retaining programs, unemployment benefits, and pension schemes are among the myriad policies that states use to stabilize the incomes of those affected by risk.

Evidence of trends in government spending shows that social insurance is an increasingly priority for states. Over recent decades states have dedicated a growing percentage of their budgets to welfare policies.[186] Studies also show, under certain conditions, that there is a significant, positive correlation between market openness and government spending both in the aggregate and on social insurance.[187] These results, along with a host of complementary findings, support the claim that, "societies seem to

[184] Garrett 1998, 797.
[185] Rodrik 1997.
[186] Alesina and Perotti 1997.
[187] Rodrik 1997, 1998; Burgoon 2001; Garrett 1995, 1998, 2001.

demand (and receive) an expanded government role as the price for accepting larger doses of external risk."[188]

However, in the spite of these findings, we continue to observe wide cross-national variation in the provision of social insurance. Citing this variation, critics of the compensation hypothesis have questioned the link between openness and social insurance provision. A recent replication of Rodrik's seminal paper finds that government consumption is actually higher in closed markets.[189] Others find that the correlation between openness and spending, where it does exist, does not prove that risk is the underlying explanation.[190] The most significant challenge, however, comes from scholars that argue globalization results in a "race to the bottom."

Critics argue that globalization handcuffs governments. Redistributive policies interfere with the natural operation of free markets. To generate the revenues necessary to pay for social insurance programs, governments introduce corporate taxes that raise the costs of doing business in their markets.[191] Additionally, government programs may raise the costs of labor by introducing rigidities into the labor market. Minimum wage policies, for example, artificially increase the costs of inputs. In both cases, firms will be driven away from markets with comprehensive social insurance programs under free markets. As a result, scholars argue that the compensation hypothesis is untenable in a globalizing world.[192] Competitive pressures compel states to take down their social nets. Instead, governments prioritize efficiency over welfare. As one commentator writes, "neo-liberal ideology is scornful of a comprehensive welfare system. Its valorization of the private

[188] Rodrik 1998, 998.
[189] Garen and Trask 2005.
[190] Kim 2007; Iversen and Cusack 2000.
[191] Genschel 2002; Avi-Yonah 2000.
[192] Cox 1992; Gill and Law 1989; Cerny 1995.

sector and skepticism of government intervention mean it aims to minimize welfare as far as possible."[193]

Empirical support for the race to the bottom is most prevalent in the developing world. Developing states face *ex ante* disadvantages. On the one hand, these states are most in need of the gains from free trade. On the other hand, they are least wel equipped to cope with risk. Severe resource shortages limit developing states' abilities to provide social insurance to those segments of the market threatened by globalization.[194] These material resource shortages, coupled with diminished bureaucratic capacity, preclude the effective use of social insurance. Wibbels summaries the point when writing that, "while internationally-inspired income shocks in no way threaten the underpinnings of the welfare state in rich nations, it undercuts the capacity of governments in the developing world to smooth consumption (and particularly consumption by the poor) across the business cycle."[195]

In the wake of the recent global economic downturn, there is mounting evidence that resource constraints are not limited to the developing world. States at all levels of development are facing strict budget constraints. One former Polish finance minister notes that, "the expanding crisis will result in higher expenditure and deficits in the Social Insurance Board (ZUS), Agricultural Social Insurance Fund (KRUS), National Health Fund (NFZ) etc., which will all have to be covered from the [shrinking] state budget. Climbing out of the crisis will take Poland at least two years."[196] States therefore face a paradox. During economic crises, precisely when social insurance is needed most,

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[193] "The poor in Japan find nowhere to turn" The Age January 3rd 2009
[194] Rudra 2007, 2004, 2003.
[195] Wibbles 2006, 435.
[196] "State Budget Deficit Increase Unavoidable" Polish New Bulletin Jan 26, 2009.

states are handcuffed by severe budget shortages. This dilemma is forcing politicians to rethink social insurance programs in a wide variety of economies including Latvia[197], China[198] and the US.[199]

The two sides of the current debate share a common limitation. Both supporters and critics of the compensation hypothesis fail to recognize risk-reducing opportunities available in the global economy. However, there are strong reasons to believe that international markets provide built-in mechanisms for combating risk. In the next section I argue that, under certain conditions, PTA membership forestalls risk's adverse welfare consequences and, in turn, attenuates demand for social insurance.

5.2 *Risk, Social Insurance, and Preferential Trade Agreements*

What explains cross-national variation in the provision of social insurance? Demand for compensation increases in a market's exposure to risk. Recent work shows that firms, who were previously assumed to oppose government intervention in the marketplace[200], support social insurance expenditures under certain conditions. Specifically, "an increase in the volatility of the level of employment can bring about a reordering of the social policy preferences of workers and employers in [high-risk] sectors."[201]

Firms are willing to pay the costs of redistributive programs if they experience high risk. Risk generates uncertainty over individual incomes, which in turn undermines the

[197] "Ceiling on social insurance service costs may be set in Latvia next year-finance minister." Baltic News Service, June 12, 2009.

[198] "Chinese economic chiefs hold news briefing on economic, financial issues" BBC Monitoring Asia Pacific-Political March 7th 2008.

[199] "What's the big idea? Social insurance needs rethinking." The Washington Times, August 13th, 2009.

[200] Esping-Andersen 1985.

[201] Mares 2004, 748.

incentives of labor to invest in skills valuable to firms. Individuals are less likely to invest in skills under conditions of high uncertainty.[202] High-risk industries are therefore in a position in which "…only by insuring against [risk] can firms satisfy their need for specific skills."[203] Firms gain directly from social insurance because "…a social policy that insures workers for employment-related risks also protects the investment made by *employers* in the skills of their workers."[204] Moreover, state-led social safety nets are less expensive to firms because the cost is spread across the market rather than concentrated in a few industries. Thus, under conditions of market openness, the high-risk sector of the market supports the provision of social insurance.[205]

Firms that experience lower risk, however, oppose state-led compensation. Low-risk industries have less material incentive to bear the costs of redistribution. Rather than expensive state-led social insurance, low-risk industries prefer private schemes that keep the costs borne by the firm to a minimum.[206] Social insurance, in the view of low-risk industries, provides a subsidy to more volatile industries at the expense of the market as a whole.

Previous work shows that each firm's willingness to support social insurance increases in its exposure to risk. Put another way, firms are less likely to demand social insurance if they are insulated from risk. I argue that, under certain conditions, PTA membership provides this insulation. New evidence shows that PTAs reduce the amount

[202] Mares 2004, 2003a, 2003b.
[203] Estevez-Abe, Iversen, and Soskice 2001, 181.
[204] Mares 2003, 237.
[205] Research shows that support from high-risk industries is policy-specific. Specifically, firms prefer policies the spread both the cost and coverage of social insurance across the market. (Mares 2004)
[206] Mares 2004.

of volatility member states experience.[207] According to this literature, PTAs ameliorate risk in two ways. First, by institutionalizing interstate trade relationships PTAs prevent states from imposing new entry barriers against fellow members. This directly reduces volatility in prices, which is driven in part by opportunistic shifts in trade policy. Second, PTAs allow states to shirk temporarily their contractual obligations price shocks do occur. By permitting escape, PTAs let member states retreat from their commitments in order to protect the domestic market. Taken together, these features of PTAs reduce the amount of terms of trade volatility to which members are exposed.[208]

This research supports the claim that PTAs help protect the domestic market from risk. One logical extension of these findings is that PTA membership provides a viable alternative to traditional domestic compensation. To the extent that PTAs reduce the market's exposure to risk, it adds stability to personal incomes and mitigates firms' demands for state intervention. As a result, PTAs members ought to spend less on social insurance than nonmembers.

However, one caveat to this argument is necessary. In this project I show that the benefits of PTA membership are not shared evenly across the market. Instead, the "winners" and "losers" from membership are contingent on agreement design. PTA rules have targeted benefits. Flexible agreements benefit import-competing firms by allowing states to erect barriers to market entry, alleviating downward pressure on prices that threatens domestic producers. However, flexibility is costly for export-dependent firms who instead prefer rigid PTAs. Rigidity tightly binds member states to their commitments, reducing the likelihood that members impose new trade barriers against

[207] Mansfield and Reinhardt 2008.
[208] Ibid.

one another. PTA design outcomes ultimately reflect a tradeoff between these competing interests. In Chapter 4, I find robust evidence that the sector composition of the domestic market, when coupled with market power, is an important predictor of PTA design.

My findings support the proposition that firms are motivated by their concern for risk. Firms recognize that PTA rules directly affect the amount of risk they will be vulnerable to in the future. Moreover, the findings also show that firms' preferred strategies for combating risk vary. Firms do not benefit from any and all PTAs. Instead, they lobby strongly for agreements whose rules provide the most effective insurance against risk. The conditional benefits of PTA membership are significant for domestic policy choices relating to social insurance.

