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The Design of Preferential Trade Agreements: A New Dataset in the Making

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Abstract[1]

Since 1990 the number of preferential trade agreements (PTAs) has increased very rapidly. This paper aims to contribute to this literature by presenting a new database on PTAs called Design of Trade Agreements (DESTA). We identified a total of 690 negotiated trade agreements between 1945 and 2009 of which we have coded 404 agreements for which treaty texts and appendices were available. We aim to have a database for about 550 agreements by 2012. We have coded agreements for a total of 10 broad sectors of cooperation, encompassing market access, services, investments, intellectual property rights, competition, public procurement, standards, trade remedies, non-trade issues, and dispute settlement. For each of these sectors, we have coded a significant number of items, meaning that we have about 100 data points for each agreement. The resulting DESTA database is – to the best of our knowledge – by far the most complete in terms of agreements and sectors covered. This dataset fills a crucial gap in the field by providing a fine-grain measurement of the design of PTAs. Among others, we think that DESTA will be of relevance for the literatures on the signing of PTAs; the legalization of international relations; the rational design of international institutions; the diffusion of policies; the political and economic effects of trade agreements; power relations between states; and forum shopping in international politics. This working paper describes the DESTA data set and provides selected descriptive statistics. The overview puts emphasis on variation in design over time and across regions.

Keywords: Preferential trade agreements

JEL Classification: F15

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Introduction

During the past twenty years, PTAs that liberalize trade between countries have proliferated. Twenty new agreements were notified to the WTO in 2009 and thirteen in 2010. Every member of the WTO (with the exception of Mongolia) is now a member of a PTA.[2] The proliferation of PTAs shows no signs of slowing down in the near future. Many negotiations are underway. Canada, for instance, is currently negotiating 12 PTAs.[3] The proliferation of PTAs also is not limited to developed economies. On the contrary, many PTAs are concluded between developing countries. The average African country belongs to four different agreements, and the average Latin America country belongs to seven agreements. This proliferation of PTAs has significantly altered the world trade regulatory landscape. Both economic and political studies therefore have tried to identify the factors that explain this rapid growth.

While research on PTAs is not short of theoretical arguments, there are still important gaps in the collection of systematic data for the purpose of empirical testing. The objective of this paper is to describe a new dataset on PTAs that will allow us to address a number of empirical puzzles present in the literature on international cooperation and the design of international agreements. In particular, the data could prove helpful to address research questions on the formation of PTAs, the design of international agreements, and the impact of PTAs on economic and political phenomena.

We have (so far) coded 404 agreements signed between 1945 and 2009. We have coded these agreements for a total of 10 broad sectors of cooperation ranging from market access to investments, services, intellectual property rights, competition, and dispute settlement. Some of these sectors are divided into sub-sectors. We have used manual content analysis and statistical techniques in order to check coders' reliability. To the best of our knowledge, there is no other dataset that covers such a wide number of PTAs and that codes such an extensive number of sectors.

The next section of this paper surveys previous attempts at coding PTAs. The third section then outlines key scholarly debates that our data speak to. In the fourth section, we map the population of PTAs since 1945. Section five then describes the coding scheme and provides some graphical illustrations for selected factors coded. The final section provides

[2] Soon all WTO members will participate in new regionalism as Mongolia is currently studying the feasibility of a PTA with Japan and other states.

[3] From the Foreign Affairs and International Trade Canada website: http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/index.aspx

some information as to planning and process of coding and focuses on the reliability of our exercise.

Previous attempts at mapping PTA design

In political science, precedents of coding legal and political texts abound. Without the ambition of providing a complete list, we identify four large coding projects that are tangential to our work. First, there are several important attempts to measure ideological position of parties by coding their manifestos. These attempts are implemented by using both manual coding (Budge et al. 2001; Klingemann et al. 2006) and software (Benoit and Laver 2006; Slapin and Proksch 2008; Lowe et al. 2011). Second, in the 1990s several competing studies have tried to come up with a reliable measure of central bank independence (Alesina 1988, 1989; Grilli et al. 1991; Eijffinger and Schaling 1992, 1993; Cukierman et al. 1994). Third, Elkins et al. (2009) have manually coded all the constitutions signed between 1789 and now.[4] Finally, Koremenos (2005, 2007) codes a large number of international treaties looking at 375 provisions. This impressive study was carried out using manual coding. In sum, these previous exercises have sharpened the discipline's attention to questions of reliability and show the importance of gathering data from legal and political texts.

PTA coding is far from new. There exist several studies that have coded (parts of) PTAs. These previous studies have not only helped us draw up our coding scheme, but also allow us to check the reliability and validity of our results. The most comprehensive attempt so far is Estevadeordal et al. (2009). The contributors to that volume coded around 50 agreements, with some variation across chapters. Many studies either limit themselves to a small number of agreements (often from one region or signed by a few actors) or to a specific sector. Table 1 provides an overview of a number of coding exercises.

[4] http://www.comparativeconstitutionsproject.org/index.htm.

Table 1: Previous research on the contents of PTAs

Study	Agreements coded	Sectors coded	Level of detail
Estevadeordal et al. 2009	Around 50 PTAs, with some variation across chapters	Market access, trade remedies, technical barriers to trade, services, investments, competition	Very detailed. For example, the coding of investment provisions comprises a total of 30 items
Estevadeordal & Suominen 2007	12,247 international agreement (including PTAs and BITs)		23 domains under seven broad categories
Fink & Molinuevo 2008	25 East Asian agreements with a services component	Services	154 services subsectors across four modes of supply
Haftel 2010	25 agreements	Scope, implementation, institutional independence, corporate bureaucracy, dispute settlement, regional institutionalization	Indicator that ranges between 0 and 30
Heydon & Woolcock 2009	Series of agreements signed by the US, EU, EFTA, Japan and Singapore	All sectors	Differs, qualitative summary
Hicks & Kim 2009	57 agreements in Asia	Type, coverage (industry, agriculture, nontariff barriers, technical barriers to trade), dispute settlement, pace of liberalization	Considerable, especially for dispute settlement and pace of liberalization
Horn et al. 2009	28 EU and US agreements	Comprehensive	Presence or absence of substantive provisions on broad areas
Houde et al. 2007	20 deep agreements	Investments and services	Detailed
Kim 2010	8 US bilateral trade agreements	Market access	Breadth, depth, and rate of trade liberalization
Kono & Rickard 2010	All agreements notified to the WTO	Procurement	Presence or absence of substantive procurement provisions
Kucik 2011	330 agreements (1960-2005)	Trade remedies	Measures of flexibility in antidumping, countervailing duties and safeguards
Lesher & Miroudot 2006	24 North-South agreements	Investments	25 investment provisions
Mansfield and Milner 2010	389 PTAs (1945-2005)	Investment clauses and dispute settlement	Ordinal indicator
Mattoo & Sauvé 2007	App. 45 agreements	Services	MFN clause, national treatment, market access, coverage etc.
McCall Smith 2000	62 trade agreements signed between 1957 and 1995	Dispute settlement	Along a scale with five values
OECD 2002	App. 30, but varies across chapters	Comprehensive	Detailed with respect to services, qualitative discussion for most other sectors
Roy et al. 2007 (and Marchetti & Roy 2009)[5]	32 agreements with services provisions	Services	Around 150 subsectors across 2 modes of supply
UN Social and Economic Commission for Asia and the Pacific (2005-2010)	137 Asian and Pacific trade agreements (including framework agreements)	Comprehensive	Presence or absence of major provisions

[5] Some of the data are available at: http://www.wto.org/english/tratop_e/serv_e/dataset_e/dataset_e.htm.

The theoretical backdrop to the project

The motivation to collect this data has been our belief that many strands of literature in political science or economics would benefit from better data on the design of international trade agreements. Among others, we think that our data will be of relevance for the following bodies of literature:

The signing of PTAs

There is no shortage of explanations on why countries form PTAs. Regarding the economic literature, the domino theory (Baldwin 1993) explains the proliferation of PTAs using a political economy model that focuses on the cost - in terms of trade diversion - of being excluded from PTAs. Furthermore, a more recent study emphasizes the role of economic size and similarity among economies as important drivers in the formation of PTAs (Baier and Bergstrand 2004). As regards the political science literature, there exist many different explanations for why states sign PTAs, suggesting that states might aim to lock-in domestic reforms, strengthen their position in multilateral negotiations, pursue import-substitution policies at the regional level, address security concerns, or sign PTAs as a reaction to other agreements (for an overview, see Ravenhill 2008). Recent studies investigate the role of domestic institutions (Mansfield et al. 2002; 2008; Baccini 2011), interest groups (Mattli 1999; Chase 2005; Dür 2007), bureaucratic interests (Elsig 2007, Elsig and Dupont 2011) and international shocks (Mansfield and Reinhardt 2003) in explaining the formation of PTAs. The political science literature thus has the merit of showing that politics do matter in a state's decision to establish a PTA. A major shortcoming of most previous research, however, has been the failure to take account of important design variation across PTAs. Our dataset aims to fill this gap in the field. For instance, it will provide the data to facilitate the further exploration of what impact domestic institutions have upon the design of PTAs – in terms of flexibility, for instance - and how interest groups' preferences affect the inclusion of specific provisions in PTA treaties.

Legalization through international agreements

A growing body of literature has addressed the issue of legalization or judicialization describing the range and variability of institutional forms in interstate relations (Stone Sweet 1999, Abbott et al. 2000). This strand of literature reflects the actual move in international cooperation towards embracing more detailed and precise rules (degree of precision),

accepting more stringent commitments as well as compliance mechanisms (degree of obligation), and agreeing on additional forms of rule enforcement (e.g., delegation to international organizations and international courts). Some of the WTO agreements (e.g., the Trade-Related Intellectual Property Rights Agreement) have served as prime examples of highly legalized treaties (Abbott et al. 2000). More recently, legalization has been studied as an explanatory variable analyzing how certain elements of legalization affect domestic policies (Allee 2005) or compliance more generally (Guzman 2008, Zangl 2008). As regards PTAs some work has been carried out on dispute settlement provisions (e.g., McCall Smith 2000). Yet, only little systematic research has been conducted on the variance in legalization across PTAs and the dominating approaches to judicial forum choice.

The rational design of international institutions/agreements

Another research program that has emerged alongside legalization is the rational design literature. A number of liberal scholars have postulated that design differences across international agreements and/or institutions are not random and can not be explained by simply drawing on realist arguments (Koremenos et al. 2001). The original contribution of the rational design (RD) literature has been to conjecture a number of explanations to account for particular design features of institutions and/or agreements (e.g., membership rules, scope of issues covered, centralization of tasks, rules for controlling the institution, and flexibility of arrangements). Key explanations in the RD tradition are drawn from game theory, in particular cooperation problems that are characterized by distributional and enforcement issues. Two additional explanatory factors are addressed: uncertainty and number of actors. In particular, the latter should be an important factor accounting for different design features through bilateral, regional or multilateral trade cooperation. While there exists some systematic research on the design of bilateral investment treaties (Allee and Peinhardt 2010), less attention has been paid to the design features of PTAs across regions and time. Finally, some scholarship at the crossroad of the legalization and the rational design literature has addressed the question of optimal institutional features that balance commitment and high levels of delegation with necessities to allow for escape mechanisms or forms of "efficient breach" (Goldstein and Martin 2000; Rosendorff and Milner 2001, Rosendorff 2005, Baccini 2009, Schropp 2010).

Diffusion

A large political science literature studies diffusion processes across borders. Among the many policies, institutions, and events that spread across borders, previous studies have looked at regulatory agencies (Jordana et al. 2011), international agreements (Elkins et al. 2006; Barthel and Neumayer 2010; Baccini and Dür 2011), tax policy (Swank 2006), democracy (Gleditsch and Ward 2008) and conflicts (Buhaug and Gleditsch 2008). Data on the design of PTAs will allow us to shed light on the conditions under which policies spread across borders and the mechanisms through which policies spread (coercion, competition, learning or emulation). Specific questions that can be addressed are: do provisions in PTAs spread? If yes, in which sequence do different countries adopt these provisions? What does this sequence tell us about the mechanism of diffusion?

Political and economic effects of trade agreements

The effects of PTAs on economic variables have been thoroughly studied by economists. A vast body of literature explores the impact of PTAs on national and world welfare by looking at the relative magnitude of trade creation and trade diversion (Viner 1950; Bhagwati 1993; Krugman 1991; Summers 1991). Moreover, countless studies investigate the impact of trade agreements on trade flows (Rose 2004; Goldstein et al. 2007) and foreign direct investment (Büthe and Milner 2008) using a gravity model. Interestingly enough, the findings of these studies often conflict with one another. We identify a poor operationalization of PTAs on the right-hand side of the econometric equation as one of the main problems of such studies. Looking at the content of PTAs would allow us to overcome some of these measurement inconsistencies and provide a better understanding of the impact of PTAs on both trade flows and FDI. Other recent studies explore the impact on political variables. Among these, some studies (Pevehouse 2005; Pevehouse and Russet 2006) argue that certain IOs, including some PTAs, increase the probability of democratization. Mansfield and Pevehouse (2000) show that PTAs help countries to peacefully settle conflicts and mitigate the risk of such conflicts escalating into full-blown war. Finally, others (Ethier 1998; Fernandez and Portes 1998) claim that PTAs help developing countries to implement and lock in economic reforms. Future studies could explore these arguments in more detail. Specifically, we could assess the impact of PTAs on economic reforms looking at specific provisions – enforcement provisions, for instance – in specific sectors, such as intellectual property rights. In addition, the design of PTAs in combination with domestic institutions and leaders' preferences may shed new light on why and when developing countries decide to implement economic reforms.

Power

How and when states exercise power in international politics is one of the key questions in the field of International Relations (Baldwin 2002; Barnett and Duvall 2005). The design of PTAs is indicative of power relations as preferences over the contents and institutional setup of such agreements vary across states. In particular, developed countries are likely to prefer deeper agreements than developing ones. To the extent that there is variation across North-South agreements, this may be due to some developing countries having more power (issue specific or structural) than others. Thus, the data will be useful in exploring to what degree and under what conditions power asymmetry is reflected in the design of PTAs.

Forum shopping/overlapping regimes

Systematic analyses addressing the effects of overlapping regimes on the evolving politics of forum-shopping are scant (Young 1996; Aggarwal 1998; Raustiala and Victor 2004; Alter and Meunier 2007; Dupont and Elsig 2011). Drezner (2006) suggests that more powerful states are better able to cope with overlapping jurisdictions and increased legalization. He argues that (too much) legalization has empowered stronger states. This observation runs counter to the conventional wisdom related to how legalization constrains the abuse of power (Grant and Keohane 2005). Focusing on interaction across regimes, Shaffer and Pollack (2010) argue that soft law regimes may be "hardened" through regime linkage, while hard law regimes may be "softened". Put differently, linking soft law regimes (other policy fields, bilateral economic cooperation) with hard law regimes (WTO) may have important spill-over effects. Some initial work on forum-shopping in the area of trade has focused on dispute settlement (Davis 2006, Busch 2007). Busch (2007) argues that forum shopping is not only about the likelihood of the claimant's success, but is also about setting a precedent that is useful for case-law development. Pauwelyn (2009) describes how the WTO and regional dispute settlement mechanisms increasingly overlap, and offers rules on how to address sequencing and conflicts arguing that the WTO cannot remain indifferent to forum exclusion clauses in PTAs. Yet, there is little research on forum-shopping (Bernauer et al. 2011). Given the increasing number of PTAs, we expect our data-set to be also useful in order to address questions emerging from this research program.

