Hubs of Governance: Path-Dependence and Higher-order Effects of PTA formation

In this paper, we focus on the presence of path dependence in key institutions of the international trade regime, induced by differences in commitments to liberalize trade services as encoded in preferential trade agreements (PTAs). We distinguish between a positive-list and a negative-list approach to the scheduling of liberalization commitments, and analyze PTAs signed by countries of the Asia-Pacific. We derive hypotheses that capture the "history" effect of choosing either a positive-list or negative-list approach. In doing so, we examine whether particular "modes of governance" diffuse through the growing network of trade agreement through the adoption of rules by third parties in their own PTAs. The empirical analysis tests them using simulation-based dynamic network analysis methods. We find evidence of strong path dependence in the choice of liberalization approach, affecting the evolution of PTA networks in the Asia-Pacific and the diffusion of services liberalization in general. Such path dependence has long-term consequences for the institutional features of the international trade regime.

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Introduction

History matters in politics, economics, and international affairs, historical institutionalists argue.[1] Yet the bulk of recent research in IR and IPE focuses on comparative statics, with little more than occasional reference to how the past conditions future choices. Landmark papers on the evolution of international institutions either simply de-trend variables[2] or explicitly include terms to control for the evolution of the institutional landscape.[3] On the other hand, when historical-institutionalist scholars refer to path dependence, they usually do so within a paradigm that does not offer statistically testable predictions.[4] Although constructivists have emphasized the importance of fundamental institutions and practices,[5] research in a rationalist tradition has generally abstracted from such notions in the quest for general explanations.[6] In this paper, we suggest that this overlooks conspicuous patterns of institutional choice that we cannot explain without reference to path dependence.

Our study provides evidence of path dependence in the formation of international institutions, focusing on one aspect of the international trade regime: agreements covering services trade and investment, i.e. agreements under Art. V of the General Agreement on Trade in Services (GATS). These agreements take two different and mutually exclusive forms. Countries can liberalize services liberalization using a "positive-list" approach, whereby they list only the specific industries in which they want to allow foreign access. The negotiating partners then stipulate what "commitments" to services liberalization are undertaken. Only those industries that are "bound" in this way will be liberalized, everything else is left at the discretion of the country. This is the approach taken in the GATS. By contrast, with a "negative-list" approach, all services sectors are liberalized, except for the restrictions explicitly mentioned. Among preferential trade agreements (PTAs), the North American Free Trade Agreement (NAFTA) is a prominent example of a negative-list approach. The *choice of liberalization approach* is therefore fundamentally important and must precede any analysis of the *extent* of services liberalization.

Our analysis shows that the initial choices countries make exert a strong influence on the future trade agreements they negotiate. In other words, early choices of institutional design—themselves the result of bargains with other countries—are self-reinforcing, a core feature of path dependence.[7] These choices generate a positive feedback effect in later negotiations: Countries that choose a negative-list approach in their first PTA continue to show a preference for this approach, and the more such agreements they have negotiated, the more attractive they become for other partners. Moreover, we find that a negative-list approach prevails when two countries consider a services PTA and already have negative-list PTAs with a common third party. These later institutional choices, we argue, are strongly influenced by the initial

[1] Greif 1992; Jupille and Caporaso 1999; March and Olsen 1998; Pierson 2000.
[2] Büthe and Milner 2008.
[3] Mansfield and Reinhardt 2003.
[4] Bennett and Elman 2006 discuss how path dependence can be analyzed in a qualitative case study research design.
[5] Reus-Smit 2003.
[6] Koremenos, Lipson, and Snidal 2004.
[7] Pierson 2000; North 1990; Thelen 1999.

informational costs incurred in negotiating that first negative-list agreement. Most importantly, countries choosing negative-list PTAs form a dense network of trade agreements, while countries forming positive-list agreements are much more loosely connected. The path-dependence of individual choices thus has consequences at the international level that affect the whole trade regime in services.

Our paper makes several original theoretical and empirical contributions. First, we use a definition of strong path dependence as state-dependent, and predict and find evidence that outcomes depend on past choices and the order in which they occurred.[8] Because these predictions are difficult to test with conventional statistical approaches, we use a two-mode network analysis for our quantitative tests—in itself (to our knowledge) a novelty in IR. We extend, both theoretically and empirically, the analytical framework of path dependence to international trade agreements, where governments must repeatedly make institutional choices in forming treaty-level agreements with other governments. This study thus differs from the majority of scholarship in path dependence and institutional development, which largely has focused on within-institutional evolution.

Second, we offer an explanation for fundamental choices states make when they negotiate trade agreements in services that precede any consideration of the extent of liberalization. Once two states have decided to negotiate a PTA, they have to agree on the fundamental choice of the *approach* to liberalization, before they negotiate just how much to liberalize. This is logically prior to any analysis of the variation in the reduction of trade barriers, but has not been addressed in the literature so far. Our explanation centers on the role of "history," or institutional precedents that persist, especially for the negative-list approach.

Third, we contribute to the literature on policy diffusion by analyzing how and why countries opt for specific policies. However unlike in landmark studies of such diffusion,[9] our outcome of interest is an international agreement between sovereign states, and thus the joint decision of two countries. Diffusion occurs where both states opt for a negative-list scheduling of commitments because they have already done so in the past, when they initially committed resources to cataloguing the details of national laws and regulations in the services sector. Our approach and findings thus speak to a growing set of studies arguing that international agreements are interdependent.[10]

Finally, we show that the substantively different approach to services liberalization chosen by the United States is promoted by closely associated states, but note that others—in particular, China—do not subscribe to it. This "higher-order effect" not previously discussed in the literature implies that countries self-select into different trade agreement networks in services, one of which includes the US, the other China.

The paper is organized as follows. In the next section, we provide a brief overview of the history of services liberalization under the auspices of the WTO and the insights of present scholarship on services commitments in PTAs. We then develop a theoretical framework to explain the choice of liberalization approach and hypotheses

[8] Page 2006.
[9] Dobbin, Simmons, and Garrett 2007; Elkins and Simmons 2005; Gilardi 2010.
[10] Baccini and Dür 2012; Egger and Larch 2008; Baier, Bergstrand, and Mariutto 2011.

regarding the choice of modalities in services liberalization through PTAs. We motivate the empirical analysis with a visual representation of the "hubs" of governance in services liberalization that have developed in the past two decades, and present the results of the network analysis. In the final section, we offer our conclusions and an outlook on future research.

Patterns of Services Liberalization in PTAs

As the negotiations in the WTO Doha Development Round enter their second decade, it is becoming evident that a comprehensive agreement may be impossible to achieve. Yet while multilateral negotiations appear stalled, trade liberalization in goods and services and the creation of rules for international commerce proceeds apace in the growing number of preferential trade agreements (PTAs). PTAs are by definition agreements that eliminate tariff barriers between members only, and individual agreements often cover very little trade. Yet by creating rules beyond the domains covered by existing WTO agreements, PTAs are now the principal venue to negotiate regulatory changes "behind the border." More and more PTAs do not just reduce tariffs or common non-tariff barriers for goods, but require changes of regulations governing market access in services, investment, and intellectual property rights.

The most important among these in economic terms is the liberalization of services trade. The economic significance of international trade in services is hard to overstate. WTO figures indicate that services exports amounted to US$3,350bn in 2009, or a fifth of global commercial exports.[11] Since the early 2000s, services investments have comprised the bulk of foreign direct investment (FDI) stock.[12] As services liberalization is a relatively recent development compared to the reduction of tariffs, the unfulfilled economic potential is even greater.

WTO membership also entails signing up to the principal multilateral regime for services, the General Agreement on Trade in Services (GATS). In the absence of progress in multilateral negotiations, however, countries are under no obligation to proceed with the opening of their services sectors. What's more, in the GATS, developing countries have generally made only very limited pledges to liberalize trade in services.[13] This contrasts with the steps taken in various preferential trade agreements. The 2011 WTO World Trade Report highlights that some PTAs go well beyond what is committed under the WTO or has been offered in the Doha Round.[14]

In the panoply of preferential trade agreements, service liberalization is addressed in different ways and to different degrees. Although there is an emergent, primarily policy-focused literature on services liberalization in the context of PTAs, there is very little work that seeks to explain the considerable variation in the inclusion of rules beyond trade in goods in PTAs. In particular, to our knowledge there is no study that offers an explanation for why countries choose one of two fundamentally different *modi operandi*—the "positive-list" or the "negative-list" approach to services liberalization.

[11] World Trade Organization 2010.
[12] UNCTAD 2004.
[13] Mattoo and Low 2000; Sauvé 2000; Hoekman and Mattoo 2000.
[14] World Trade Organization 2011.

