

# Exploratory Data Analysis: Core Sources (1990+ focus)

2026-02-01

## Overview

This EDA summarizes the core datasets currently available in the repository (DESTA, ATOP, IEADB, WTO RTA, UNCTAD IIA). The focus is on coverage from 1990 onward, country participation over time, and regional variation. Regions are based on UN M49 region names (continent-level) mapped via ISO3 codes.

For WTO RTA and UNCTAD IIA, REIOs / non-country entities are excluded from analysis. A record of excluded entities is saved in:

- `outputs/eda/wto_rta_excluded_entities.csv`
- `outputs/eda/unctad_iia_excluded_entities.csv`

All figures and tables below were generated by `scripts/R/eda_run.R`.

## Summary of datasets

Table 1: Summary of available datasets

dataset	rows	unique_countries	year_min	year_max
DESTA	1410	NA	1948	2025
ATOP (state-year)	11923	186	1815	2018
IEADB (members)	125887	253	1111	2026
WTO RTA	655	194	1948	2025
UNCTAD IIA	14978	206	1957	2026

## DESTA (trade agreements)

DESTA does not include a treaty-level ratification variable. We therefore report country counts by signature year and by entry-into-force year.

## ATOP (security alliances)

We report the number of countries with any alliance per year and by alliance type (defense, offense, neutrality, non-aggression, consultation). Regional variation uses UN M49 regions.

## IEADB (environment agreements)

We report the number of countries per year by action category (Signature, Ratification/Accession, Entry into force, Other), and regional variation for any action.

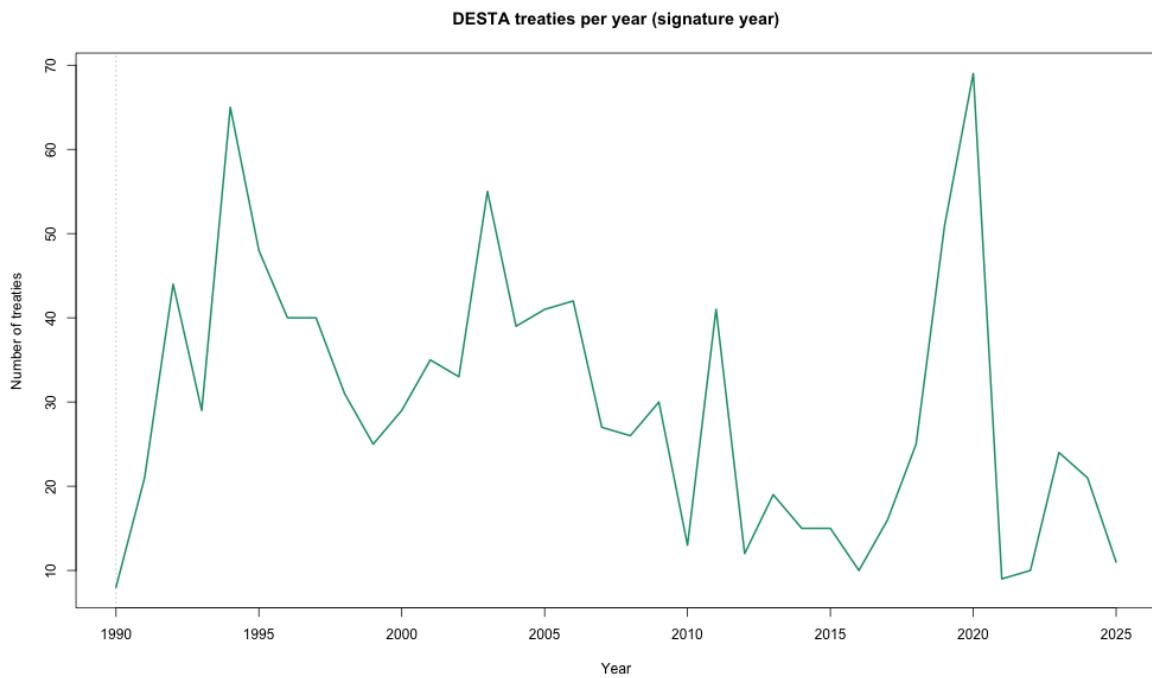


Figure 1: DESTA treaties per year (signature year).

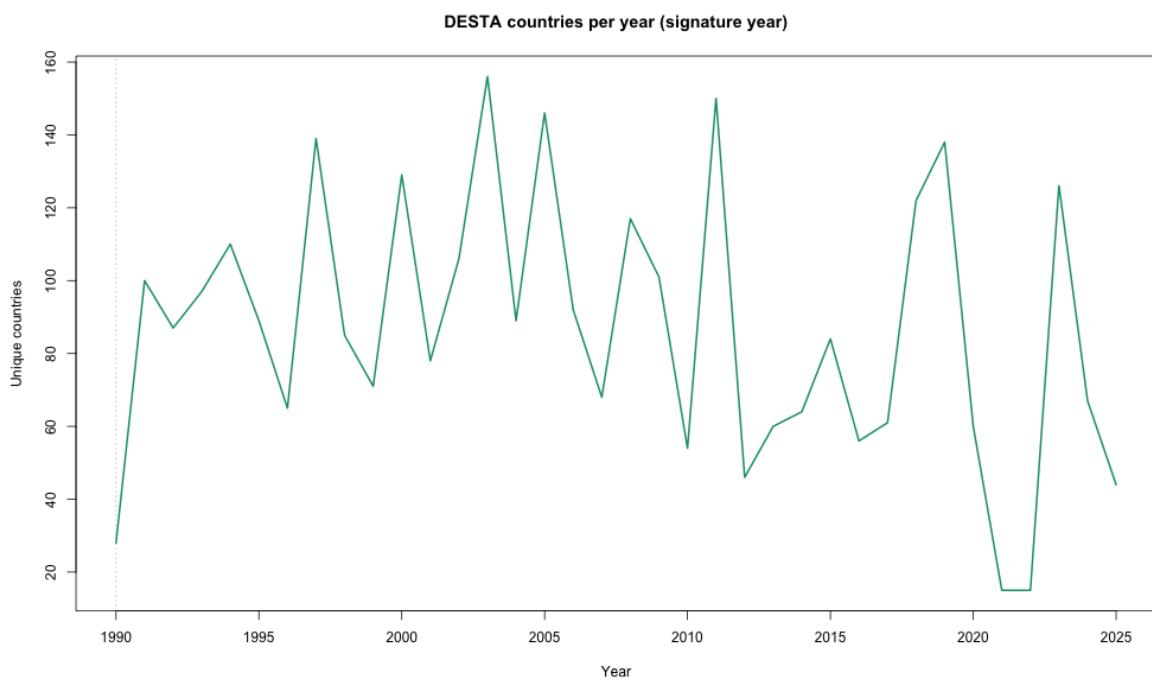


Figure 2: DESTA countries per year (signature year).