Our sample of PTAs

Our objective has been to cover all *negotiated* trade agreements signed between 1945 and 2009 that include *concrete* steps, that is, potentially be covered by GATT Article XXIV, the GATT Enabling Clause, or GATS Article 5, towards the *preferential* liberalization of trade in goods or services.[6] By including "negotiated" in our definition, we exclude one-sided preference schemes such as the Generalized System of Preferences. The term "concrete" means that we did not consider agreements that only include vague provisions on objectives, without specifying specific measures that will be carried out in a reasonable time frame. This excludes framework agreements that often precede the conclusion of actual PTAs (for example, the 2003 framework agreement between India and ASEAN) and partnership and cooperation agreements (for example, EU-Ukraine 1998).[7] "Preferential" indicates that we excluded agreements that extend steps to liberalize trade to third countries without asking for reciprocity. Asia Pacific Economic Cooperation, for example, is a grouping that we do not consider in this project. Moreover, we exclude agreements that simply extend most-favored nation treatment to countries that are not members of the World Trade Organization. The preferences can be one-sided as is the case for the European Union's Lomé agreements.

We used a variety of sources to identify the relevant trade agreements. Our main sources were the list maintained by the World Trade Organization, the Tuck Trade Agreements and McGill Faculty of Law Preferential Trade Agreements databases, and the list collated by Gary Clyde Hufbauer.[8] After eliminating overlaps and some agreements that did not fit our definition, and adding agreements especially from the Middle East, we ended up with a database of 690 agreements.[9] So far, we have been able to code 404 of these

[6] Importantly, we do not consider agreements that touch upon "trade and" issues such as competition policy or movement of natural persons unless the same agreement also includes provisions that are directly aimed at enhancing market access for goods and/or services. This excludes some very far-reaching agreements, such as EU-Switzerland Bilateral Agreements II, which cover everything from taxation to free movement of persons.

[7] We decided to include a few borderline agreements such as the Community of Sahel-Saharan States (CEN-SAD), the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, and the Protocol on Trade Negotiations.

[8] These databases are available at http://www.wto.org/english/tratop_e/region_e/summary_e.xls; http://www.dartmouth.edu/~tradedb/; and http://ptas.mcgill.ca/. We also relied on other webpages, such as www.bilaterals.org and http://www.cuts-citee.org/PTADossier.htm, to get a full list of agreements signed more recently. For the Hufbauer list, see Hufbauer 2007.

[9] To compare, as of October 2010 the WTO list of agreements, including those signed but not yet in force, encompasses 419 agreements (both goods and services agreements). Our dataset also includes agreements enlarging and deepening pre-existing agreements. For instance, for the EU we coded the Rome Treaty (1957), the enlargement treaties, and the Single European Act (1986), the Maastricht Treaty (1992), the Amsterdam Treaty (1997), the Nice Treaty (2001), and the Lisbon Treaty (2007). In contrast to the WTO list, we did not

agreements. We currently have not coded texts for the other agreements mentioned in these sources because we were unable to find the full texts of some agreements and because of time constraints. The agreements not yet coded introduce a certain bias, as many of them are older agreements, partial agreements, and agreements among lesser developed countries.[10] Nevertheless, our sample contains virtually all the countries in the world and covers all the types of agreements defined above. The following graphs give an overview of the agreements that we have coded.

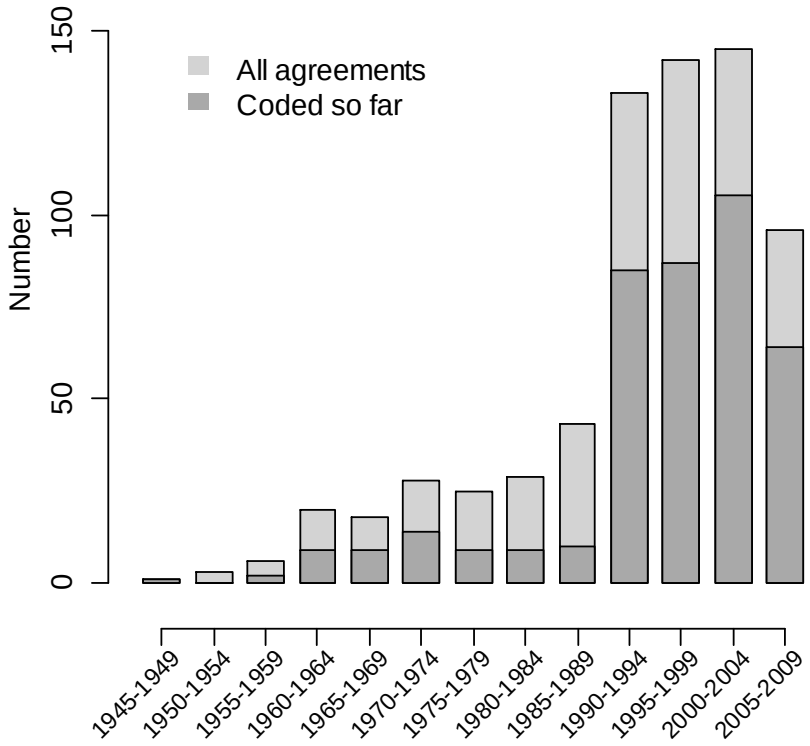


Figure 1: New PTAs over time

Figure 1 shows the number of agreements signed over time (including the percentage of the agreements that we have coded so far). This figure confirms the common view of a stark increase in the number of agreements signed in the 1990s. Currently, we only know the data of signature of an agreement; our data on the date of entry into force still has some gaps at the time of writing. As we do not know which agreements disappear over time, we cannot give cumulative numbers. The oldest agreement that we include is the South Africa-Southern

include interim agreements and we separately counted services agreements only if the services agreement was signed in a different year than the goods agreement.

[10] We may also be missing (or may not have coded) some protocols that were added to agreements after they were signed. Our strategy has been to include all protocols in the coding exercise that are referenced in the main text of an agreement.

Rhodesia Customs Union from 1948 (Interim Agreement for the re-establishment of a customs union between the Union of South Africa and Southern Rhodesia).[11] The trend sees a peak in the period 2000-2004, when about 22 agreements were signed each year. Since then, we have seen a slight decline in the number of PTAs signed, largely due to a decline in the number of agreements among European countries.

Figure 2a distinguishes between different types of agreement. We use the categories bilateral, plurilateral, region-country, and inter-regional agreements to classify agreements. Plurilateral are all agreements that include more than two countries, but do not fall into the region-country or inter-regional categories. Inter-regional agreements are those signed between two regional entities. 53 percent of the agreements in our database are bilateral and only 3 percent of our agreements are inter-regional ones. The figure also shows that our sample of coded agreements contains slightly fewer bilateral agreements than the population.

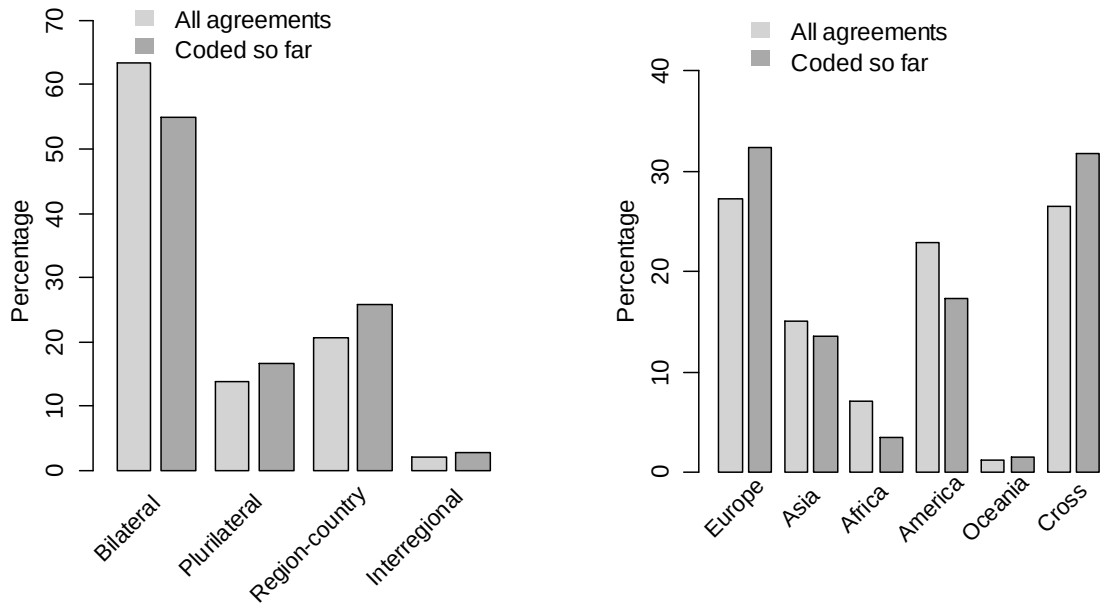


Figure 2a & 2b: PTAs by (a) type of agreement and (b) region

In terms of geographical distribution, Figure 2b lists the agreements by continent, using the United Nations classification to assign countries to a continent.[12] We define agreements crossing regions as "cross-continent". Some of the agreements falling under this category are actually agreements between countries that are geographically close, such as Bulgaria

[11] In fact, the origins of this agreement go back to 1910.
[12] http://unstats.un.org/unsd/methods/m49/m49regin.htm.

(Europe) and Turkey (Asia). The data confirms the conventional view that most agreements have been signed among European countries, although the number of PTAs crossing regions is not much lower. Again, figure 2b shows a small bias in our sample of coded agreements in favor of European agreements and cross-continent agreements.

In Figure 3, we show the regional distribution of agreements over time. Two trends are particularly evident from this graph: first, the sharp increase in the number of agreements in the 1990s was driven by European countries. Second, more recently, cross-continent agreements are the dominant form of PTAs.

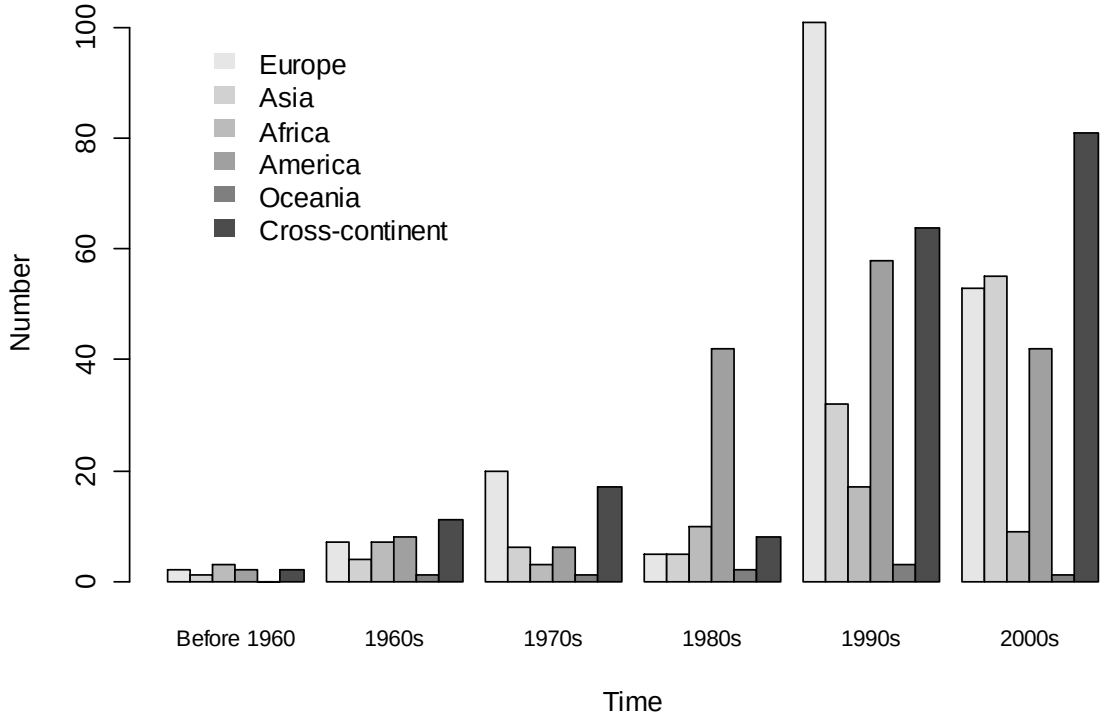


Figure 3: Regional distribution of PTAs by time period

Finally, in Figure 4 we distinguish between North-North, North-South and South-South agreements. North-North agreements are those among the United States, Canada, Western European countries, Japan, Australia and New Zealand.[13] North-South agreements are those signed between one or several of the above countries and all other countries. South-South agreements are those excluding the above countries. The figure clearly shows that the number

[13] Clearly, this list of "Northern" countries is debatable. Countries that can be considered developed at least for parts of the period covered are Hong Kong, Taiwan, Singapore, South Korea, several Central and Eastern European countries, and Israel. A better approach would be to classify agreements by comparing the Gross Domestic Product per capita of member countries; however, this goes beyond what we could do at this stage of the project.

of South-South agreements by far outstrips the number of North-North or North-South agreements.

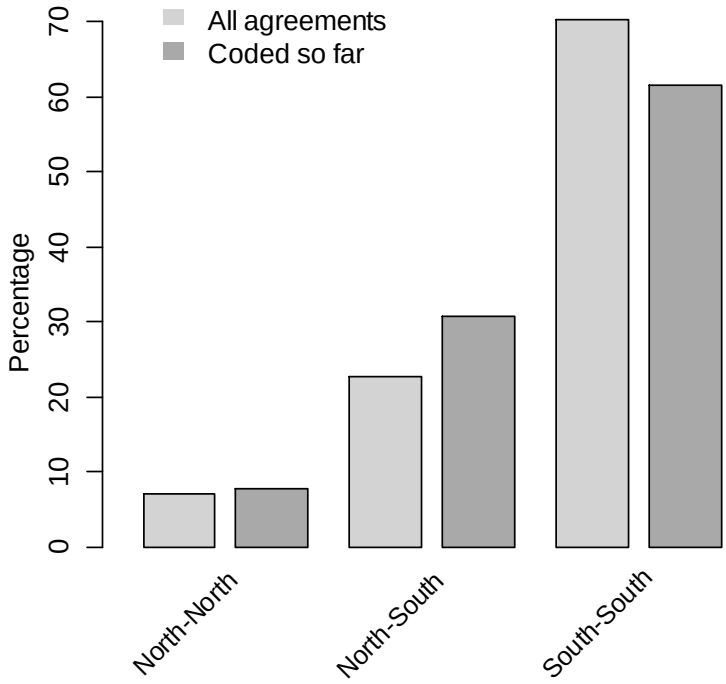


Figure 4: Agreements by level of development of member countries

We have coded the 404 agreements for a total of 10 broad sectors of cooperation. Some of these sectors are divided into sub-sectors. The number of items coded varies from one sector to another: from a minimum of six for the sector government procurement to a maximum of 30 for the sector market access.

The design of PTAs

In the following, we provide an overview of the sectors coded and some selected descriptive evidence on the design of the PTAs (additional information on the coding strategy is found in the penultimate section of the paper).