Services liberalization only came onto the agenda of trade negotiations in the 1980s, when the US was instrumental in its inclusion in the Uruguay Round of the GATT, following intense lobbying[15] and a drawn-out process of identifying and formulating trade policy positions on the new issue.[16] The negotiations in the Round culminated in the creation of the WTO, and the GATS became a counterpart to the existing and updated GATT, with participation (although not necessarily actual liberalization) a prerequisite for WTO membership. As a complement to GATT Article XXIV that allows for the formation of "regional trade agreements" to coexist with multilateral obligations, the GATS includes Article V (Economic Integration), which permits "agreement[s] liberalizing trade in services between or among the parties to such an agreement." As a result, PTAs with services agreements are conventionally called "economic integration agreements" (EIAs).

The legal language and structure of the GATS have exerted considerable influence on PTAs in services. In GATS parlance, services are divided into four categories, or "modes" of provision. These are mode 1—cross-border supply, mode 2—consumption abroad, mode 3—commercial presence, or effectively foreign direct investment, and mode 4—presence of natural persons to supply a service. All GATS members are required to offer most-favored-nation treatment (MFN), or treatment no worse than accorded to any other WTO partner, although some have taken out "exceptions" to this rule for individual sectors. More importantly, they should in principle provide national treatment (NT), or treatment comparable to their own suppliers. Yet NT only applies to services industries they choose to liberalize. Countries list their "commitments," stipulate the time frame for the elimination of measures restricting foreign suppliers, and mention which modes in which services industries remain "unbound," i.e. where no commitments are undertaken. Services not explicitly listed are presumed not liberalized, and for unbound services, countries can regulate foreign access however they choose on the basis of purely domestic laws and regulations. This positive-list approach is also used in many PTAs that are notified to the WTO under GATS Article V. Often the language closely resembles that of the GATS itself.[17] Just like in the GATS, PTAs often have separate chapters for financial and telecommunications services that take their cues from the respective sectoral agreements in the WTO.[18]

Concurrently with the negotiation of the GATS, the negative-list approach was first fully codified in NAFTA, largely at the instigation of US domestic interest groups that sought the maximum possible liberalization from Mexico.[19] Following this method, the negotiating partners must first catalogue all existing restrictions—a process that is often administratively challenging for developing countries—and then bargain over which can be maintained, and which will be phased out and over which time period.

[15] Hoekman and Kostecki 2010, 335.
[16] Drake and Nicolaïdis 1992.
[17] The GATS approach is sometimes called "hybrid approach" as in Fink and Molinuevo 2007. In the absence of a national treatment and MFN obligation, it is theoretically possibly to have a "pure positive-list" approach that only lists the specific service and type of market access permitted. However this approach is only used in two PTAs, the Macau S.A.R.-PR China and Hong Kong S.A.R-PR China agreements, which by virtue of their status as specially administered Chinese regions are not comparable with countries that negotiate their trade policy independently.
[18] Hoekman and Kostecki 2010, 347–350.
[19] Cameron and Tomlin 2000, 42–43. The Australia-New Zealand Closer Economic Relations Trade Agreement (ANZCERTA 1983) was the first to use the negative-list approach, but provisions covered cross-border trade in services only and lacked an investment chapter. See Mattoo and Sauvé 2011.

Because the existing restrictions are made transparent, negative lists have a built-in tendency to yield more liberalization. Once the PTA has been ratified, new restrictions on services trade cannot be legally introduced without negotiations with the PTA partners to offer compensation. Moreover, services that are newly developed or become tradable because of technological advancements are generally not subject to restrictions, but may be so under a positive-list approach.

While it is in principle possible to achieve the same degree of liberalization with either approach, in practice negative lists are much more demanding: All restrictions on foreign market entry that a country wishes to claim as exemptions from liberalization of its services market have to be made explicit, and are therefore put on the table in the negotiations.

In this paper, we focus on PTAs in the Asia-Pacific region, i.e. agreements involving countries in East and Southeast Asia, Oceania, and the Pacific littoral states of the Americas. In this subset, we observe conspicuous patterns and changes over time. In the early years of our sample period, positive-list agreements clearly predominate, but the Americas see a rapid rise in negative-list PTAs. Over time, negative-list PTAs become more common in Asia, with nearly all agreements signed since 2005 of this type, as are most trans-Pacific agreements. To account for these patterns, we employ network analysis. Given the temporal pattern in the evolution of either the positive or negative-list approach to services liberalization, we are particularly interested in the role of institutional history, that is, whether the choice of one scheduling approach tends to prevail over time in subsequent agreements.

The existing literature on PTA formation offers limited guidance, especially as regards the question of the choice of modalities—positive or negative-list—in services liberalization. As is well known, an extensive literature exists on the compatibility of PTAs with the existing multilateral trade regime.[20] Much less scholarship has accumulated, however, on the workings of services liberalization through PTAs or the political economy of services liberalization more broadly,[21] in spite of the growing importance of services trade. The PTA literature has largely focused on trade in goods, and trade in services is sufficiently different as to warrant a distinct theoretical framework. Trade in services involves close geographical proximity between supplier and consumer, and discrimination (as well as preference) concerns domestic regulations and restrictions that govern the movement of labor and capital.[22]

Two recent studies on services commitments in PTAs examine commitments by 36 countries across 32 agreements.[23] The authors map liberalization commitments for mode 1 (cross-border trade) and mode 3 (commercial presence), which comprise the bulk of services trade. Drawing on prior work,[24] they distinguish between full commitment without limitations (1), partial commitments (.5) and no commitment (0). They find overall that commitments by these countries not only go well beyond current GATS levels but also surpass offers currently on the table in the Doha

[20] This voluminous literature includes but is not limited to studies by Viner 1950, Bhagwati 1991, 1993, 1994; Baldwin 1995; Grossman and Helpman 1995; Levy 1997; Bagwell and Staiger 1998; Panagariya 2000, 1999; Pomfret [1997] 2001; Aghion, Antras and Helpman 2004; Limao 2007, 2006a, 2006b.
[21] Chase 2008.
[22] Mattoo and Sauvé 2011 237.
[23] Roy, Marchetti, and Lim 2007; Marchetti and Roy 2008.
[24] Hoekman 1996.

Round.[25] A comprehensive study of services agreements in the East Asian region employs the same methodology that includes all sub-sectors and all four modes of supply.[26]

Explaining the Choice of Modalities in Services Liberalization

What explains why countries choose to adopt either a positive-list or negative-list approach? A "bottom-up," or positive-list approach, as described above, includes only modes and sectors that states are willing to liberalize. In contrast, the negative list, or "list it or lose it" approach liberalizes all sectors and modes, unless otherwise specified as exceptions. The choice of modalities goes to the heart of how governments utilize domestic rules, regulations, and policies to discriminate against foreign suppliers. The positive-list approach, modeled after the WTO's GATS, allows countries to specify the terms of liberalization, i.e., the terms of market access for foreign suppliers. They retain the right to eschew commitments and to bypass the obligation to provide information on domestic regulations that may be discriminatory. The negative list, on the other hand, entails a general commitment to liberalization services, although countries may exempt individual industries.

While both approaches could yield identical results in terms of actual services trade liberalization, the negative approach is regarded as "governance-enhancing" in two main ways.[27] First, it commits signatories to a general obligation of transparency. This is especially important as the negative-list approach requires signatories, in listing their respective exemptions, to identify and enumerate non-liberalized domestic measures. Second, it locks in the status quo regulatory system in the signatories. The listing of exemptions under the negative-list approach, aside from providing valuable information on current restrictions, provides the benchmark for commitments not to adopt new and discriminatory regulations. As "revealed" sectors and levels of exemptions, they also provide the baseline for negotiating future liberalization agreements.

For the country that has already adopted a negative-list approach services agreement, its subsequent agreements will follow the same principle because of the regulatory precedents set by previous agreements. Governments that want to attain the same liberalization can commit (or "schedule") all sectors in a positive list, e.g. with a "horizontal" commitment that applies to all sectors, with the reservations to match the exceptions in a negative-list approach. In practice, however, a negative-list PTA is likely to be more liberalizing. What's more, once a country has drawn up a list of existing restrictions, then subsequent PTAs are likely to follow this model.

A negative-list PTA requires a cataloguing of all existing restrictions on foreign market access. If a country maintains explicit measures, then it is obviously administratively demanding to draw up a complete list. Countries therefore incur a one-off but potentially considerable cost in acquiring this information. The complete

[25] Roy et al. 2007. The data, including additional PTAs that expand the data to 53 WTO members across 62 agreements, is available online. http://www.wto.org/english/tratop_e/serv_e/dataset_e/dataset_e.htm. See Roy 2011 for supporting documentation.
[26] Fink and Molinuevo 2007. See also Fink and Molinuevo 2008a, 2008b.
[27] Mattoo and Sauvé 2011, 252.

list then provides information about the current extent of restrictions to the negotiating partner, who can choose to demand their removal in the negotiations. Because both parties have to supply their negative lists at the beginning of the negotiations, domestic interest groups with an eye on the other country's market have immediate access to them. Both strengthen the hand of "offensive" interests in the language of trade policy, i.e. those who seek liberalization of the other country's trade barriers. The initial one-off cost implies that countries obtain increasing returns on this investment if they negotiate further agreements—however only if these are negative-list PTAs.