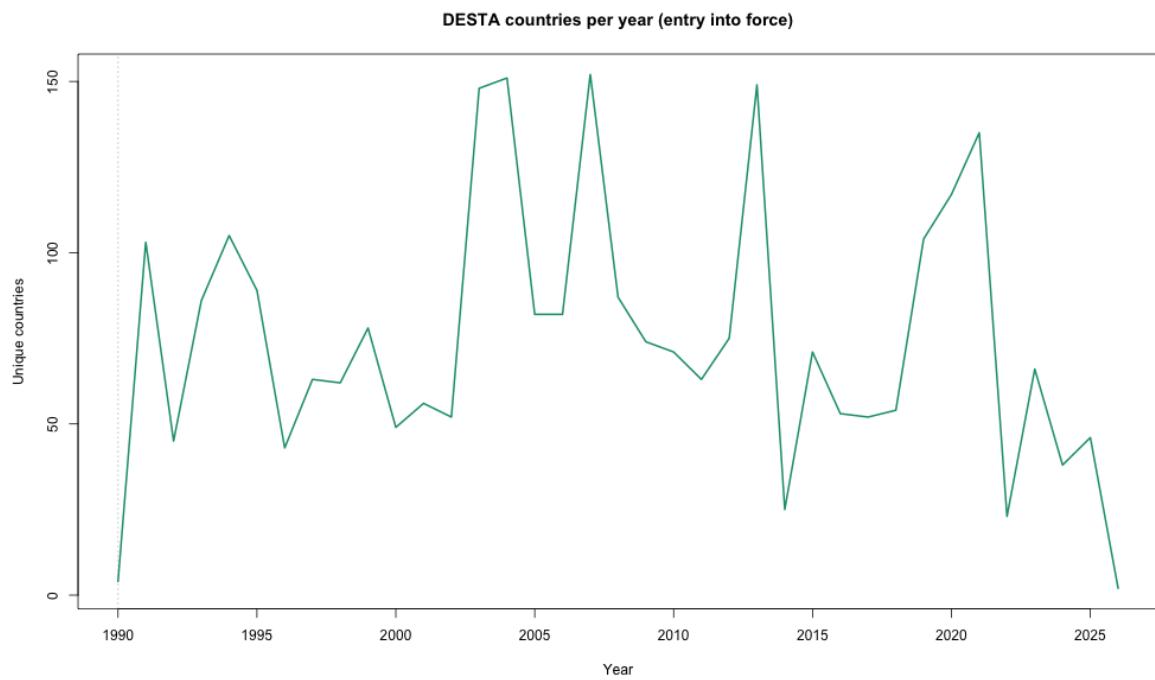


Figure 3: DESTA countries per year (entry into force).

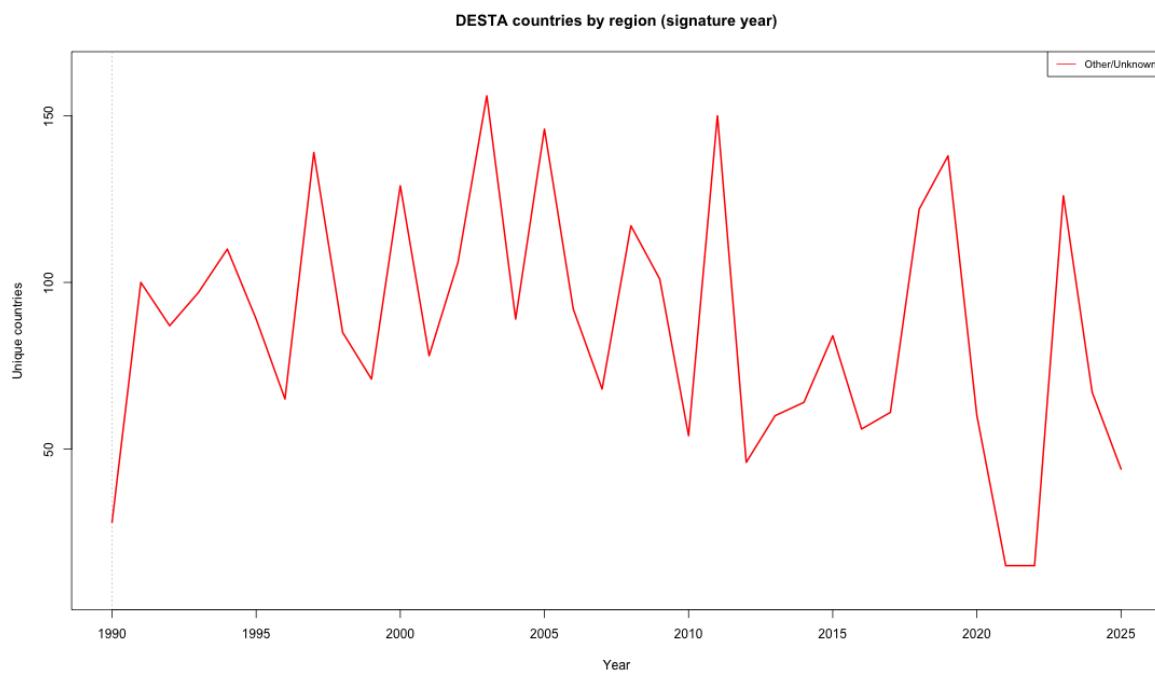


Figure 4: DESTA regional variation (signature year).

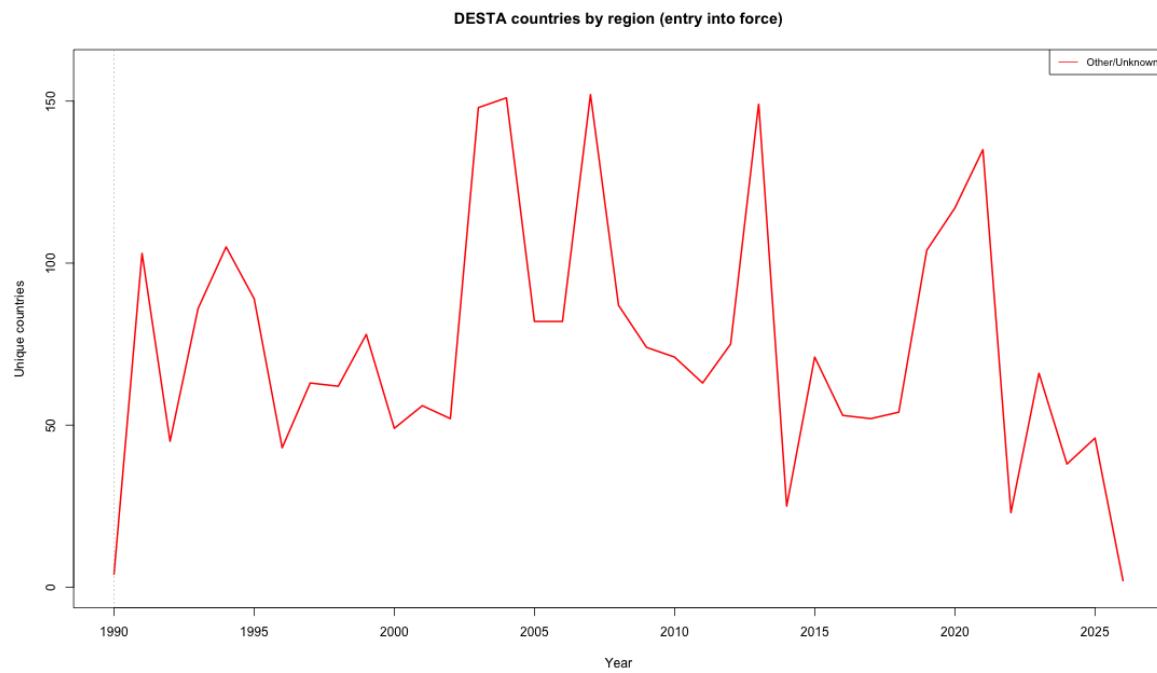


Figure 5: DESTA regional variation (entry into force).