I expect that the risk-reducing effects of PTAs are strongest when agreement design matches the preferences of the domestic market—i.e. when the predominant sector secures its ideal terms. Put another way, the benefits of membership decrease in the distance between a state's domestic preferences and the design of their international commitments. I predict that,

H2. *States with predominately import-competing (export-dependent) markets devote fewer resources to social insurance when they are members of flexible (rigid) PTAs.*

This study is among the first to propose an international policy strategy for coping with global market risk. The availability of a viable alternative to social insurance promises several benefits. First, it shows that states do not need to be passive in combating risk. Instead, states can be proactive by entering into trade agreements that

directly affect the amount of risk they will face in the future. Second, PTA membership may provide states a way around their resource constraints. Many states are disadvantaged because they cannot afford to pay for comprehensive social insurance programs. This is especially true in the developing world where problems of resource scarcity are most acute. PTA membership promises a comparatively cheaper policy option, offsetting resource shortages while simultaneously softening the adverse impact of globalization.

However, there are also good reasons to remain skeptical of the role played by international institutions. To begin with, PTAs are only a first line of defense against risk. They are not perfect substitutes for social insurance. With respect to social programs states enjoy discretion over the policies they enact. However, in the context of institutions, states cannot always secure favorable PTA terms. This is especially true of the developing world, where they invariably lack bargaining power in their negotiations with larger markets. If it is true that these states receive suboptimal terms, then PTAs will do little to reduce these markets' vulnerability to risk.

Additionally, my theory assumes that risk is the driving force behind social insurance provision. However, previous studies challenge the assumptions that (1) risk is necessarily correlated with market openness and (2) that increased exposure to risk motivates an expansion of the welfare state. In contrast to the compensation hypothesis, there is some evidence that market openness reduces volatility.[209] Openness promotes diversification and growth, which are both associated with lower volatility.[210] Moreover,

[209] Kim 2007; Fagerberg 1994.

[210] Cavallo 2007; Down 2007; Lutz and Singer 1994. This relationship remains open to debate, however. Studies continue to find mixed results concerning the relationship between openness and risk. See Wibbels (2006) and Easterly and Kraay (2000).

where social insurance has expanded, it can be attributed to other economic trends such as deindustrialization, rather than globalization.[211]

5.3 *Ireland in Crisis: An Illustration of Firm Preferences*

Before presenting my statistical analysis I provide an example of how firms bring their preferences to bear on social insurance policy. The purpose of this example is to demonstrate how policy decisions relating to risk and compensation divide the market along predictable lines. For this illustration I focus on Ireland.

Ireland is one country in which there is active debate over the provision of social insurance. The Irish economy has seen its once remarkable growth vanish during the recent global financial crisis. For more than decade, between the years 1994 and 2007, Ireland enjoyed a booming economy. Once regarded as a European backwater, Ireland quickly became one of the richest nations in the EU. However, as with many countries around the world, the recent financial crisis exposed the fragile foundations on which this growth was built. Now, Ireland is faced with difficult questions about how to break out of a cycle of escalating deficits, declining employment, and shrinking output. Debate over the best strategy for recovery divides the Irish market between exporter, who support a market-oriented recovery, and labor unions, which support a comprehensive expansion of social insurance.

Beginning in the 1990s, the Irish economy grew at a remarkable rate. From 1994 to 2005, Ireland enjoyed double-digit GDP growth. During this time, per capita income in Ireland exceeded that in France, Germany, and the United Kingdom.[212] The government

[211] Iversen and Cusack 2000.
[212] In fact, Ireland's per capita GDP was the second highest in the EU by 2005.

played an active role in facilitating the economic boom. Growth was fueled largely by inflows of foreign direct investment, which Ireland enticed by offering the EU's lowest corporate tax rates.[213] Corporate taxes were slashed from 40% to 12.5% during the 1990s.[214] The success of this policy is evidenced by the fact that, "while Ireland accounts for just 1 percent of the European Union's total GDP, it account for 6 percent of the inward foreign direct investment flows."[215] At its height, Ireland hosted operations from 9 out of the 10 of the world's largest pharmaceutical companies.[216] New investment meant new jobs for the Irish and for a wave of immigrants from Eastern Europe.[217] Employment levels grew 50% during this period from 1.2 to 1.8 million.[218]

While the economy was thriving, government expenditures on social insurance were kept under control. In the 1990s public spending grew at a rate of 7% per year, a full 5% lower than growth in output.[219] However, cracks in the foundation were already beginning to show. By 2005, government balance sheets reversed. Annual expenditures grew 50% *faster* than output.[220] Coinciding with the mounting financial burden was another negative development for the export-oriented market: a steady increase in labor costs.[221] In the last ten years, the cost of labor in Ireland grew almost twice as fast as in

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[213] Fellow EU members have heavily criticized Ireland's low corporate tax rates on the grounds that they cannot compete with low rates.

[214] "Ireland's Low Corporate Tax Rate Leads to Prosperity." *Tax Foundation*, July 6, 2005.

[215] "It's Not the Luck of the Irish—It's Their Low Corporate Taxes." Commentary, The Tax Foundation. Accessed online (March 17th, 2010) at: http://www.taxfoundation.org/news/show/175.html

[216] "The End of the Rainbow." *New York Times*, June 9, 2005.

[217] "Ireland's immigrants return home as slum sharpens fear of racism." *The Guardian*, May 4, 2008.

[218] "Small steps to give jobless a giant leap." *The Sunday Times*, August 2, 2009. For a detailed discussion of employment trends see Walsh (2003).

[219] "Reduced pay could be silver lining of crisis." *The Irish Times*, May 2, 2009.

[220] Ibid.

[221] "7 reasons why Ireland will be left behind." *The Irish Times,* October 2, 2009.

the rest of the EU (43% in Ireland relative to just 22% in the EU).[222] Ireland also had the EU's 2nd highest minimum wage.[223] Both trends signaled danger ahead. Mounting labor costs and suspicions of fiscal irresponsibility in government began to erode Ireland's competitive advantages in global markets before the onset of the crisis.[224]

The policies that fueled Ireland's growth were not without controversy. Staunch criticism of the market-oriented approach came from a variety of interest groups, most notably labor unions. The Irish Congress of Trade Unions (ICTU) was among the most vocal critics of the corporate tax policies that, while supporting the inflow of foreign investment, created inequality and left large swaths of Irish society without protection from risk. The average social security contributions made by employers was 10% of labor costs in 2003. This 10% ranges from one-third of the rate in France (28%) and Hungary (27%) to one-half of that in Sweden (25%) and Spain (23%).[225] The ICTU cites these figures as evidence that the Irish government has been far too lenient (and shortsighted) in the concessions it grants to business. The results have been greater inequality and higher prices for middle- and low-income workers seeking public services. An ICTU publication summarizes their skepticism, noting that, "low taxes, inequality in the provision of health and education, a growing income gap, and sub-optimum economic growth: these are not separate, unrelated issues, but are inextricably connected and bound up together."[226]

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[222] Ibid.

[223] "A prescription for exporting our way to sustainable growth." *The Irish Times*, January 15, 2010.

[224] "Is the economy headed for a slowdown?" *The Daily Mail*, February 26, 2007.

[225] "Tax cuts did not create the Celtic Tiger." Publication of the Irish Congress of Trade Unions, 2004. Also see, "A Short Guide to the Irish Social Welfare System." Publication of the Irish Congress of Trade Unions, 2010.

[226] "Government's Low Tax Model Will Not Make Us a Fairer Society and Won't Create a Vibrant Economy." The Union Post, September 2009.