By comparison, a positive-list approach works on the basis of the GATS "request and offer" approach. This means that the onus is on the party who wants better market access to seek information about the other's trade barriers and to decide upon the degree of liberalization sought. Countries can strategically make offers, but do not have to specifically list existing restrictions and can merely note that a sector and mode of provision is "unbound," i.e. restrictions are left at the country's discretion. This puts the offensive interest at an informational disadvantage, and imposes a cost on the side demanding liberalization.

This has a number of implications for future PTA negotiation choices once a country has negotiated a particularly type of services PTA. Once a country has signed one negative-list PTA, its existing restrictions are public in the text of the first PTA, so that the informational advantage of a positive-list PTA is no longer available. Indeed, as "revealed" sectors and levels of exemptions, such a negative-list PTA provides the baseline for negotiating future agreements. When countries implement the commitments made in a services PTA, they usually do so on a non-discriminatory basis. In most cases, a sector whose restrictions will be eliminated through a PTA becomes legally accessible to all foreign providers, not just those from the first PTA partner. Even where this is not the case, a negotiating partner can use the "revealed" sector list and demand parity in access.

Consequently, negative-list PTAs have a strongly liberalizing effect in practice. A government will have to draw up the list, "expose" the restrictions to the negotiating partner, and accept liberalization of varying degree. Domestic services providers whose protection is phased out have to adjust. Accordingly, negative-list PTAs also exhibit a strong self-reinforcing "history" effect. We thus advance our first hypothesis:

Hypothesis 1: The more negative list PTAs a country has negotiated, the more likely that it will negotiate future negative list agreements.

We do not have a similar expectation for positive-list agreements, since especially negotiations between developing countries with little interest in service-sector liberalization and without stark asymmetries may result in little or no market-access improvements. These agreements will therefore not exert any adjustment pressure. Such PTAs are easy to draw up: it suffices to list all sectors and modes of provision as "unbound" unless the negotiating partner requests a commitment.

A second, subtler effect is that countries with negative-list PTAs can negotiate such agreements with each other with relative ease. The elimination of measures that restrict foreign market access will generally be non-discriminatory, and the list of

measures retained can form the basis of negotiations. This results in a *higher-order effect* of PTA negotiations. Consider figure 1: Country *j* has already negotiated negative-list PTAs with countries *h* and *k*, country *i* only with country *j*.

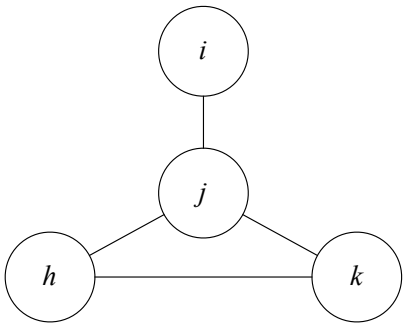


Figure 1: Unbalanced network

Consequently, county *i* can draw on these earlier negotiations to obtain information about the commitments made by *h* and *k*. Conversely, *h* and *k* can use information about the negative list provided by *i* in its negotiations with *j* to propose a PTA. The outcome would two further PTA ties, or what in network terminology would be called a "balanced graph" shown in figure 2.

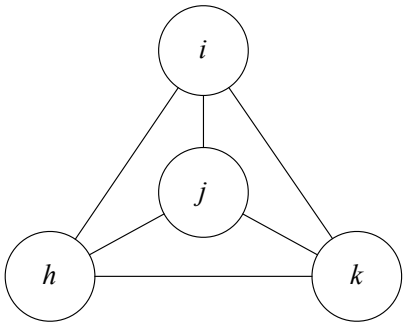


Figure 2: Balanced network

Our second hypothesis captures this tendency in the formation of negative-list PTAs.

Hypothesis 2: Countries with negative-list PTAs should be more likely to form negative-list PTAs with the partners of their existing negative-list PTA partners, thus forming balanced networks.

Again, we have no such expectation for positive-list PTAs. Moreover, as a consequence of these two effects, we expect countries to separate into two distinct PTA networks through their choice of liberalization approach. Countries signing negative-list PTAs will strongly gravitate towards other such countries because neither party would be at an informational disadvantage, thanks to the transparency of domestic regulations established by previous agreements. Thus the choice of a negative-list approach should have an effect on the evolution of PTAs throughout the region.

Hypothesis 3: The separation effect should result in two distinct networks (i.e. few

countries signing both positive- and negative-list PTAs).

It is important to note that the negative-list approach has been promoted by the United States, making it a precondition for the negotiation of a PTA with the US. However, compared to other countries, the United States has been slow to negotiate trade agreements, with only thirteen agreements in force at the time of writing in 2012. The growing popularity of negative-list agreements is therefore not due to US insistence, but the result of the choices of other countries. As we show graphically below, a small number of countries have first signed negative-list PTAs with the US, and then went on to negotiate such agreements with third countries. In other words, the US approach to services liberalization diffuses through *other* countries' PTAs.

Visualizing Services PTA Networks

To get a sense of these evolutionary tendencies, it is useful to explore the negative-list and positive-list PTAs visually. Figure 3 shows the evolution of the network of positive-list agreements from 1994 to 2010. The size of individual nodes is weighted to reflect a greater number of PTAs.

It appears that until 2004, having a positive-list PTA did not necessarily create any further incentive to negotiate more such agreements—with the exception of Singapore that positions itself as a hub. By 2008, China also assumed the role of a hub, with spokes throughout Asia and Latin America, as did Japan. In 2010, the last year of positive-list PTA activity in our analysis period, several smaller hubs emerged (among them, New Zealand, Australia, and several ASEAN countries), but the network retained "loose ends" and countries that are only weakly embedded. It is noticeable, however, that Asian countries dominate among the positive-list network, and that several countries that otherwise prefer negative-list PTAs, as we will see next, are willing to conclude positive-list agreements if this is a precondition for having a PTA with China.

The negative-list PTA network shown in Figure 4 evolves quite differently. Following the signing of NAFTA, Chile formed PTAs with Canada and several Latin American neighbors, and quickly established itself as the primary services PTA hub in the region. This is noteworthy because during the same period the United States did not form any further PTAs, as the Clinton administration failed to obtain the Congressional authority to negotiate further trade agreements. In other words, the model of services liberalization in PTAs preferred by the US was not spread by its most important proponent, but by other countries, in particular Chile and Mexico.

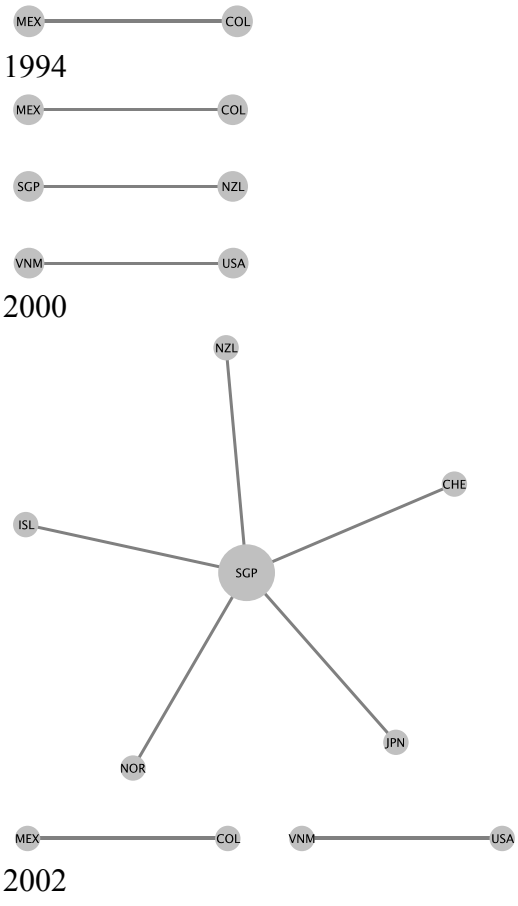
By 2003, the NAFTA approach had diffused to the Asian region through the US-Singapore and Panama-Republic of China (Taiwan) PTAs. Australia, Korea and Singapore became promoters of negative-list PTAs by 2008. In 2011, the network of negative-list PTAs had become dense, with almost all actors connected to most others within the network. There are only two "outliers:" Hong Kong is connected to New Zealand, and Uruguay—which legally as a Mercosur member state should not even form separate trade agreements—has a PTA tie with Mexico. The negative-list network is dominated by Latin American countries. The ASEAN countries are absent with the exception of Singapore and Brunei (via the P-4 agreement). Most of the negative-list PTA partners are also formal or informal US allies, although the US does not have PTAs with all of them. However a number of US allies are conspicuously

