



FONDATION POUR LES ÉTUDES  
ET RECHERCHES  
SUR LE DÉVELOPPEMENT  
INTERNATIONAL

# WTO Webinar

## Trade facilitating measures related to Rules of Origin

A (more )systematic exploration of the trade effect of  
product-specific Rules of Origin

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October 11 13:00-15:00

# A Practitioner's view of Preferential Trade Agreements (PTAs) and associated Rules of Origin (RoO)

- Nowadays PTAs are a step beyond the GATT (aka 'General Agreement to Talk and Talk') since agenda involves covering more items at negotiations table
- RoO are necessary to prevent cheating in all PTAs (i.e. Repackaging to qualify for preferences) and transshipment (in practice not relevant in most developing countries)
- ... But PTAs are a tool to encourage vertical integration within the boundaries of the PTA, for example within Africa under the AfCFTA
- Importantly, PTAs are giving with one hand (preferences) and taking away with the other (costly to satisfy rules of origin).
- In practice, RoO are 'business owned' rather than 'business friendly',
- Currently, over 54,000 different Product-specific RoO (PSRO) have been tabulated across 370 registered PTAs in ITCs data base.
- This paper is about estimating the effects of different PSRO on bilateral trade flows

# Objectives

- What is the distribution of PSROs across PTAs? Any stylized patterns?
- How do Product Specific RoOs (PSROs) affect the intensity of bilateral flows, i.e. are bilateral flows more intense when RoO are more flexible (e.g. Exporters can choose between different PSROs)?
- Novelty: exploration over all publicly available reciprocal FTAs in the 'Deep Trade Agreement (DTA)' data base.
- Large data base covering 135 exporters and 181 importers over 1990-2015 (see next slide).
- Also see use of ITC data base (Kniahin and Melo (2022))

# Two data Repositories

- **World Bank's Deep Trade Agreement Database**

- Based on joint work OECD and World Trade Institute [Angeli et al., 2020].
- All WTO notified Free-Trade Agreements until 2015.
- Only reciprocal RTAs.
- 159 RTAs for product-specific RoO and 280 for regime-wide RoO.
- Publicly available.
- Database for this paper.

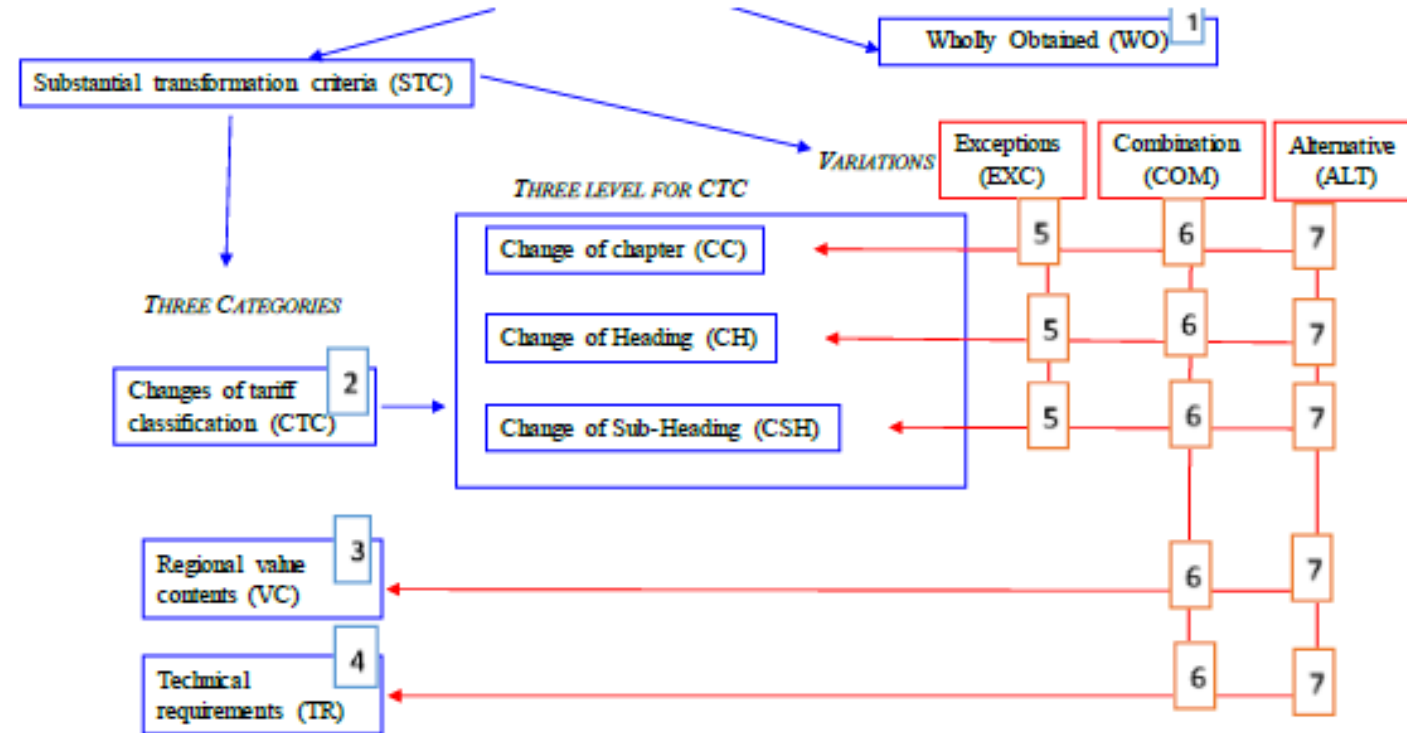
- **International Trade Center's Rule of Origin Facilitator (ROF)**

- 370 Preferential Trade Agreements (reciprocal and non-reciprocal).
- Not publicly available.