As these statements reveal, several government policies, which directly benefited foreign firms, many of which accounted for a large percentage of Ireland's exports, were already controversial before the crisis hit in 2008. However, the crisis raised new questions about how Ireland could best protect those most at risk. Indeed, the adverse effects of the crisis have been dramatic. The single biggest problem is the rising unemployment. Estimates place the number of lost jobs since 2008 at 250,000, or 14% of the labor force.[227] The contraction of the labor market was visible most in low- and medium-skilled positions, including the construction industry, which had previously been responsible for a large part of Ireland's rapid growth.[228]

As the excess supply of labor continues to grow, wages have depreciated. As a result, the Irish work force is facing high uncertainty over personal income. Consumer confidence is at its lowest ebb since the late 1980s. Household savings rates have quadrupled and consumer spending is down 7% from 2007 levels.[229] The sharp drop in spending is significant. The Irish economy has shrunk no less than 11% since 2008.[230]

Declining output, coupled with rising unemployment, has meant fiscal headaches for the Irish government. There is widespread demand among labor unions for state-led social insurance. However, the government is finding it difficult to meet this demand. Public spending commitments reached 55 billion euro in 2009 just as revenues have fallen to 35 billion.[231] Moreover, the deficit is only expected to increase over the next several years. The government's difficult financial situation is exemplified by recent downgrades by market analysts. In early 2010, Irish government debt was rated the

[227] "Ireland trapped in a no-win situation." *The Sunday Times*¸ May 3, 2009.
[228] "Is the economy headed for a slowdown?" *The Daily Mail*, February 26, 2007.
[229] "Ireland trapped in a no-win situation." *The Sunday Times*¸ May 3, 2009.
[230] Ibid.
[231] "How Ireland became an economic basket-case." *The Daily Mail*, April 9, 2009.

riskiest in the EU, including Greece. At the same time, Irish government bonds were stripped of their AAA rating, signaling a clear message of skepticism from international capital markets.[232] As faith in government debt erodes, Ireland will find it increasingly difficult to raise the revenues necessary to fund social insurance.

In light of the government's financial difficulties, some segments of the market are calling for international assistance. One potential source of aid is the European Central Bank, which has already begun funding the purchasing of Irish government debt.[233] However, any money received from international sources is likely to come with strings attached. Namely, Ireland will be asked to cut public employment, the wages paid to public employees, and the state-led pension scheme currently in place.[234] However, these cuts are hugely controversial in a country where public opinion is divided over the best strategy for recovery.

On one side, export-dependent industries, particularly multinationals that were drawn in during the boom years, have lobbied hard for a market-oriented recovery. Rising labor costs and lost competitiveness have hurt firms that were attracted to Ireland for its skilled and comparatively cheap workforce. To regain lost market share, industry leaders have called for aid. One commentator notes that, "the policy implications for Ireland are obvious, but that would involve a sea-change in attitudes and the embracing of what is now regarded as heresy—in short, a downward currency adjustment…"[235] However, Ireland's monetary policy is handcuffed by its membership in the eurozone. Currency

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[232] Ibid.
[233] "Banks using ECB funds to buy bonds." *The Independent,* May 3, 2009.
[234] "Ireland trapped in a no-win situation." *The Sunday Times*¸ May 3, 2009.
[235] Ibid.

devaluations taking place in the United Kingdom, for example, cannot be replicated in Ireland where they lack autonomy over monetary policy.[236]

Devaluation would not be necessary, according to exporters, if labor costs, propped up by the public sector, were not so high. The Department of Finance, in an effort to boost post-crisis exports, is trying to curb the costs of labor. However, this is a difficult strategy under conditions of high uncertainty in the market. It is no coincidence that proposals for an export-led recovery strategy have been met with fierce resistance. According to one analyst, wage reductions are "the crudest of instruments," and will only lead to "business closures, job losses, depressed domestic demand, and a collapse in property prices."[237]

Rather than policies oriented toward international market competitiveness, large sectors of the market, led by labor unions, are calling for a state-led recovery through the erection of social safety nets. In the words of one observer, "it is encouraging that the distributional effects of the measures so far taken have been progressive. But that is little consolation for the many tens of thousands of people losing."[238] Similar sentiments have been expressed throughout the marketplace. The unemployed "need support and a sense of solidarity. The price of that support and solidarity is higher taxes across the board and the provision of a good welfare safety net for everybody."[239]

Reconciling these competing views represents a significant challenge for Ireland. As debate carries on, there have already been some high-profile examples of capital flight. The computer manufacturer Dell, which was once a widely publicized example of

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[236] The constraints placed on Ireland by its eurozone membership are sufficiently controversial to have sparked debate over whether Ireland should abandon the common currency regime.

[237] "Bring on Keynes' Animal Spirits." *The Sunday Independent*, January 17, 2010.

[238] "Reduced pay could be silver lining of crisis." *The Irish Times*, May 2, 2009.

[239] "Keeping out exports healthy." *The Irish Times*, April 20, 2009.

Ireland's emerging global competitiveness, has abandoned Ireland for Poland.[240] (It is a move whose irony is lost on few who recall Poland as the principal source of immigrants during the boom years.) Waterford Wedgewood, one of Ireland's most widely recognized international brand, entered into receivership in 2009.[241] These are just two examples of the hardships currently facing export-dependent firms.

Making matters worse, the EU has given Ireland a strict mandate to get its budget crisis under control. Ireland has been given until 2014 to come into compliance with EU standards—budget deficits no greater than 3% of GDP. Current forecasts predict Ireland's deficit will rise to 14.7% in 2010 (up from 7.2% in 2008).[242] As a result, Ireland has been asked to cut 4 billion euro from its budget over the next three years. A strong exporter-led lobby, coupled with severe budget limitations, may mean bad news for those asking for expanded state protection. The best solution may be the recommendations offered by those seeking compromise. Latest plans involve an expanded social insurance program, but one that is tailored to promoting competitiveness—i.e. more money for worker retraining programs.[243]

The ongoing political debate over social insurance provision and economic recovery illustrates the political divisiveness of compensation policy. In Ireland's case, the primary cleavage is between export-dependent firms on the one hand and labor unions on the other. Exporters want to slash social insurance programs in an effort to regain competitiveness in global markets while unions are calling for a state-led recovery effort,

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[240] "How Ireland became an economic basket-case." *The Daily Mail*, April 9, 2009.
[241] "Waterford Wedgewood in receivership." *RTE News*, January 5, 2009.
[242] "EU set to give Ireland until 2014 to meet its budget deficit target." *The Irish Times*, November 10, 2009.
[243] Ibid.

including an expansion of social safety nets. These diverging preferences follow directly from how the two traded sectors of the market prefer to deal with risk.

5.4 *Data and Variables*

I test the validity of my hypotheses using data on the size of social insurance programs around the world for 120 countries from the years 1977-2004. Since I am interested in identifying the effect institutional design has on social insurance spending, the sample is restricted to states that are currently, or have been in the past, PTA members.[244]

5.4.1 Dependent Variables

The outcome I wish to analyze is levels of social insurance spending. Previous studies employ a variety of different variables to measure this concept.[245] In Rodrik's seminal study the main dependent variable is total government expenditures as a percentage of GDP.[246] In my first test I employ the same measure, TOTAL SPENDING, which is taken from EuroMonitor's Global Market Information Database (GMID). GMID compiles information from common sources of government finance data, including the OECD, IMF, and World Bank.

While I use this measure in my initial analysis, I recognize that using an aggregate measure of government spending has drawbacks. Most importantly, it masks the amount of government resources dedicated explicitly to social welfare. It is therefore difficult to compare the size of social insurance programs across countries. In response, recent work

[244] Testing my core hypothesis requires that a state has been in a formal interstate trade agreement.

[245] Existing work commonly uses measures of government revenues (see Cameron 1978, Huber and Stephens 1993, Bradely, Huber, Moller, Nielson and Stephens 2003, and Adsera and Boix 2002) or government expenditures (Rodrik 1998, Garrett 2001, Bernauer and Achini 2000, and Iversen 2001).

[246] Rodrik 1998.

argues in favor of more fine-grained measures, including government expenditures on social security.[247] This measure is also imperfect. For example, it does not capture the effective coverage of a state's social safety nets. It merely tells us the amount that is spent on the welfare state. To get around this problem some studies have used data on individual policies or measures of "income replacement."[248] Both strategies are intended to capture more precisely government compensation efforts.

Notwithstanding these limitations, my effort here is to capture the total amount of resources dedicated to social insurance, not the provision an individual policy. As a result, I construct a variable, WELFARE SPENDING, which measures expenditures on social security and welfare as a percentage of GDP. These data are taken from Rudra as well as from GMID.[249]

5.4.2 Independent Variables

My theory predicts that both institutional design and the sector composition of the domestic market determine levels of social insurance provision. The main explanatory variable is therefore an interaction between sector composition and the trade-weighted average rigidity of each state's PTA commitments. Here I describe the component parts.

The measures of sector composition are the same as those employed in chapter 4. I use both a single measure of sector composition as well as separate variables for imports and exports. Recall that the combined measure, NETX, is constructed by subtracting the

[247] There has also been a push toward using policy-specific measures (Burgoon 2001, Rudra 2007, Rudra and Haggard 2005, Mares 2004, and Mares 2005). Other work does not use spending data but instead uses indices of government generosity (Allen and Scruggs 2004 and Esping-Andersen 1990).

[248] Hicks and Freeman 2009.