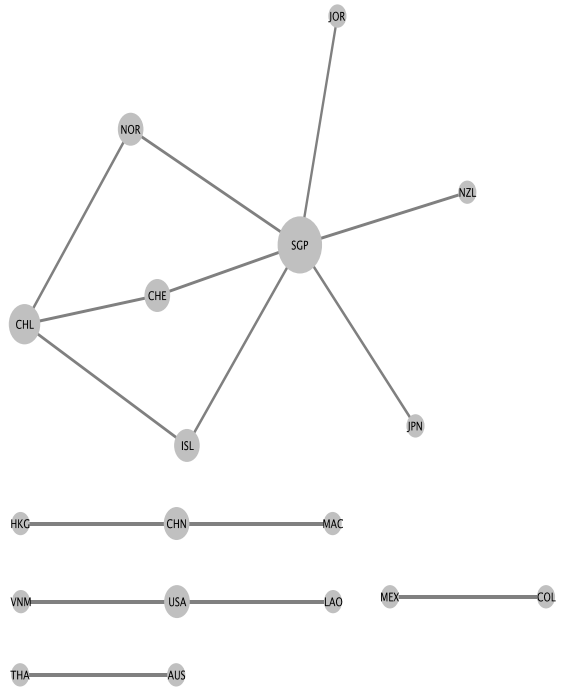
missing from this network, among them Thailand and the Philippines.

Importantly, the separation into two different networks does not appear to be a simple consequence of *ex ante* country preferences. Rather, a number of countries start off with positive-list PTAs, but then switch onto the negative-list track, while others remain committed to positive-list agreements. However, very few countries switch from negative-list to positive-list agreements, and then only when they seek to negotiate a PTA with China, for which this is apparently a precondition.

In summary, visual inspection of the networks shows several important trends: The positive-list network has several hubs—notably, China—and numerous spokes. By contrast, the negative-list network is densely connected, and its evolution appears to originate in NAFTA and spread among countries with close economic and political ties to the United States, but is not directly driven by the US. Instead, there seems to be a strong diffusion effect. Such an interpretation is, of course, merely anecdotal. We test the hypotheses above in a statistical analysis in the next section.

Figure 3: Positive-list PTA network

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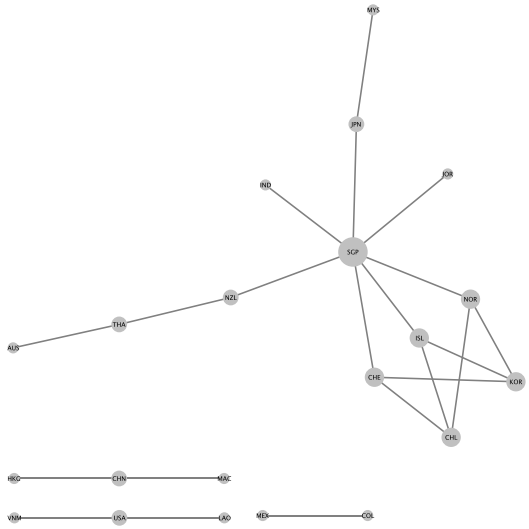
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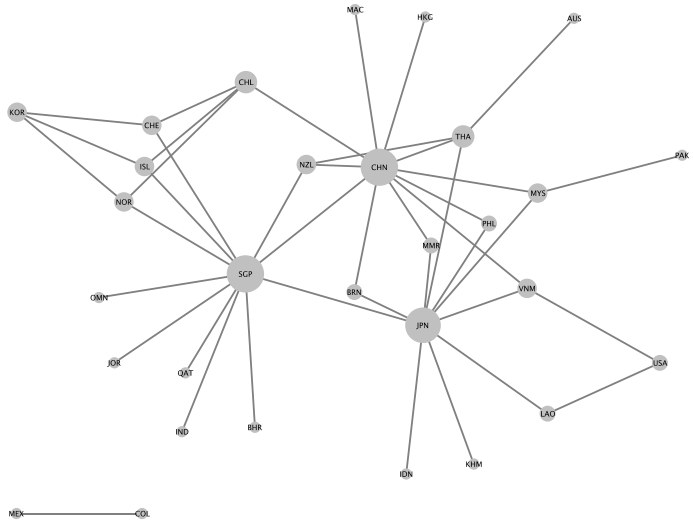
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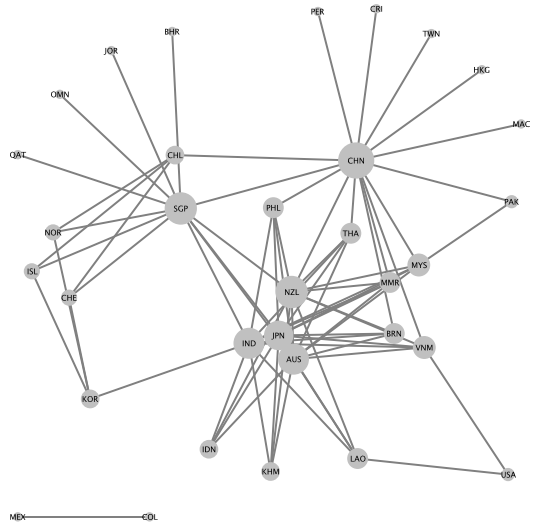
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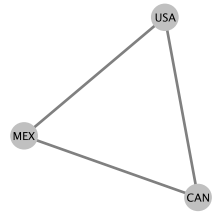
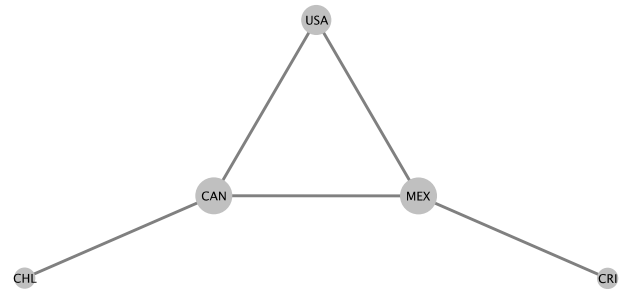
2010