Market access

In terms of market access, we code general characteristics of tariff schedules, degree of concessions, tariff peaks, exemptions, speed and depth (e.g., Hicks and Kim 2009). We focus on the types of templates used: First, we code whether states work with the Harmonized System (HS) or a national system, which particular HS references are used (as these have

been regularly updated; HS 1988/92 - very similar and therefore usually combined, HS 1996, HS 2002 and HS 2007) and at which digit level concessions are listed. Second, the coding differentiates whether the parties agree on a uniform (basket) approach or whether there are areas that have a specific treatment (e.g., agriculture, fishery products, textiles, etc) (Estevadeordal et al. 2009). This is usually reflected in a positive list approach, a negative list approach or a combination of both. We further code whether there is an explicit stand-still clause (that parties cannot increase tariffs during negotiations).

With respect to concessions (depth), we focus on the absolute and relative numbers of tariff lines with concessions (and the number of tariff rate quota lines with concessions). We also code exemptions (no concessions) and the treatment of tariff peaks (remaining, decreasing, removed). We calculate average tariffs ex ante and ex post the transition period (where available). To capture the speed of concessions, we code the pattern of liberalization over the transition period for tariff lines and tariff quotas focusing on the degrees of early liberalization, gradual liberalization and liberalization towards the end of the transition period.

Finally, we code whether agreements regulate export taxes. A first round of coding will be finalized by December 2011.

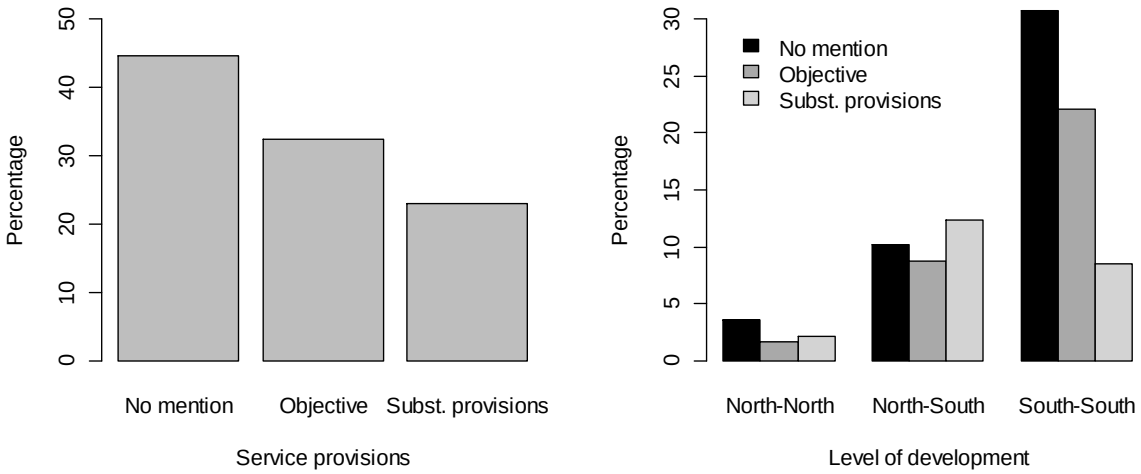
Services

Several previous attempts have been made to code the services provisions in PTAs, all of which have looked at a smaller number of PTAs (Stephenson 2002; Mattoo and Sauvé 2007; Roy et al. 2007; Fink and Molinuevo 2008; Heydon and Woolcock 2009; Marchetti and Roy 2009). Other studies have concentrated on the comparison of the provisions for specific services sectors (aviation, financial services etc.) or specific modes of supply (e.g., movement of natural persons) across a number of PTAs (see, for example, some contributions in Marchetti and Roy 2009). Our coding scheme builds on these previous studies, but refrains from coding the liberalization commitment for each services subsector (the WTO's list distinguishes more than 150 such sub-sectors, ranging from veterinary services to electronic mail) across all four modes of services supply (cross-border supply, consumption abroad, commercial presence, and movement of natural persons). We decided not to code at this level of detail because 600 coding decisions[14] across more than 400 agreements went beyond what we could feasibly achieve.

[14] In fact, since commitments may not be completely symmetric across member states, the actual number of coding decisions would be 600 times the number of member states. The study that comes closest to coding at this level of detail is Roy et al. (2007) who code the commitments for 36 WTO members in the General Agreement on Trade in Services and in PTAs across all 150 services subsectors for two modes of supply (cross-border trade and commercial presence).

Our initial interest is simply whether an agreement includes any substantive provisions on the liberalization of trade in services, or mentions this liberalization as an objective.[15] We then distinguish between positive and negative list approaches to the liberalization of services trade. Agreements with a negative list approach tend to be more far-reaching than those with a positive list approach (Fink and Molinuevo 2008). In addition to this, we checked whether the agreement explicitly included or excluded 11 broad services sectors (from business to transport services). We also coded the presence or absence of MFN, national treatment, non-establishment, and movement of natural persons clauses, with the latter two capturing two modes of services supply. Finally, we coded whether or not the services chapter includes a continuous review provision.

Figure 5a shows that less than a quarter of all agreements included in our coding exercise have a substantial services chapter (23 percent). Another third, however, mentions the liberalization of services trade as an objective, whereas 45 percent of all do not mention trade in services. Importantly, some agreements that are coded as having no substantive services provisions may still have chapters on specific services sectors, such as financial services or transport services. Figure 5b makes a distinction between North-North, North-South, and South-South agreements. Of the three, North-South agreements have the most far-reaching and South-South agreements the shallowest services provisions.

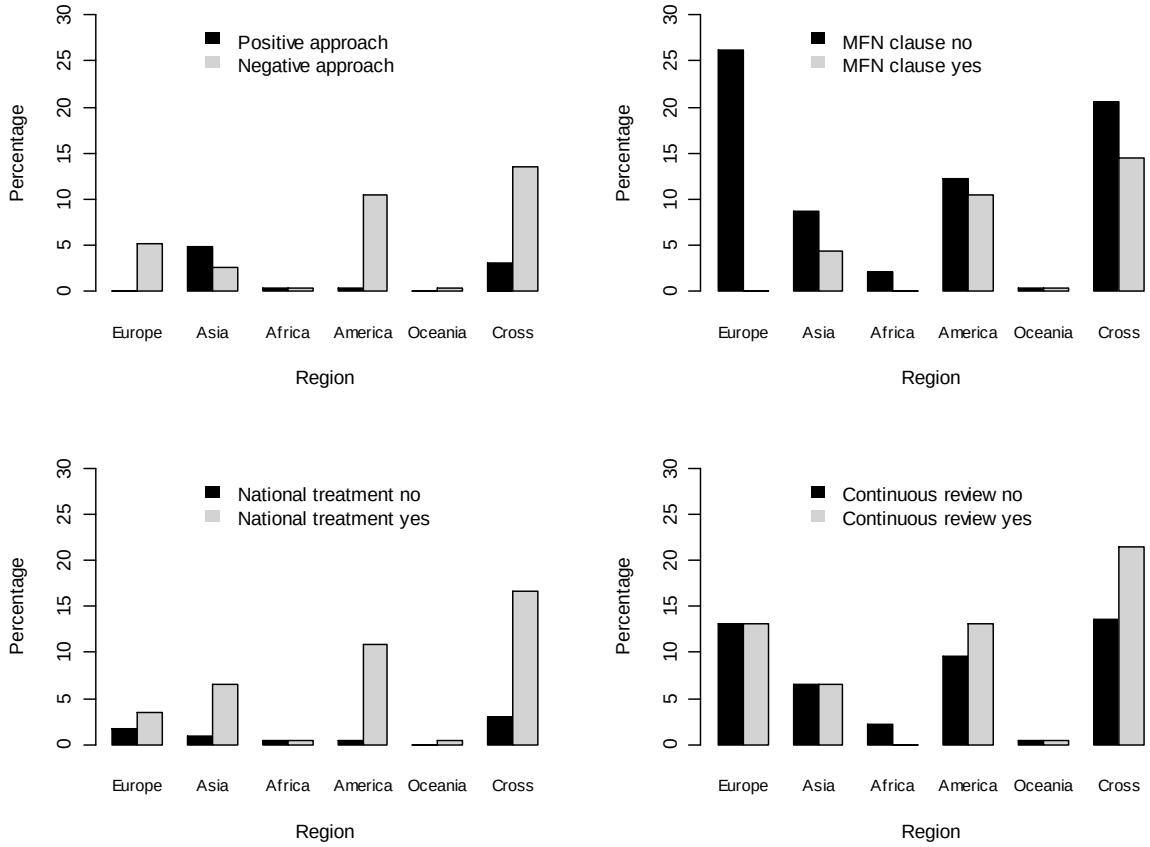


Figures 5a & 5b: Services coverage in PTAs by (a) scope and (b) level of development

As expected, the percentage of agreements with substantive services provisions has been growing for the last couple of years. In fact, a large majority of agreements signed between

[15] We use services chapter as a short hand for substantive measures, which may also be found in declarations added to an agreement. Non-legally binding provisions (as those included in a declaration attached to the 1985 Israel-U.S. agreement) are coded as objective only, as are agreements that only write down an MFN obligation.

2005 and 2009 includes a service chapter. By contrast, before 1985 hardly any agreements foresaw the liberalization of services trade. We also witness substantial variation across continents in the depth of services provisions. The largest share of agreements with substantive services provisions is to be found in the Americas, whereas we have only two coded African agreements in the database with substantive services provisions. Also the large majority of intra-European agreements either do not mention the liberalization of services trade (especially the older ones) or do so only as an objective to be reached at a later stage. When comparing types of agreements (bilateral, plurilateral, region-country, and region-region agreements), no particular trend becomes apparent.



Figures 6a-6d: Services sectors by region (percentages are calculated in relation to all agreements that at least mention services liberalization)[16]

Figures 6a to 6d provide evidence with respect to the more detailed items that we coded for each services sector, always distinguishing by region. Clearly, most agreements with substantive services provisions adopt a negative list approach. Interestingly, Asian agreements are an exception to this rule. MFN clauses are rather rare in the agreements that mention at least the objective of services trade liberalization, and are not used in European agreements.

[16] The values shown in Figures 6a and 6c do not add up to 100 percent as coding the approach to liberalization and national treatment provisions only makes sense for agreements with substantive services provisions.

Most agreements with substantive provisions on services trade liberalization include a national treatment clause. Finally, across all continents many agreements include a continuous review provision, which is a clause that stipulates further negotiations on the liberalization of trade in services.

Investment

Our coding strategy focuses on eights sets of variables: 1) sectoral coverage; 2) scope of non-discrimination provisions; 3) most-favored nation (MFN); 4) national treatment (NT); 5) standards of treatment; 6) transfer of payments; 7) dispute settlement mechanism (DSM); 8) temporary movement of business and natural people. Sectoral Coverage is the most important variable in determining the scope of investment protection. First, in coding this variable we distinguish among PTAs that do not include any investment provisions and PTAs that do. Second, among the latter PTAs we categorize whether PTAs include a vague statement on investment protection, rely on bilateral investment treaties previously signed by member countries, contain investment provisions only in the service sector (GATS type), and PTAs that have an ad hoc section on investment (NAFTA type).

The scope of non-discrimination provisions allows checking in which phase(s) (if at all) of the investment procedure foreign investors are protected. In coding MFN and NT we distinguish between negative list and positive list; the former one being a stronger form of investment protection than the latter one. MFN and NT are contingent standards based on the treatment afforded to other groups of investors, whereas the standards of treatment are based on customary international law (Lesher and Miroudot 2006**:** 14). Regarding transfers of payments, we code whether there are restrictions in transferring profits from the host country to the home country. Regarding the DSM, we assess the presence of a dispute settlement clause and also distinguish between an investor-state DSM and a state-state dispute DSM. Finally, we code whether there are restrictions for movement of key personnel, e.g. managers and chairmen of the board, and business.

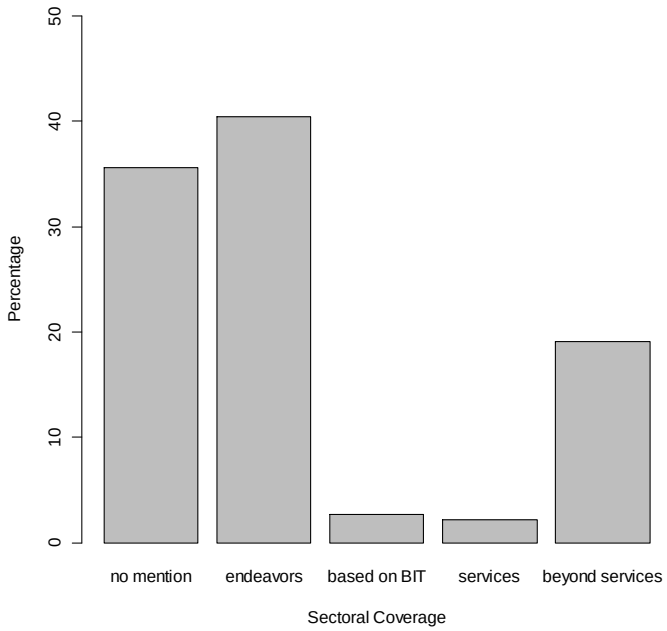
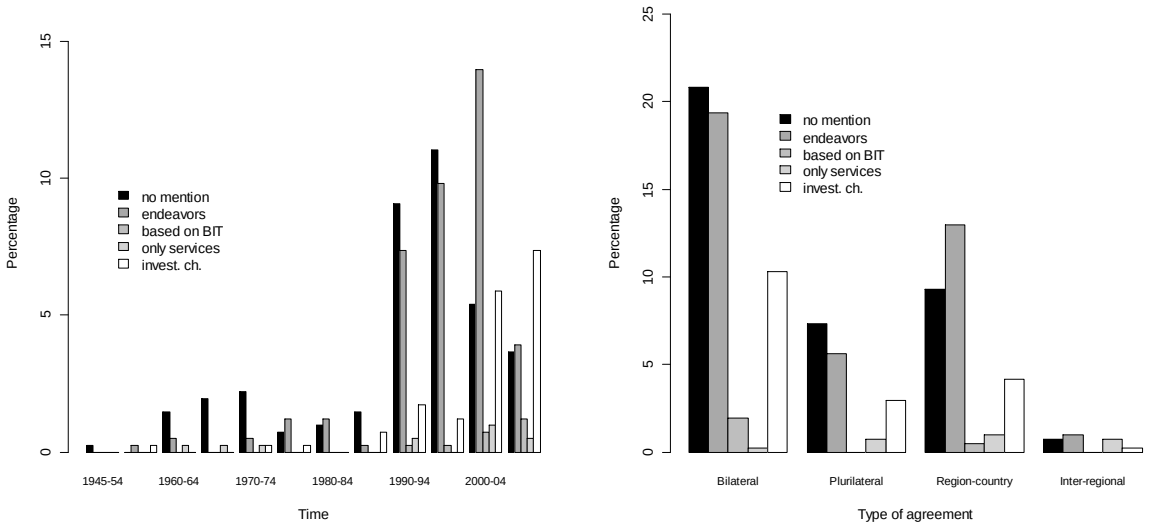