[249] Rudra's (2008) measure of social security and welfare is correlated at 95% with GMID's data for comparable categories. I therefore merge these variables to maximize the sample size.

total amount of "pressure imports" from total exports, for each PTA, as a percentage of GDP. To reiterate, "pressure imports" are the total volume of imports from PTA partners less the amount of intra-industry between states. The measure is designed to isolate only those imports that compete directly with the products of domestic suppliers. The combined variable NETX is increasing in the export-dependence of the overall domestic market. In alternative specifications, I use the individual component parts EXPORTS and IMPORTS.

To measure the design of a state's international commitments I take the trade-weighted average of each state's PTA commitments in each year. I weight the average by trade because some PTAs are significantly more "important" than others—much more trade is conducted under certain agreements. I expect that the design outcomes of PTAs that govern a larger amount of trade have a greater impact on the welfare of the domestic market. As a result, it is necessary to weight these agreements more heavily. The resulting measure, AVERAGE RIGIDITY, ranges from 0 to 25, the same range as underlying design variable RIGIDITY (see chapter 4), with a mean of 6.6.

I predict that social insurance provision is influenced jointly by the design of each state's PTAs as well as the composition of the domestic market. To capture this interactive effect, I include a multiplicative term, NETX X RIGIDITY.

5.4.3 Control Variables

I include controls for several confounding factors. To begin with, research shows that resource shortages place *ex ante* constraints on the size of the welfare state.[250] Larger deficits ought to limit the amount of resources states have available for redistribution or

[250] Brooks 2002; Mares 2005; Rudra and Haggard 2005.

social investments. As a result, social insurance expenditures ought to decline in the size of the deficit.[251] I control for the size of each government's budget deficit in the form of the variable DEFICIT, which is the central government's deficit as a percentage of GDP. This data is taken from GMID.

Wealth ought to likewise affect social insurance incomes. Richer states may be better equipped to cope with market openness.[252] Higher per capita incomes imply that individuals are more secure from market shocks and that the government has a larger pool of resources to draw from when necessary. Indeed, most evidence in favor of the compensation hypothesis is confined to the developed world.[253] To control for the impact of wealth on the provision of social insurance I include the variable INCOME, taken from the World Bank's World Development Indicators (WDI). INCOME is measured in constant year 2000 US dollars and logged to attenuate the skewed nature of the data.

Demand for social insurance comes not just from features of the market, but also from traits exhibited by the population. Government expenditures, including those on welfare and social security, ought to increase in the size of the dependent population.[254] The number of dependents is typically measured as the percentage of the population under the age of 14 and over 65. These two thresholds are intended to capture segments of the population not included in the formal labor force. I include a measure, DEPENDENTS, taken from the WDI.

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[251] On the other hand, large welfare programs may be an important underlying source of deficits in the first place. States may be funding the welfare state through deficit spending, particularly during times of crisis as the example of Ireland shows. If so, government expenditures on social insurance may increase in the deficit. Over time, however, we would still expect the relationship to be negative as pressure to bring government finances into line mounts.

[252] Rudra 2007; Rudra and Haggard 2005.

[253] Garrett 1995; 1998a 1998b; Adsera and Boix 2002.

[254] Swank 1998; Burgoon 2001; Tang 1996; Cheibub 2006.

There are also strong reasons to expect that domestic political institutions shape the way preferences over compensation are translated into policy. Previous literature shows that the ideological leaning of the government is an important determinant of whose interests are represented in economic and social policy.[255] Specifically, left-leaning governments, which favor labor's interests, ought to provide comparatively more social insurance all else equal. Right-leaning governments, to the contrary, which cater to the interests of capital, who are traditionally assumed to oppose redistributive policies. I include CONSERVATIVE, a measure of the dominant legislative party's ideology. The measure is taken from the Database of Political Institutions and is coded "0" for liberal, "1" for moderate, and "2" for conservative. The measure is increasing in the conservatism of the dominant legislative party. It should therefore be inversely correlated with social insurance spending.

I also include a measure of regime type. Democracies ought to be comparatively more responsive to demand for social insurance. In democratic states, the costs of openness are more likely to jeopardize the tenure security of politicians. Regular elections expose politicians to the risk of public sanction by segments of the market adversely affected by globalization. Studies show that democracies dedicate more resources to social insurance than non-democracies.[256] It has also been theorized that regime type affects the amount of risk to which markets are exposed. Democratic states may have less volatile markets.[257] However, if so, then we might expect the opposite relationship—democracies should spend less on the welfare state if they experience less risk.

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[255] Mosely 2002; Brady, Beckfield and Seeleib-Kaiser 2005; and Iversen and Cusack 2000.
[256] Adsera and Boix 2002. For additional discussion Rudra and Haggard 2005.
[257] Rodrik 2000.

Finally, I include a measure of each state's nominal exchange rate regime. Exchange rate policy may be an effective way to hedge against market risk.[258] I control for FIXED EXCHANGE, which is taken from Reinhart's data on each state's official IMF classification.[259]

5.5 *Analyses and Results*

In this section I present a series of tests of my core proposition: states dedicate fewer resources to social insurance when their PTA commitments mitigate the domestic market's exposure to risk. I begin my analysis by identifying a general relationship between the sector composition of the domestic market, PTA design, and total government expenditures as a percentage of GDP. These results provide an evidentiary foundation for more detailed analysis. In additional tests I use more fine-grained dependent and independent variables, as well as a variety of techniques designed to correct for common problems with pooled panel data. My baseline results are robust to each model specification. When the design of a state's PTAs matches the preferences o he domestic market, governments spend less on social insurance.

5.5.1 Model 1

I start with an analysis of the effect that sector composition and PTA design have on aggregate government spending. For ease of interpretation I use the combined sectors measure NETX in this fist test. I run an ordinary least squares (OLS) regression with

[258] Results on this front are mixed. See Bacchetta and Van Wincoop (2000), Stephens, Huber and Ray (1999), and Caselli (2001).

[259] Reinhart provides information on 5- and 14-point scales after dropping the category entitled "dual market in which parallel data is missing." I report below that the results are not affected by the substitution of one variable for the other.

heteroskedastic robust standard errors.[260] The results are reported in Table 5.1. The results provide preliminary support for my theory. The statistically significant, negative coefficient on the interaction term suggests that states have "smaller" governments when their markets are predominately export-dependent and they are members of rigid PTAs.

To clarify these results I graph the substantive effects in Figure 5.1. The graph illustrates the diverging effects that an increase in the average rigidity of each state's PTAs has on the amount their government spends as a percentage of GDP. As predicted, spending increases in AVERAGE RIGIDITY for predominately import-competing markets. The predicted value of TOTAL SPENDING at an average rigidity of 0 for an import-competing market (NETX set to -0.2) is 0.13 [0.07, 0.20]. At an average rigidity score of 25, the predicted spending is 0.49 [0.38, 0.59].

The reverse is true for export-dependent markets. Increasing AVERAGE RIGIDITY when NETX set to 0.8 causes a sharp decline in total government expenditures. The effect is significant over design scores ranging from 0 to 15. The prediction for an export-dependent market with perfectly flexible PTAs is 0.72 [0.54, 0.89]. As AVERAGE RIGIDITY increases to 15, this number falls precipitously to 0.14 [0.04, 0.25].

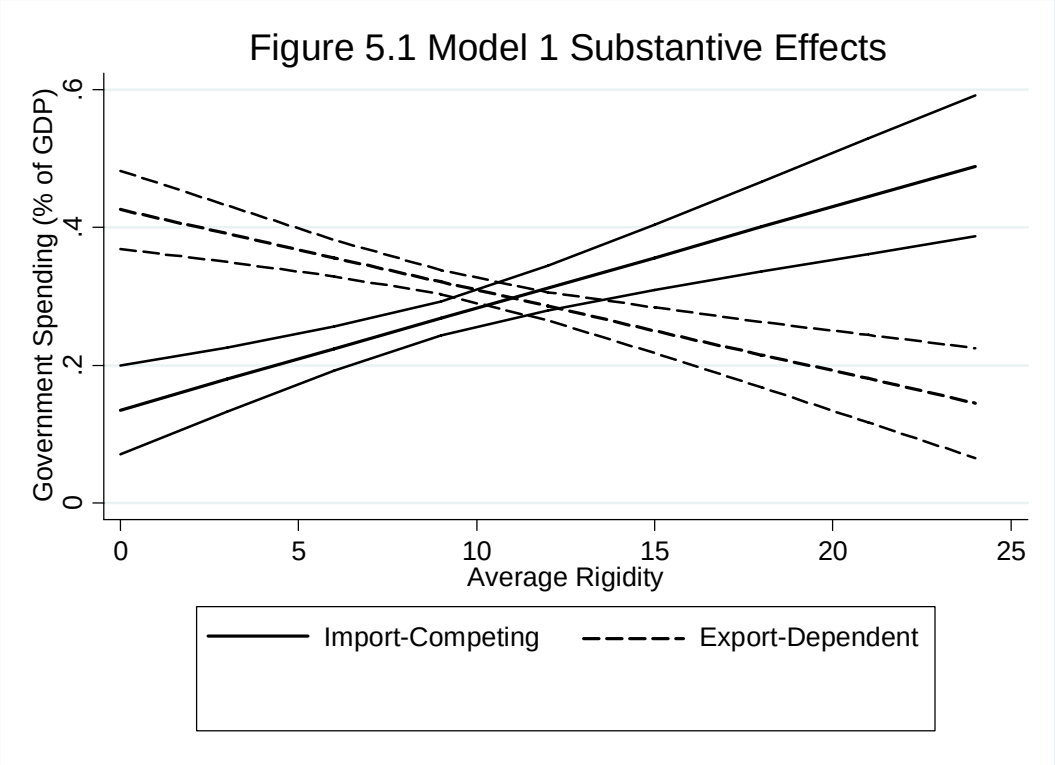
For both types of markets the effects of PTA design are hugely significant. Import-competing economies spend much more on social insurance when they are members of rigid PTAs—their least preferred outcome. Export-dependent markets, on the contrary, which benefit from rigid PTAs, spend dramatically less under conditions of rigidity. The results suggest that demand for compensation increases in the distance between a market's preferences and the design of their PTA commitments.