- Paper uses Deep Trade Agreement (DTA) database.
- Next slide describes the 7 PSRO categories assembled from the DTA
- See extra slides for the data preparation

# 7 categories of PSROs further classified in two types: (i) stand-alone (ii) composite

Figure 1: Criteria and mapping of product-specific rules of origin



### 4 stand-alone rules:

- WO: wholly obtained (1)
- CTC: change in tariff classification (2)
- VCR: value content (3)
- TR: technical requirement (4)

### 3 composite rules:

- EXC: Any rule with a CTC and an exception [5]
- COM: rules with combination ('and') criteria (without exception in CTC) [6]
- ALT: rules with alternative ('or') criteria (without exception in CTC) [7]

# Examples of PSRs (1/2): Stand-alone

- Wholly Obtained (WO): "A product shall be considered as originating in a Party if: (a) it has been wholly obtained in a Party, in accordance with Article 3<sup>2</sup> [...]", EFTA-Central America (2014) FTA.
- Change in Tariff Classification (CTC) through Chapter (CC): "A change to a good of heading 05.01 through 05.11 from any other chapter.", Transpacific Partnership (TPP).
- Value Content Requirement (VCR): "No change in tariff classification required for a good of heading 87.07, provided there is a regional value content of not less than:
  - 35 per cent under the build-up method; or
  - 35 per cent under the net cost method; or
  - 45 per cent under the build-down method.", TPP.
- Technical Requirement (TR): "[...]a good of chapter 27 that is the product of a chemical reaction is an originating good if the chemical reaction occurred in the territory of one or more of the Parties.", TPP.

## Examples of PSRs (2/2) from TPP: Variations

- Exceptions (EXC): "A change to a good of subheading 1102.90 from any other chapter, **except from** heading 10.06."
- Combination (COM): "A change to a good of subheading 1901.20 containing more than 30 per cent by dry weight of rice flour from any other chapter, **provided that** the value of non-originating rice flour of subheading 1102.90 does not exceed 30 percent of the value of the good."
- Alternative (ALT): "[...] A change to a good of subheading 1515.19 from any other chapter; **or** No change in tariff classification required for a good of subheading 1515.19, provided there is a regional value content of not less than 40 percent under the build-down method."

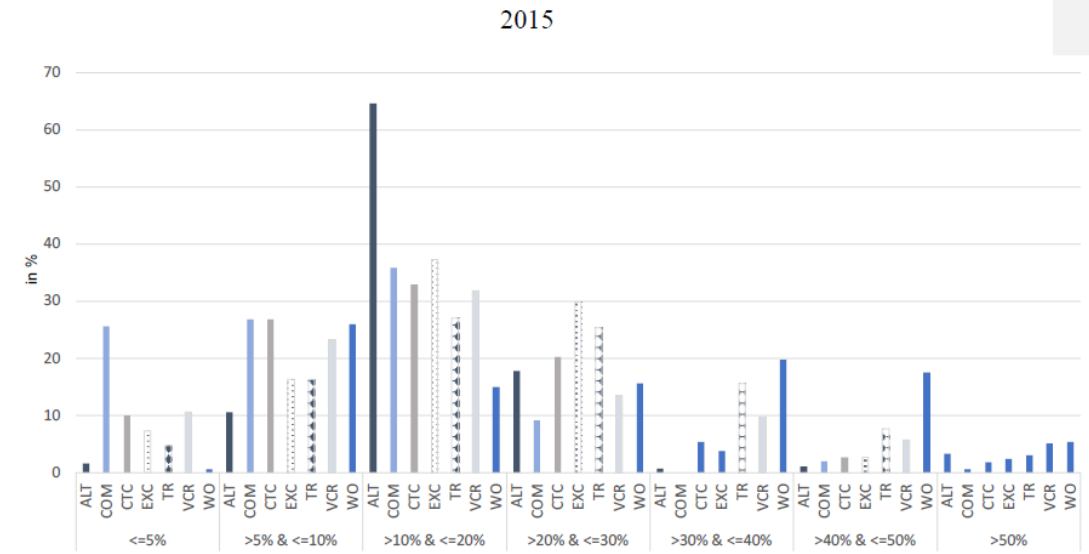
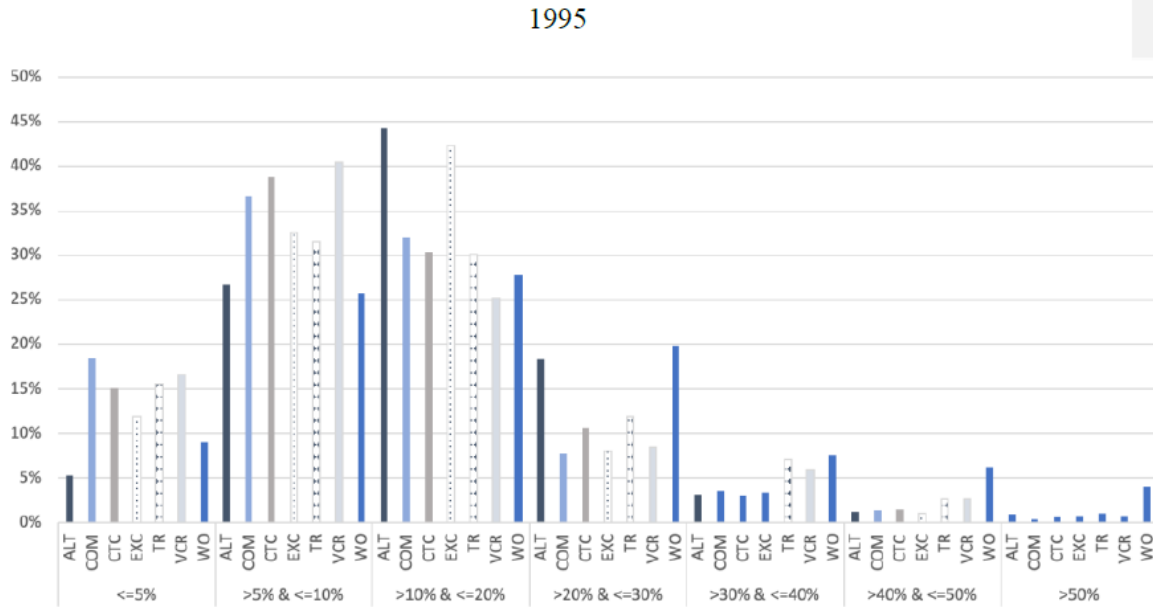
ALT PSRs are likely to be easier to satisfy than COM and EXC PSRs