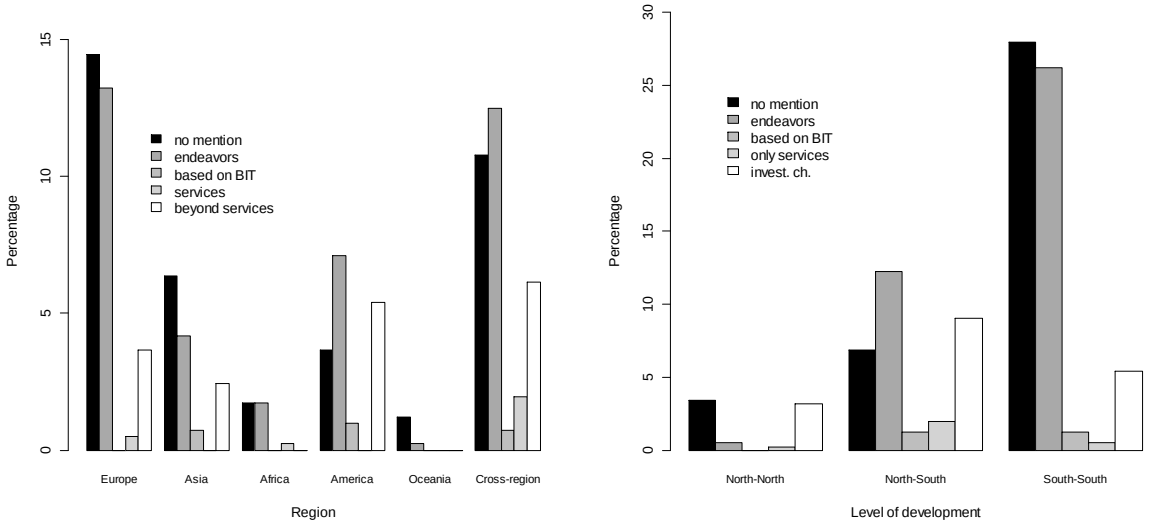
Figure 7: Investment coverage in PTAs

A third of the agreements included in our coding exercise do not mention investment at all (Figure 7). 40 percent of the agreements mention investment protection as a general objective, often in the preamble, without including any further provisions on how to realize and enforce such protection. Moreover, only a handful of PTAs rely on provisions included in a bilateral investment treaty previously signed by the same two countries (three percent). Similarly, only two percent of PTAs regulate investment protection in the service sector. PTAs signed by the EU with developing countries fall in this category. Finally, almost 20 percent of PTAs include a separate chapter on investment protection. In sum, only a relatively low number of PTAs contain strict regulations on investment.

As with other sectors, the percentage of agreements with investment protection provisions has been growing over time (see Figure 8a) and it is a feature of new regionalism (Ethier 1998). Interestingly, the majority of PTAs signed in the last five years include an investment chapter, that is to say, double the number of PTAs that make no mention of investment protection. Moreover, Figure 8b shows that bilateral agreements are the deepest PTAs in terms of investment protection. Indeed, more than 40 percent of bilateral agreements include a chapter on investment. Finally, developed economies tend to form PTAs that include stricter regulation on investment than developing countries do. This does not come as a surprise. Since they have the largest share of FDI outflows, highly industrialized countries are particularly concerned in protecting their investments.



Figures 8a & 8b: Investment sectors by (a) time period and (b) type



Figures 8c & 8d: Investment sectors by (c) region and (d) level of development

In terms of dispute settlement mechanisms, Figure 9 shows that only one third of PTAs has either an investor-state DSM or a state-state DSM. This percentage is higher for north-south PTAs relatively to north-north PTAs and south-south PTAs. Indeed, almost 50 percent of the north-south PTAs include either an investor-state DSM or a state-state DSM. As for sectoral coverage, the number of PTAs that include a DSM on investment has increased sharply in the last decade (Figure 10). Overall, we can conclude that investments are still poorly protected by PTAs, though there is evidence that countries have become more concerned with this issue over the last ten years.

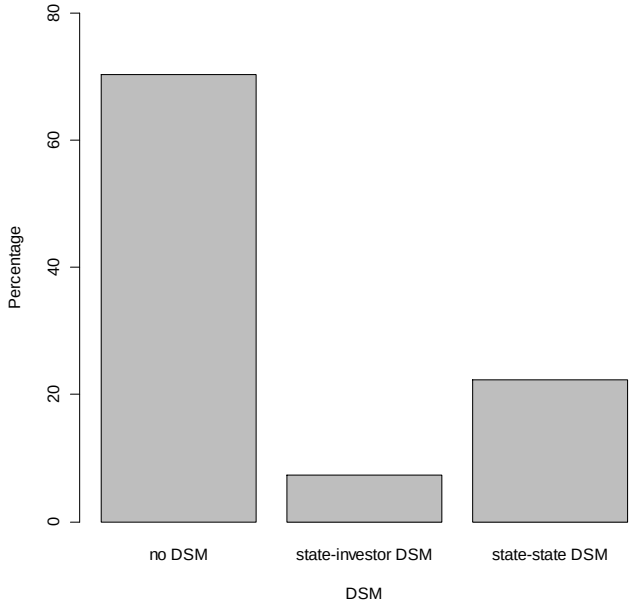


Figure 9: Investment-related dispute settlement provisions

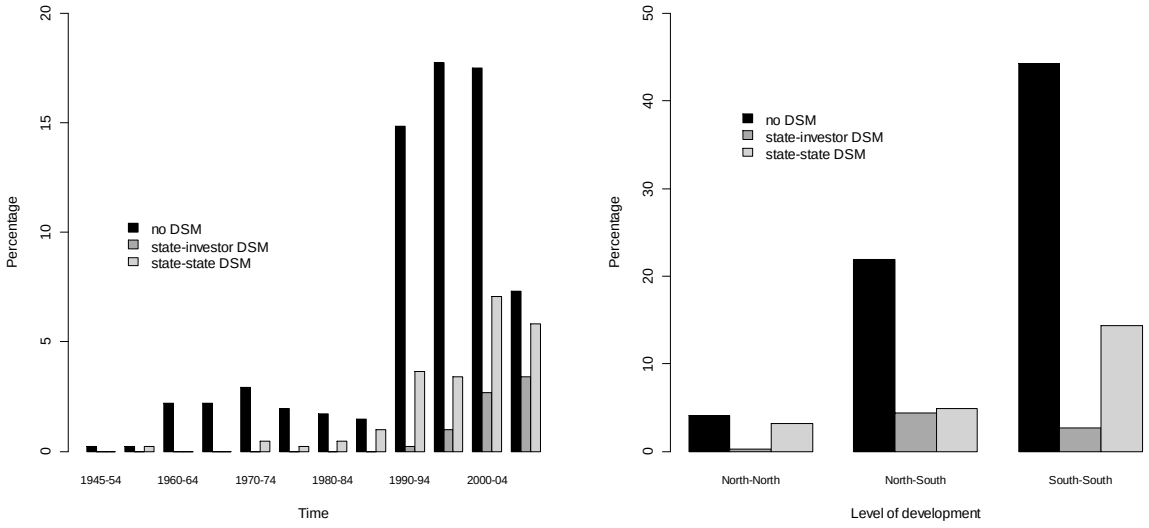


Figure 10a & 10b: Investment-related dispute settlement provisions by (a) time period and (b) level of development

Intellectual Property Rights

Our coding strategy focuses on three sets of variables for intellectual property rights (IPRs): 1) general statement on IPRs; 2) IPR Conventions; 3) scope of IPR protection. Regarding general statement on IPRs, the aim is to distinguish among PTAs that do not include any IPR provisions and PTAs that do. Regarding IPR Conventions, we code whether PTAs include

specific deadlines for acceding to key multilateral conventions on the protection of IPR. Regarding scope of IPR protection, we code whether there are provisions protecting IPRs in specific sector (e.g., pharmaceutical industry). Moreover, we coded 1 when there are provisions that require products to specify the geographical provenance. Finally, we coded 1 if there is a specific provision on the enforcement of regulations related to IPRs protection.

Figure 11 shows IPR coverage for all PTAs in the sample. Specifically, coders were asked to answer 10 yes or no questions related to IPRs. High numbers imply strong coverage of IPRs, e.g. a score of 10 implies that a coder answered yes, i.e. she coded 1, to every question. More than forty percent of PTAs have no provision on IPRs and more that two thirds have only weak IPRs coverage, i.e. IPRs total coverage scores lower than or equal to 2. Roughly ten percent of PTAs have strong IPR coverage, i.e. IPRs total coverage scores at least 7. EU and US bilateral trade agreements fall in this category.

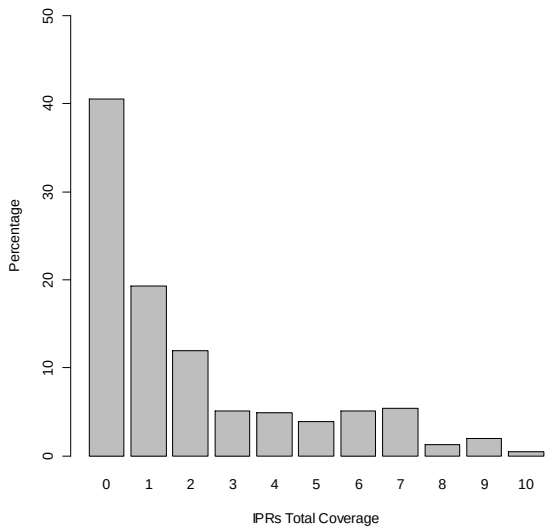
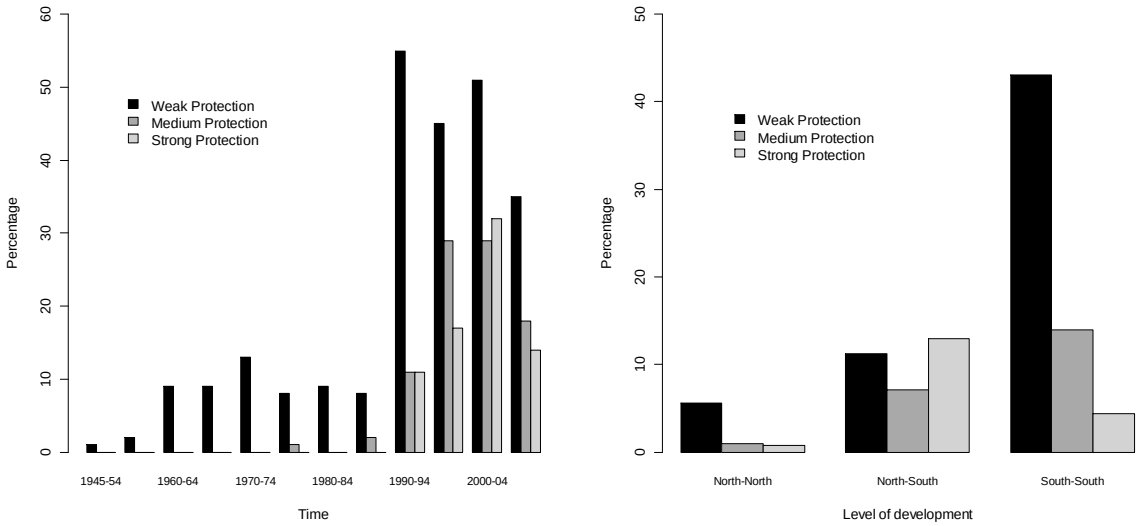


Figure 11: Coverage of intellectual property rights.[17]

Figure 12 shows that provisions on IPRs have been included in PTAs only in the last 20 years. Against the background of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement, signed by WTO members in 1994, there is evidence that (at least) some countries do not find existing provisions included in this multilateral agreement sufficient and try to regulate IPRs bilaterally. Moreover, this finding suggests that a small percentage of PTAs include WTO-plus provisions on IPRs. Finally, and not surprisingly, north-south PTAs include stronger IPRs protection compare to north-north and south-south PTAs.

[17] 10 yes (coded one) or no (coded zero) questions related to provision protecting IPRs. High numbers imply strong coverage of IPRs.

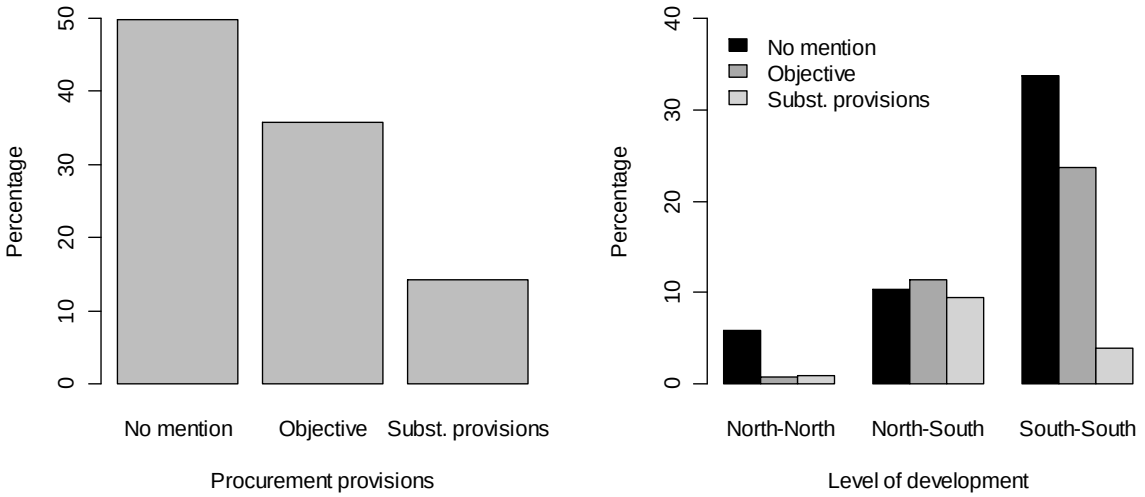


Figures 12a &12b: Coverage of intellectual property rights by (a) time period and (b) level of development

Government procurement

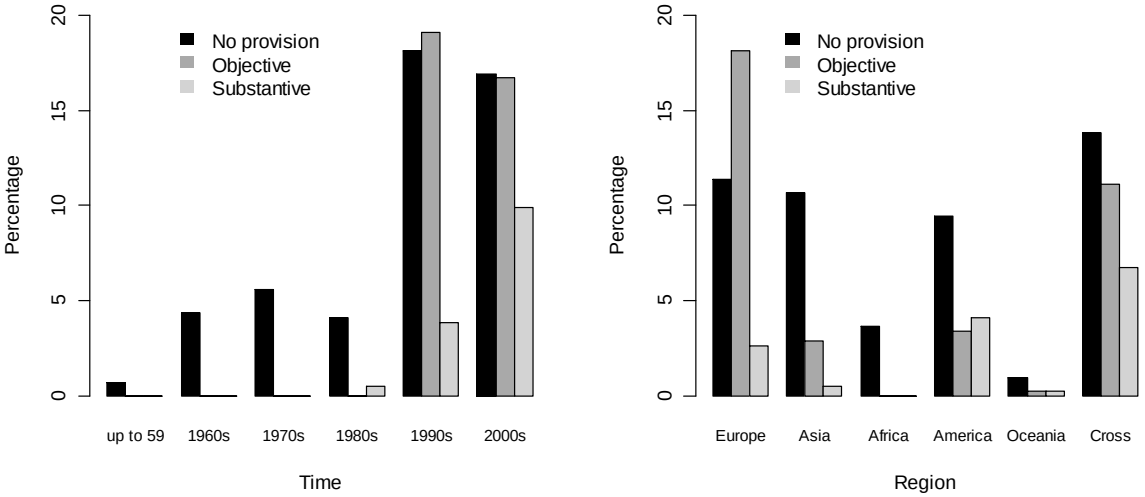
With respect to provisions governing public procurement, again building on previous studies in this area (Heydon and Woolcock 2009), we first coded whether an agreement included the regulation of procurement policies as a general objective or in form of substantive rules. We also coded the presence or not of a national treatment clause, a transparency clause, and a reference to the GATT/WTO rules on public procurement. Finally, we coded the scope of the procurement provisions (if any) in terms of entities (government, sub-national governments, state-owned enterprises) and type of purchase (goods and/or services) covered.