[260] The results are the same without this correction.

Table 5.1 Baseline Results

	Model 1	*Model 2*	*Model 3*
Variables	TOTAL SPENDING	WELFARE	WELFARE
$NETX_i$	0.581***	0.174***	___
	(0.118)	(0.036)	
AVERAGE RIGIDITY	0.005***	-0.000	-0.003***
	(0.001)	(0.001)	(0.001)
NETX X RIGIDITY	-0.052***	-0.010**	___
	(0.012)	(0.004)	
$EXPORTS_i$	___	___	0.139***
			(0.028)
$IMPORTS_i$	___	___	-0.101**
			(0.049)
EXPORTS X RIGIDITY	___	___	-0.010**
			(0.004)
IMPORTS X RIGIDITY	___	___	0.023***
			(0.006)
$DEMOCRACY_i$	-0.005	0.028***	0.023***
	(0.009)	(0.004)	(0.004)
$INCOME_i$	0.040***	0.032***	0.035***
	(0.003)	(0.002)	(0.002)
DEPENDENTS	-0.022***	-0.004***	-0.003***
	(0.001)	(0.001)	(0.001)
EXCHANGE RATE	-0.023***	-0.012***	-0.008***
	(0.003)	(0.002)	(0.002)
DEFICIT	0.002***	0.001***	0.001***
	(0.001)	(0.000)	(0.000)
CONSERVATIVE	-0.022**	-0.012***	-0.013***
	(0.004)	(0.002)	(0.002)
Constant	0.113*	0.045	-0.032
	(0.063)	(0.033)	(0.037)
N	1063	951	1063
R-Squared	0.36	0.545	0.36

*Notes: *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests*



5.5.2 Models 2 and 3

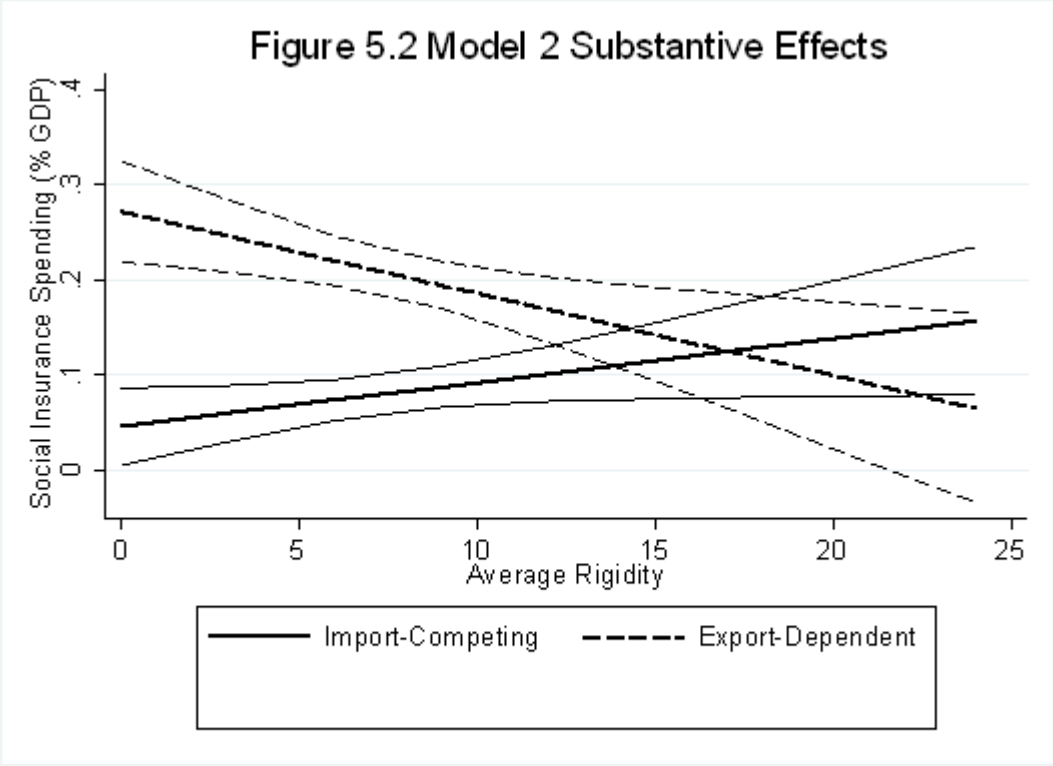
Model 1 provides preliminary support for my hypothesis. I now test whether those results are an artifact of using aggregated dependent and independent variables. Research shows that total government expenditures are an imperfect measure of the welfare state. Total expenditures mask the amount of money dedicated specifically to social insurance programs. In Models 2 and 3 I employ an alternative dependent variable, WELFARE SPENDING, which measures that portion of TOTAL SPENDING directed toward social security and welfare. I test the effect of sector composition and PTA design on social insurance expenditures using both the combined sectors variable NETX (Model 2) and separate indicators (Model 3). The results for Models 2 and 3 are provided in Table 5.1.

Looking briefly and the control variables, the estimates show that democracies spend more on social insurance all else equal. This result implies that their responsiveness to public demand outweighs any negative correlation democracies may have with market risk.[261] The results also show that richer nations spend more on social insurance and that right-leaning legislatures spend less. Both findings match the existing literature. There are two more curious results, however. First, spending *decreases* in the size of the dependent population. Second, spending decreases in the flexibility of the exchange rate. This latter result is surprising given that fixed exchange rate regimes are traditionally thought to protect the market against global economic risk more effectively than floating regimes.[262]

Moving on to the explanatory variables, the results of both specifications are consistent with the Model 1 estimates. In Model 2, NETX X RIGIDITY is again statistically significant and negatively signed. The substantive effects are plotted in Figure 5.2. Import-competing markets spend significantly more on social insurance as the average rigidity of their PTA commitments increases. Moving across the entire range of AVERAGE RIGIDITY results in an increase from 0.05 [0.01, 0.08] to 0.15 [0.08, 0.23], or a three-fold increase in the amount of resources dedicated to social insurance. The same change results in a sharp decline in spending for an export-dependent market. States with predominately export-dependent economies spend 0.27 [0.22, 0.32] of GDP on social insurance when they are members of perfectly flexible PTAs. This number drops to 0.09 [0.01, 0.17] as AVERAGE RIGIDITY approaches its maximum. The result is the

[261] A more detailed analysis would be to be done to tease apart this relationship.