# Descriptive stats



# Frequency distributions of preferential margins and PSRs by percentage bins

Figure A6: Frequency distribution of preferential margins across PSR categories by bins

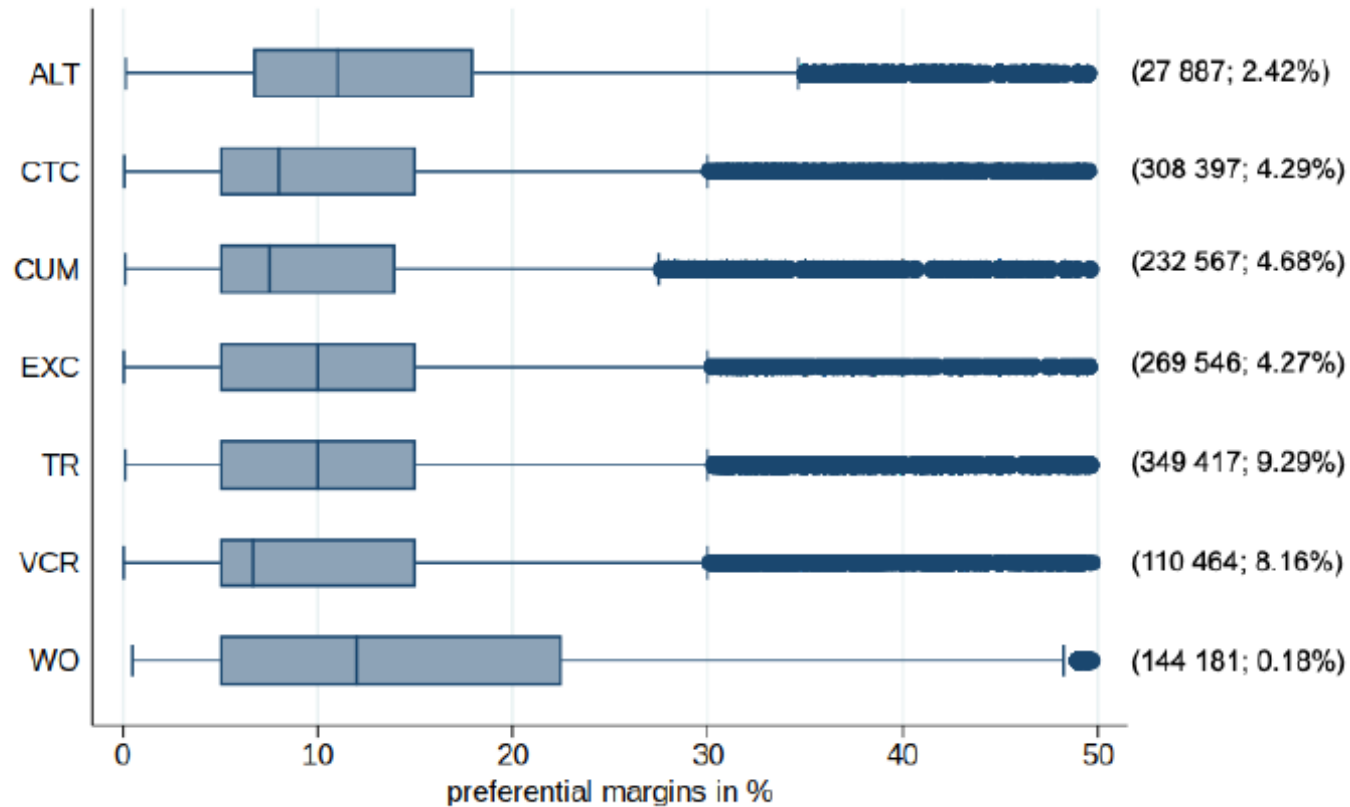


Notes: Figure displays the distribution of PSRs across 7 bins. Distribution of PSRs across bins adds up to 100%. Abbreviations to PSRs introduced in table 1. Source: Authors.

- Most preferential margins are in the <5-10> and <10-20> bins

- ALT, the flexible rule is concentrated in the <10-20>

Figure 4: Whisker plots of preferential margins (in %) by PSR category<sup>27</sup>



- Small number of flexible ALT category giving choice of RoO.
- Median preference margin around 10% shows potentially large market access
- High dispersion of margins within each of 7 categories

Notes: Numbers in parenthesis indicate the number of observations and percentages represent the share of outliers. Preferential margins above 50% are excluded from the figure (amounting to 1.2% of observations in the treatment group). Each whisker plot shows the distribution of preferential margins in the range of the 25<sup>th</sup> and 75<sup>th</sup> percentiles. The black line in each plot indicates the median of the preferential margins. The lines extending from the plots are respectively the upper and lower adjacent values located above the percentiles. The dots outside of the lines are outliers.

Bilateral trade flows: Panel estimates of tariffs and 7 categories of PSRs (r

$$X_{ijkt} = \exp[\beta_0 + \beta_1 \ln(1 + \text{tar})_{jkt}^{MFN} + \beta_2 I_{ijt}^{RTA} + \beta_3 (I_{ijt}^{RTA} \times \ln(1 + \text{tar})_{jkt}^{MFN}) + \sum_{l=1}^7 \beta_{4l} r_{ijkl} + \sigma_{ijk2} + \eta_{it} + \theta_{jt}] + \epsilon_{ijkt} \quad (1)$$

where  $i = 1, \dots, 135$ ;  $j = 1, \dots, 181$ ;  $k = 1, \dots, 5018$ ;  $t = 1, \dots, 6$

The dummy variable

$$I_{ijt}^{RTA} = \begin{cases} 1, & i \text{ and } j \text{ are members of the same PTA in year } t \\ 0, & \text{otherwise} \end{cases}$$

indicates whether  $i$  and  $j$  belong to the same PTA.

$$r_{ijkl} = \begin{cases} 1, & \text{if rule } PSR_l \text{ applies to product } k \text{ in the agreement between } i \text{ and } j \\ 0, & \text{otherwise} \end{cases}$$

is a set of dummies indexed over  $l$  for each of the 7 PSR categories. Since the categories are non-overlapping, only one PSR is applicable to each HS6 product  $k$  in a PTA between  $i$  and  $j$ .

