

Identifying Global Value Chains in Mexico: Challenges



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Outline

- 01** Global context
- 02** Identified Challenges
- 03** Methodology
- 04** Extended Supply and Use tables
- 05** Conclusions



Global Context



Currently the growth of globalization demands the generation of statistics that provide information on interdependencies across countries, promoting the quality of official statistics with accuracy and relevance.

Identified global needs:

01

A policy for an industrial and business macroeconomic vision based on estimates of globalization

02

Statistics oriented towards the integration and harmonization of business statistics with sectorial macroeconomic accounts

Identified Challenges



Identified Challenges

Objective: Identifying the production processes involved in a Global Value Chain (CVG), as well as the recognition of challenges and alternatives for their measurement in the case of Mexico.

1. To conform establishment records into a firm or company record

1



2. To characterize the observation units and their transactions to identify if they are part of a domestic or global value chain.

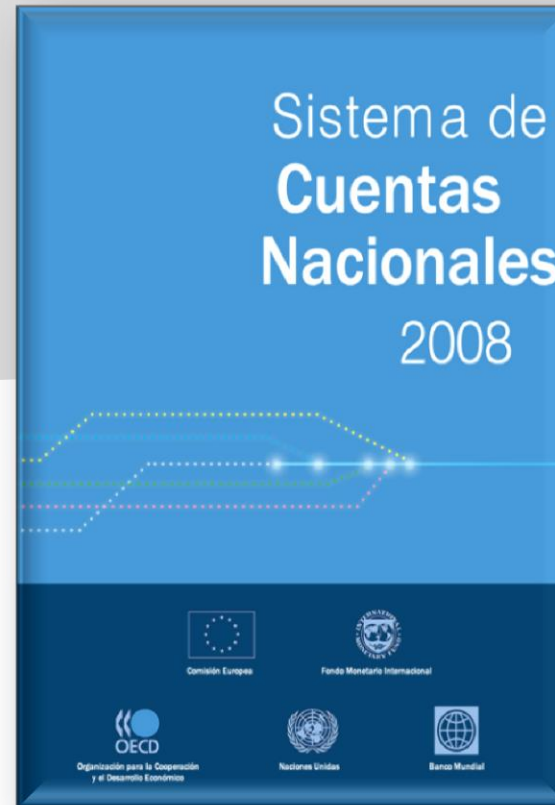
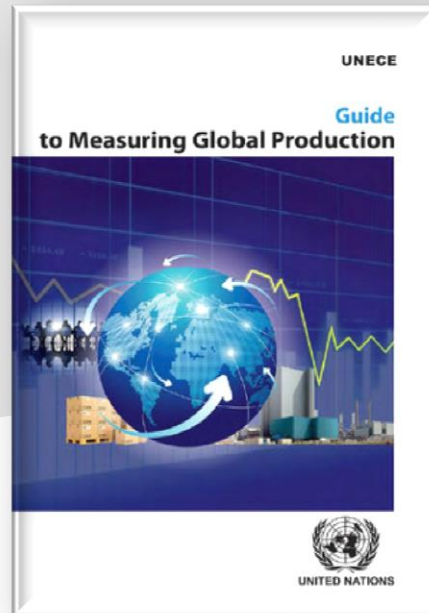
Once these challenges are fulfilled, we will elaborate Extended Supply and Use Tables, considering them as the main input for the construction of Regional Matrices



Methodology



Conceptual Framework



OCDE EXPERT GROUP ON EXTENDED SUPPLY-USE TABLES TERMS OF REFERENCE

1. Overview

1. The increasing international fragmentation of production that has occurred in recent decades driven by technological progress, cost, access to resources and markets, trade policy reforms, and indeed emerging economies, has challenged our conventional wisdom on how we look at and interpret trade. Traditional measures of trade, record gross flows of goods and services each and every time they cross borders leading to what many describe as a 'multiple' counting of trade, which may lead to misguided policy measures in a wide range of policy areas.

