



ESCAP
Economic and Social Commission
for Asia and the Pacific

Launch of the *Guide on using R for
calculating trade Indices and Indicators*
24 May 2023, virtual

*Trade indicators
are getting a new lease of life*

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WOMEN IN ARTNeT

Trade indicators - mirrors & glass balls

- Rearview mirror - a throwback to ARTNeT and APTIAD work
- Handheld mirror - about choosing what you want to see
- Glass ball gazing - R, machine learning and AI

Rearview mirror

ARTNeT Capacity Building Workshop on Trade Research
22-25 March 2005

Introduction to trade research II: Trade data and statistics

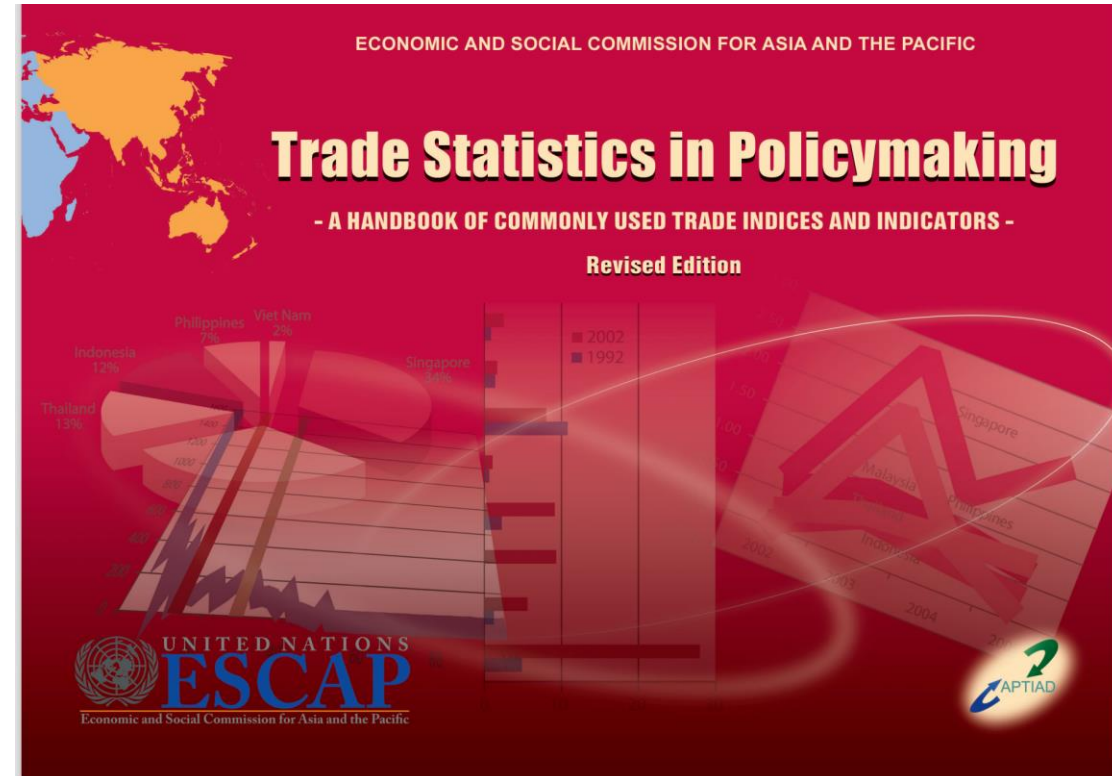
COMMONLY USED TRADE INDICATORS : A NOTE¹

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1. Introduction: What questions can we answer by using trade indicators and descriptive statistics?

Economists use statistical data and indicators in all branches of Economics – sometimes indicators are used as leading indicators (when they have predictive power), sometimes to describe what has happened in the past (lagging indicators). Often one distinguishes between business and macroeconomic indicators. This note does not provide a comprehensive discussion on indicators. It has a very narrow objective of providing a list and definition of most commonly used indicators in the field of International Trade.

A broad definition of a trade indicator is that it is an index or a ratio which can be used to describe and assess the state of trade flows and trade patterns of a particular country or



Motivation / need to address the gaps

- Developing analytical capacity within and with the ARTNeT community to
 - locally produce **evidence** for better (smarter?) trade policymaking
 - improve our **understanding** of the hype of the day – RTAs/FTAs
- Several constraints
 - limited availability of trade and other economic time series data and their imperfect reliability;
 - lack of technical and/or human resources for appropriate analyses in some of the countries
 - under-established practice by policymakers to use the findings of complex empirical research in their policymaking
- statistical analysis based on a set of **trade indices and indicators** to assess trade patterns and characteristics and changes in trade patterns of individual economies and their various groupings in this region

There are however other problems with using (just) statistical analysis

Trade indicator is

“...an index which can be used to **describe and assess the state of trade flows and trade patterns** of a particular economy or economies and can be used to **monitor these flows and patterns over time or across economies/regions**”



- There is a limited benefit in driving a car forward but looking at your rearview mirror:
 - indicators are based on PAST trade data, often 2 or 3 years old
 - yet issues policymakers need to address might be only several months (weeks, days) old
- It allows a relatively good answer to WHAT, but misses answering the WHYs explicitly
- No predictive power

Do not buy into “Lies, damn lies, and statistics ...”