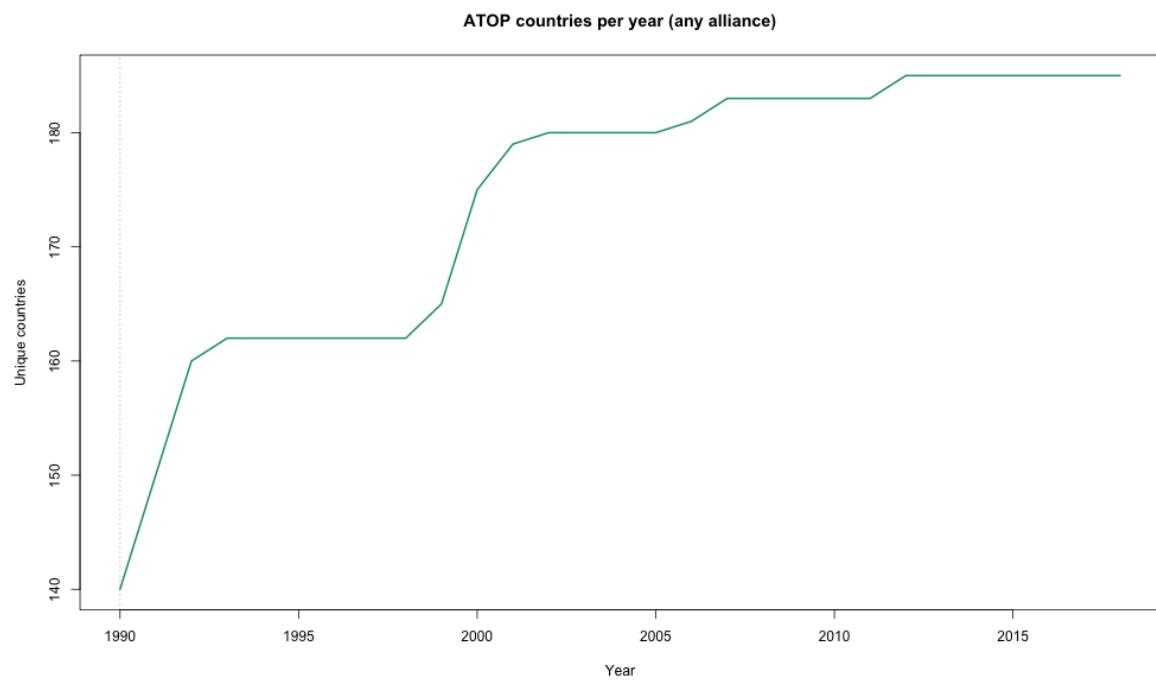


Figure 6: ATOP countries per year (any alliance).

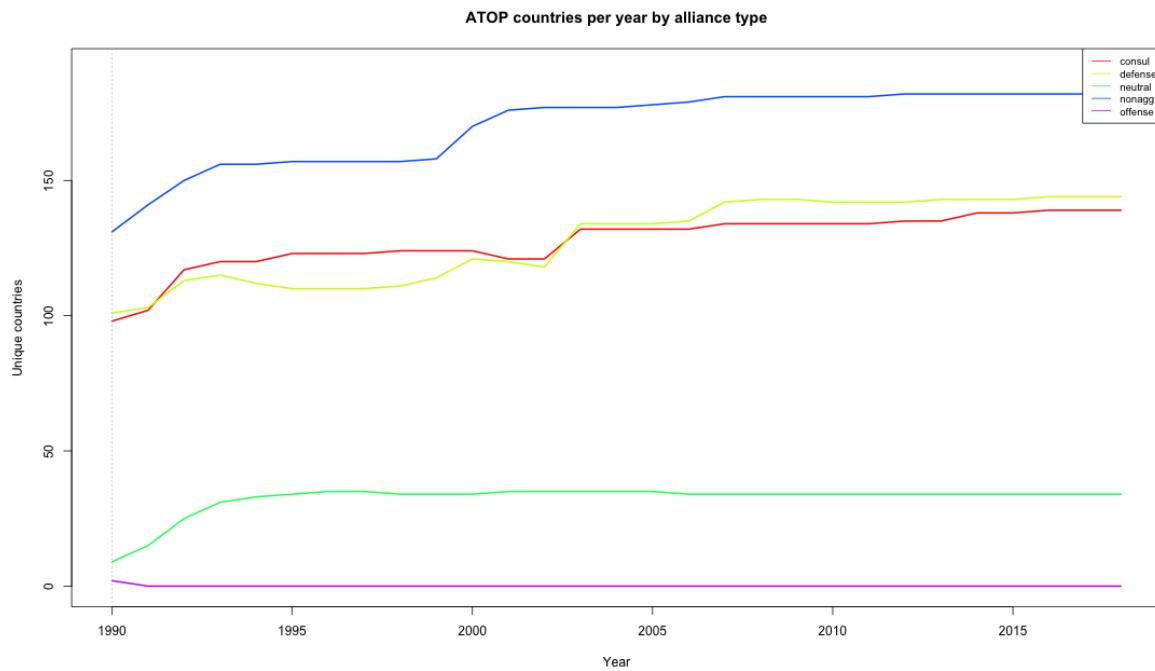


Figure 7: ATOP countries per year by alliance type.

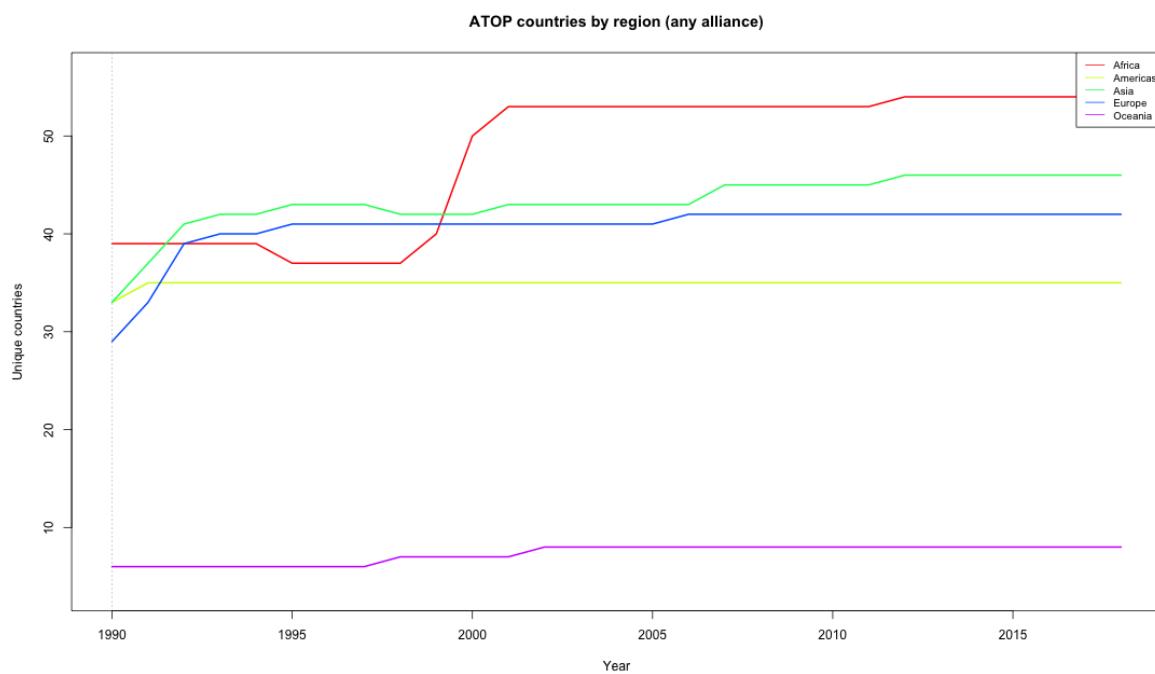


Figure 8: ATOP regional variation (any alliance).