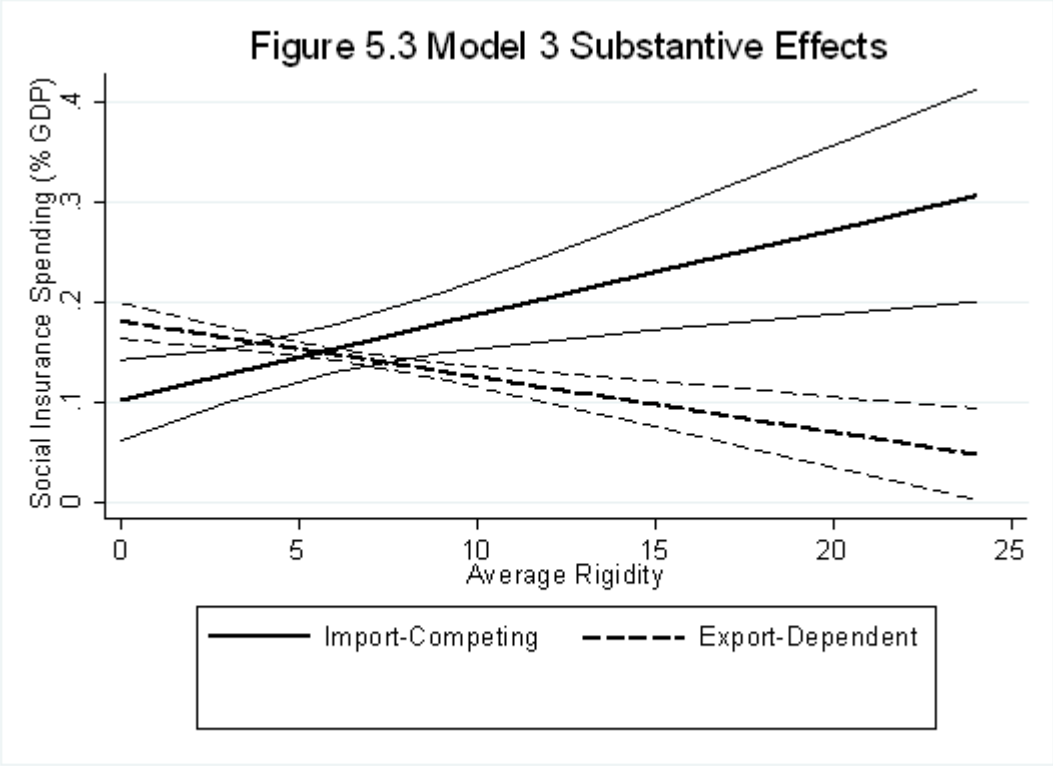
[262] Indeed, there appears to be a negative relationship generally between the rigidity of a state's PTA commitments and the rigidity of it nominal exchange rate regime. This correlation may imply that these two policy outcomes are partial substitutes for one another. I revisit this idea as one possibility for future research in the concluding chapter of this project.



mirror image of import-competing markets' behavior: a three-fold *decrease* in the amount of resources spent offsetting the adverse consequences of market risk.

In Model 3 I use disaggregated sectors measures. I include the component parts of NETX—EXPORTS and IMPORTS—along with their respective interactions. The results are consistent with the previous two specifications. Figure 5.3 displays the substantive effects. An increase in rigidity again results in the tripling of social insurance expenditures for an import-competing market, from 0.10 [0.06, 0.14] to 0.31 [0.20, 0.41]. For export-dependent markets, increasing the average rigidity of their PTA commitments results in a decrease in spending from 0.18 [0.16, 0.20] to 0.05 [0.00, 0.10].

Models 2 and 3 show a clear relationship between sector composition, PTA design, and spending on social insurance—not just total government expenditures. These results offer clear support for my hypothesis. States spend less on social insurance when their



PTA commitments match the preferences of the domestic market. Import-competitors, which prefer flexible PTAs, ought to demand more domestic compensation under conditions of PTA rigidity. Export-dependent firms, on the contrary, prefer rigid agreements and should therefore have less need for domestic policy support when their government is a member of rigid PTAs. The findings accord with these predictions. There is a strong positive relationship between the average rigidity of a state's PTAs for import-competing markets and a strong negative relationship for export-dependent markets.

5.5.3 Robustness Checks

I test the durability of my results to ensure that my findings are not an artifact of model estimation or specification. Note that the three baseline specifications all employed OLS

estimators with robust standard errors. However, we know that pooled panel data commonly exhibits traits that may bias the results if left unaccounted for. For example, there may be non-constant error variance across the panels in the dataset. In Models 4 and 5, I rerun my analysis of social insurance spending using panel corrected standard errors (PCSEs).

The results are reported in Table 5.2. Model 4 uses the baseline specification with NETX while Model 5 uses the disaggregated sectors variables. Correcting for panel hetereoskedasticity does not change the core results. It is worth noting, however, that PCSEs are an imperfect fix. In particular, they are designed primarily for data that has a comparatively small number of panels (*N*) and large number of years (*T*). The cutoff point for the size of *T* commonly employed is 15. The mean number of observations per country in my data is 16, quite close to the lower limit. PCSEs may therefore generate problems for the data as a large number of the samples (roughly half) fall below the recommended threshold.

Omitted variables represent another potential source of bias. It is impossible to control for every confounding variable. As a result, there is good reason to assume that unique features of each country are correlated with my regressors. To ensure that unobserved unit effects are not driving my results I rerun Models 2 and 3 with country fixed effects. The results are reported in Table 5.3 (see Models 6 and 7). No significant changes occur when adding fixed effects.

Using country fixed effects, however, assumes that the unobserved process is time-invariant. I also run the baseline models with country and year dummies to correct for

Table 5.2 Robustness Checks (Panel Corrected Standard Errors)

	Model 4	*Model 5*
Variables	WELFARE	WELFARE
$NETX_i$	0.174***	___
	(0.022)	
AVERAGE RIGIDITY	-0.000	-0.003***
	(0.000)	(0.001)
NETX X RIGIDITY	-0.010***	___
	(0.003)	
$EXPORTS_i$	___	0.125***
		(0.025)
$IMPORTS_i$	___	-0.076*
		(0.040)
EXPORTS X RIGIDITY	___	-0.004***
		(0.003)
IMPORTS X RIGIDITY	___	0.023***
		(0.006)
$DEMOCRACY_i$	0.028***	0.003***
	(0.005)	(0.000)
$INCOME_i$	0.032***	0.034***
	(0.001)	(0.001)
DEPENDENTS	-0.004***	-0.003***
	(0.000)	(0.000)
EXCHANGE RATE	-0.012***	-0.010***
	(0.003)	(0.003)
DEFICIT	0.001***	0.001***
	(0.000)	(0.000)
CONSERVATIVE	-0.012***	-0.012***
	(0.002)	(0.002)
Constant	0.045**	-0.032
	(0.020)	(0.022)
N	951	900
R-Squared	0.545	0.57

*Notes: *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests*

Table 5.3 Robustness Checks (Fixed Effects)

	Model 6	*Model 7*
Variables	WELFARE	WELFARE
$NETX_i$	-0.084**	___
	(0.037)	
AVERAGE RIGIDITY	0.001*	0.000
	(0.000)	(0.001)
NETX X RIGIDITY	-0.010***	___
	(0.004)	
$EXPORTS_i$	___	-0.082**
		(0.032)
$IMPORTS_i$	___	0.129***
		(0.039)
EXPORTS X RIGIDITY	___	-0.011***
		(0.004)
IMPORTS X RIGIDITY	___	0.016***
		(0.006)
$DEMOCRACY_i$	0.002	0.001
	(0.005)	(0.004)
$INCOME_i$	0.009	-0.003
	(0.007)	(0.008)
DEPENDENTS	-0.004***	-0.003***
	(0.001)	(0.001)
EXCHANGE RATE	0.002*	0.002**
	(0.001)	(0.001)
DEFICIT	-0.001	-0.001
	(0.000)	(0.000)
CONSERVATIVE	0.002	0.001
	(0.001)	(0.001)
Constant	0.209	0.286***
	(0.082)	(0.085)
N	951	951
R-Squared	0.173	0.182

*Notes: *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests*

omitted variable bias both across countries and over time.[263] Even with year dummy variables included on the right hand side, which significantly reduce my degrees of freedom, the core results hold up. In light of this encouraging result, I conclude that my findings are not an artifact of my estimation technique. Rather, the results are robust to common approaches for correcting the problems inherent in pooled panel analyses.

Before concluding I conduct two additional tests. First, I stratify the sample by level of development. One of the main lessons of the existing research on social insurance expenditures is that the developing world faces significant disadvantages. Resource scarcity severely limits the developing world's ability to provide comprehensive social insurance. There is also strong reason to expect that PTAs may not be sufficient to protect these states from risk, and that international agreements are therefore not a substitutable good for developing countries. In chapter 4 I show that the likelihood that states secure favorable design outcomes increases in market power. However, developing economies by their nature enjoy market power over very few if any trade partners. These states are therefore the *least* likely to enter into PTAs that match the preferences of their domestic market.

I split the sample at the mean of INCOME and rerun my analyses. I use the disaggregated sectors measures EXPORTS and IMPORTS for ease of interpreting whether the effects of PTA design are unique to one sector. Model 8 uses the developed world as its sample (INCOME greater than the mean of 8.4 according to my data). This restriction limits the sample to 39 countries. The results, which are reported in Table 5.4, show no change from the baseline. Model 9 uses the developing world. This analysis includes 52 countries. There is one significant change to the results for the developing

[263] See Garrett and Mitchell (2001) for a lengthy substantive justification for this approach.