Question: Controlling for the preferential margin and other omitted factors ( $\text{tar}_{ijk}$ , are trade effects stronger for the more flexible PSR type?)

Results from estimating (1).  
--Coefficient values relative to the excluded group, EXC.  
--At HS6 level, for given preferential margin (PM), bilateral trade flows among RTA members are more responsive when PSRs are more flexible  
--(ALT 2.2% more trade than EXC).

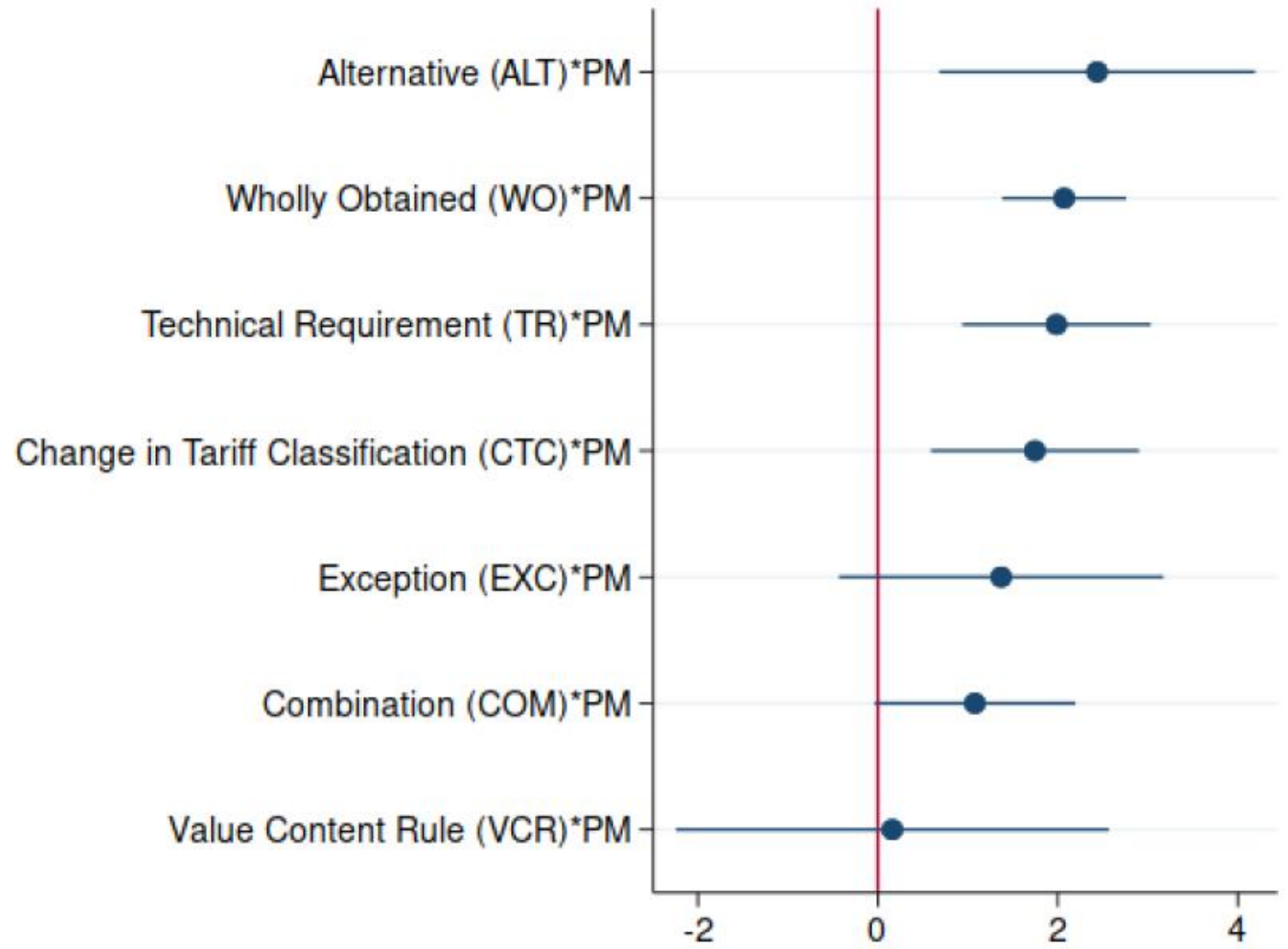
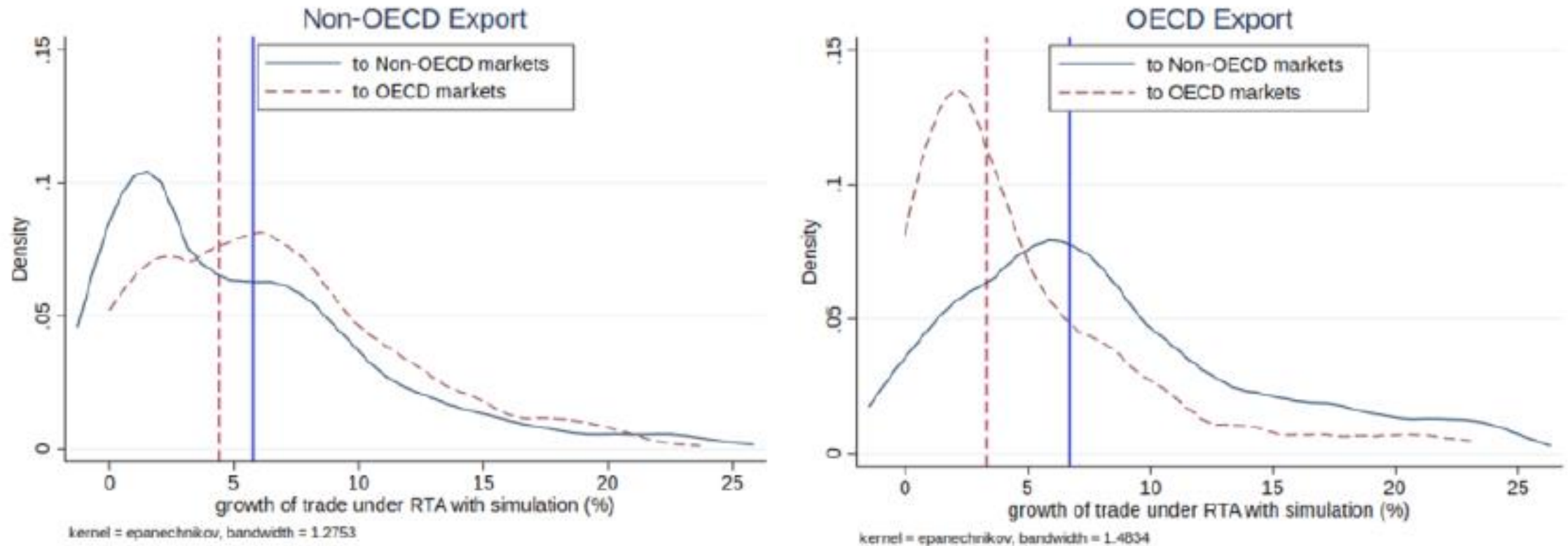