Errors using inadequate data are much less than those using no data at all.

*Charles Babbage
(1791 – 1871, English polymath,
inventor and mechanical engineer)*

It is easy to lie with statistics, but easier to lie without them.

*Fred Mosteller
(1916 – 2006, American
mathematician, one of the most
eminent statisticians of the 20th
century)*

Statistics necessary (ahh, yes, not sufficient)

Hand-held mirror concerns



- The primary issue is the incompleteness of **DATA** in several dimensions, which then limits the reliability of the use of trade indicators
- One can choose **what to look at** because indicators are by nature partial in cover
- Because they are based on TRADE data only, they do not reveal underlying issues without further digging into data and modeling
- **EXAMPLES** are plenty, from the trade balance to trade dependence

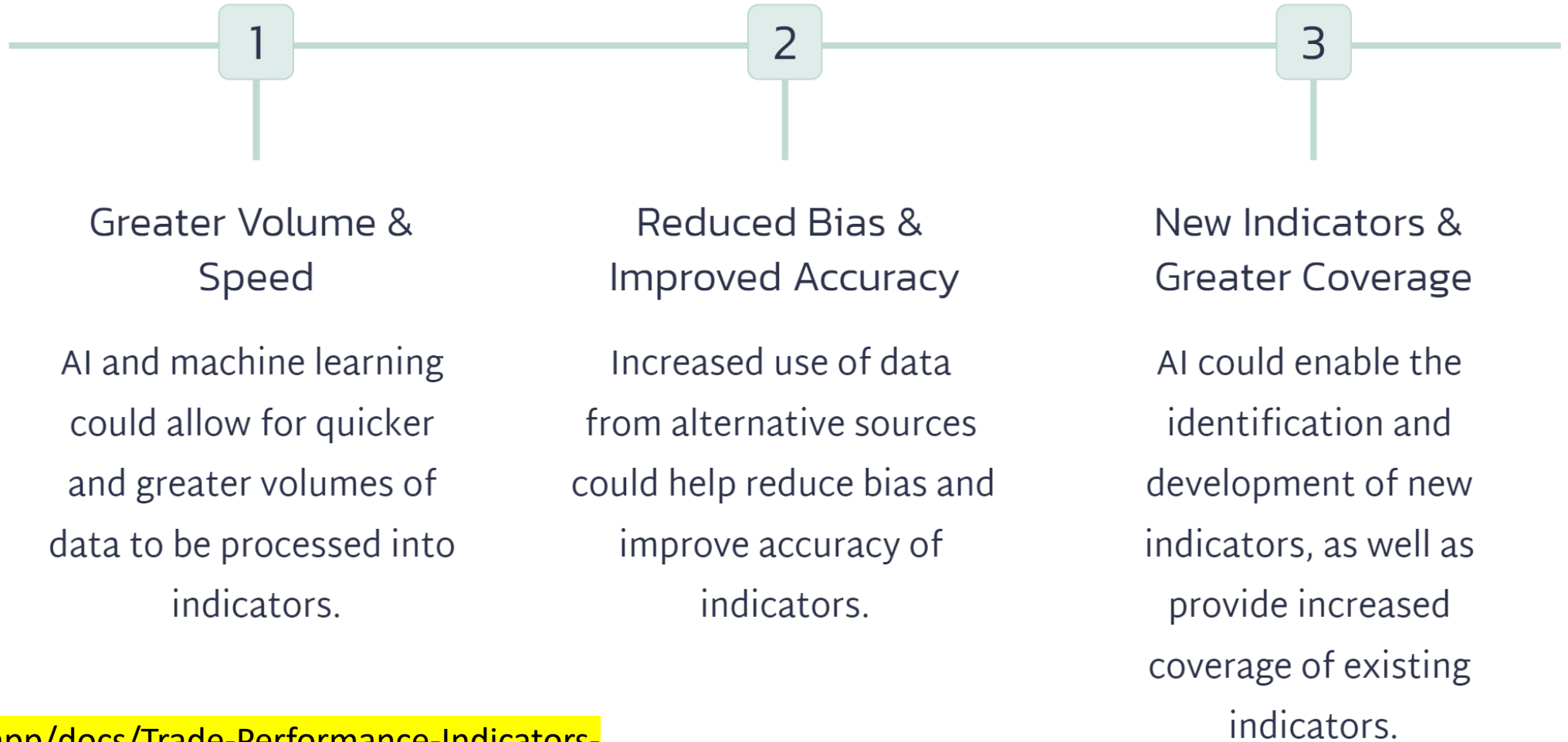
From misinterpretation...

- **Openness or dependence or import penetration**
- **Revealed comparative advantage or specialization in trade?**

...to significant holes in coverage of trade+
issues

- **Gender equality related concerns**
- **Sustainability related concerns only recently started to be incorporated (e.g. STI)**

Glass ball-ing



<https://gamma.app/docs/Trade-Performance-Indicators-Evolution-Use-and-Future-fk1th66934c8747?mode=doc>

Before we entrust policymaking to AI

- DATA
 - Capacity to handle data
 - Capacity to understand results and convert them into policies
 - Capacity to implement, monitor, and correct policies
- + transparency, consultation, and accountability (apart from regulating AI)

Thank you!

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