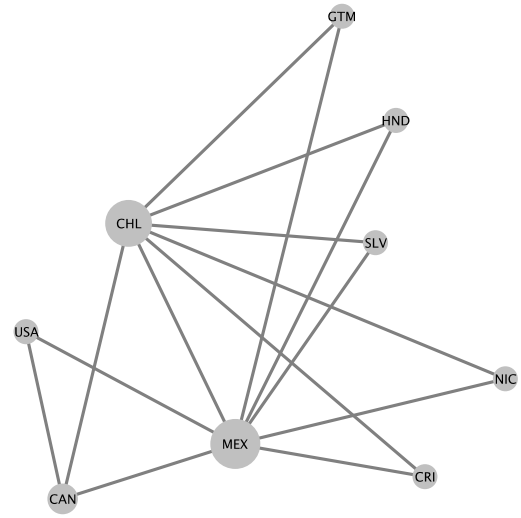
Figure 4: Negative-list PTA network



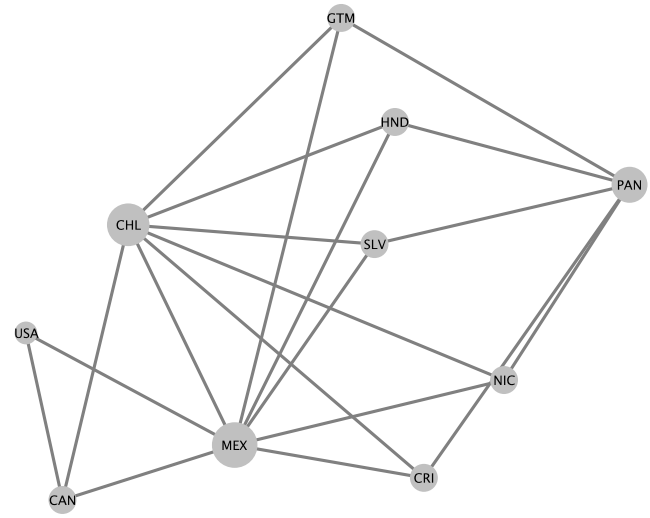
1992



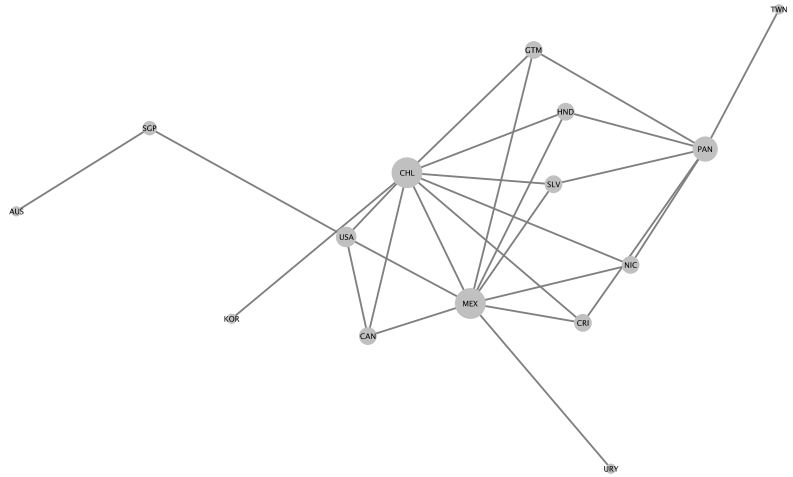
1996



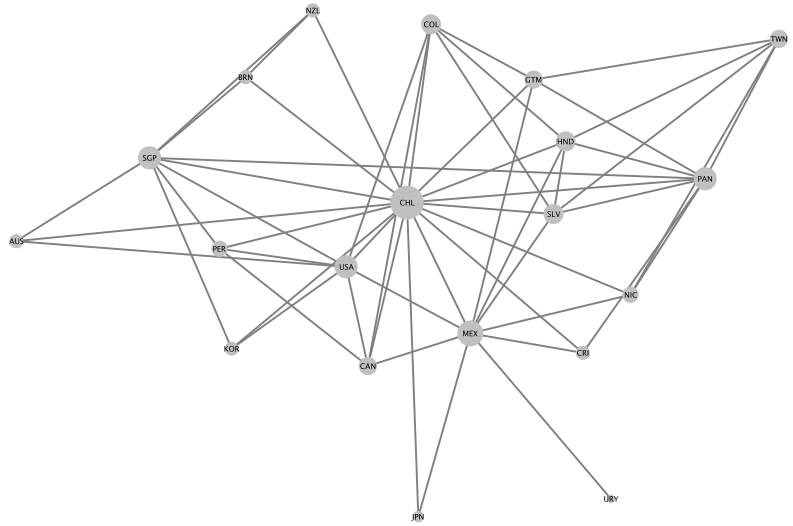
2000



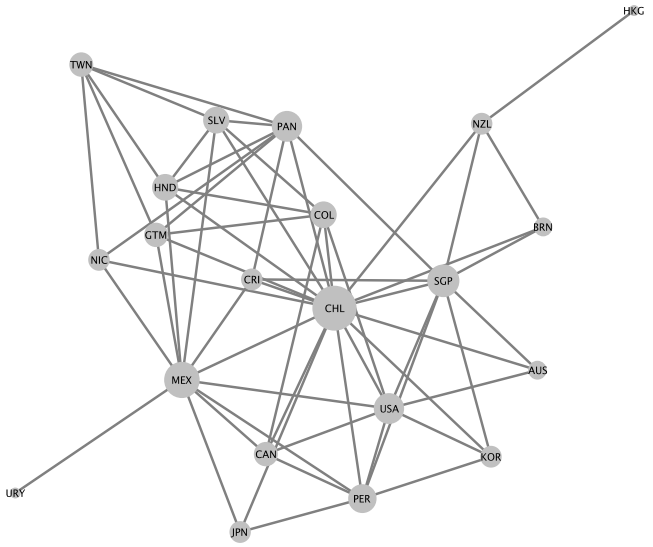
2002



2003



2008



2011

Analysis

In our analysis of PTAs in the Asia-Pacific region, we include agreements involving countries in East and Southeast Asia, Oceania, and the states of the Americas bordering on the Pacific. We include a PTA if at least one of the members is a state from this group. We restrict our analysis to this "region" for several reasons. First, the Americas and the Asia-Pacific geographic region is the site of the greatest activity of PTA formation in recent years and especially in this century.[28]

Second, with strengthening trade links, the number of "cross-regional" agreements between Asian and Latin American countries bordering on the Pacific has grown rapidly in recent years.[29] This process builds on earlier efforts in Asia-Pacific Economic Cooperation (APEC),[30] and has recently been invigorated with the negotiations towards the Trans-Pacific Partnership agreement (TPP).[31] Conveniently, the timing of these agreements helps us avoid a problem that arises when we use the sample in a network analysis. While some countries in our sample have ties with countries beyond it, the number of these ties is extremely small, and in all cases only creates a slight bias in our coefficients because the chosen liberalization approach matches our predictions.

Third, PTAs in other regions such as Europe have often been preparatory steps for later EU accession, so no higher-order effects can be discerned because countries effectively gave up an independent trade policy and delegated it to Brussels instead.

Finally, while there are multiple PTAs in Africa and the Middle East, they only very rarely involve services liberalization, and many do not even entail any liberalization. In sum, for our purposes the PTA "population" is heterogeneous, and we focus on a subset of it. The analysis features an original dataset that codes the scheduling approach of all PTAs involving at least one Asia-Pacific country.

Longitudinal Network Analysis

Network analysis is related to the more common dyadic estimation frameworks in International Relations research, but offers several distinct advantages. The dependent variable in network is an $N \times N$ matrix, in which the matrix entries represent ties (in our case, PTAs) between actors. Unlike dyadic models, this approach can take into account higher-order dependencies, e.g. if indirect ties affect tie formation, and endogenous popularity, i.e. if more ties make an actor more attractive for future ties. Moreover, unlike dyadic models, network models allow for the estimation of monadic and dyadic effects.

We use a particular type of model referred to as "stochastic actor-oriented model."[32] In these models, individual actors evaluate their position in the network structure and form or break ties to increase their utility. Actors change their ties between observed

[28] Dent 2006; Ravenhill 2010; Capling 2008; Aggarwal and Urata 2006. Fiorentino et al. 2007.
[29] Katada, Solís, and Stallings 2009; Katada and Solís 2008.
[30] Ravenhill 2000.
[31] At the time of writing, Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States and Vietnam are negotiating, with Japan and South Korea potentially joining at a later stage.
[32] Snijders 2001.

instances of networks. Their behavior is assumed to be goal-directed, but myopic, so that all additional long-term strategic considerations are not explicitly modeled or taken into account by exogenous covariates or structural network effects. Each micro-step taken by an actor changes the network structure for this and all other actors, and hence implies a strong dependence between actor choices.

Data

The dependent variables are $N \times N \times T$ arrays, in which the presence of a PTA tie is binary. As we analyze the coevolution of negative-list and positive-list PTAs, we include two sets networks, one for each PTA type, over 18 years from 1994 to 2011. The choice of 1994 follows from the fact that it is the first year in which we have information on both networks, in that a negative-list PTA is in existence (specifically, NAFTA), and a positive-list agreement is signed by two countries.[33]

The control variables in the analysis include bilateral trade and democracy, which are the commonly featured economic and political determinants in studies of PTA formation and design. Bilateral trade is measured in terms of log-transformed imports reported by each of the dyad member from the other. We also include the log-transformed GDP of each country in the dyad to reflect the size of the economy and its impact on services liberalization commitments. In an alternative specification, we also include GDP per capita values for the "ego" and the "alter" country and the interaction of these terms to control for the level of development.[34] Data for GDP and GDP per capita were obtained from the *World Development Indicators*, and bilateral trade data from the *Direction of Trade Statistics* of the IMF. The analysis also controls for regime type, including the *Freedom House* measure for each dyad member.[35] Finally, we also control for the previous signature of a PTA covering goods only, reasoning that such a PTA may be a precursor to a later more comprehensive economic integration arrangement. PTAs for trade in goods have been signed for over a century, while services PTAs are a recent arrival on the trade policy scene.

For our control variables, the expectation is that larger and more developed economies are more likely to have a substantial service sector and trade in services that makes liberalization commitments both feasible and a major bargaining issue. Also, as democracies are more likely to sign trade agreements in the first place,[36] we test also whether they are more likely to sign a positive or negative-list services agreement.

Estimation

To analyze the evolution of these networks, we use the longitudinal network analysis

[33] We could include earlier years in the analysis, but without any services PTAs in existence, they would not contain any information and the analysis would merely be computationally less efficient without changing the results.
[34] See Baier and Bergstrand 2004, among others.
[35] The Freedom House index is not ideally suited to longitudinal analysis because the coding of the variable has changed over time, but we have reasons to believe that this does not apply to our sample period and countries: The annual cross-correlation between the Freedom House score and the (consistently coded) Polity IV score lies between 0.84 and 0.89 in our sample.
[36] Mansfield, Milner, and Rosendorff 2002.

package RSiena.[37] In this framework, an evaluation function is used to model the probability calculations of both countries that are given the opportunity to form a PTA. The evaluation function is defined as a linear combination of terms

$$f_i(\beta, x) = \sum_{k=1}^{n} \beta_k s_{ik}(x)$$

where the β_k are the parameters, and the $s_{ik}(x)$ are covariate values, the value of a structural network statistic, or combination of the two. In addition, a random element with a Gumbel distribution is included, so that actors (i.e. countries) stochastically optimize the evaluation function plus this random disturbance. RSiena simulates networks until the parameters converge to values that produce simulated networks with characteristics similar to those of our actually observed networks.