Figure 11: Density of simulated trade growth under RTA, average over 1990-2015 by pair



Replace EXC, COM, TR, WO, CTC, VCR with ALT rule

- Non-OECD → non-OECD (3%) OECD → OECD (1.5%)

Simplification has stronger effects on trade flows between non-OECD partners because of higher preferential margins

# Conclusions

- ❑ First documented evidence of trade effects of different categories of PSRs on disaggregated trade
  - Controlling for level of preferential margin, rules allowing to choose between alternatives (ALT rules) have strongest positive effects on trade
  - Adopting stricter rules like combinations of different requirements (COM), largely annihilate positive trade effects of granting preferential tariffs.
  - Simulating radical reform where producers can choose among alternative PSRs (ALT) increases global trade by between 2.7% and 4%
- ❑ Results support calls for simplification (Cadot and Melo (2008), Hoekman and Inama (2018), Mavroidis and Vermulst (2018))

# Next steps

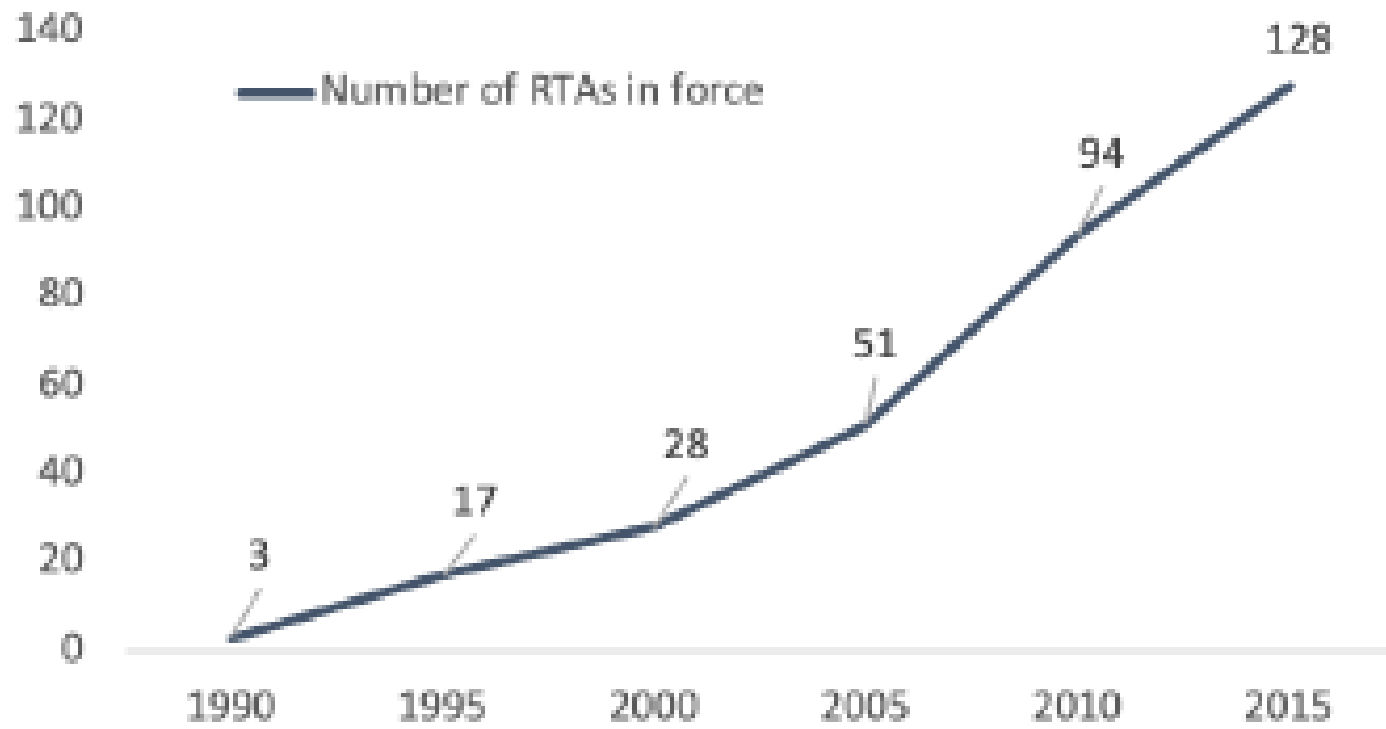
- ❑ Study political economy of choice of PSRs for PTAs under negotiation (e.g. how negotiators progressing on the agreed 800 different PSRs under AfCFTA... See extra slides)
- ❑ Study regime-wide rules (around 30, some restrictive like no transit)
- ❑ Plead for availability of preference utilization rates
- ❑ Carry in-depth case studies (e.g. Textiles and apparel or automobiles in CAN-MEX-US)
- ❑ Exploit “event- analysis” situations provided by reforms (e.g. move to single transformation rule under AGOA and EBA for T&A)
- ❑ Analyze different-size trade flows to estimate fixed vs. variable compliance costs.
- ❑ Monitor and report on automation of declaration forms