Table 5.4 Additional Robustness Checks

	Model 8	*Model 9*	*Model 10*
Variables	WELFARE	WELFARE	WELFARE
AVERAGE RIGIDITY	-0.002	-0.004***	-0.003***
	(0.001)	(0.001)	(0.001)
$EXPORTS_i$	0.294***	0.073***	0.116***
	(0.077)	(0.027)	(0.028)
$IMPORTS_i$	-0.344**	-0.053	-0.025
	(0.167)	(0.042)	(0.047)
EXPORTS X RIGIDITY	-0.029***	0.000	-0.007*
	(0.009)	(0.003)	(0.004)
IMPORTS X RIGIDITY	0.058***	0.016***	0.023***
	(0.020)	(0.005)	(0.005)
$DEMOCRACY_i$	0.073***	0.006	0.016***
	(0.015)	(0.005)	(0.005)
$INCOME_i$	0.040***	0.023***	0.029***
	(0.006)	(0.003)	(0.002)
DEPENDENTS	-0.002**	-0.003***	-0.002***
	(0.001)	(0.001)	(0.000)
EXCHANGE RATE	-0.010***	-0.002	-0.000
	(0.003)	(0.002)	(0.002)
DEFICIT	-0.374***	0.000	0.000
	(0.060)	(0.000)	(0.000)
CONSERVATIVE	-0.010***	-0.016	-0.009***
	(0.003)	(0.020)	(0.002)
Constant	-0.164**	0.084**	-0.061*
	(0.074)	(0.041)	(0.035)
N	487	464	778
R-Squared	0.395	0.461	0.485

*Notes: *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests*

world sample. The effects of PTA design are perceptible only for the import-competing sector. Import-competing markets in the developing world spend significantly more on

social insurance when they are members of rigid PTAs (increasing from 0.11 [0.08, 0.15] to 0.20 [0.12, 0.28]).

As a second test I run a model eliminating members of the European Union. EU members may complicate the analysis in a number of ways. To begin with, they negotiate their PTAs as group even though their economies are diverse. As a result, there is a highly likelihood that at least some members of the EU lose from any individual PTA agreement. Moreover, there are constraints upon fiscal policy imposed by the institution's governing bodies. States are limiting by EU regulations to the size of the deficit they are permitted to run. This gives EU members comparatively less leeway in their spending initiatives of all types, including social insurance. Model 12 is therefore run on non-EU member countries (see Table 5.4). Omitting EU members does not affect the results.[264]

5.6 *Summary and Conclusions*

In this chapter I bring together to previously unrelated strands of research. I argue that international markets provide built-in mechanisms for reducing global economic risk. Through PTA membership, states can actively shape the amount of risk to which their markets are exposed in the future. This theory helps answer a question that has been the subject of lengthy debate: What explains cross-national variation in the provision of social insurance. Recent work argues that firms have diverging preferences over social insurance policy. Specifically, higher risk industries have greater demand for

[264] In unreported robustness tests I find that the results are also robust to the inclusion of measures of GPD growth, veto players, and external debt. The results are also consistent when using alternative measures of regime type and the ideological leanings of the central government, two concepts over which there is lengthy debate.

compensation. I expand upon this work by arguing that PTAs, to the extent they reduce the amount of risk firms face, attenuate domestic demand for social insurance.

I test the validity of my hypothesis using a variety of approaches. The core result holds up across all model specifications and estimation techniques. Specifically, when the design of a state's PTA commitments matches the preferences of the domestic market, states devote fewer resources to the provision of social insurance I interpret this as evidence that PTAs provide a viable alternative to traditional compensation.

The evidence presented here makes several contributions. First, I find that PTA design outcomes matter for policies beyond whether a state liberalizes its market. The effects PTA rules have on firm welfare resonate for domestic policy. Second, and related, these results show that states' arsenals are not limited to social insurance. PTAs provide a forum in which states can be proactive, effectively shaping the amount of risk they are likely to face in the future. Third, the results suggest that developing nations may not be as handcuffed when dealing with risk as previously thought. PTA membership provides a comparatively cheaper way to protect the domestic market from risk and its adverse welfare effects.

My results also raise a number of interesting questions worthy of future research. First, more research has to be done before we can link changes in social insurance spending directly to changes in risk brought about by PTA formation. A more fine-grained analysis of how, exactly, PTAs affect the market, and whether this is correlated with subsequent changes in welfare state policy, is required before the case can be closed. Second, a logical extension of my research is to further disaggregate my dependent

variables. Firms are likely to have diverging preferences over specific policies depending on where they are situated in the marketplace.

6

Conclusion

In this project I seek to explain variation in the design of international trade treaties. Contractual design is an issue that has recently received a great deal of attention from political scientists and, as a discipline, we are only now beginning to understand the implications that different forms of agreements have for future policy choices. However, emerging research on court decisions, environmental regulations, human rights treaties, national security alliances, as well as in a variety of other contexts all demonstrates that design matters. Moreover, it matters for highly salient policy decisions. The rules to which actors commit, be they individuals or states, directly affect the prospects for agreement formation and survival.

With few exceptions, these varied efforts have led to one conclusion: specifically, and perhaps counter-intuitively, building flexibility into contracts induces deeper, long-lasting cooperation. This "flexibility hypothesis" finds its strongest support in the context of trade agreements. Studies show that providing members with an institutionalized system for escape generates three benefits. First, it increases the likelihood that states enter into trade liberalizing agreements. Second, it also increases the likelihood that states sustain their commitments to liberalize over time. Third, it encourages states to make deeper

tariff reductions upon entry into the agreement. These benefits have led some scholars to conclude that, “flexibility promotes cooperation.” However, in spite of these benefits we observe significant variation in the design of trade institutions and, in particular, preferential trade agreements.

While previous work significantly advances our understanding of flexibility’s benefits it cannot explain why agreements exhibit so much variation in their rules. In this project I offer a new explanation of PTA design in which I emphasize the role played by domestic interest groups with conflicting preferences over agreement rules. Existing literature’s focus on state-level incentives leads to the conclusion that flexibility is a “win-win” proposition. States enter into agreements under conditions of uncertainty. Flexibility helps reduce this uncertainty by reassuring members that they can shirk temporarily their contractual obligations without violating the terms of the agreement. I argue, however, that flexibility’s benefits are distributed unevenly across the domestic marketplace. And, as a result, a political tension arises between those who win and those who lose from flexible agreements.

6.1 Core Argument and Contributions

Preferences over agreement design derive from how firms prefer to cope with global economic risk. When a state opens its market it exposed domestic producers to the vicissitudes of the global economy. For import-competitors, opening the market to cheap foreign goods places downward pressure on prices, threatening the survival of domestic firms. The export-dependent sector, which is known to prefer free trade, is similarly vulnerable risk. Volatility in the prices of traded goods creates uncertainty in

international markets, raising the costs of doing business abroad and dampening international trade flows. In light of these adverse effects, both traded sectors have incentives to insulate themselves from risk.

The central insight of this project is that PTAs help protect the interests of domestic producers but only under certain conditions. Specifically, import-competing firms, who resist openness, demand flexibility in their governments' international commitments. Flexible rules provide states the opportunity to protect their domestic producers when international competitive pressures threaten firm survival. Unfortunately, the benefits import-competitors accrue from flexibility come at the expense of the export-dependent sector, which demands rules that heavily regulate, or entirely prohibit, the use of escape clauses.

The preferences of the two traded sectors of the domestic market therefore stand in diametric opposition to one another. I argue that state preferences derive from the relative sizes of these two competing interest groups. States with predominately import-competing (export-dependent) markets prefer more flexible (rigid) PTA rules. However, while this theory specifies where preferences come from it does not predict whether a country will be able to secure its ideal terms. PTA outcomes are the result of a bargaining process that takes places between states that may have very different design preferences. I argue that each state's bargaining power increases in its market power. I therefore add a caveat to my core prediction: States with predominately import-competing (export-dependent) markets enter into more flexible (rigid) agreements when they are sufficiently powerful to influence PTA negotiations.

In Chapter 4 I find robust evidence in favor of this proposition. The sector composition of the domestic market is a powerful predictor of PTA design outcomes for those states that enjoy market power over their trade partners. These results draw upon new and detailed data on the individual legal provisions contained in over 300 PTA texts since 1960. Using a wide variety of approaches I find that import-competing states enter into comparatively more flexible agreements than states whose markets are predominately export-dependent.