2. To respond to this challenge on 15 March 2012 the OECD and WTO undertook to collaborate on the development of estimates of trade in value-added (TIVA), via the construction of a global input-output table, resulting in a first release of a preliminary database on 16 January 2013 and a subsequent update in May 2013.

3. From the very beginning one of the key objectives of the TIVA initiative has been to raise awareness of the importance of new statistics that are better able to reflect the increasingly global nature of production, driven by Global Value Chains (GVCs). But a second, and equally important, objective has been to mainstream the production of TIVA indicators, and the underlying Input-Output tables, from which they are derived, into the global statistical information system and, in turn, to reinforce the significance attached to improving national capacities to develop core national inputs.

4. Significant progress has been made on these fronts since the launch of the database. TIVA has entered the mainstream of the policy debate on GVCs and international and national organisations are investing resources through collaborative networks to create the underlying statistical infrastructure, in particular via the creation of improved national and international supply-use and input-output tables.

5. But further improvements can be made (and are being made) in a number of areas and exploring the feasibility of implementing these improvements is the key objective of the Expert Group on Extended Supply-Use Tables, who will be expected to deliver a series of recommendations at the end of its mandate.

2. Background

6. The use of Input-Output tables to provide evidence on Global Value Chains (GVCs), and Globalisation more generally, is now widespread. But globalisation is rapidly changing long-standing assumptions about the relative homogeneity of the production functions (Input-Output technical coefficients) of units classified to a given industrial activity, which is, implicitly, an underlying assumption used in creating Input-Output based indicators. Such assumptions have, of course, always been challenging when considering small and large firms, where economies of scale have always been understood to play a role. But the increasing prevalence of new types of firms such as *Factoryless Producers and Processors*, and the

Guide to Measuring Global Production (2015)

System of National Accounts (2008)

OCDE Expert Group on Extended Supply-Use Tables Terms of Reference (2014)

Trade by Enterprise Characteristics (TEC)

INEGI is considering the proposed OCDE terms of reference according to next structure:



Source: Expert Group on Extended Supply Use Tables, Terms of Reference, Trade by Enterprise Characteristics (TEC), OCDE (2014)

Information sources



Establishment Surveys



Census



Household Surveys

Extensive review of available information



The following Road Map

Once results from stage 1 are obtained and through the exploitation of other complementary sources such as (FTDB², SUT 2013³), transactions between enterprises will be analyzed, identifying:

- A. Enterprises linked to a GVC
- B. Enterprises not linked to a GVC

Enterprises participating in a GVC



Considering Census information and SBRM¹, it will be possible to obtain the following information:

1. Unique establishments
2. Enterprises
 - Parent company
 - Affiliates



For Enterprises linked to a GVC we will focus on:

1. Intra-firm relations
2. Inter firm relations

Based on this, we will be able to identify Domestic or Global Value Chains



This estimate will allow us to measure TiVA (foreign)

SBRM¹ : Statistical Business Register of Mexico

FTDB², Foreign Trade Data Base

SUT 2013³, Supply Use tables 2013

1. Composition of Enterprises

Information sources:

A. Statistical Business Register of Mexico

B. Economic Census

A. SBRM

It serves as a integration and dissemination tool of business records from directories (internal and external sources)

It allows to monitoring economic units over time.