Just like in traditional dyadic framework, our evaluation function includes monadic and dyadic variables, but the network approach allows the inclusion of structural effects. The first effect we include is the number of existing PTAs in each category for ego and alter (*degree* and *degree of alter*). To achieve model convergence, we hold fixed the ego degree effect in the evaluation function, and focus on the *degree of alter* instead. This effect operationalizes one aspect of the path dependence of PTAs. By comparing the coefficients of the degree of alter for negative and positive-list PTA networks, we can directly observe if our first hypothesis is supported and negative-list PTAs induce relatively more such PTAs in subsequent years. We expect a positive effect for degree of alter in joining negative-list PTA networks, which in turn creates a path dependence of choices.

Second, we include an effect to measure the tendency of actors to balance their network ties, i.e. to be tied to countries with a similar set of ties. With this effect, we operationalize the tendency of a country to seek partners with comparable ties within either a positive-list or a negative-list PTA network. In other words, we evaluate whether a country, once it has signed a positive- or negative-list PTA, eventually seeks PTAs with other countries that already PTAs with its current agreement partners. Concretely, if countries separate themselves into different groups, then a stronger balancing effect in one group should lead to a more densely connected group that have structurally equivalent ties. This effect is defined as the similarity in ties of country *i* and the ties of country *j* to which country *i* is tied with a PTA of either specific type,

$$s_{i10}^{net}(x) = \sum_{j=1}^{n} x_{ij} \sum_{h=1, h\neq i,j}^{n} (b_0 - |x_{ih} - x_{jh}|)$$

where b_0 is a constant included to reduce the correlation between the *balance effect* and the *degree effect*, defined by

$$b_0 = \frac{1}{(M-1)n(n-1)(n-2\_} \sum_{m=1}^{M-1} \sum_{i,j=1}^{n} \sum_{h=1, h\neq i,j}^{n} |x_{ih}(t_m) - x_{jh}(t_m)|$$

[37] Ripley, Snijders, and Preciado Lopez 2011.

The effects are defined separately for negative and positive-list PTAs, i.e. the *degree* is measured for a country's negative and positive-list PTAs separately to capture the effects of the two networks.

The inclusion of a separate *degree of alter* and *balance* effects also allows us to assess whether countries simply exhibit a preference for countries that pursue a similar liberalization approach (an atheoretical notion of homophily) and select themselves into such a network. In this case, the *balance* effect would not be statistically significant. Most importantly, simple homophily would predict two separate networks because countries either prefer positive-list or negative-list agreements, whereas we predict the presence of network effects for negative list agreements only.

Making full use of the advantages of network analysis, we also test for effects across networks, that is whether positive-list ties affect the formation of negative-list ties. We also test for different forms of network closure and similarity, but (to preview our results), we find no evidence of these.

Findings

Tables 1 and 2 present the results of the analysis. The parameter estimates in our analysis can be used to calculate the probability of a services PTA tie of either type being proposed by a country and confirmed by its partner.[38] The exponentiated parameters can be interpreted as the multiplicative factor of the probability of the initiation or confirmation of a tie, given a one-unit increase in the variable under consideration, *ceteris paribus* the given network structure.

As shown in Table 1, model (1) is our minimal model containing only structural effects in each network and parameter estimates that are statistically significant at least at the 5% level. Clearly, *balance* is a positive and strongly significant effect in the negative-list PTA network. In other words, countries are more likely to sign negative-list PTAs with the same partners as the other countries that have signed negative-list PTAs. This confirms our hypothesis that negative-list PTAs form a network of countries that tend to all be tied to each other. Moreover, as the *degree of alter* estimate indicates, the more negative-list PTAs a country has signed, the more likely it is also chosen as partner for further such agreements. This finding supports our first hypothesis of a "history" effect. Once a country signs a negative-list PTA, it is more likely to do so in future agreements. The controls for *trade* and *democracy* (of ego) are significant and have the expected positive sign consistent with findings of existing studies. The coefficient for *GDP* is estimated to be negative, indicating that larger economies are less likely to sign negative-list PTAs, which is not unsurprising given that large countries are less trade-dependent in general.

By contrast, for the network of positive-list PTAs, we only find *trade* and the interaction of *democracy ego* with *democracy alter* to reach statistical significance. There is no evidence of any structural network effect. In other words, having positive-list PTAs has no statistically significant impact on the formation of future positive-list PTAs. Path-dependence, therefore, holds for negative-list PTAs, but there is no evidence of it for positive-list PTAs.

[38] A web appendix provides the equations necessary to calculate these probabilities.

Model (2), our preferred specification, furthermore includes an effect to capture cross-network influence, that is, whether the number of negative-list PTAs signed by a country has an effect on the probability of this country forming a positive-list PTA or vice versa. We find strong evidence of an effect in the direction of negative-list history to positive-list PTAs, but not of the opposite direction. This is in line with our expectations: governments that have faced down political opposition and have undertaken the administrative effort of listing all their services restriction to draw up a negative-list PTA can easily do the same for a positive-list agreement. Governments that prefer positive-list agreements because of domestic constraints will be hampered in signing negative-list agreements for the very same reasons. To obtain predicted substantive changes in the probabilities, we exponentiate the parameter estimates. We focus on two structural network effects: The *degree of alter*, i.e. the count of (respectively) negative-list or positive-list PTAs formed by the country, and the *balance* effect.

Our results in model (2) show that per the *degree of alter* effect, for each additional negative-list PTA a potential partner country *j* has signed, the probability of country *i* choosing this country *j* as a partner in a negative-list PTA increases by 60%. This is substantively the strongest effect, with the exception of how a negative-list history influences positive-list PTA formation (but see an important caveat below). This effect creates a strong "pull" into the network of negative-list PTAs—the more the partners have signed, the more attractive they are, so that very quickly, a densely connected group of countries emerges.

Contributing to this network evolution is the *balance* effect. For each one-unit increase in the measure of similarity between the negative-list PTA ties of the partners, the probability of a negative-list PTA being proposed by the ego country increases by 10%. Adding to the *degree of alter* effect, this will induce the formation of a network of highly similar ties, in other words, these countries will tend to all be tied to each other.

We find no evidence of either tendency for positive-list agreements. While negative-list PTAs create a strong path dependence, positive-list PTAs have no such effect. Indeed, there is no evidence of any "history" effect at all. Positive-list PTAs evidently do not reveal a country's preferences, or do not create pressures for economic adjustment that make subsequent liberalization easier.

Substantively the effect of another negative-list PTA on the probability of forming a positive-list tie is the strongest—equal to 2.5 times greater for each such tie. However, this result should be seen with some caution. Due to the almost exclusive state of preferring either positive-list or negative-list PTAs, much of this effect is driven by one country: Singapore. The city-state has not only signed more PTAs than any other country in our analysis, but also (unusually) appears to show no preference for either positive-list or negative-list agreements. This may reflect the asymmetries when Singapore negotiates PTAs with any other country—in other words, it has little choice but to accept the other party's preference—but possibly even more that the Lion City has a much more liberalized services economy than almost any other country in the world, and that the government actively promotes the country as a services hub for the region. The majority of other countries clearly prefer one or the other liberalization approach. This finding supports our third hypothesis regarding a separation that yields two distinct networks of PTA ties.

The parameter estimates for our covariates are broadly in line with previous work on PTA formation when we consider the negative-list agreement network. Here, an increase in the democracy ego by one point on the combined seven-point Freedom House scale (for example, the democratic consolidation of Poland between 1991 and 2005) equates to an increase of 52% in the probability of forming another negative-list PTA. A one-unit increment in bilateral trade increases the probability of negative-list PTA formation by 27%. Interestingly, only bilateral trade seems to matter for the probability of positive-list PTA formation, albeit more strongly with an increase in the probability of 43% for each additional unit of bilateral trade. After controlling for democracy, only the interaction of democracy ego with democracy alter appears to have a slight negative effect on the likelihood of positive-list PTA formation, with an 8% decrease in the probability for each point (as interaction) on the Freedom House scale. Democracies, it appears, have a preference for negative-list agreements. As they are more liberalizing, this corresponds to existing findings for trade liberalization more generally.[39] Somewhat unexpectedly, the coefficient on GDP does not reach statistical significance. In model (3) we exclude the cross-network effect, but include controls for GDP per capita, individually and interacted with interacted between ego and alter, but the estimates do not reach statistical significance in either network. Model (4) includes the cross-network effect and a control for a previously-signed PTA covering goods only, reasoning that this might facilitate subsequent signing of a services PTA, but we do not find evidence of this for either type. Model (5) drops the control for the previously-signed PTA in goods, model (6) includes all controls. Given the relatively low degree of correlation of our explanatory variables, it is unsurprising but reassuring that none of this changes anything about our main results.