About 50 percent of the agreements have a reference to government procurement, but only 14 percent include substantive procurement provisions (that is, provisions that go beyond stating adherence to the WTO agreement on procurement or the desire to exchange information in this area) (Figures 13a & 13b)



Figures 13a & 13b: Coverage of government procurement provisions by (a) substance and b) level of development

Again, as with the other sectors coded here, it is evident that over time the depth of integration has increased with respect to government procurement (Figure 13c). Government procurement provisions are virtually absent from African agreements; by contrast, the share of agreements with substantive procurement provisions is highest for agreements in the Americas (Figure 13d).



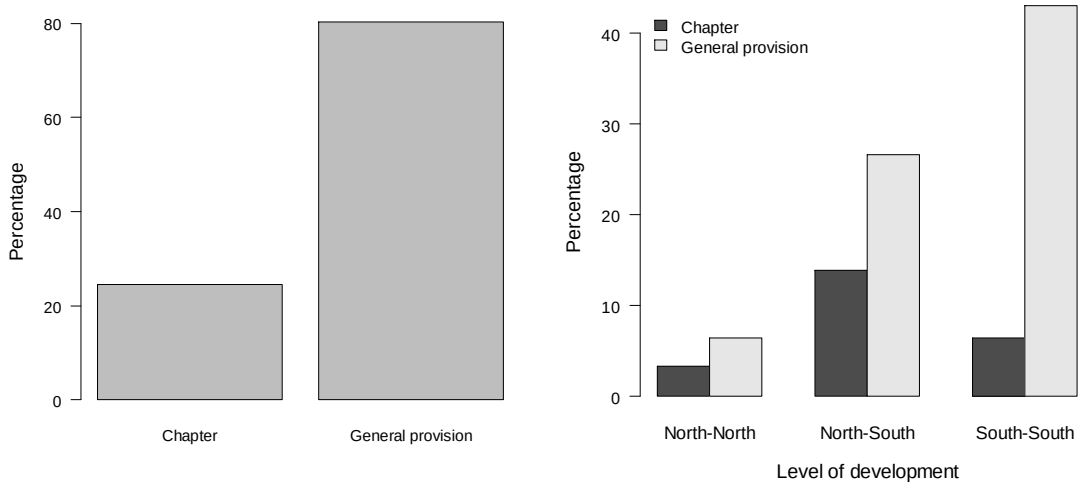
Figures 13c & 13d: Coverage of government procurement provisions by (c) time period and (d) by region

Basically all of the agreements with substantive provisions grant national treatment with respect to government procurement. Throughout, they tend to extend this treatment to goods and services; moreover, they apply not only to the national government, but also to subnational governments and state-owned enterprises (although many agreements include

positive lists of such enterprises). More than half of all agreements that mention access to government procurement at least as objective make a reference to the GATT/WTO agreement on government procurement, whereas only a quarter include a transparency provision.

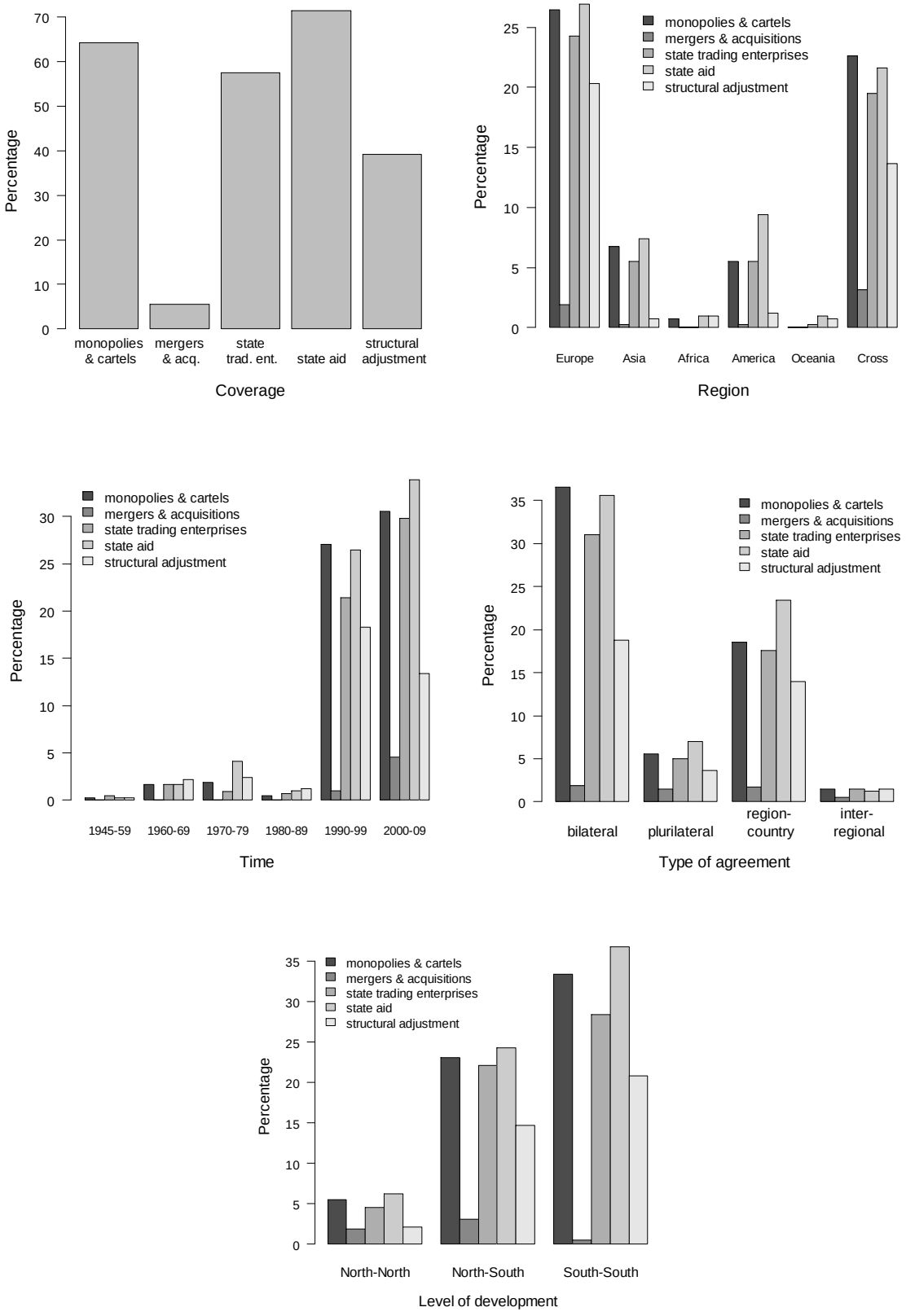
Competition

With regard to competition-related obligations, we first seek to capture the importance given to this area by the contracting parties. We code whether competition is covered in a chapter or single articles. We also record whether agreements have provisions related to subsidies, coding whether these are allowed or out-ruled, and whether specific references to the GATT/WTO agreement are made. Second, we compile information on the scope of areas covered in an agreement (e.g., monopolies and cartels, mergers and acquisitions, state trading enterprises, state aid (and as an extra category structural adjustment provisions)) (see also Teh 2009) and the degree of cooperation measured by the forms of cooperation (general obligation not to distort competition, exchange information, notification, establish national competition authorities, establish working groups, coordination among authorities of partner countries, creation of common competition authority).



Figures 14a & 14b: Provisions on competition by (a) scope and (b) level of development

Figures 14a and 14b show descriptive statistics related to the existence of provisions in the field of competition. The existence of a competition chapter indicates the importance attributed to this area by the contracting parties. While only 24 percent have a chapter dedicated to competition, more than 80 percent of PTAs have competition-related provisions. Only after 1990 parties started to integrate full chapters on competition into agreements. In terms of development, north-north and north-south agreements have a relative high number of competition chapters (roughly 50 percent).

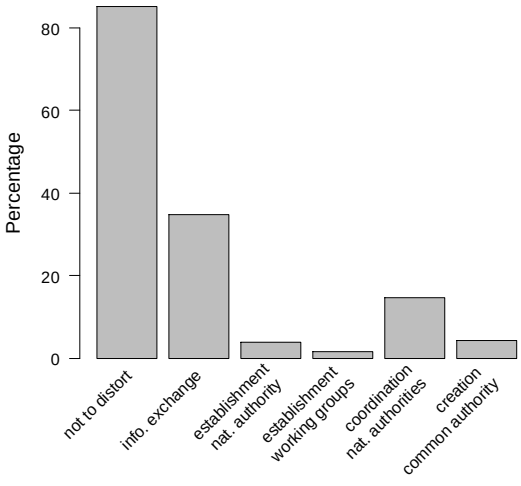


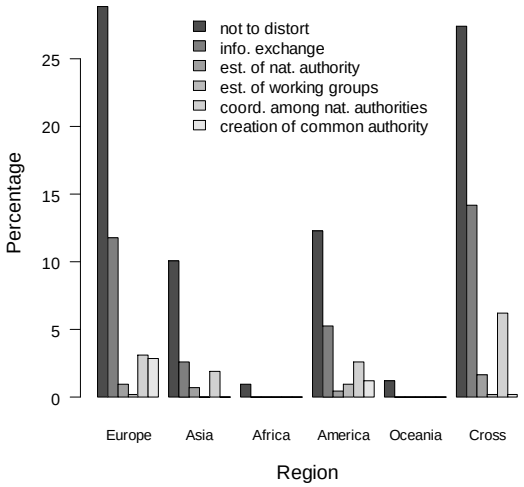
Figures 15a-15e: Coverage of competition issues by (a) coverage (b) region, (c) time period, (d) type of agreement and (e) level of development[18]

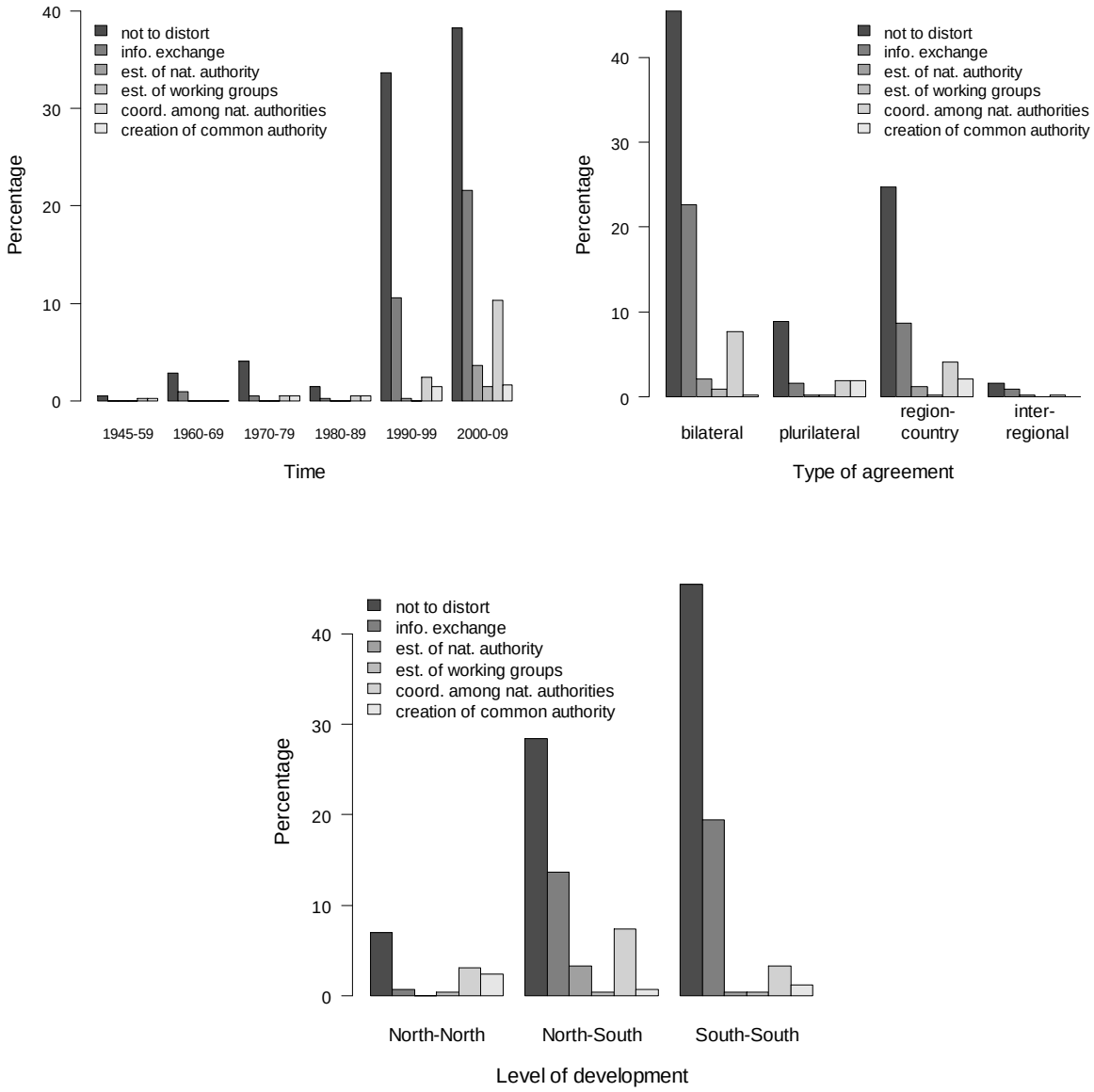
[18] The values shown in figures 15a-15e go beyond 100 percent as the same agreement can feature multiple competition-related provisions. The same applies to figures 17, 18, 20, 23 & 24.

When we look at the coverage, the data shows that most provisions are related to state aid (71 percent) and least to mergers and acquisitions (about 5 percent) (Figure 15a). African trade agreements feature least and European trade agreements most provisions (Figure 15b). Focusing on the past 20 years, we see that there are fewer provisions – in relative terms – on structural adjustment and there an increasing number of PTAs that also regulate mergers and acquisitions (Figure 15c). As to type of PTA, we see in particular a relative high attention paid to state aid in region-country agreements (Figure 15d). Finally, from a development perspective, we observe a relative importance of state aid and little attention to M&A provisions in south-south agreements, while little attention is paid in north-north agreement in relation to structural adjustment (Figure 15e).

Figures 16a-16e illustrate the degree of cooperation in this field ranging from declarations not to distort competition and lose cooperation on information exchange to the creation of a common authority that manages competition policy. Generally, cooperation is low in Asia and Africa and substantially higher in other parts of the world. Over time, in particular information exchange and other coordination provisions have significantly increased after the end of the Cold War. From the development perspective (figure 16e), north-north agreements foresee a relative high degree of cooperation, north-south are in particular focusing on institutionalized cooperation between national authorities, and south-south agreements put less emphasis on institutionalized cooperation.