A1.VARIABLES

- Business statistics code
- **Business name**
- **Activity code**
- **External part: parent company, affiliate**

Use of SBRM

DESCRIPTION SAMPLE

- **Coverage:** Large Establishments
- **Sample size:** 179, 195
- **Activities:** 777
- **Num of parent companies:** 15, 916 (8.9%)
- **Num of affiliates:** 163,279 (91.1%)

CRITERIA

- Economic consistency of the classified observations in parent companies or affiliates
- Reclassification of observations

1. Composition of Enterprises



Statistical Unit: **Enterprise**

Variables:

- Business statistics code
- Business name
- Parent company/Affiliate/Unique establishment

Business Statistics Code

Linking sources



ID CODE



ECONOMIC CENSUS

Statistical Unit: **Establishment**

Variables:

- Business name
- Turnover
- Purchases of goods and services
- Production Value
- Occupied population

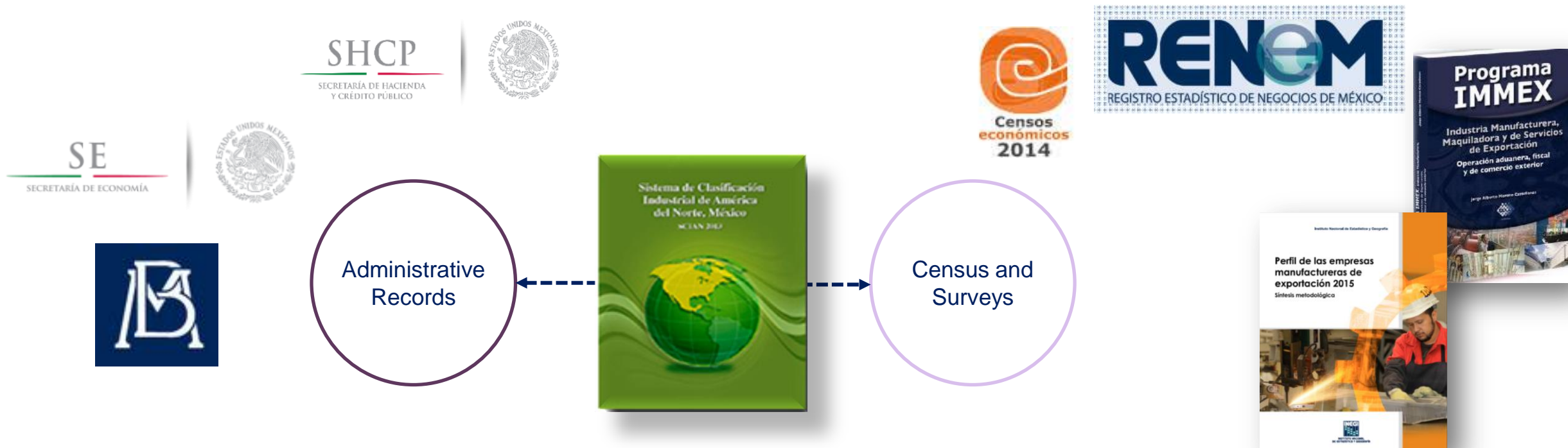
Business name

NAICS 2013

The result of this stage will be the composition of enterprises

2. Linking available information

In order to characterize the statistical units as well as their transactions, the following available information will be linked as sound as possible (microdata):



2. . Linking available information

Once the companies are formed, it will be possible to characterize information breaking down into parent, affiliate or unique establishment. Identifying their participation along the CVG and considering the following variables:

CENSUS VARIABLES



1. Participation of foreign capital in the capital of the establishment

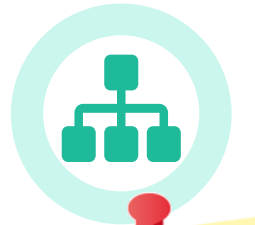


2. Foreign capital share (%)

3. Participation in contracts or programs of economic collaboration with companies located in other countries.

4. . Participation in contracts or programs share (%)

5. Contracts or collaboration programs established with economic units located in other countries (foreign, domestic, affiliates and non-affiliates) ***



If enterprises fit these criteria they will be classified as a part of a GVC, otherwise they belong to a DVC.