Conclusion

Path dependence is strongly evident in international trade agreements. Using a strict definition of path dependence that relies on state-dependence, or a "history" effect, we have shown that the choices countries make not only condition their future options, but also have effects at the international level. In the specific issue area of services trade and investment liberalization, we have provided evidence that once countries agree to a negative-list approach in a PTA negotiation, they become more attractive partners for other countries that want to negotiate a negative-list PTA in services. Furthermore, countries that have negotiated a negative-list PTA with another country are more likely to seek negative-list PTAs with that country's PTA partners. As a result of these effects, countries negotiating negative-list services trade agreements sort themselves into a separate network of states. In this network, nearly all members are connected to each other. We also show that there is no evidence of these effects for positive-list agreements. The distinction between the positive- and negative-list approach to scheduling liberalization commitments in services yields a significantly different picture from simply taking account of who signs with whom. By taking account of the features of agreement between signatories, we have found that, at least in PTAs involving Asian countries, stronger and more "embedded" hubs of governance are found for those countries that commit to the negative-list approach. In other words, past choices in the membership design of international institutions can set countries on different tracks, and can have outcomes for the institutional landscape far beyond the additive effect of individual country decisions.

[39] Mansfield, Milner, and Rosendorff 2002; Milner and Kubota 2005.

Substantively, our findings indicate that with whom a country forms its first PTAs strongly influences the design of later agreements. A country seeking a PTA with the US is required to draw up a negative list to strike a deal, and is much more likely to stick to this approach in its own, subsequent PTAs. Over time, the specific approach to services liberalization preferred by the US therefore diffuses and comes to dominate, but through the efforts of US partners in their own PTAs. It is evident, however, that the network of negative-list PTAs is driven by US partners to the exclusion of countries that prefer a different approach—in particular, the PR China. Very few countries are members of both networks, and only Singapore seems to be indifferent to the choice of approach. In the absence of a multilateral, comprehensive deal on services liberalization that advances the GATS commitments of its members, two separate regimes for services liberalization may emerge, one based on a positive-list approach, the other on negative-list agreements.

Theoretically, our findings suggest that country choices at the international level are far more interdependent than existing studies have assumed, and that there are different evolutionary paths that international regimes consisting of multiple formal institutions—like the international trade regime—can follow. This calls for more theoretically-informed considerations of interdependence and path dependence in the study of the formation of international institutions.

Our approach also suggests new avenues of inquiry: Our method of tracing the diffusion of a particular liberalization pattern through the network of PTAs should be applicable to any set of bilateral agreements. One example would be bilateral air transportation agreements that are governed by a complex network of treaties, whose institutional diversity presents a field wide open for research. In the multitude of international institutions, history matters, and much insight could be gained from further research in this direction.

References

Aggarwal, Vinod K., and Shujiro Urata. 2006. *Bilateral Trade arrangements in the Asia-Pacific: origins, evolution, and implications*. London: Routledge.

Aghion, Philippe, Pol Antràs and Elhanan Helpman. 2004. Negotiating Free Trade. NBER Working Paper No.10721.

Arthur, W. Brian. 1994. *Increasing Returns and Path Dependence in the Economy.* Ann Arbor: University of Michigan Press.

Baccini, Leonardo, and Andreas Dür. 2012. The New Regionalism and Policy Interdependence. *British Journal of Political Science* **42** (1): 57–79.

Bagwell, Kyle and Staiger, Robert W. 1998. Regionalism and Multilateral Tariff Cooperation. In John Piggott and Allan Woodland, Eds. *International Trade Policy and the Pacific Rim.* London: MacMillan.

Baier, Scott L., and Jeffrey H. Bergstrand. 2004. Economic Determinants of Free Trade Agreements. *Journal of International Economics* 64 (1): 29–63.

Baier, Scott L., Jeffrey H. Bergstrand, and Ronald Mariutto. 2011. *Economic Determinants of Free Trade Agreements, Revisited: Distinguishing Sources of Interdependence*. Working Paper. Notre Dame, IN: Department of Finance, Mendoza College of Business and Kellogg Institute for International Studies.

Bennett, Andrew, and Colin Elman. 2006. Complex Causal Relations and Case Study Methods: The Example of Path Dependence. *Political Analysis* **14** (3): 250–267.

Bhagwati, Jagdish. 1991. *The World Trading System at Risk.* Princeton: Princeton University Press.

Bhagwati, Jagdish. 1993. Regionalism and Multilateralism: An Overview, in Jaime de Melo and Arvind Panagariya, eds., *New Dimensions in Regional Integration*. Cambridge: Cambridge University Press, pp. 22-51.

Bhagwati, Jagdish. 1994. Threats to the World Trading System: Income Distribution and the Selfish Hegemon. *Journal of International Affairs.* 48: 279-85.

Büthe, Tim, and Helen V. Milner. 2008. The Politics of Foreign Direct Investment into Developing Countries: Increasing FDI through International Trade Agreements. *American Journal of Political Science* **52** (4): 741–762.

Cameron, Maxwell A. and Brian W. Tomlin. 2000. *The Making of NAFTA: How the Deal Was Done.* Ithaca: Cornell University Press.

Capling, Ann. 2008. Preferential Trade agreements as Instruments of Foreign Policy: An Australia–Japan Free trade agreement and Its Implications for the Asia-Pacific region. *The Pacific Review* **21** (1): 27–43.

Chase, Kerry A. 2008. Moving Hollywood Abroad: Divided Labor Markets and the New Politics of Trade in Services. *International Organization* **62** (4): 653–687.

Dent, Christopher M. 2006. *New Free Trade Agreements in the Asia-Pacific*. Basingstoke: Palgrave Macmillan.

Dobbin, Frank, Beth Simmons, and Geoffrey Garrett. 2007. The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning? *Annual Review of Sociology* **33** (1): 449–472.

Drake, William J., and Kalypso Nicolaïdis. 1992. Ideas, Interests, And Institutionalization - Trade In Services And The Uruguay Round. *International Organization* **46** (1): 37–100.

Egger, Peter, and Mario Larch. 2008. Interdependent Preferential Trade Agreement Memberships: An empirical analysis. *Journal of International Economics* **76** (2): 384–399.

Elkins, Zachary, and Beth A. Simmons. 2005. On Waves, Clusters, and Diffusion: A Conceptual Framework. *Annals of the American Academy of Political and Social Science* **598**: 33–51.

Fink, Carsten and Martin Molinuevo. 2007. *East Asian Free Trade Agreements in Services: Roaring Tigers or Timid Pandas?* Washington, DC: The World Bank.

Fink, Carsten and Martin Molinuevo. 2008b. East Asian Preferential Trade Agreements in Services: Liberalization Content and WTO Rules. *World Trade Review* 7,4: 641-673.

Fink, Carsten and Martin Molinuevo. 2008a. East Asian Free Trade Agreements in Services: Key Architectural Elements. *Journal of International Economic Law* 11,2: 263-311.

Gilardi, Fabrizio. 2010. Who Learns From What in Policy Diffusion Processes? *American Journal of Political Science* **54** (3): 650–666.

Greif, Avner. 1992. Institutions and International Trade: Lessons from the Commercial Revolution. *The American Economic Review* **82** (2): 128–133.

Grossman, Gene and Helpman, Elhanan. 1995. The Politics of Free Trade Agreements *American Economic Review*, 85, 4: 667-90.

Hoekman, Bernard M., and Michel M. Kostecki. 2010. *The Political Economy of the World Trading System*. 3rd ed. Oxford University Press, USA.

Hoekman, Bernard, and Aaditya Mattoo. 2000. Services, Economic Development and the Next Round of Negotiations on Services. *Journal of International Development* **12** (2): 283–96.

Hoekman, Bernard. 1996. Assessing the General Agreement on Trade in Services. In Will Martin and L. Alan Winters, ed. *The Uruguay Round and Developing Countries*. Cambridge: Cambridge University Press.

Jupille, J., and J. A. Caporaso. 1999. Institutionalism and the European Union: Beyond International Relations and Comparative Politics. *Annual Review of Political Science* **2** (1): 429–444.

Katada, Saori N., and Mireya Solís. 2008. *Cross Regional Trade Agreements: Understanding Permeated Regionalism in East Asia*. illustrated ed. Berlin: Springer.

Katada, Saori N., Mireya Solís, and Barbara Stallings. 2009. *Competitive Regionalism: Explaining the Diffusion of FTAs in the Pacific Rim*. London: Palgrave.

Koremenos, Barbara, Charles Lipson, and Duncan Snidal. 2004. *The Rational Design of International Institutions*. Cambridge, UK: Cambridge University Press.

Levy, Philip I. 1997. A Political-Economic Analysis of Free-Trade Agreements, *American Economic Review* 87, 4: 506-19.