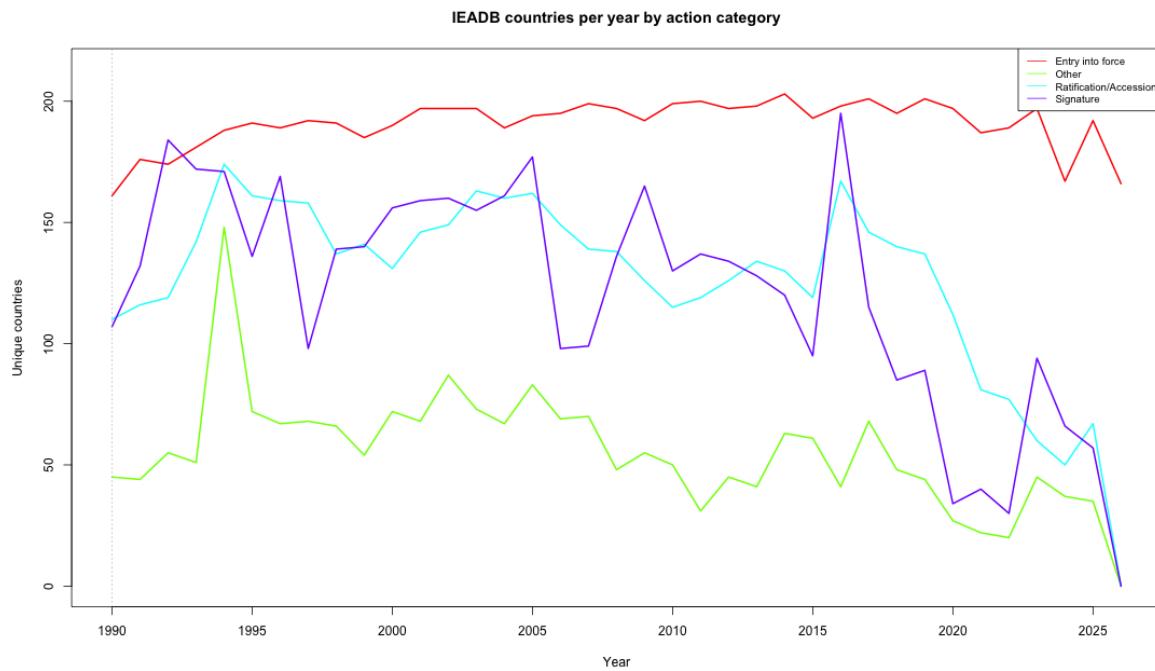


Figure 9: IEADB countries per year by action category.

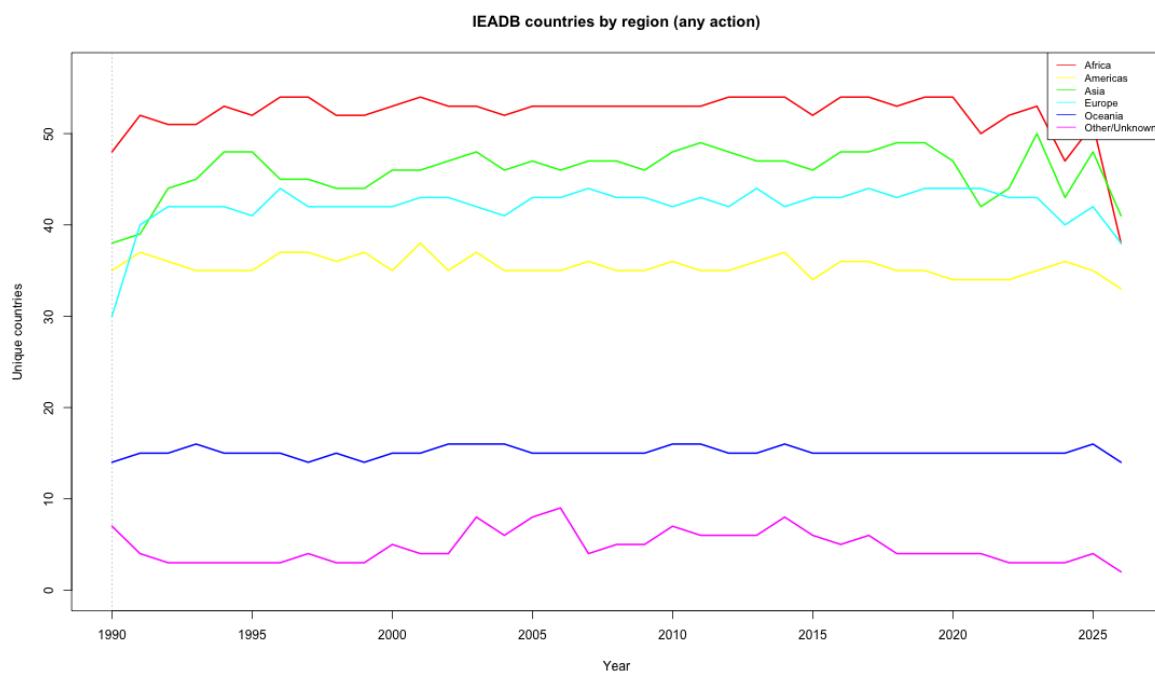


Figure 10: IEADB regional variation (any action).

Table 2: IEADB action type counts (top 10, 1990+)

Action Type	n
Entry Into Force (Tacit Acceptance); Status based on pre-amendment agreement action of Entry into force	30786
Entry into force	23157
Signature	12026
Entry Into Force (Tacit Acceptance); Status based on post-amendment agreement action of Entry into force	10991
Ratification	7419
Accession	4553
Acceptance	1643
Withdrawal	709
Entry Into Force (Tacit Acceptance); Status based on pre-amendment agreement action of Withdrawal or Similar	567
Entry Into Force (Tacit Acceptance)	411

## WTO RTA (trade agreements)

The WTO RTA dataset provides agreement-level dates and signatory lists. We report agreements per year and countries per year, using signature and entry-into-force dates (goods/services). Signatories are taken from the current signatories list when available.

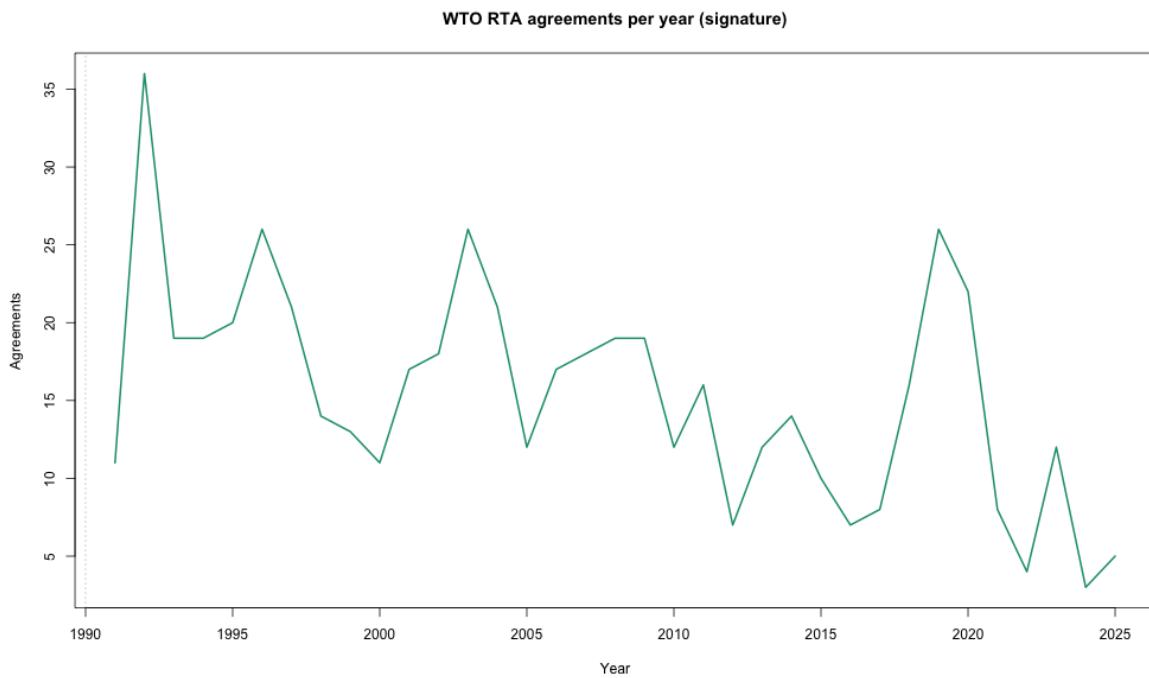


Figure 11: WTO RTA agreements per year (signature).