# EXTRA SLIDES

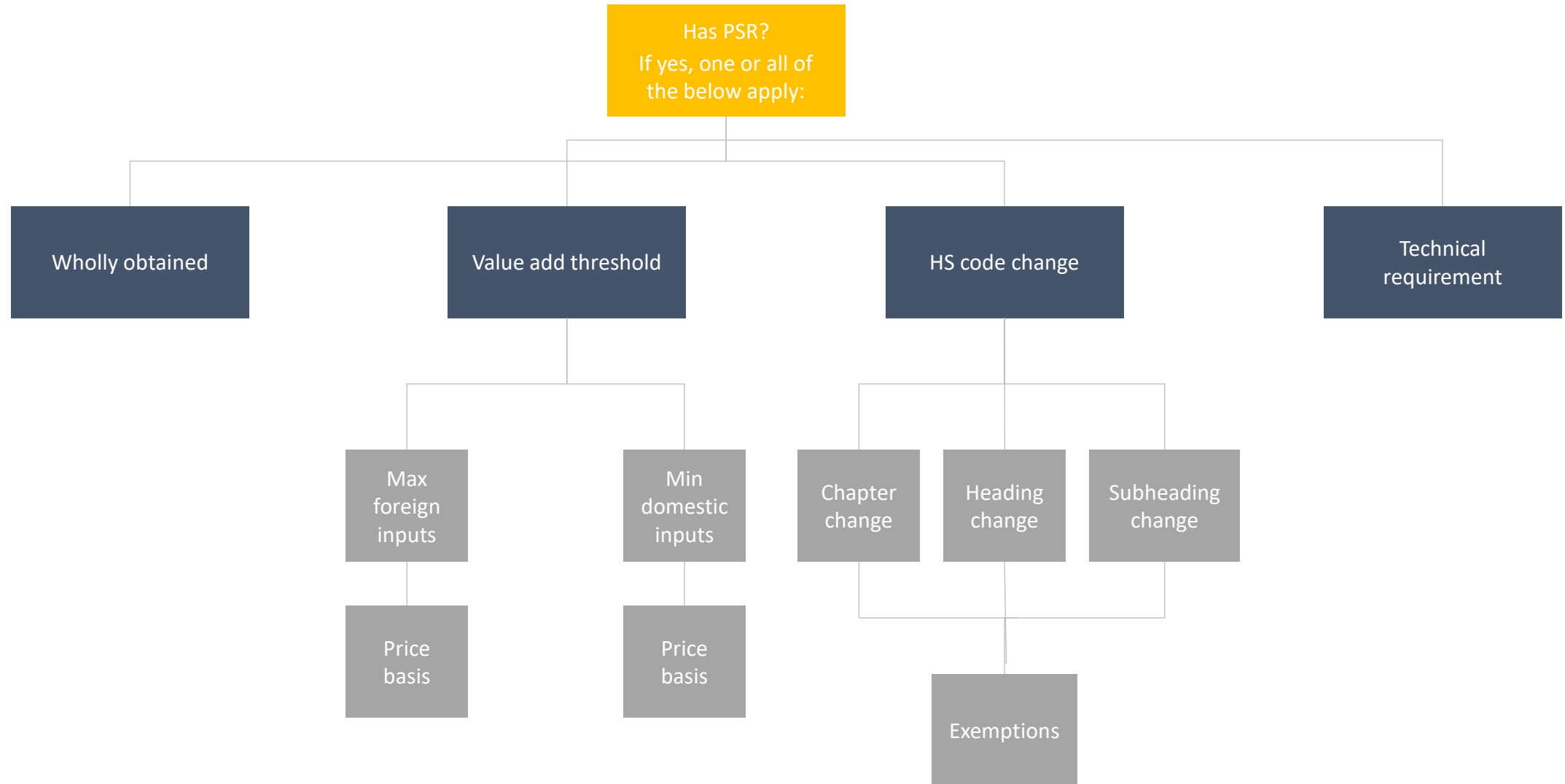


# RTA coverage over sample years

Figure A1: Number of RTAs in force across year intervals in the sample



# Product-specific rules in DTA data base



# Data preparation

| Steps                                    | Sample period                      | Nbr of countries                    | Nbr of products | Change in nbr of observations | Nbr of observations | Change in trade value | Trade value (in billion USD) |
|--|------------------------------------|-------------------------------------|-----------------|-------------------------------|---------------------|-----------------------|------------------------------|
| Raw data                                 | 1990-2015                          | 181                                 | 5 018           |                               | 121 224 927         |                       | 156 580                      |
| exclude small exporters (<25 percentile) |                                    |                                     |                 | -1,2%                         | 119 820 171         | -0,2%                 | 156 324                      |
| exclude if <=5 years of observed trade   |                                    |                                     |                 | -18,7%                        | 97 435 976          | -1,7%                 | 153 721                      |
| data at 5 years intervals                | 1990, 1995, 2000, 2005, 2010, 2015 | <b>135 exporters, 181 importers</b> |                 | -77,6%                        | 21 803 233          | -77,7%                | 34 280                       |
| exclude trade flows <1000 USD            |                                    |                                     |                 | -13,5%                        | 18 854 670          | -0,003%               | 34 279                       |
| exclude if MFN=0 & PSR=1                 |                                    |                                     |                 | -2,4%                         | 18 393 110          | -6,1%                 | 32 171                       |
| exclude products in RTA without PSR      |                                    |                                     |                 | -5,0%                         | 17 480 272          | -9,7%                 | 29 061                       |
| Final data                               | 1990, 1995, 2000, 2005, 2010, 2015 | <b>135 exporters, 181 importers</b> | 5 018           |                               | 17 480 272          |                       | 29 061                       |

Notes: \* 22.8% of those products (207,790 observations) are in an RTA with a zero applied MFN tariff. Changes in number of observations and in trade value are from each step.