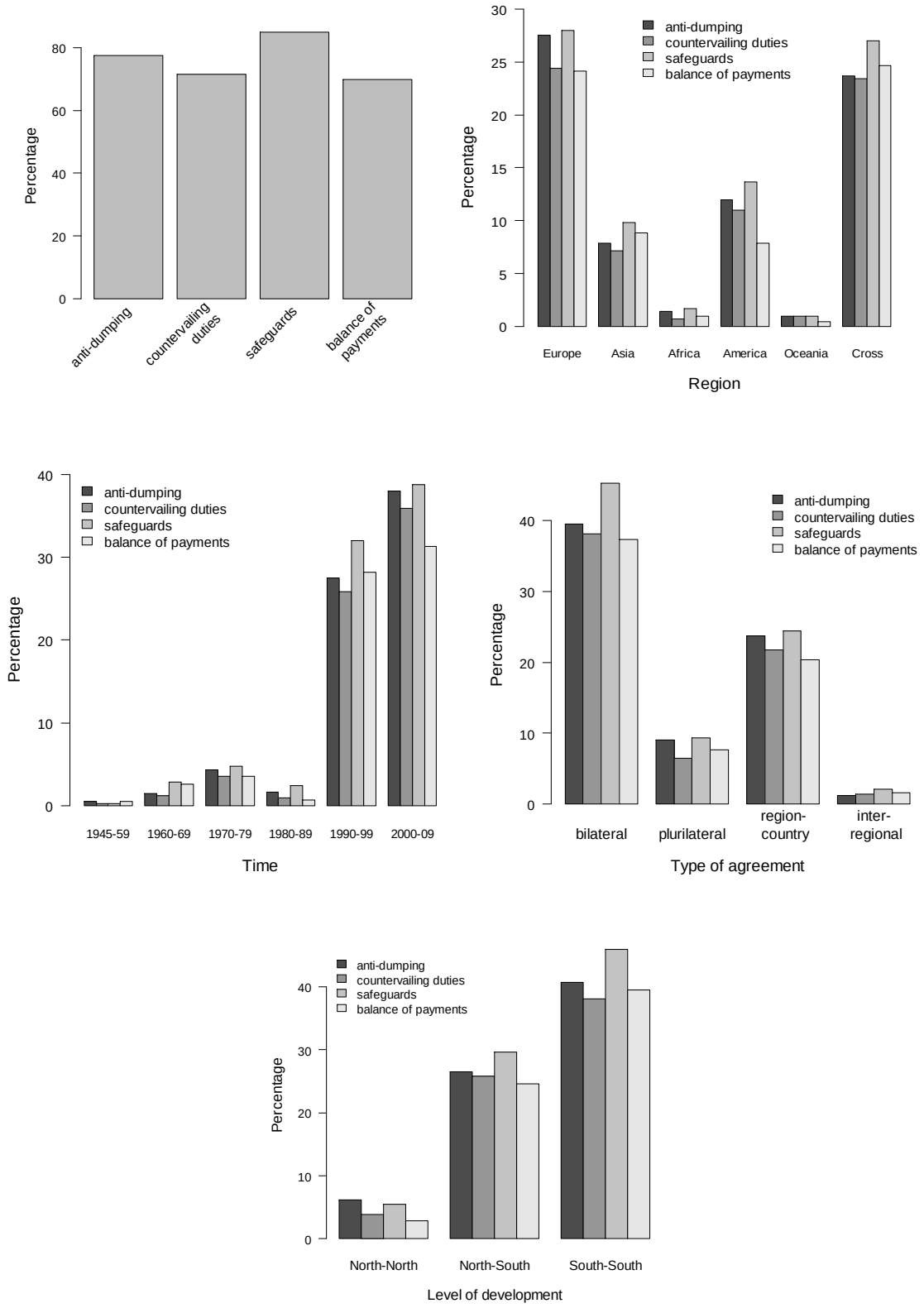
Figures 16a-16e: Cooperation on competition policy by (a) type of cooperation, (b) region, (c) time period, (d) type of agreement and (e) level of development

Trade defence instruments

Besides a general coding on competition, we focus on three specific unilateral trade policy measures: anti-dumping, countervailing duties, and safeguards provisions (see also Teh et al. 2009). We code whether these trade defence instruments (TDIs)[19] (also called trade remedies) are allowed or out-ruled and whether specific references to the GATT/WTO agreements are made. In terms of safeguards, we also code whether specific exceptions related to balance of payments exist. Figures 17a-17e provide an overview on the general TDI categories. In the

[19] TDI as defined by the European Commission

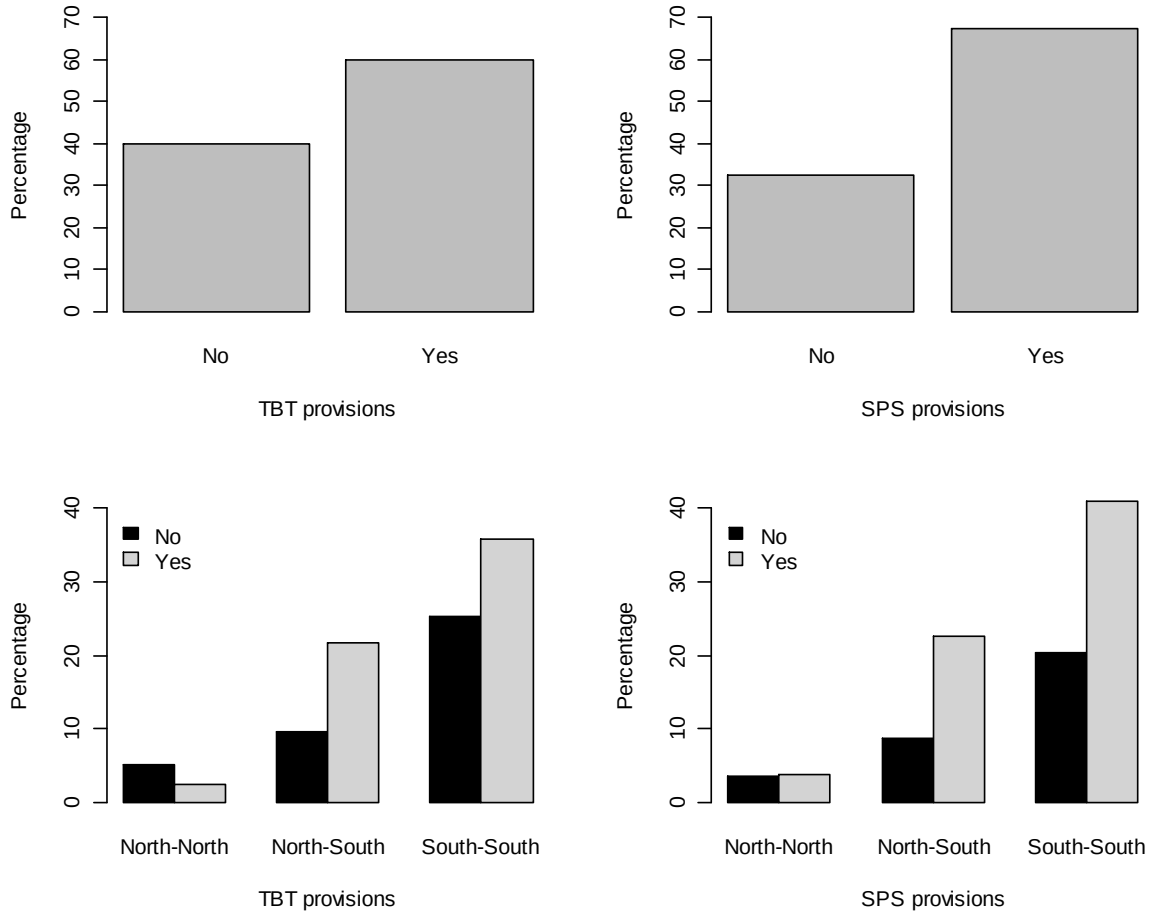
figures, we have also included balance of payments-related exceptions. TDIs are frequently used across regions as well as in bilateral and regional agreements. The patterns are strikingly similar across the various categories.



Figures 17a-17e: Coverage of trade defence instruments by (a) coverage, (b) region, (c) time period, (d) type of agreement and (e) level of development

Technical Barriers to Trade (TBTs) and Sanitary and Phytosanitary (SPS) Measures

Our coding of TBTs and SPS measures first concentrates on the presence or not of any provisions for these potential nontariff barriers.[20] For both areas, we also code references to GATT/WTO provisions, provisions calling for cooperation and information exchange, and provisions stipulating the harmonization of rules. For TBTs, we also code whether the agreement encourages the use of international standards and whether the section on TBTs makes any reference to resolving disputes.

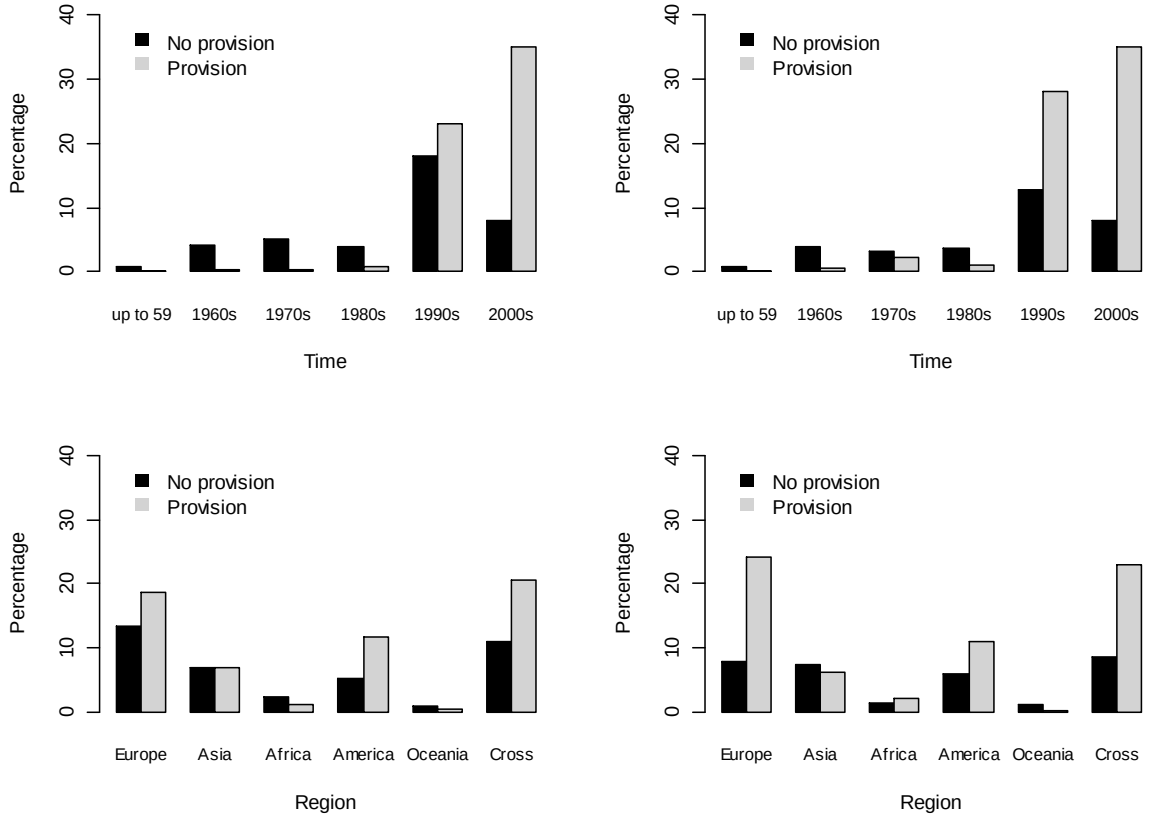


Figures 18a-18d: Provisions on (a) technical barriers to trade (TBT), (b) sanitary and phytosanitary measures (SPS), (c) TBT by level of development and (d) SPS by level of development

An analysis of provisions for TBT and SPS measures shows that about 60 percent of all agreements coded include TBT measures and even 67 percent SPS measures (Figures 18a and 18b). When comparing across North-North, North-South and South-South agreements, it

[20] For a previous study that compares agreements with respect to TBTs and SPS, see Heydon and Woolcock (2009).

becomes evident that both TBT and SPS provisions are most likely included in North-South agreements. North-North agreements are the least far-reaching in that regard.



Figures 19a-19d: Provisions on technical barriers to trade (TBT) and sanitary and phytosanitary measures (SPS) by (a&b) time period and (c&d) region

Analyzing the development over time, Figures 19a to 19b show that agreements signed in the 1990s and 2000s are much more likely to include TBT and SPS provisions than older agreements. When comparing across regions (Figures 19c and 19d), the small share of Asian agreements with TBT and SPS provisions is remarkable, more so if we consider that many of them have been signed more recently.

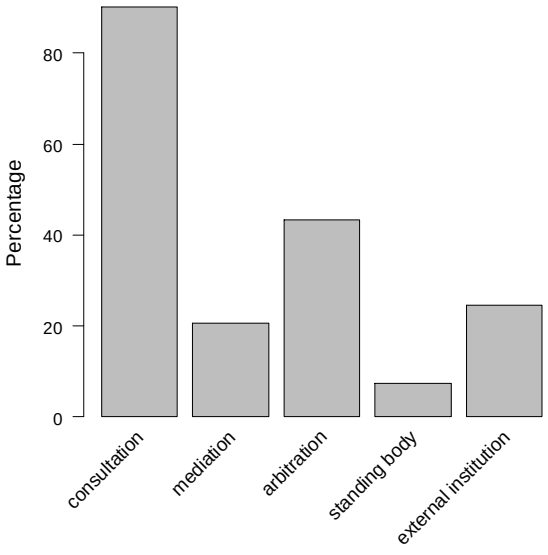
Interestingly, the TBT provisions included in most agreements are rather shallow. Only about 20 percent of all agreements make reference to the aims of adopting international standards or harmonizing standards for members party to the PTA. Many of the agreements (41 percent), however, include a reference to the WTO TBT agreement, and 49 percent stipulate that parties should cooperate in this area. 30 percent also stipulate that parties should cooperate in the field of SPS measures.