These findings have a number of important implications. First, I offer one of the first studies that focuses on domestic interest groups and that explores how these groups bring their preferences to bear on the formation of interstate contracts. I relax the implicit assumption in most of the previous rational design work that flexibility provisions are mutually beneficial. I theorize that domestic interest groups, and the states that represent them, have very different preferences over design. I then demonstrate empirically that these interests are powerful determinants of design outcomes. The evidence shows that domestic politics are inextricably linked to the formation of international economic institutions.

A clear policy implication follows from these findings. Agreements that closely match the sector composition of the domestic market are more likely to promote deeper and longer-lasting commitments. The difficulty is that no markets are composed entirely of one sector and therefore PTA membership will always generate “winners” as well as “losers.” Indeed, the large number of PTAs that are neither wholly rigid nor entirely flexible signify the need to compromise during trade agreement negotiations.

Second, and related, I apply one of the dominant models of trade preferences to a new domain and, in so doing, generate novel predictions about the levels of liberalization that firms are willing to accept. PTA design outcomes directly affect firm welfare. As a result, domestic producers have preferences not just over the amount of trade concessions to which their governments commit, but also the rules of the agreement. The traditional sectors model teaches us that import-competing firms oppose liberalization while export-dependent firms support it. However, liberalization is not the only issue on the table during PTA negotiations. Firms tradeoff between their ideal levels of openness and their ideal PTA rules. Thus, we observe firms accepting suboptimal levels of one in exchange for more favorable levels of the other. Given that PTA rules are fundamentally about insurance against the future, this tradeoff reveals that concerns over market risk, not just the material gains accrued from free trade, shape the politics of trade and globalization.

Third, I develop and employ a new dataset on PTA design in this project. The data are based on a detailed reading of 330 PTAs since 1960. I record the individual legal provisions relating to the flexibility system included in each PTA. From this data I create unique measures of the agreement design. The empirical work done in this project represents only one of the many possible applications of this data. Below I highlight some avenues of additional research for which this database is well suited.

6.2 Implications for Social Insurance

The theory and findings provided in this project show that contractual design outcomes matter significantly for trade policy. Design outcomes are a key determinant of which firms benefit from their government's membership in a given agreement. However, the

implications of PTA design reach beyond the promotion of interstate economic cooperation. Design also directly impacts domestic policy choices, including those relating to the provision of social insurance.

This project's emphasis on the risk-reducing benefits of PTAs represents a departure from previous work on states cope with fickle global markets. Existing work focuses exclusively on domestic policy mechanisms. Specifically, the compensation hypothesis posits that governments can offset the costs of economic openness by erecting social safety nets—that is, social insurance programs designed to stabilize and/or supplement the incomes of those adversely affected by market risk. The compensation hypothesis has been heavily criticized on a number of theoretical and empirical grounds. However, the debate largely overlooks the possibility that there are alternative strategies for reducing risk that state can employ. One of these alternatives is the formation of PTAs.

PTAs have recently been shown to significantly reduce the amount of risk that member states face. Given that risk is thought to be one principal source of demand for social insurance, PTA members ought to devote fewer resources to social insurance than nonmembers. Of course, this effect should only be observed when PTAs are expected to have the most dramatic effects on risk—that is, when the design of a state's PTA commitments match the preferences of the domestic market. Through a series of large-N analyses using a variety of model specifications and estimation techniques I find that states do indeed spending less on social insurance when they are members of PTAs.

These findings contribute in unique ways to the literatures on coping with market risk and the determinants of welfare state forms. First, they show that international commitments have clear implications for domestic policy. The rules to which states

commit in the global economy directly affect demand for government intervention in the marketplace, particularly in the form of social safety nets. As a result, it may very well be that deeper engagement with global markets, through PTA membership, actually reduces the demand for social insurance and protection from risk generally.

Second, these findings suggest that states are not entirely handcuffed by global markets. In recent decades a lot has been made of how markets have eroded the role of the nation state. Indeed, most of the literature on the compensation hypothesis, and especially the critiques of that theory, assume implicitly that states can only respond to market forces. In fact, I argue that states can shape those forces directly through the formation of trade institutions that have tangible effects on the likelihood that shocks occur. Thus, states are not limited in their strategies for coping with risk to ex post fixes. Rather, states can be proactive.

The availability of a viable alternative to social insurance has a number of policy implications. To being with, it suggests that states can use social insurance and formal economic commitments in concert with one another to combat risk. More importantly, it may mean that states facing severe resource constraints, such as those developing states so often emphasized by the critics of the compensation hypothesis, have greater opportunity to protect their markets than previously thought. Studies show conclusively that developing states face greater difficulty providing protection from market risk. However, PTAs offer a comparatively cheaper avenue for support that may provide at least partial relief to markets unable to provide comprehensive social insurance.

6.3 Limits of the Project and Future Research

While the findings offer strong support for the propositions advanced in this project there are good reasons to remain cautious. First, I do not measure the tradeoff between the levels of trade liberalization and levels of flexibility directly. Currently, we lack the data necessary for such a study, which requires detailed data on the good-specific nominal tariff reductions made under each PTA. With that data in hand it would be possible to precisely measure how liberalizing each agreement is, for which proxies are traditionally used. Moreover, it would be possible to explore the relationship between tariff reductions and rules. Only with that data could we conduct a more detailed analysis of the tradeoffs made by industries in specific sectors.

Additionally, my theory offers an essentially pluralist account. The larger sector of the market is assumed to influence state preferences more significantly. However, in practice we know that a wide variety of factors influence how preferences are translated into policy. Domestic political institutions, the ideology of the dominant government party, and the relative concentration and level of organization of different industries should all affect whether a firm lobbies successfully for its ideal PTA terms. While I find favorable evidence even when controlling for these alternative explanations, more detailed work must be done before we can fully understand when and where firms are more or less likely to win favorable PTA rules.

There are also some important limits to the findings on the link between PTAs and social insurance provision. PTAs are not a one-to-one substitute for social insurance and we must be cautious in treating them as a solution to the problems state experience in global markets. For one thing, it is difficult for states to secure their ideal terms. The evidence provided here shows that market power is an important predictor of whether a

state successfully bargains for its market's ideal terms. And, while it is true that in bilateral relationships even comparatively small states can have market power over their trade partners, the least developed markets will lack the leverage needed to get the best possible deals.

Moreover, the same bureaucratic resource shortages that limit a country's ability to effectively administer the welfare state will also limit its ability to take full advantage of PTAs. For example, it has been shown that bureaucratic capacity is a strong predictor of whether a state adopts and enforces the GATT/WTO provisions relating to anti-dumping. We would expect the same to be true around the globe across PTA agreements. States with nominal access to policy mechanisms may be ill equipped to use those mechanisms to protect their interests. As a result, states unable to use social insurance may find it difficult to harness the potential of PTAs.

None of these issues should prove fatal to this project's core insights: that domestic interest groups are a crucial and undeniable influence in the design of interstate contracts and that these contracts have policy implications that reach far beyond the absolute levels of tariff reductions to which states commit. If anything, these issues highlight the fact that there remain a number of areas worthy of future research. For example, exactly how PTA design outcomes affect firm welfare remains an open question. This project takes for granted the proposition that PTA rules have tangible material effects on firms. However, I do know test directly the size of these effects or how they may vary across different institutional contexts. Additional work needs to be done in order to identify precisely how PTAs affect firms. For example, are prices higher for important-competing firms' goods under flexible agreements? Do export-dependent firms experience less price volatility in

the goods they trade with markets under rigid agreements? My theory generates clear predictions about these relationships without testing them. Using this new database on agreement design as well as good-specific price data it would be possible to explore these relationships more fully.

Another area for further research is into the domestic politics of lobbying over design. As mention above, I assume that the larger sector wins—that is, the larger traded sector of the market will have its interests represented by its government at the PTA bargaining table. However, we know that things are not this simple. A more detailed study of lobbying efforts at the firm level will contribute a great deal to our understanding of how preferences are translated into policy. In particular, it would be interesting to see how firm preferences are conditioned or interact with the ideologies of particular parties and legislators, the form of the government, the relative concentration of industries, and a number of other features of the domestic political context that we think ought to matter.

There is also more work to be done before the connection between PTAs and domestic compensation is made clear. Most importantly, recent work on the compensation hypothesis has argued for the use of more fine-grained, policy-specific measures of the social insurance outcomes. These efforts are supported by a number of studies that show that preferences over redistributive policies and social investments are policy-specific, not universal. In the context of industry preferences, new research demonstrates that firms are not wholly averse to government intervention in the marketplace as previously thought. Instead, industries will support policies that directly benefit their workers and, by extension, their bottom lines. Unfortunately, this availability of this data continues to be limited. In the future, however, it will important to (1)

theorize in greater detail about which policies in particular import-competing and export-dependent firms support and to (2) subject these claims to empirical testing using measures of specific policy outcomes.

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