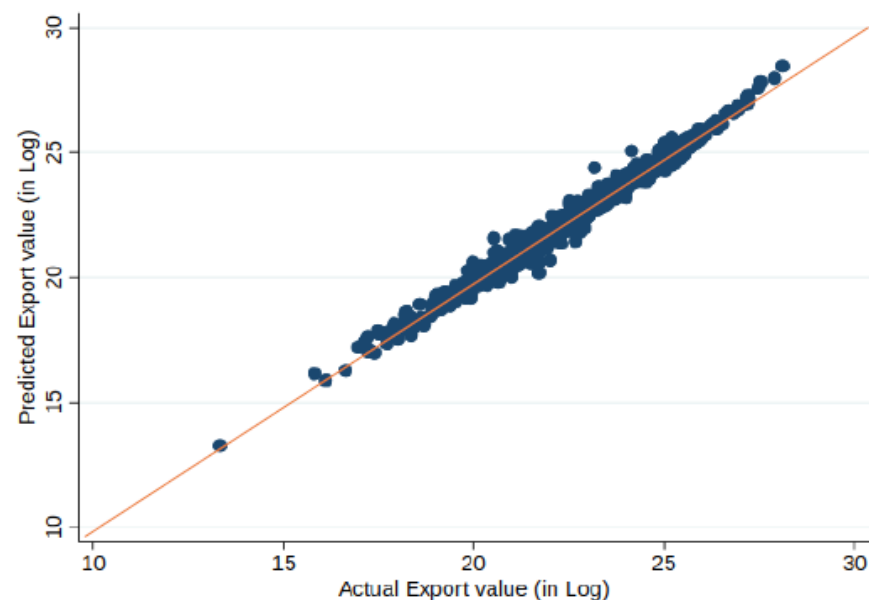
Source: Authors

Good fit thanks to battery of dummy variables controlling for omitted variables

$$\begin{aligned} \ln \hat{X}_{ijkt} = & \hat{\beta}_0 + \hat{\beta}_{ALT} D_{ijkt}^{ALT} + \hat{\beta}_{VCR} D_{ijkt}^{VCR} + \hat{\beta}_{CTC} D_{ijkt}^{CTC} + \hat{\beta}_{WO} D_{ijkt}^{WO} + \hat{\beta}_{TR} D_{ijkt}^{TR} + \hat{\beta}_{COM} D_{ijkt}^{COM} + \\ & \hat{\beta}_{EXC} D_{ijkt}^{EXC} + \hat{\gamma}_{ALT} D_{ijkt}^{ALT} \ln PM_{ijkt} + \hat{\gamma}_{VCR} D_{ijkt}^{VCR} \ln PM_{ijkt} + \hat{\gamma}_{CTC} D_{ijkt}^{CTC} \ln PM_{ijkt} + \\ & \hat{\gamma}_{WO} D_{ijkt}^{WO} \ln PM_{ijkt} + \hat{\gamma}_{TR} D_{ijkt}^{TR} \ln PM_{ijkt} + \hat{\gamma}_{COM} D_{ijkt}^{COM} \ln PM_{ijkt} + \hat{\gamma}_{EXC} D_{ijkt}^{EXC} \ln PM_{ijkt} + \\ & \hat{\sigma}_{ijt} + \hat{\delta}_{ijk} + \hat{\eta}_{ikt} + \hat{\theta}_{jkt} + \widehat{\varepsilon}_{ijkt} \end{aligned} \quad (3)$$

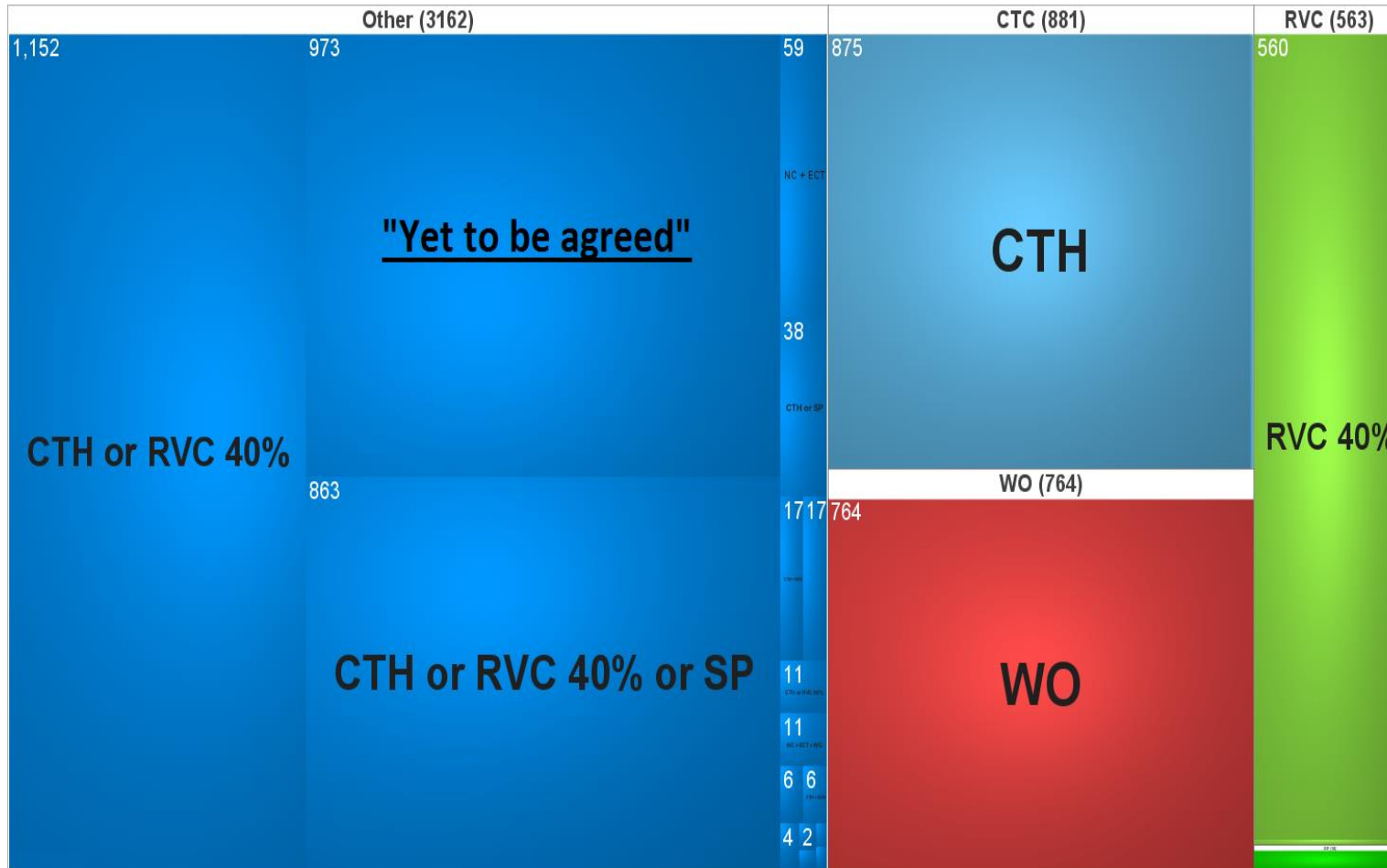
Model  
predicted vs.  
actual trade  
flows