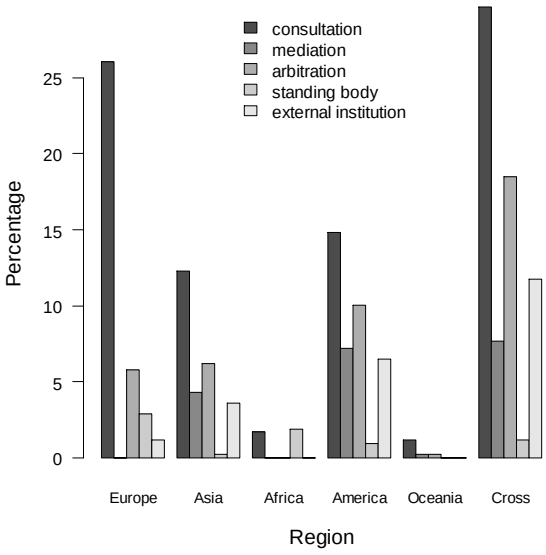
Dispute Settlement

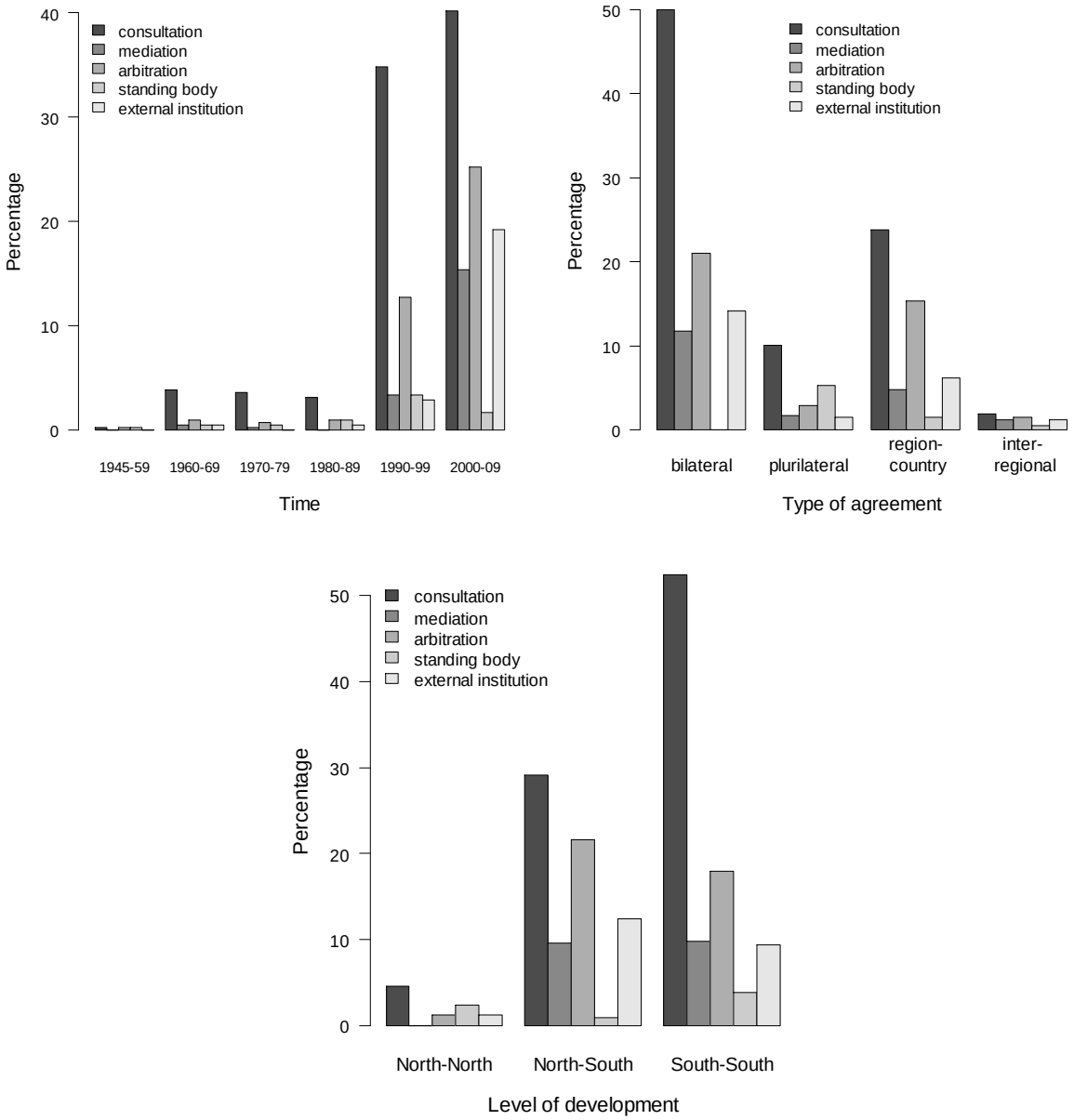
Our coding strategy for dispute settlement focuses on five sets of variables: existence of provisions, degree of delegation, choice of dispute settlement forum, implementation (bindingness and sanctions), and exemptions. With regard to the degree of delegation (see Abbott et al. 2000) we capture the extent to which parties allow delegation to occur (consultation, mediation, arbitration, creation of a standing body, or use of external dispute settlement forms). As to the choice of forum, we code whether parties can choose from different dispute settlement mechanisms and what rules apply (in particular restrictions to forum choice).

Implementation-related coding covers a range of issues. We record in particular the rules related to the use of sanctions, including the aspect of who selects appropriate sanctions (disputing parties jointly, complainant, or third party), as well as the form of sanctions (sanction in the same sector, cross-retaliation - sanctions in other sectors, monetary compensations). Under exemptions we document whether areas are exempted from dispute settlement through a positive list or a negative list approach.

Figures 20a-20e provide an overview for provisions related to the degree of delegation.



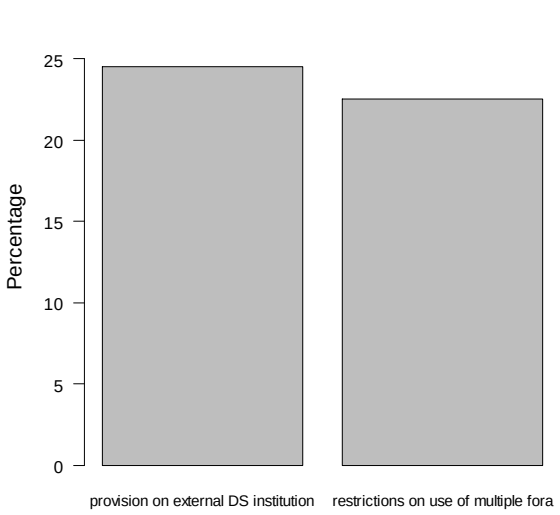


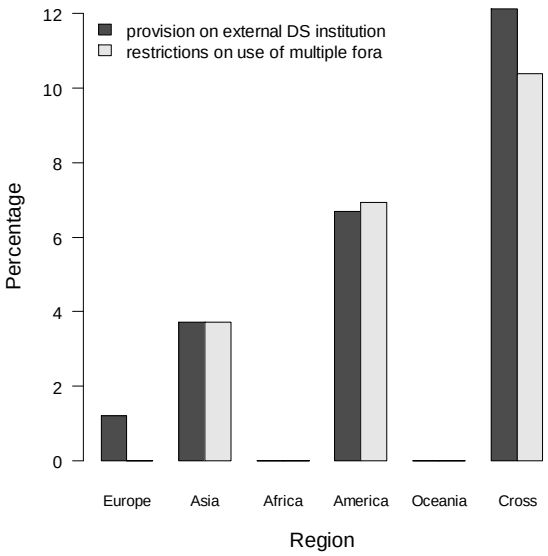


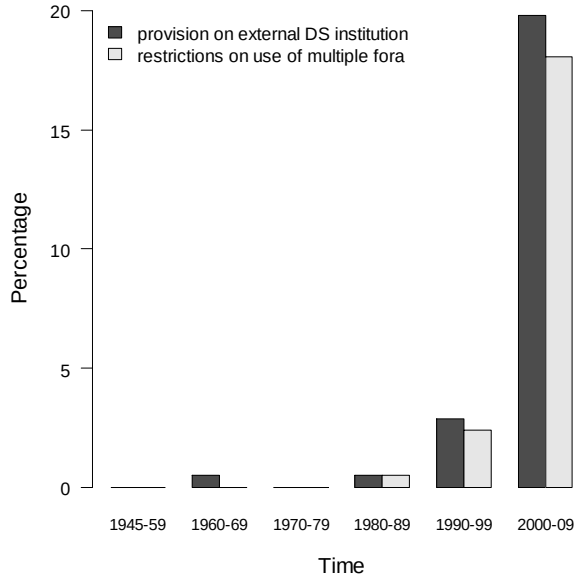
Figures 20a-20e: Degree of delegation by (a) instrument, (b) region, (c) time period, (d) type of agreement and (e) level of development

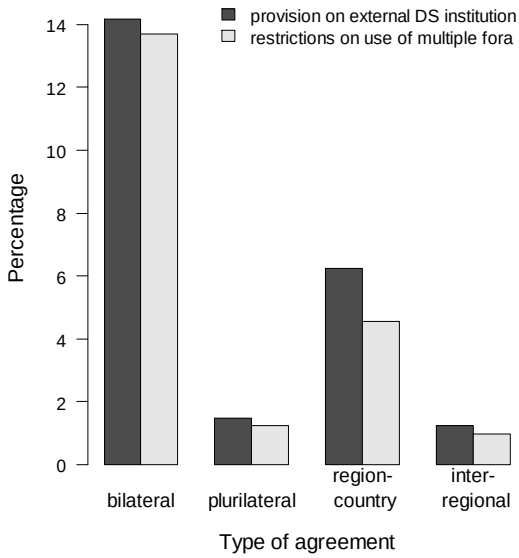
Figure 20a shows that around a quarter of all agreements foresee the possibility to refer to treaty-external institutions of dispute settlement. Mediation and the creation of standing bodies are the least found options. Dispute settlement is largely dominated by consultation procedures (90 percent) and forms of arbitration (45 percent). Across regions, it is interesting to note that in particular Asian and American agreements rely on external institutions, while mediation is absent in European and African agreements. Arbitration is mostly offered in American agreements. Over time references to external bodies (mostly GATT/WTO) also increase, while the creation of treaty-internal standing bodies is less frequently observed. Finally, mediation provisions have gained popularity in the last 10 years. References to external bodies have been used in particular in the newer treaties. The distinction of

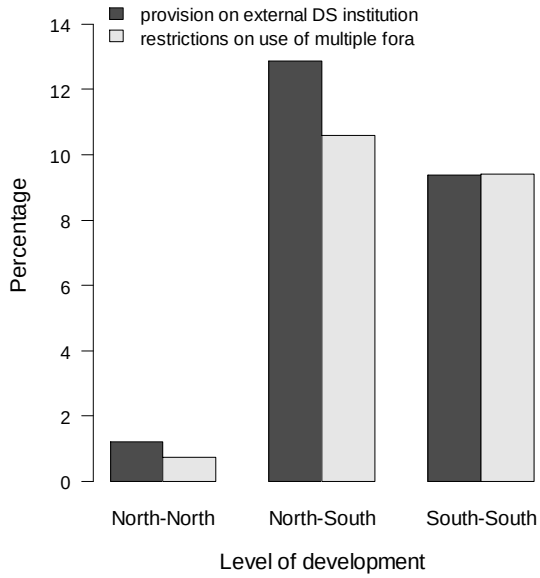
agreement types provides evidence that plurilateral agreements (which includes EU and EU accession agreements) include fewer references to external bodies and rely more on standing bodies; bilateral agreements put more emphasis on arbitration and lack provisions on the creation of new bodies (would probably be too costly). In terms of development, south-south agreements are generally less legalized, but still a significant number of treaties foresee a standing court. The few north-north agreements lack mediation as a form of dispute settlement.







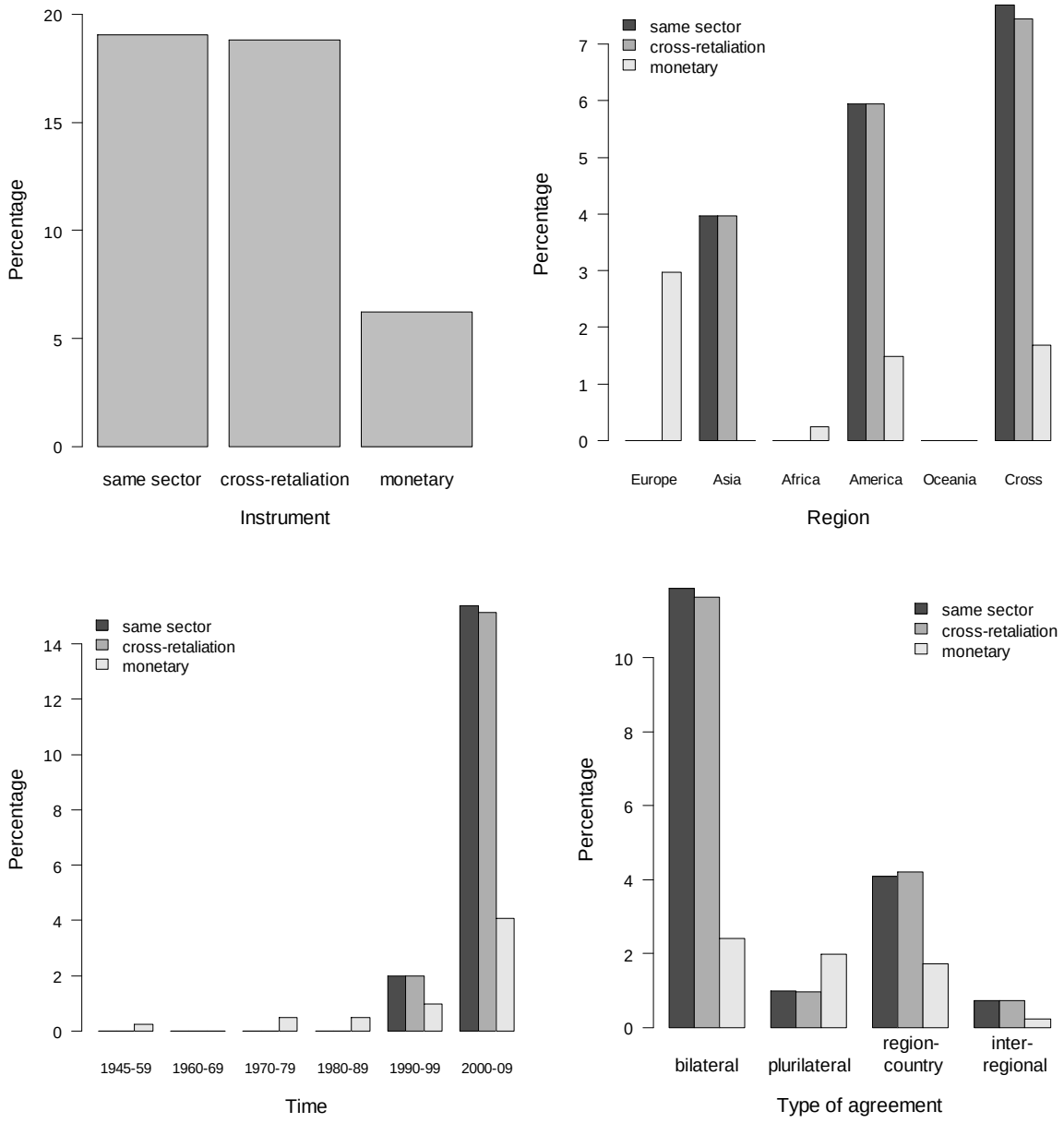




Figures 21a-21e: Choice of forum by (a) provisions/restrictions (b) region, (c) time period, (d) type of agreement and (e) level of development

Figures 21a-21e map the provisions on external dispute settlement institutions and the existence of restrictions related to the choice of forum. Figure 21c illustrates an increase in the last 10 years of both potential recourse to external institutions and restrictions. The data actually shows that restrictions are an often observed phenomenon which stands in contrast to some conventional wisdom that suggests a lack or addressing forum choice. Further, variation as to the existence of external institutions and choice of forum is visible along the regional dimension. Africa and Europe have little outside references to judicial bodies, whereas this seems to be a more established practice in the Americas. Interestingly south-south agreements foresee when referring to external bodies systematically a restriction to forum-shopping, while in north-north and north-south some exceptions exist.