## UNCTAD IIA (investment treaties)

UNCTAD IIA provides signature and entry-into-force dates. There is no explicit ratification date, so entry-into-force is used as the closest proxy for a completed ratification/activation step.

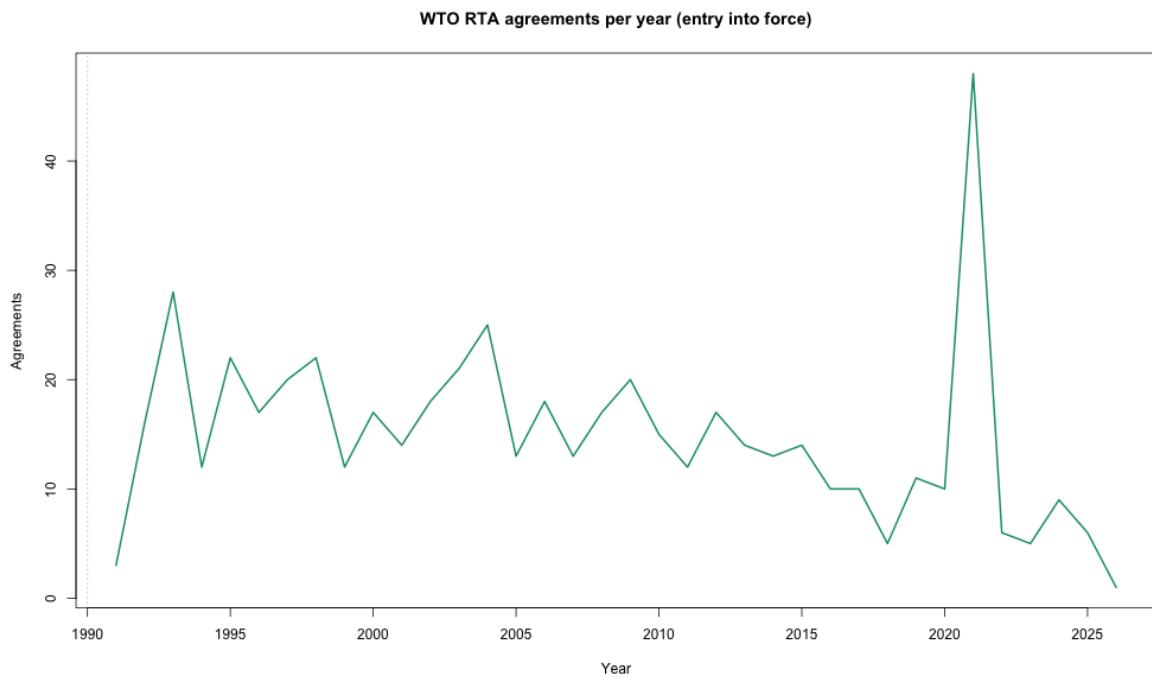


Figure 12: WTO RTA agreements per year (entry into force).

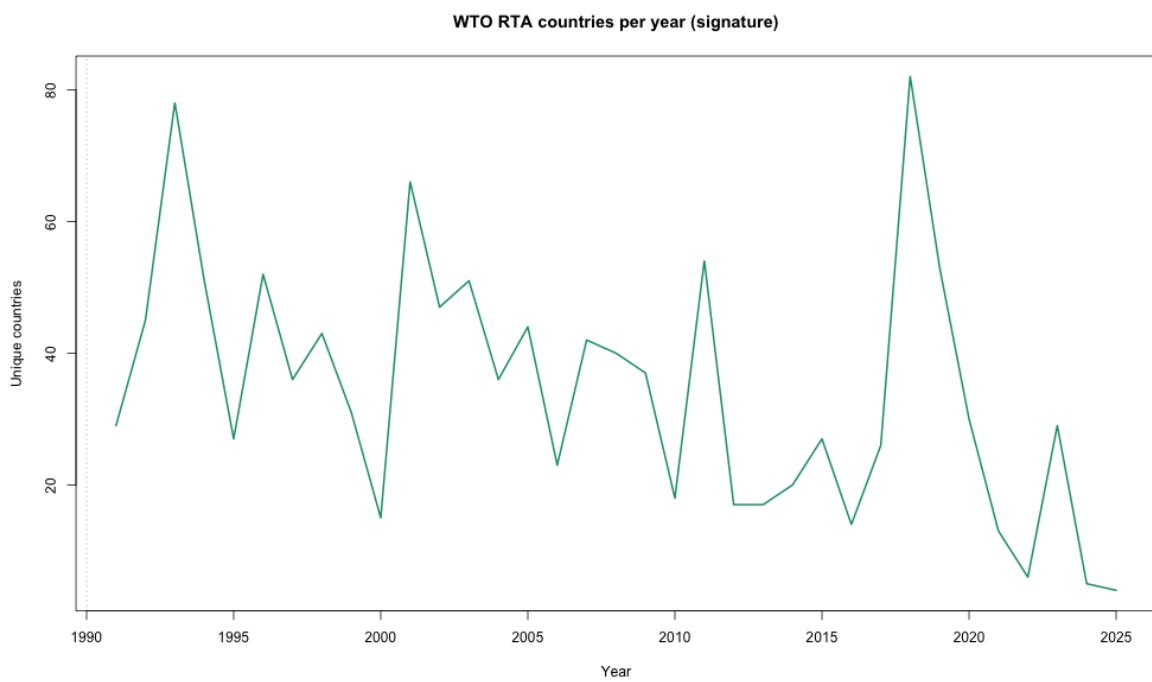


Figure 13: WTO RTA countries per year (signature).

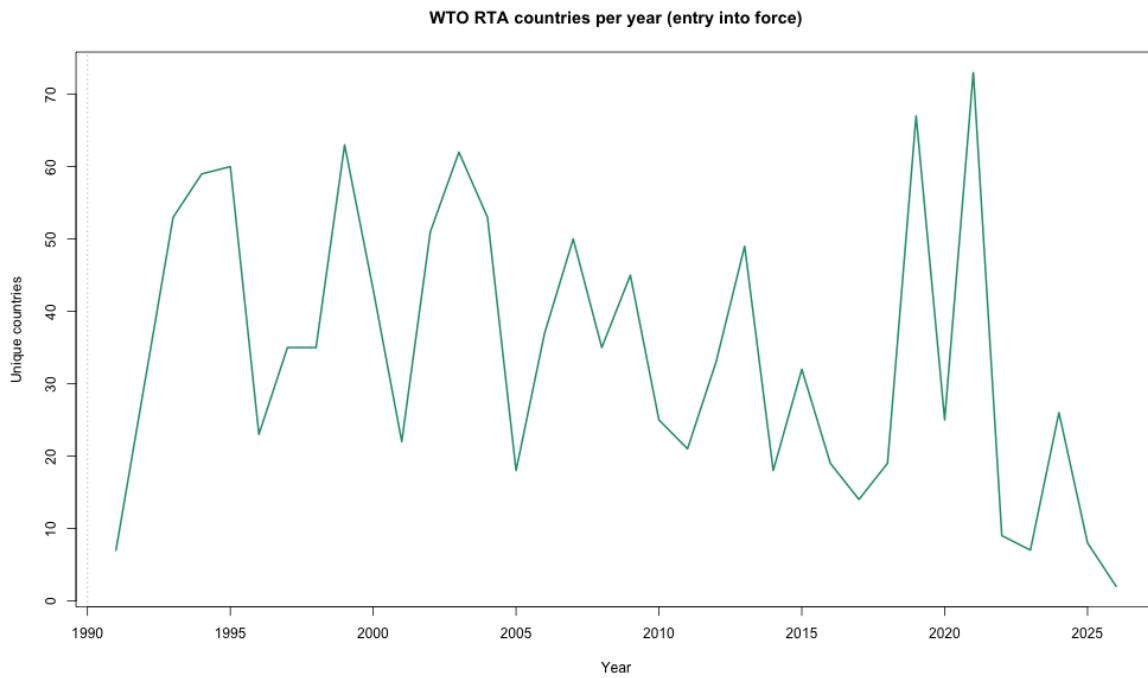


Figure 14: WTO RTA countries per year (entry into force).