Figure 9: Predicted versus observed trade value for country pairs, 1990-2015 (equation 3)



Source: Authors.

Distribution of most common PSRs in AfCFTA across 6 African RECs over 5387 HS6 codes: (13%) of codes were yet to be agreed as of January 2021—Next slide shows differences between agreed and yet to be negotiated PSRs

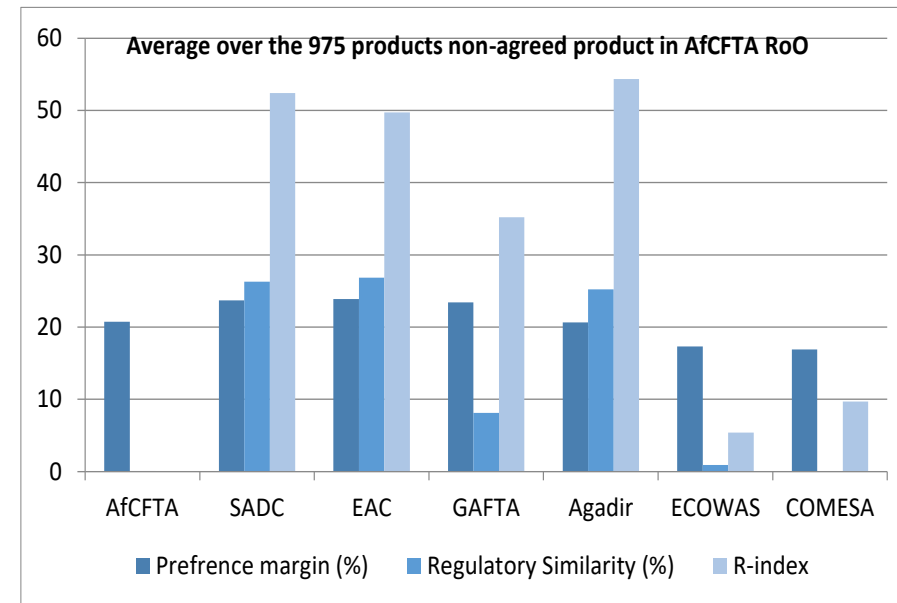
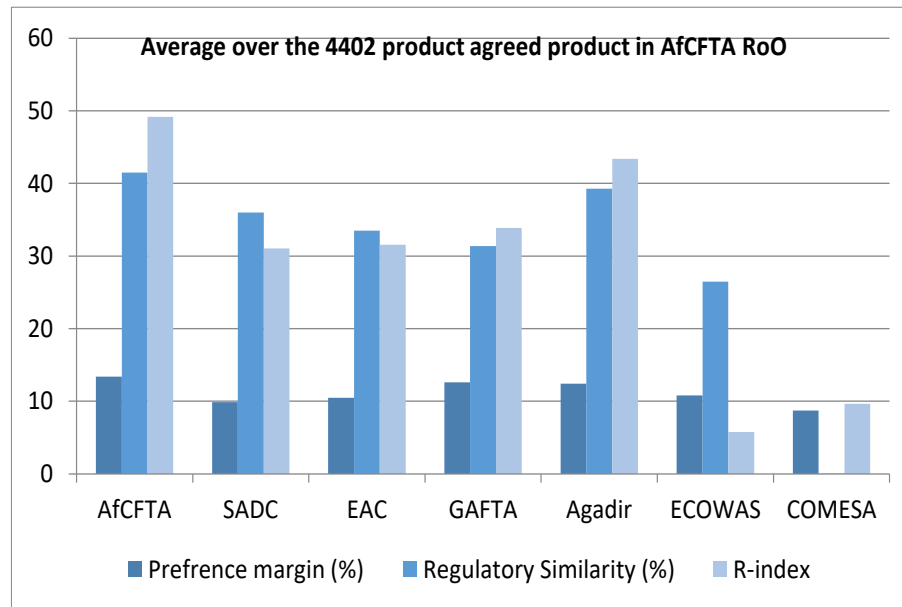


Source: Gourdon et al. (2021)

- Agreement has been reached with single criteria PSR for 41% of HS6 codes (WO, RVC at 40%, CTH) and on another 37% agreement has been reached for a choice criterion account (CTH or RVC 40%), and (CTH or RVC 40% or SP).
- Note that the yet to be agreed category is for infrequent ROOs like “EXC” or “TEC” (exceptions or technical ROO)

Agreed PSRs have lower preferential margins, higher regulatory similarity and lower index values of restrictiveness

| PSRs in AfCFTA            | Average Pref margin | Average Regulatory similarity | R-index |
|---------------------------|---------------------|-------------------------------|---------|
| YES (87% of tariff lines) | 11%                 | 28                            | 25      |
| NO                        | 21%                 | 14                            | 35      |



\* A higher R-index value indicates a more elaborate/complex PSR

Gourdon et al. (2021)

# References

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