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MEASUREMENT OF THE SERVICES VALUE ADDED: A VALIDATION EXERCISE USING COLOMBIAN DATASET

Presentation by

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Measurement of the Services Value Added:a validation exercise using Colombian dataset

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Introduction

Main Aim:

• Apply the methodology proposed by Prof. Haddad (2019) to another country to validate it.

Main Issues related to the validation exercise:

• As one of the goals of the project is to "reduce the knowledge gap in developing countries on measuring services value added in exports" applying the methodology to Colombia could strength the goal.

• Colombia dataset is not part of the world input-output dataset (WIOD).

• Characterize the exports of services value added of another developing country.

Introduction

Advantages:

- Capture explicitly the interdependence among sectors – *systemic analysis*.

- Divide the results into *"initial"* and *"direct + indirect"*.

- Feasible to apply in a inter-regional context enabling the discussion about local *versus* global value chains.

- Enable to implement different impact analysis through different techniques of input-output - *extraction method*.

Dataset

- Oficial dataset for Colombia:

    - https://www.dane.gov.co/

- Input-output matrix
    - 2015 (base year)
    - Current prices
    - Billions of pesos
    - 54 sectors
    - 392 products/activities
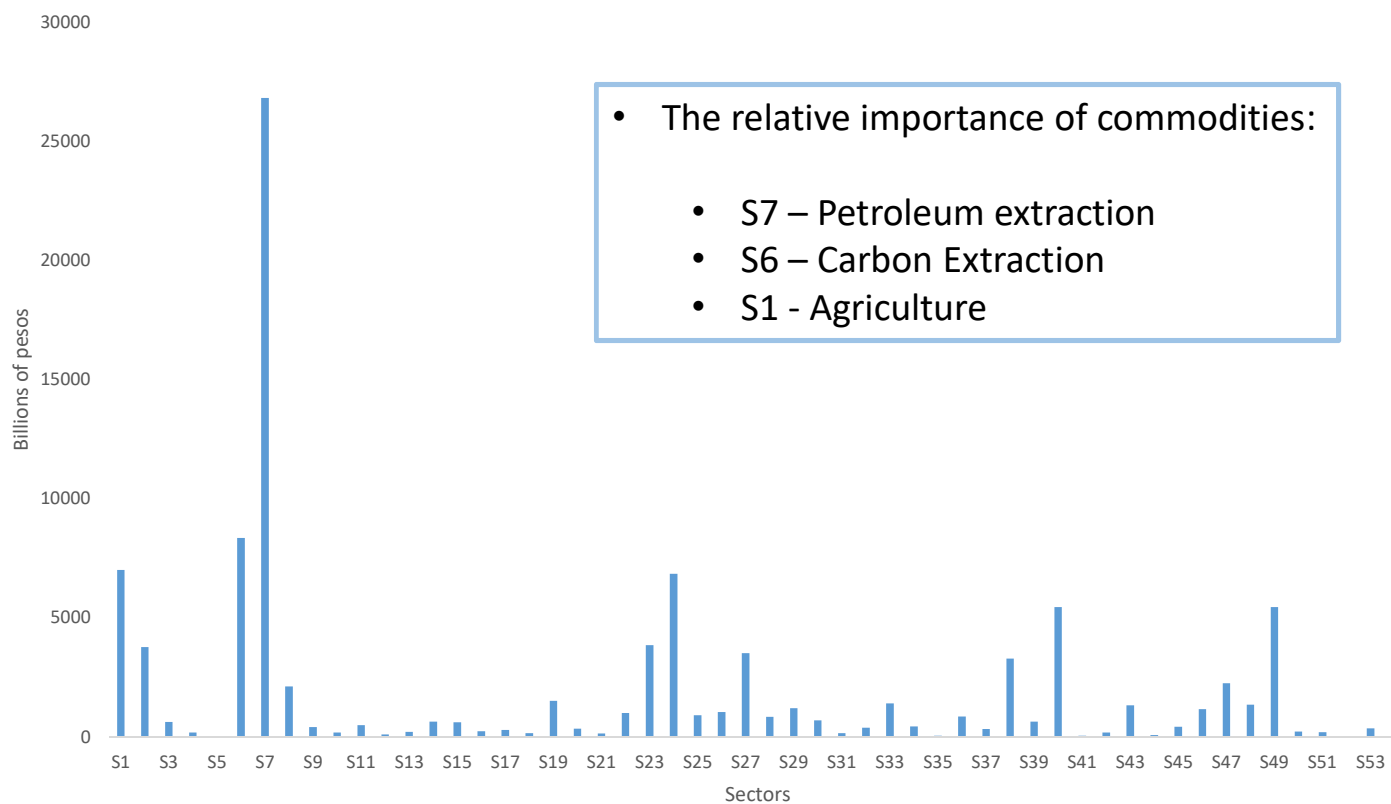
Methodology

- Traditional input-output approach:

- $x = (I - A)^{-1} Fi$

- Transform the traditional input-output model to capture the value added in exports

  - Divide the value added in sub-groups:

    - A) Group 1 – goods and non-services activities
    - B) Group 2 – services and services activities

Results

T6 - Total value added embedded in exports (in billions of Pesos)

- The relative importance of commodities:

  - S7 – Petroleum extraction
  - S6 – Carbon Extraction
  - S1 - Agriculture

Results

T7 - Total value added embedded in exports of services (in billions of pesos)

- The relative importance of commodities:

  - S49 – Air transport
  - S45 – Accomodation and food services
  - S42 - Professional, scientific and technical activities
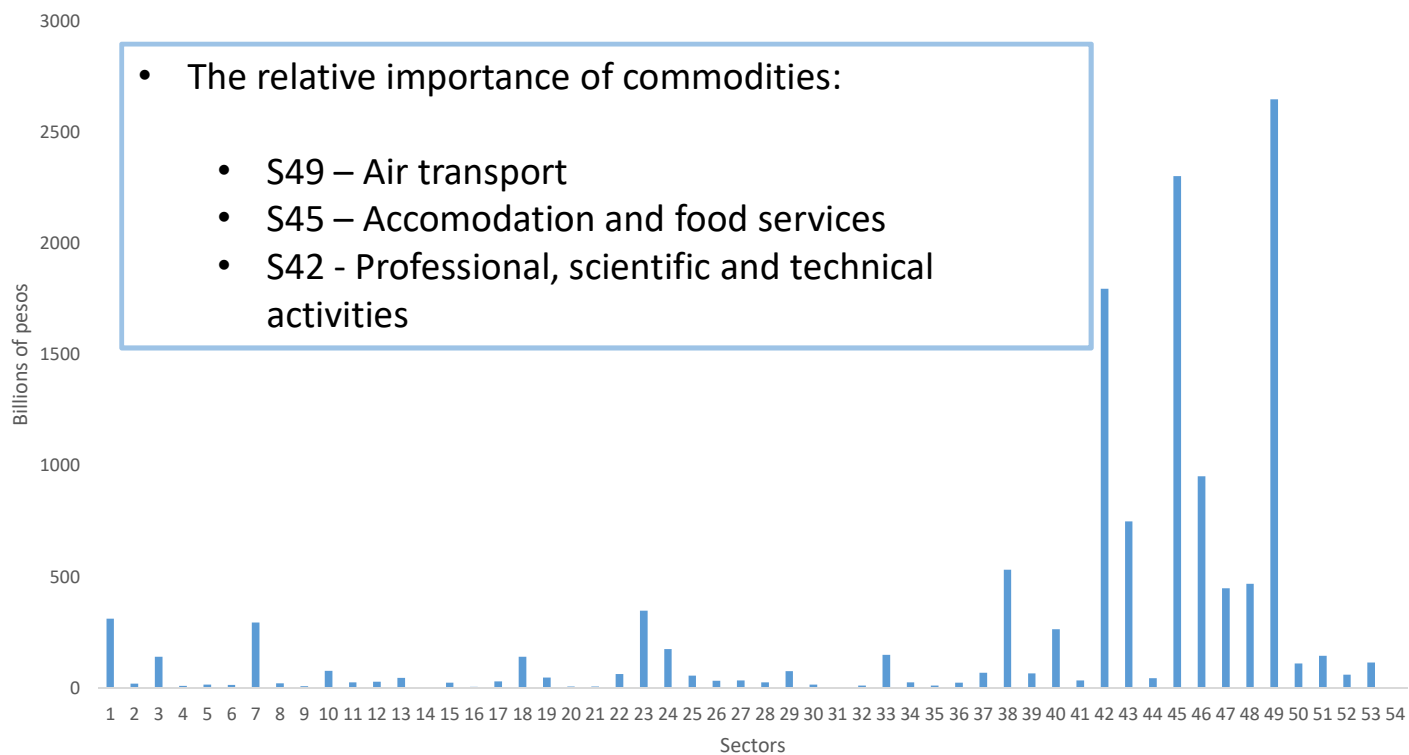
Results

Wrapping the results:

- Capture the global picture of the impacts.

- In the case of Colombia – a dichotomy in terms of the results for total exports and services exports.

  - The first is guided by traditional sectors (producer of commodities).
  - The second is guided by a mix of service sectors (based on different mix of technology incorporated).
  - The second present a more disperse impact among the service sectors.

Results

Summary of results

In billions of pesos

	Indicator	Colombia		Indicator	Colombia
INITIAL	*Exports of goods*		**DIRECT + INDIRECT**	*Exports of goods*	
	VA in service sectors	682		VA in service sectors	22977
	VA in non-service sectors	46365		VA in non-service sectors	30169
	Total VA	47047		Total VA	53146
	Exports of services			*Exports of services*	
	VA in service sectors	6868		VA in service sectors	3976
	VA in non-service sectors	130		VA in non-service sectors	2173
	Total VA	6998		Total VA	6150
	Total exports			*Total exports*	
	VA in service sectors	7550		VA in service sectors	26953
	VA in non-service sectors	46494		VA in non-service sectors	32342
	Total VA	54044		Total VA	59296

Due to the degree of interaction among Colombiam sectors

Final Considerations

- We can affirm that:

  - The methodology is well explained and easily replicable.

  - The dataset is available easily - replicability

  - Enables a comparison among countries

  - The use of it could improve the debate in developing countries about the insertion in global value chains.

Final Considerations

- **<u>Questions or Doubts</u>**:

  - Is it possible with this methodology building an extension to capture environmental issues?
    - Emissions
    - Energy
    - Use of water

  - For a country with the dimension of Brazil, how feasible is to replicate this methodology to consider the degree of heterogeneity among the Brazilian states?

  - In the global context how important is the flexibility to have answers, as you did in your document, about labor market issues?

LATES

LABORATÓRIO DE ANÁLISES TERRITORIAIS E SETORIAIS

Thank you!

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