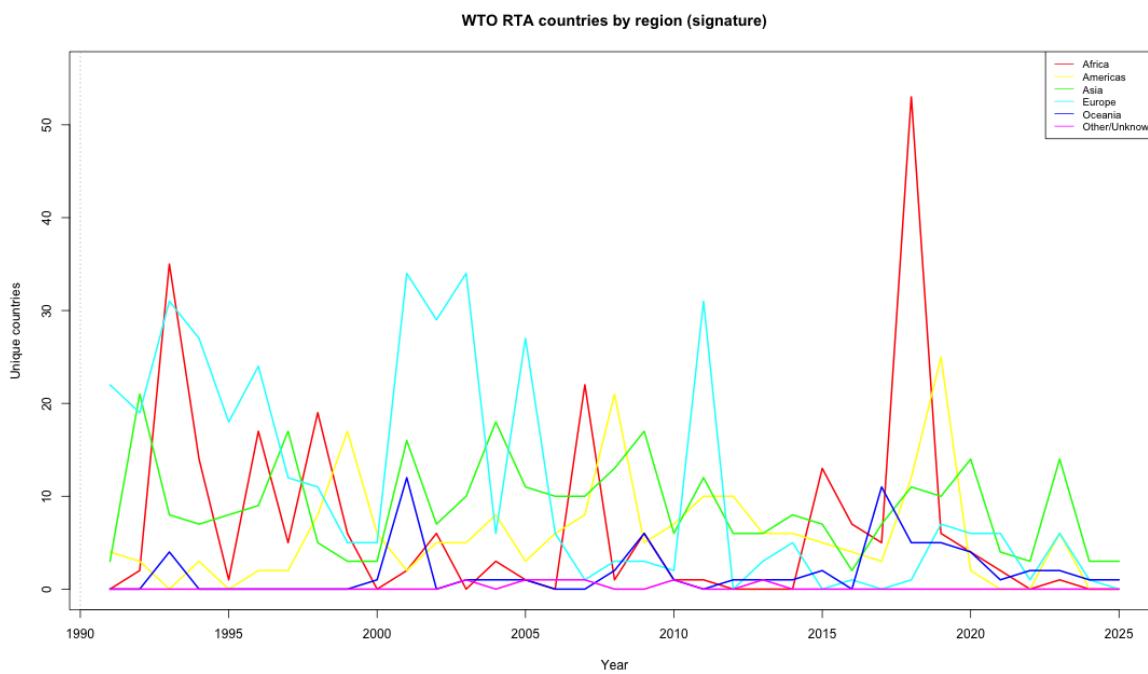


Figure 15: WTO RTA regional variation (signature).

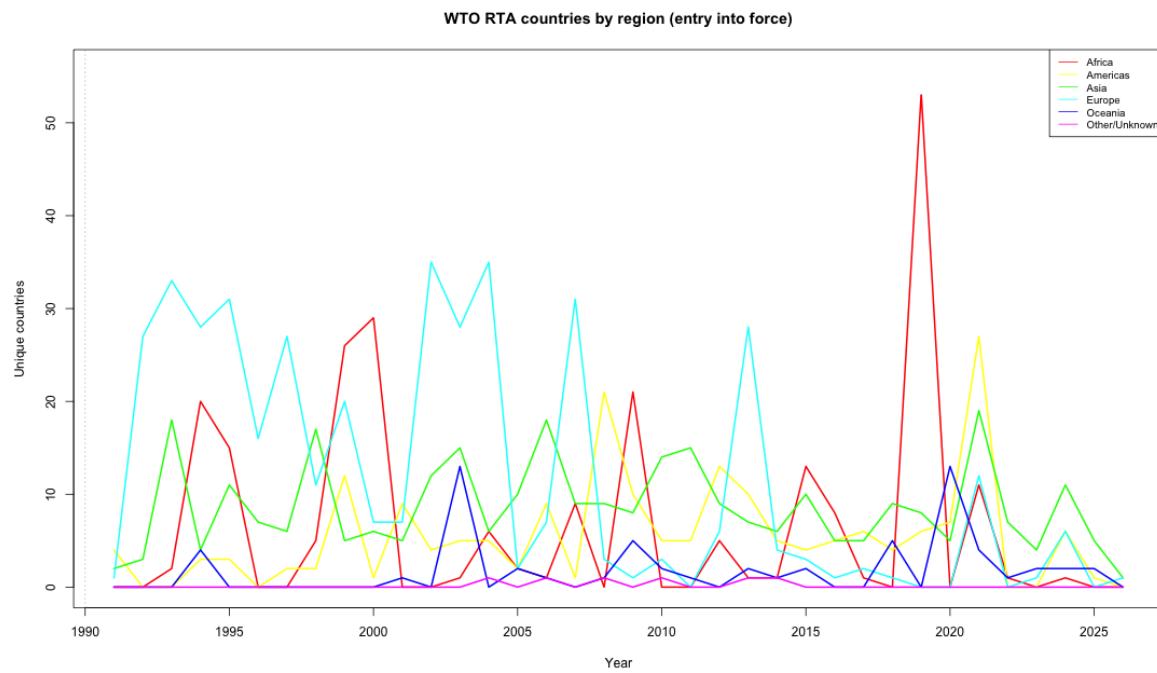


Figure 16: WTO RTA regional variation (entry into force).

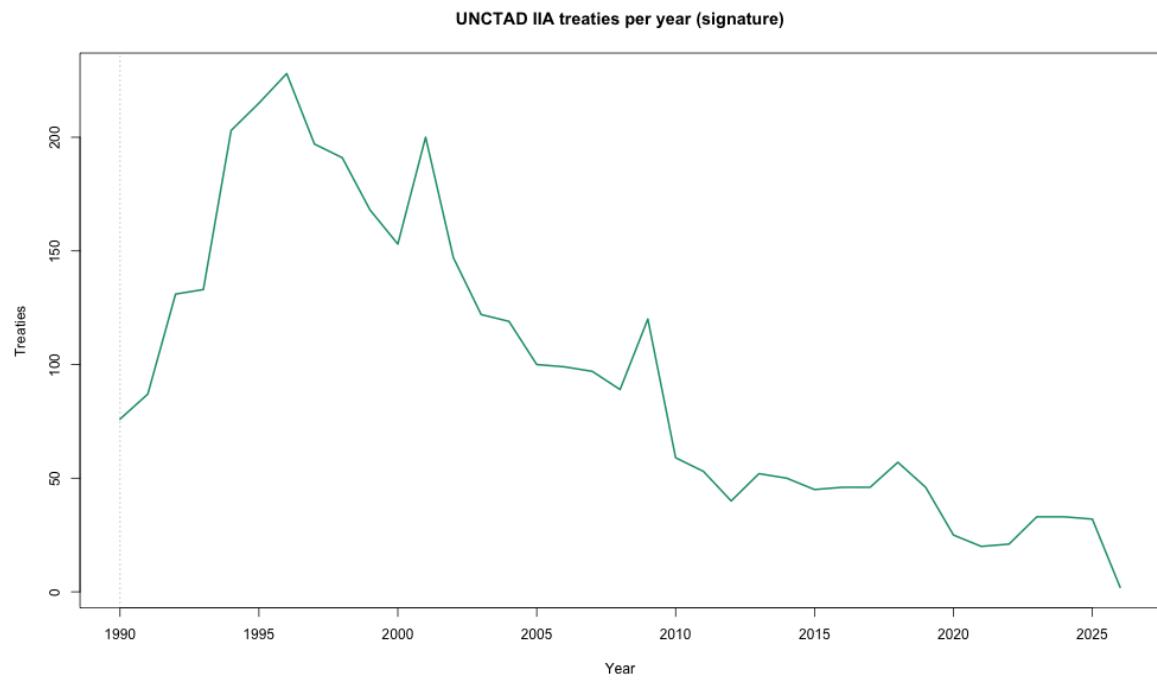


Figure 17: UNCTAD IIA treaties per year (signature).

