



NATIONAL RESEARCH
UNIVERSITY

Faculty of World Economy and International Affairs

INPUT – OUTPUT ANALYSIS

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STRUCTURE

- 1. Introduction**
- 2. TiVa indicators**
 - **Description**
 - **Motivation**



- 15 minutes



INTRODUCTION

Purpose of calculating TiVa indicators:

- Providing an essential information about countries' trade relations
- Assistance with development strategy design for commercial partnership expansion



DOMESTIC VALUE ADDED IN GROSS EXPORTS

PARTNER SHARES, PERCENTAGE

Description:

- The importing country distribution of the value added by each exporting country and industry produced during the production and supply chain processes

Purpose:

- Identifying which of the partners creates more profit and has a potential of further trade flow growth;
- Establishing which of the trade partners, conversely, lack their attention but have the capacity for extension;
- Evaluating for which country the created value added is too high and can be decreased to receive more income

Motivation:

- Useful for reviewing the distribution of the value added amongs each exporter and each industry;
- Getting a fuller picture of the international trade connections.

$$EXGR_DVApSH_{c,p,i} = \frac{EXGR_DVA_{c,p,i}}{\sum_p EXGR_DVA_{c,p,i}} \times 100$$



DOMESTIC VALUE ADDED SHARE OF GROSS IMPORTS, PERCENTAGE

Description:

- The domestic value added embodied in gross imports as a share of total gross imports for each industry and exporting country

Purpose:

- Reflecting how much domestic value-added is embodied per unit of total gross imports from each exporting industry of every exporting country;
- Revealing the extent to which previously exported domestic value-added returns to the domestic economy

Motivation:

$$\text{IMGR_DVASH}_{c,i,p} = \frac{\text{IMGR_DVA}_{c,i,p}}{\sum_p \text{IMGR}_{c,i,p}} \times 100$$

- Getting a fuller picture of the international trade connections



RE-EXPORTED INTERMEDIATE IMPORTS

USD MILLION

Description:

- The amount of intermediate imports that are used (indirectly and directly) in producing goods and services for exports

Purpose:

- Evaluating size and level of development of the country's economy;
- Indicating the industries of the country where producers experience lack of the most efficient inputs which are needed to produce competitive on international markets goods and services