Finally, when mapping the forms of sanctions in case of non-implementation (Figures 22a-22d), we observe that monetary sanctions are the most preferred option foreseen to induce compliance in Europe and in Africa. The time dimension further shows that until the end of the 1980s the only mentioned sanctioning mechanisms relied on monetary sanctions. Monetary sanctions are in particular found in regional agreements. Cross-sector sanction is as often foreseen as same-sector sanction, usually relying on a sequencing procedure according to which parties first apply sanction in the same sector and only then move towards cross-retaliation.



Figures 22a-22d: Forms of sanctions by (a) instrument, (b) region, (c) time period and (d) type of agreement

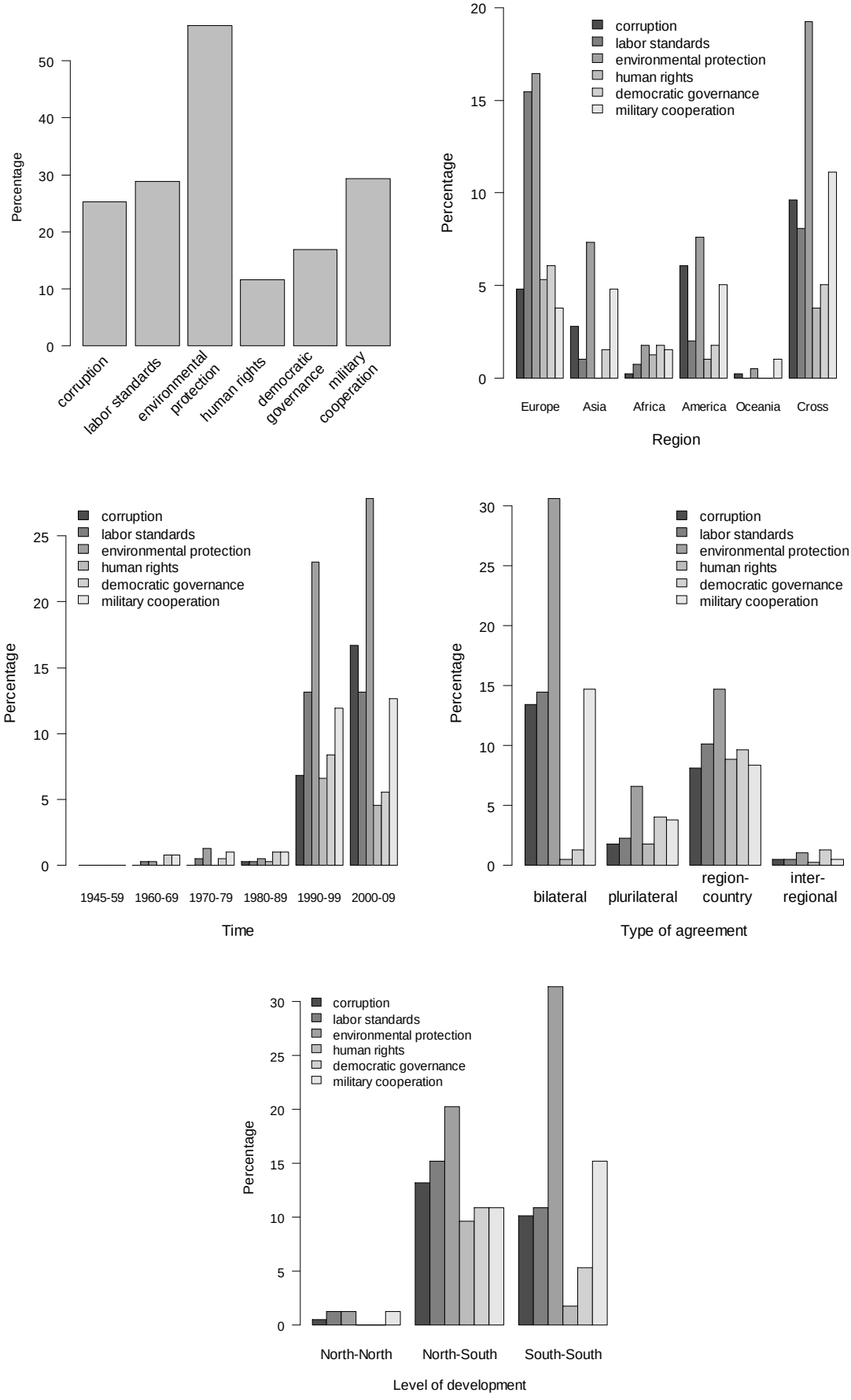
Non-trade issues ("political" issues)

The main objective in this design category is to list types of non-trade issues that are addressed in PTAs. We focus on issues that are normally regulated in international legal instruments other than classical trade regulation. Types of non-trade issues are recorded from information available in the preamble and the remaining part of the agreement. Accordingly, we code the type of issues addressed in the agreement. In addition, we list related references to other international treaties or international organizations. We have identified six areas of non-trade issues: 1) corruption, 2) labor standards, 3) environmental protection, 4) human

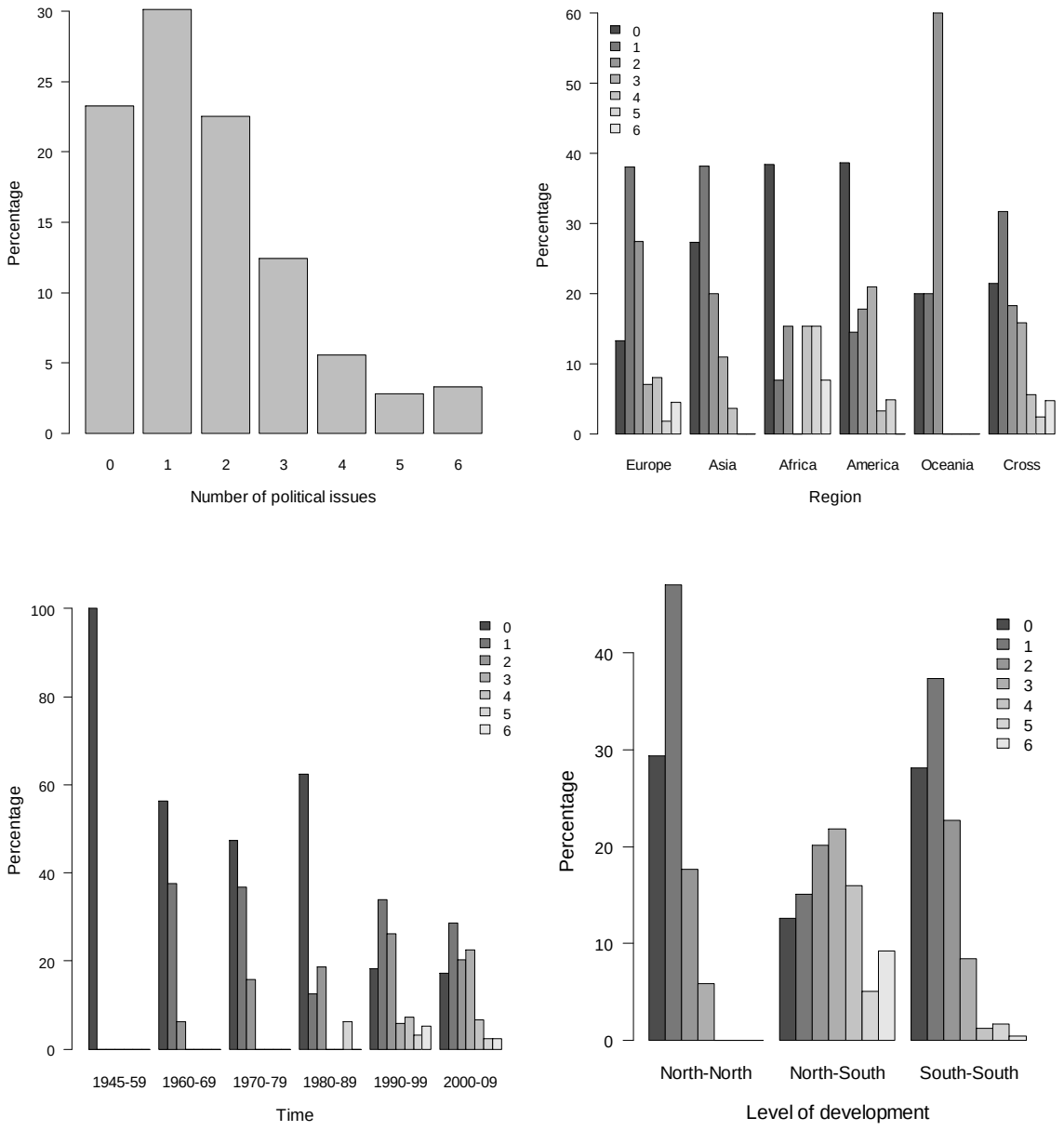
rights, 5) democracy, and 6) military cooperation. In a separate category we list additional non-trade issues mentioned in the agreements; these include organized crime, drug smuggling, migration issues, economic development, common foreign policy, and financial assistance. The data will helpful for studying questions, such as whether and to what extent non-economic, political issues have been taken up in PTAs across time and region (see also Hafner-Burton 2005).

Figures 23a-23e map the number of areas which are covered in the treaty text. The predominant non-trade issues include cooperation on environmental protection, military cooperation and labor standards. Across regions, we observe significant coverage of labor standards in European agreements. Corruption-related obligations are in particular witnessed in the Western hemisphere. Military cooperation is most often observed in Asian and American treaties. Over time, we observe more attention to corruption, whereas human rights and governance issues drop in recent years from a very high level after the end of the Cold War. As to the types of agreements, bilateral agreements seem to be the preferred venue to address environmental concerns, however are less prevalent for dealing with human rights and democratic protection. If we compare South-South and North-South agreements, we observe important variation. South-South agreements focus more on environmental protection and military cooperation, yet less on democracy and human rights.

Finally, we present some descriptive statistics about the scope of non-trade issues by creating an indicator from 0 (no non-trade issues) to 6 (all six areas). Figures 24a-24d provide an overview. Most agreements have a relative low scope (0-2), yet over time this changes significantly. Were first agreements without any reference to non-trade concerns, the 1990s saw a strong growth of agreements incorporating non-trade issues. In particular North-South and South-South agreements as well as African agreements are characterized by broad non-trade concerns being addressed in the treaty design.



Figures 23a-23e: Political issues by (a) issue area, (b) region, (c) time period and (d) type of agreement and (e) level of development



Figures 24a-24d: Political issues by (a) number covered, (b) region, (c) time period and (d) level of development

Coding work organization and reliability tests

We employed eleven coders in carrying out this project. Specifically, two coders worked on services, procurement, technical barriers to trade, and sanitary and phytosanitary (SPS) measures at the University of Salzburg. Six coders focused on market access (tariffs),

competition, trade defence instruments, dispute settlement mechanism and other provisions at the World Trade Institute at the University of Bern. Three coders worked on the sections investment and intellectual property rights at IMT Institute of Advanced Studies in Lucca. Importantly, the coders were extensively trained in order to give them high levels of reliability. The rationale of dividing the coding exercise by sectors rather than by PTAs is to improve coders' performance. Indeed, coders' learning is likely to be particularly quick if coders deal with the same sectors and they get familiar with specific topics.

At this stage of the project, each sector is coded by one coder (or sometimes two coders) using a coding scheme prepared by us. It is important to stress that in preparing the coding scheme we rely on the suggestions of experts in the field, mainly economists and trade lawyers, as well as previous articles that address similar topics. A list of papers that we used as base to our coding scheme is included in Table 1.

To check the reliability of our coders, three coders independently code a sub-sample of agreements, i.e. EU PTAs and US PTAs. Results from the Kappa statistics are remarkable.[21] Indeed, the association among coders was higher than 85 percent for these PTAs.[22] These findings are particularly encouraging since EU PTAs and US PTAs are famously the deepest and most complex agreements (e.g., Horn et al. 2009). However, it must be stressed that these PTAs are also very similar one to another in terms of structure, so coders' learning is likely to be quicker in these cases compare to other PTAs.

We implemented other checks to verify the reliability of our findings. Specifically, we compare the results that we obtained in coding the investment sector with the results that we obtained in coding the services sector. Indeed, the correlation between two sectors is expected to be high given the fact that they regulate similar issues (Houde et al. 2007). We run three different tests. First, the correlation between the presence of substantive provisions on services and the presence of substantive provisions on investment is .79. Second, the correlation between a MFN provision on service and a MFN provision on investment is .84. Third, the correlation between a NT provision on service and a NT provision on investment is .67. Overall, these results are very encouraging on the accuracy of our coding exercise. We intend to implement similar checks also for the other sectors of our coding scheme in the future.

[21] Cohen's kappa is a measure of association (correlation or reliability) between two measurements of the same individual when the measurements are categorical. Kappa is often used to study the agreement of two raters such as judges or doctors. Each rater classifies each individual into one of k categories.

[22] Rules-of-thumb for kappa: values less than 0.40 indicate low association; values between 0.40 and 0.75 indicate medium association; and values greater than 0.75 indicate high association between the two raters.

A further reliability check is to compare our results with those reported in comparable studies (see Table 1). For example, comparing our coding of procurement provisions shows that of 39 agreements listed by Kono and Rickard (2010) as having a procurement chapter, we classify 33 as having substantive provisions and 6 as having procurement liberalization as an objective. Similar comparisons will be carried out for the other sectors that we are coding.

For the time being, it is our intention to test further the reliability of our coding exercise. We plan to do that in two stages. First, we will ask two coders independently to code a random sub-sample of agreements. Taking a random sub-sample should decrease the concern that some PTAs are easier to code than others or that the learning process is quicker for some PTAs compare to others. Second, we plan to use two coders to code every PTA in the sample. In doing so, we could not only test the overall reliability of our coders, but also resolve the inconsistency using a conciliator, i.e. a third person who decides the "right coding" in case of inconsistency.[23] Finally, such an approach will allow us to incorporate coder's error in the final measurement of PTA scope, as suggested by previous studies in comparative politics (Benoit et al. 2009; Lowe et al. 2011).

Conclusion

This paper has described a new dataset covering the design of PTAs signed since the end of World War II. Moreover, we have given indications as to how this data could be used to answer some important research questions related to PTAs. From this coding exercise, we derive three broad preliminary findings. First, we witness that the regional dimension seems to lose significance over time (and with it explanations rooted in the European integration literature). We observe in particular an important growth in the number of PTAs that involve countries from different continents. Second, the scope of PTAs widens over time. For instance, PTAs signed in the last decade include a larger number of provisions on trade-related sectors than PTAs signed in the 1990s. Third, there seems to be important variation when comparing types of agreements, whereas differences across geographical regions seem at first sight less important. In particular, bilateral trade agreements tend to cover sectors that are not included in the majority of plurilateral agreements.

What are the next steps? For the time being, we will tackle PTAs that have been left out from this first round of coding. In addition, market access will be coded in the months to come to ensure every sector is completed. Finally, we will make a major effort to check the

[23] For a similar approach see Melton et al. (2010).

reliability of our results, which will involve cross-checking between similar sectors, comparison with previous datasets on the design of PTAs, and double-coding of (at least) a sub-sample of PTAs. In the end, we hope that the data will prove useful for the scientific inquiry into the politics and economics of PTAs.

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