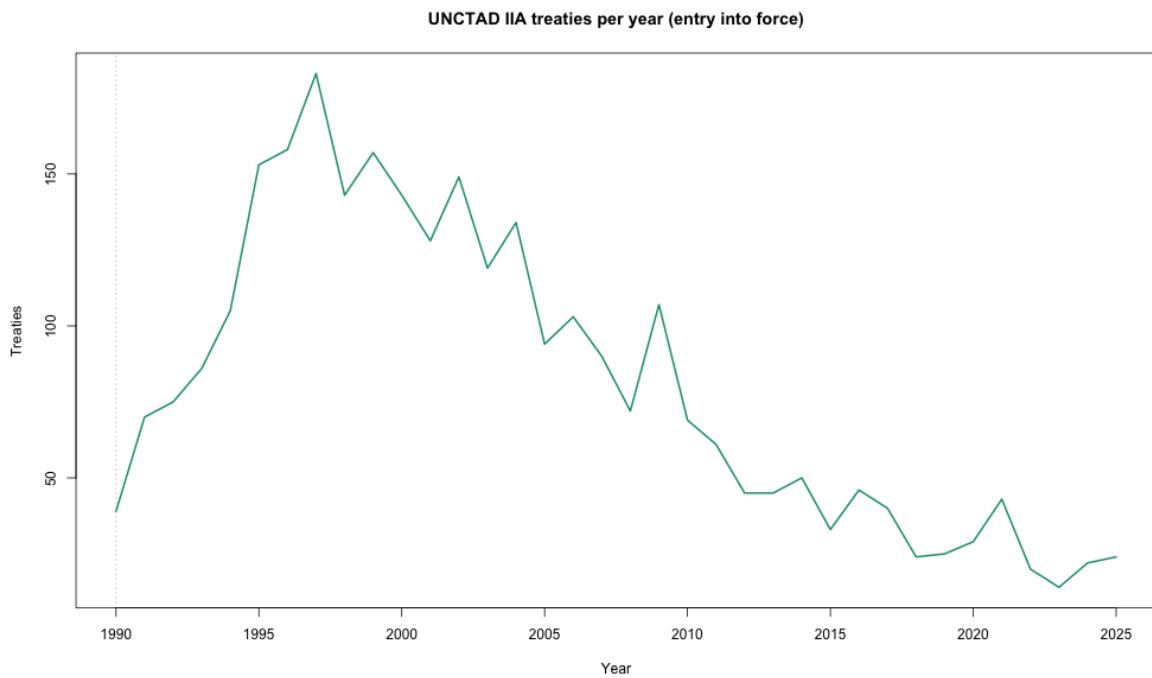


Figure 18: UNCTAD IIA treaties per year (entry into force).

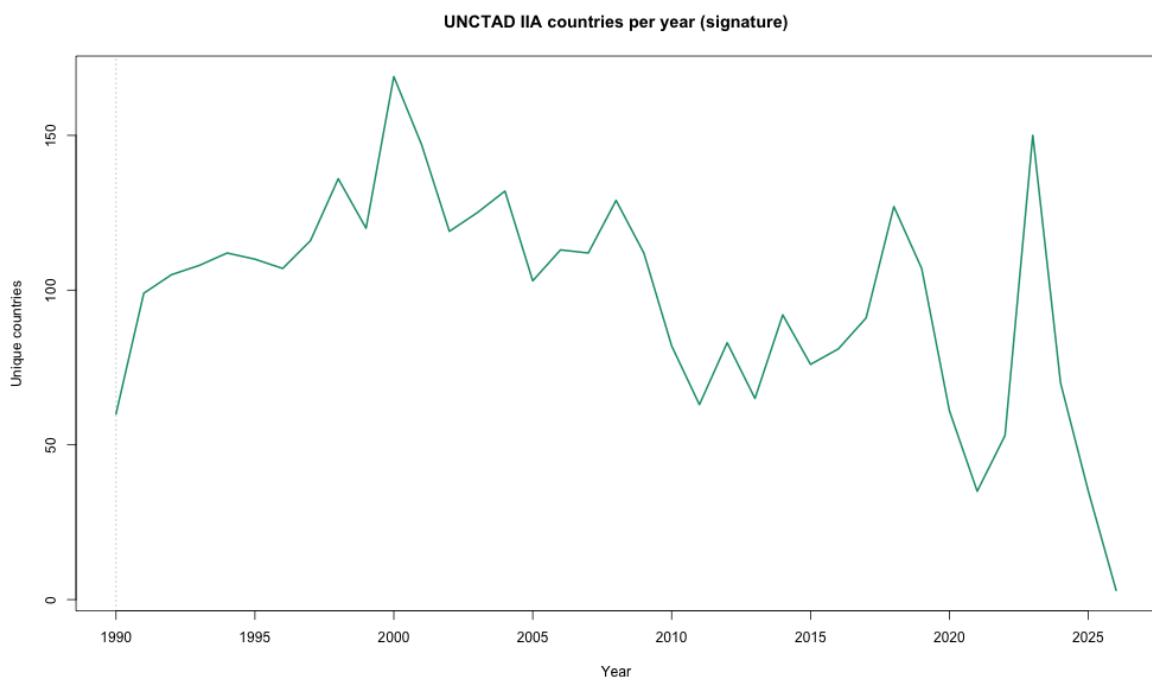


Figure 19: UNCTAD IIA countries per year (signature).