$$REII_{c,i} = \left(\sum_p A_{p,c} B_{c,c} EXGR_c \right)_i$$

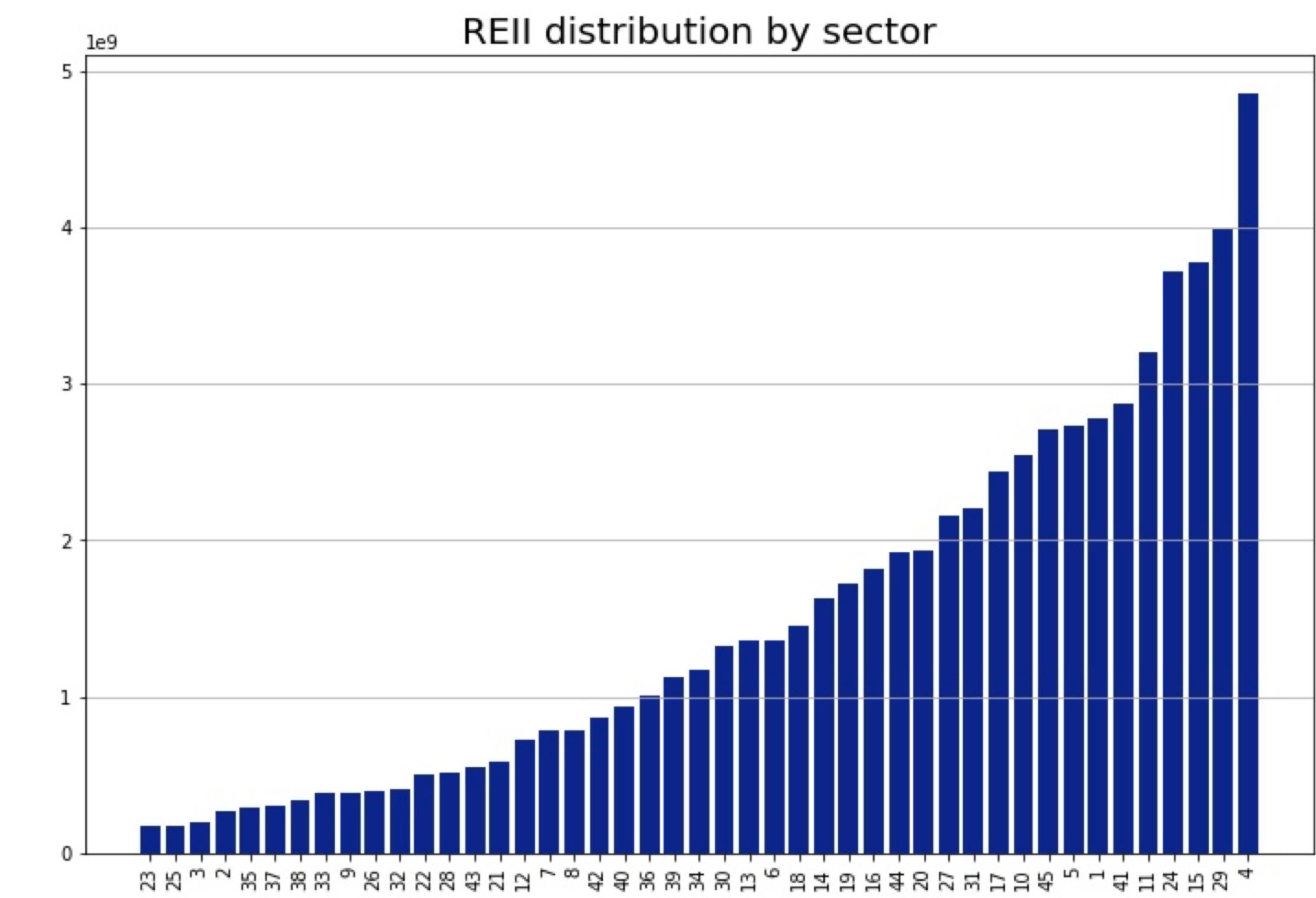
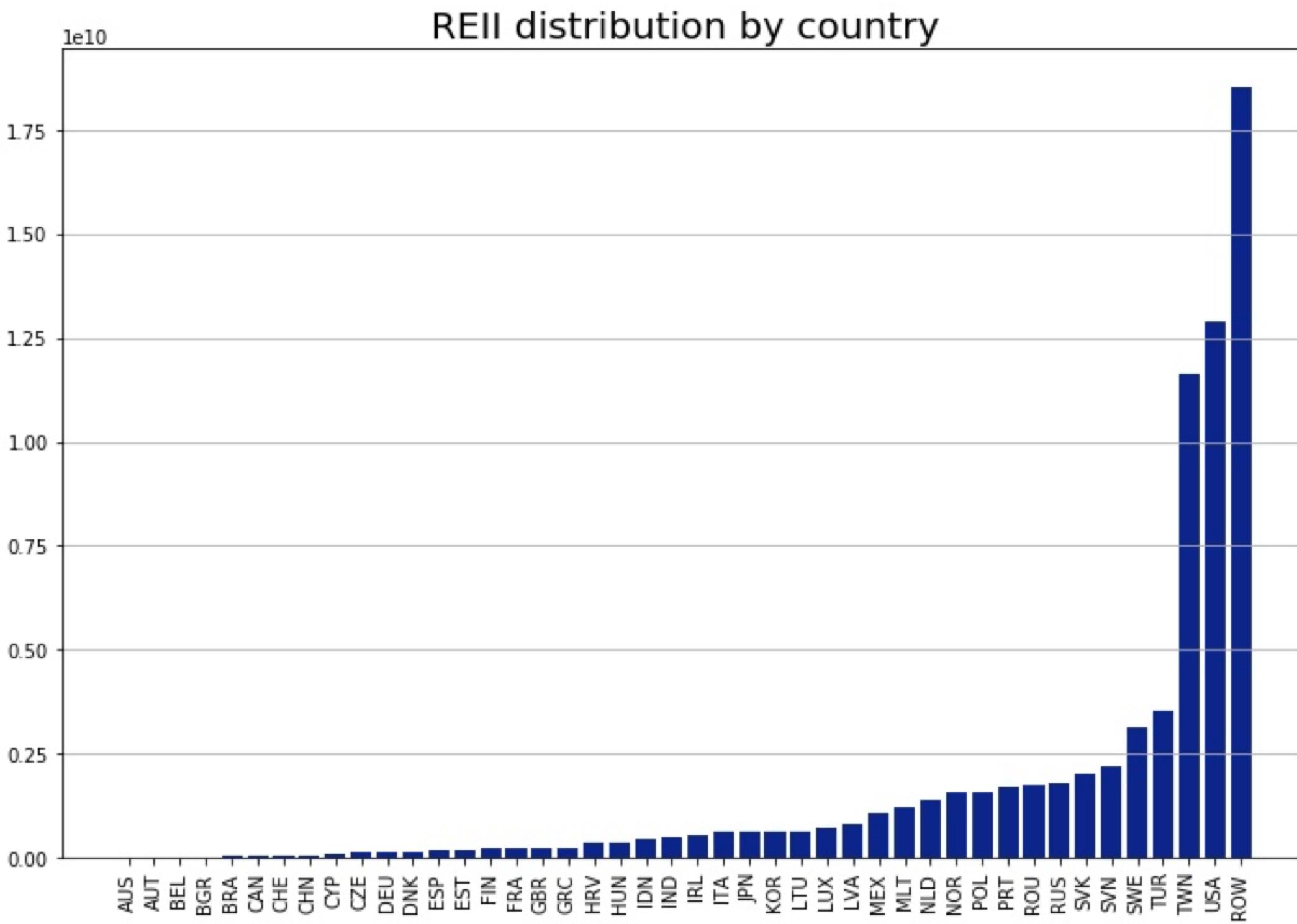
Motivation:

- Providing the opportunity to see the developments of the industries and economies from another prospective;
- Identifying strengths and weaknesses of countries.



RE-EXPORTED INTERMEDIATE IMPORTS

USD MILLION





VALUE ADDED SHARES IN FINAL DEMAND, BY SOURCE COUNTRY AND INDUSTRY, PERCENTAGE

Description:

- The value added proportions in the final demand of the country by each trade partner and each industry

$$FD_VASH_{c,p,i} = \frac{FD_VA_{c,p,i}}{\sum_p FD_VA_{c,p,i}} \times 100$$

Purpose:

- Establishing for which products of different industries and countries the demand is the highest;
- Identifying the commercial partners with the most substantial domestic demand for their products;
- Determinating of miscalculations in the domestic market supply with further estimation of the value-added shares in consumption and GFCF for striking a balance in the national market

Motivation:

- Demonstrating the differences in final demand value added proportions for the specific countries;
- Allowing to see how the value added created for an industry or a state is connected to a final demand of a country



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