Limão, Nuno. 2006b. Preferential vs. Multilateral Trade Liberalization: Evidence And Open Questions. *World Trade Review* 5: 155-176.

Limão, Nuno. 2006a. Preferential Trade Agreements as Stumbling Blocks for Multilateral Trade Liberalization: Evidence for the United States. *American Economic Review* 96(3): 896-914.

Limão, Nuno. 2007. Are Preferential Trade Agreements with Non-trade Objectives a Stumbling Block for Multilateral Liberalization? *Review of Economic Studies* 74(3): 821 – 855**.**

Mansfield, Edward D., and Eric Reinhardt. 2003. Multilateral Determinants of Regionalism: The Effects of GATT/WTO on the Formation of Preferential Trading Arrangements. *International Organization* **57** (4): 829–862.

Mansfield, Edward D., Helen V. Milner, and B. Peter Rosendorff. 2002. Why Democracies Cooperate More: Electoral Control and International Trade Agreements. *International Organization* **56** (3): 477–513.

March, James G., and Johan P. Olsen. 1998. The Institutional Dynamics of International Political Orders. *International Organization* **52** (04): 943–969.

Marchetti, Juan and Martin Roy. 2008. Services Liberalization in the WTO and in PTAs. In J. Marchetti and M. Roy, eds. *Opening Markets for Trade in Services; Countries and Sectors in Bilateral and WTO Negotiations*, Cambridge: Cambridge University Press and WTO.

Mattoo, Aaditya and Pierre Sauvé. 2011. Services. In Jean-Pierre Chauffour & Jean Christophe Maur, eds. *Preferential Trade Agreement Policies for Development: A Handbook*. Washington, DC: The World Bank.

Mattoo, Aaditya, and Patrick Low. 2000. Is There a Better Way? Alternative Approaches to Liberalisation under the GATS. In *GATS 2000: New Directions in Services Trade Liberalization*, edited by Pierre Sauvé and Robert Stern, 449–472. Washington, DC: Brookings Institution.

Milner, Helen V., and Keiko Kubota. 2005. Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries. *International Organization* **59** (1): 107–143.

North, Douglass C. 1990. *Institutions, Institutional Change and Economic Performance.* New York: Cambridge University Press.

Ostry, Sylvia. 1997. *The Post-Cold War Trading System: Who's on First?* Chicago: University of Chicago Press.

Page, Scott E. 2006. Path Dependence. *Quarterly Journal of Political Science* **1** (1): 87–115.

Panagariya, Arvind. 1999. The Regionalism Debate: An Overview. *The World Economy*. 22(4): 477-511.

Panagariya, Arvind. 2000. Preferential Trade Liberalization: The Traditional Theory and New Developments. *Journal of Economic Literature* 38(2): 287-331.

Pierson, Paul. 2000. Increasing Returns, Path Dependence, and the Study of Politics. *The American Political Science Review* **94** (2): 251–267.

Pomfret, Richard. [1997] 2001. *The Economics of Regional Trading Arrangements*. Oxford: Oxford University Press.

Ravenhill, John. 2000. APEC Adrift: Implications for Economic Regionalism in Asia and the Pacific. *Pacific Review* **13** (2): 319–333.

Ravenhill, John. 2010. The 'New East Asian Regionalism': A Political Domino Effect. *Review of International Political Economy* **17** (2): 178.

Reus-Smit, Christian. 2003. The Constitutional Structure of International Society and the Nature of Fundamental Institutions. *International Organization* **51** (04): 555–589.

Ripley, Ruth M., Tom A. B. Snijders, and Paulina Preciado Lopez. 2011. *Manual for RSiena*. Oxford: Department of Statistics, University of Oxford.

Roy, Martin, Juan Marchetti, and Hoe Lim. 2007. Services Liberalization in the New Generation of Preferential Trade Agreements: How Much Further than the GATS? *World Trade Review* **6** (2): 155-192.

Sauvé, Pierre. 2000. Developing Countries and the GATS 2000 Round. *Journal Of World Trade* **34** (2): 85–92.

Snijders, Tom A. B. 2001. The Statistical Evaluation of Social Network Dynamics. *Sociological Methodology* **31** (1): 361–395.

Thelen, Kathleen. Historical Institutionalism in Comparative Politics. In *The Annual Review of Political Science,* Vol. 2: 369-404.

UNCTAD. 2004. *World Investment Report: The Shift Towards Services*. UNCTAD World Investment Report. Geneva: United Nations Conference on Trade and Development.

Viner, Jacob. 1950. *The Customs Union Issue*. New York: Carnegie Endowment for International Peace.

World Trade Organization. 2010. *Measuring Trade in Services: A Training Module for the World Bank*. Geneva: World Trade Organization.

World Trade Organization. 2011. *The WTO and Preferential Trade Agreements: From Co-existence to Coherence (World Trade Report 2011).* Geneva: WTO.

	(1)			(2)			(3)		
Variable	**Coeff.**		**S.E.**	**Coeff.**		**S.E.**	**Coeff.**		**S.E.**
Negative-list PTAs									
Balance	0.086	**	0.029	0.096	***	0.026	0.087	*	0.029
Degree of alter	0.487	***	0.072	0.467	***	0.068	0.497	***	0.076
Trade	0.291	**	0.099	0.246	**	0.09	0.260	**	0.097
Democracy ego	0.394	**	0.145	0.419	**	0.133	0.346	*	0.147
Democracy ego x Democracy alter	-0.023		0.061	-0.043		0.055	-0.041		0.061
GDP ego	-0.298	*	0.128	-0.343	**	0.123	-0.318	*	0.138
GDP/capita ego							0.215		0.241
GDP/capita ego x GDP/capita alter							0.222		0.130
Effect of degrees in negative-list PTAs on positive-list PTAs				0.947	***	0.265			
Positive-list PTAs									
Balance	-0.139		0.074	-0.137		0.074	-0.137		0.076
Degree of alter	0.082		0.067	0.099		0.071	0.078		0.071
Trade	0.324	***	0.098	0.353	**	0.108	0.310	**	0.096
Democracy ego	-0.084		0.083	-0.023		0.102	-0.109		0.108
Democracy ego x Democracy alter	-0.091	*	0.036	-0.092	*	0.039	-0.092	*	0.037
GDP ego	-0.075		0.114	-0.117		0.125	-0.061		0.109
GDP/capita ego							0.077		0.184
GDP/capita ego x GDP/capita alter							0.024		0.094
Effect of degrees in positive-list PTAs on negative-list PTAs				-0.214		0.195			

Results are based on 1000 simulation runs. * $p<0.05$, ** $p < 0.01$, *** $p < 0.001$.

	(4)			(5)			(6)		
Variable	**Coeff.**		**S.E.**	**Coeff.**		**S.E.**	**Coeff.**		**S.E.**
Negative-list PTAs									
Balance	0.098	***	0.026	0.100	***	0.026	0.096	***	0.025
Degree of alter	0.466	***	0.069	0.460	***	0.068	0.460	***	0.068
Trade (dyadic)	0.253	*	0.095	0.224	**	0.078	0.239	**	0.086
Goods PTA signed	-1.385		0.742				-1.378		0.750
Democracy ego	0.413	**	0.141	0.433	***	0.127	0.423	**	0.146
Democracy ego x Democracy alter	-0.027		0.058	-0.051		0.055	-0.041		0.064
GDP ego	-0.316		0.142	-0.276		0.132	-0.299		0.128
GDP similarity	1.827		1.054	1.789		0.975	1.720		0.968
GDP/capita (ego)							-0.066		0.220
GDP/capita ego x GDP/capita alter							0.159		0.123
Effect of degrees in negative-list PTAs on positive-list PTAs	1.030	***	0.270	0.912	**	0.279	1.026	***	0.290
Positive-list PTAs									
Balance	-0.151		0.076	-0.149		0.074	-0.148		0.074
Degree of alter	0.093		0.070	0.094		0.070	0.088		0.073
Trade	0.337	***	0.102	0.340	**	0.107	0.315	**	0.098
Goods PTA signed	0.084		0.471				0.164		0.497
Democracy ego	-0.015		0.102	-0.021		0.088	-0.052		0.107
Democracy ego x Democracy alter	-0.093	*	0.039	-0.092	*	0.039	-0.093	*	0.039
GDP ego	-0.068		0.152	-0.070		0.150	-0.050		0.151
GDP similarity	1.233		1.307	1.257		1.270	1.179		1.268
GDP/capita ego							0.142		0.204
GDP/capita ego x GDP/capita alter							0.018		0.100
Effect of degrees in positive-list PTAs on negative-list PTAs	-0.242		0.202	-0.231		0.190	-0.271		0.195

Results are based on 1000 simulation runs. * $p<0.05$, ** $p < 0.01$, *** $p < 0.001$.