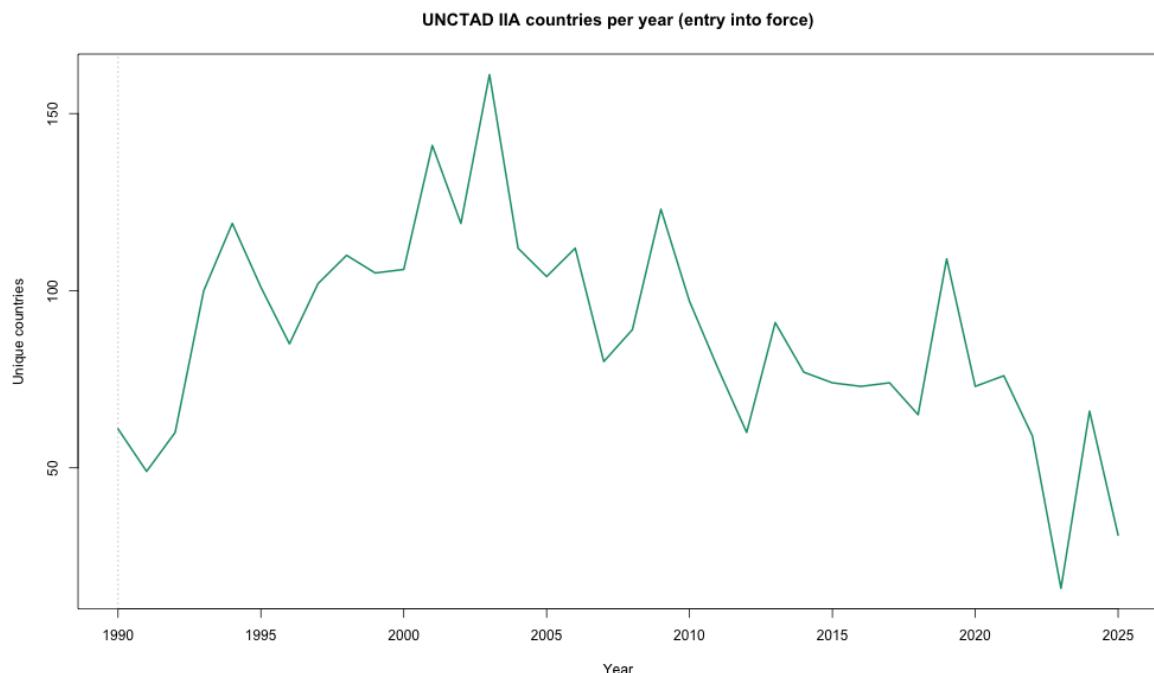


Figure 20: UNCTAD IIA countries per year (entry into force).

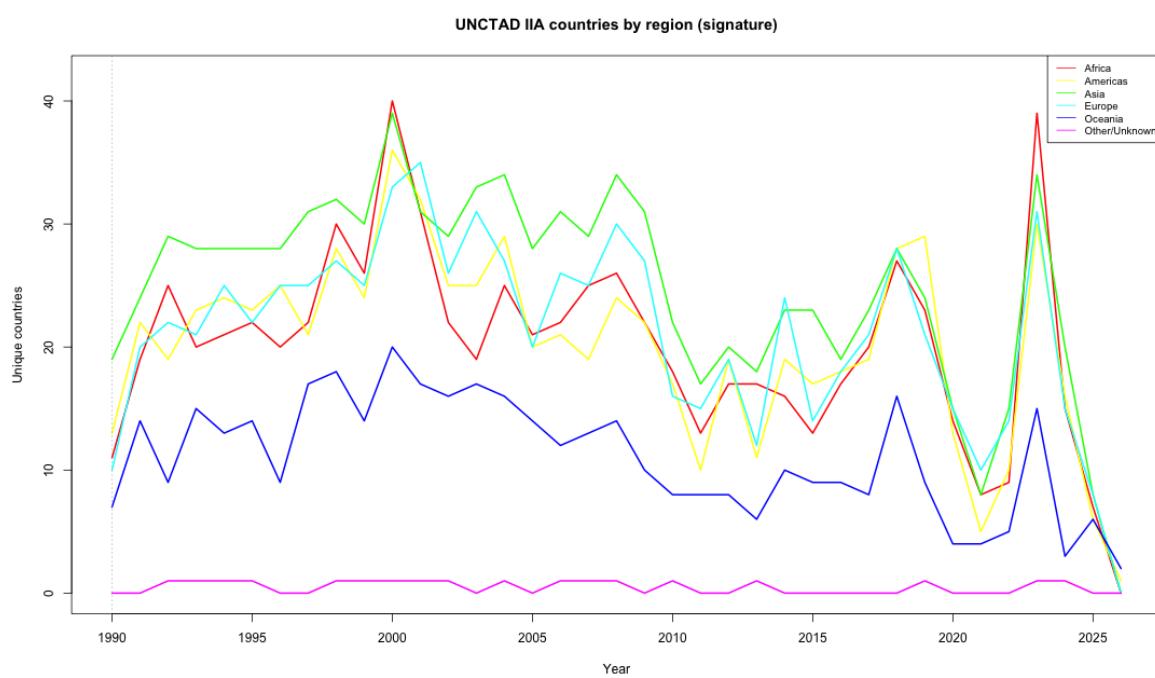


Figure 21: UNCTAD IIA regional variation (signature).

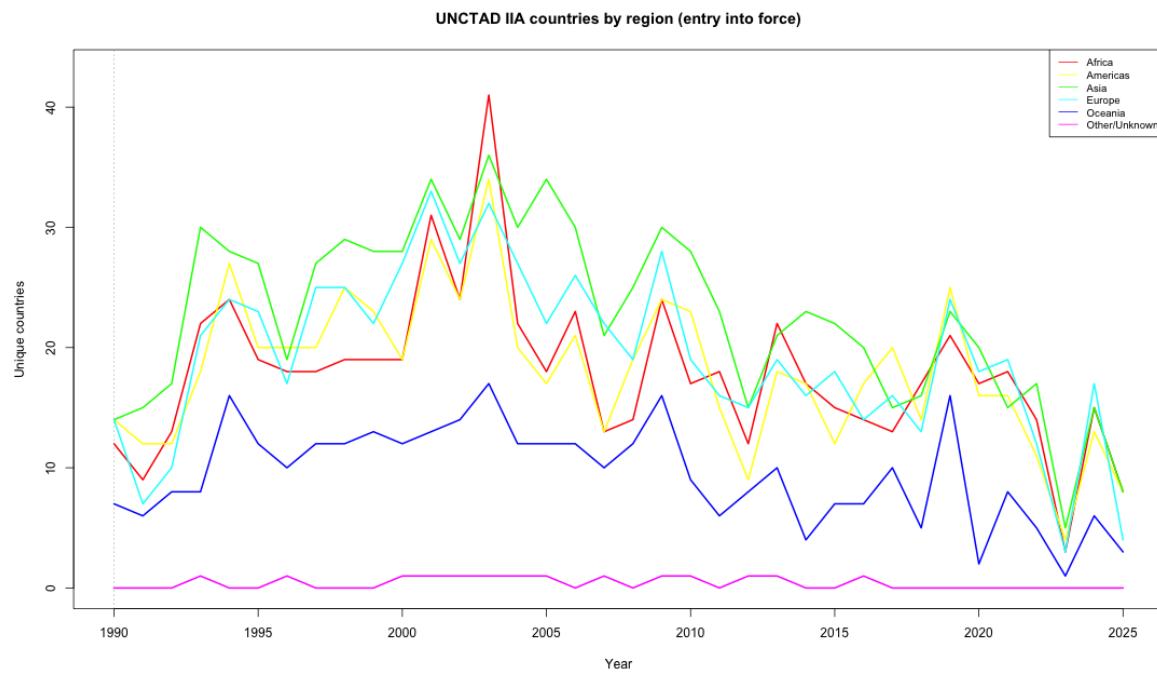


Figure 22: UNCTAD IIA regional variation (entry into force).

Table 3: UNCTAD IIA status counts (top 10, 1990+)

status	n
In force	7002
Signed (not in force)	2019
Terminated	1046

## Appendix: excluded non-country entities

The tables below summarize and list excluded non-country entities (REIOs/territories) for WTO RTA and UNCTAD IIA.

Table 4: Excluded non-country entities (summary)

dataset	excluded_entities	excluded_rows
WTO RTA	10	221
UNCTAD IIA	4	4

Table 5: Excluded non-country entities (list)

dataset	entity
UNCTAD IIA	Namibia
UNCTAD IIA	State of Palestine
UNCTAD IIA	Virgin Islands (United States)
UNCTAD IIA	Åland Islands
WTO RTA	ASEAN Free Trade Area (AFTA)
WTO RTA	Central American Common Market (CACM)
WTO RTA	Eurasian Economic Union (EAEU)
WTO RTA	European Free Trade Association (EFTA)
WTO RTA	European Union
WTO RTA	Gulf Cooperation Council (GCC)
WTO RTA	Kosovo (under UNSC res. 1244)
WTO RTA	Lebanese Republic
WTO RTA	Southern African Customs Union (SACU)
WTO RTA	Southern Common Market (MERCOSUR)