- ***
1. Companies located abroad belonging to the same business group
 2. Mexican affiliates operating abroad
 3. Non affiliates

2. Linking available information

Considering previous variables, it will be possible to identify different types of enterprises' participation in GVC:

DIRECT

Establishment affirmed:

1. Receiving **participation of foreign capital** in the capital of the establishment, with a share higher than **80%**.



2. Participation in contracts or programs of economic collaboration with companies located in other countries*, with a share higher than **0%**

CONTROL



INDIRECT

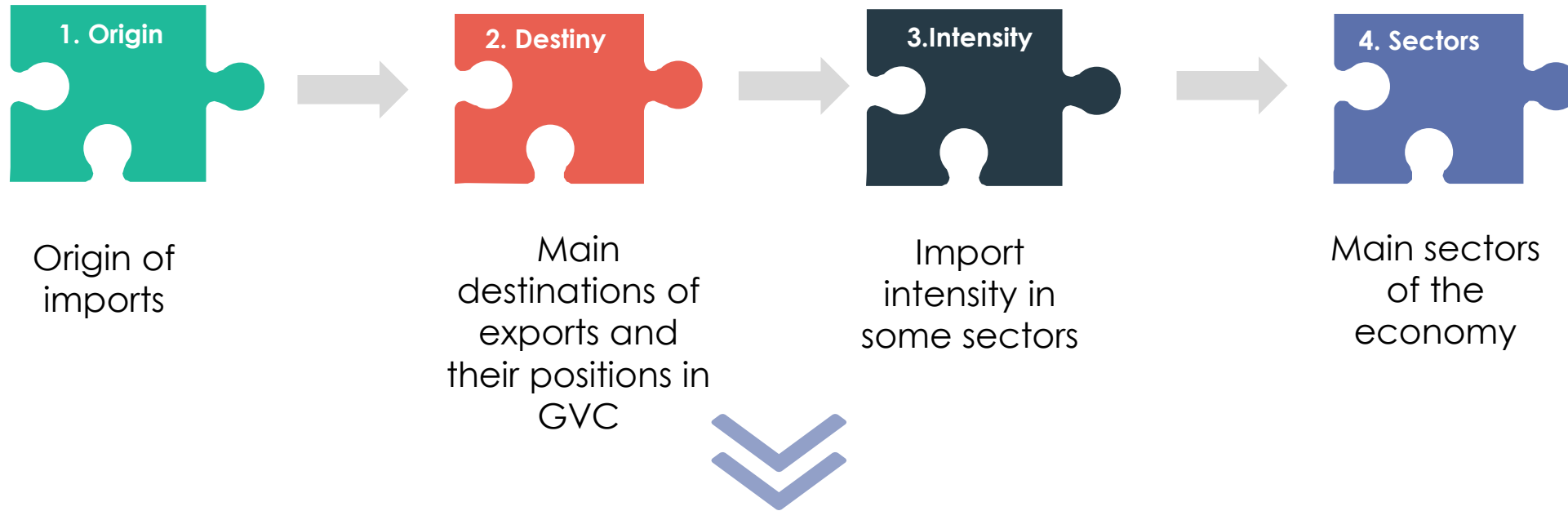
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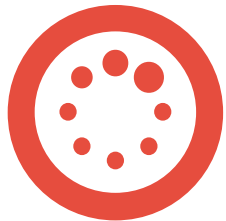
*
1. Companies located abroad belonging to the same business group
2. Mexican affiliates operating abroad

Linking Microdata

Linking microdata will lead us to identify:



IN ORDER TO:



A. Evaluating impact of commercial phenomena in global production

Taking decisions in terms of commercial and public policies



Extended Supply and Use Tables



Extended Supply and Use Tables

Considering international recommendations for constructing ESUT, Mexico will consider the next stages:

Stage 1. Goods for processing

Identification of establishments involved in goods for processing

Stage 2. Exporters

Establishments that assign partial or whole production of goods and services to exports

Information sources

- ✓ Economic Census_2014
- ✓ Administrative Records
- ✓ Economic Surveys



Stage 4. Enterprise Size

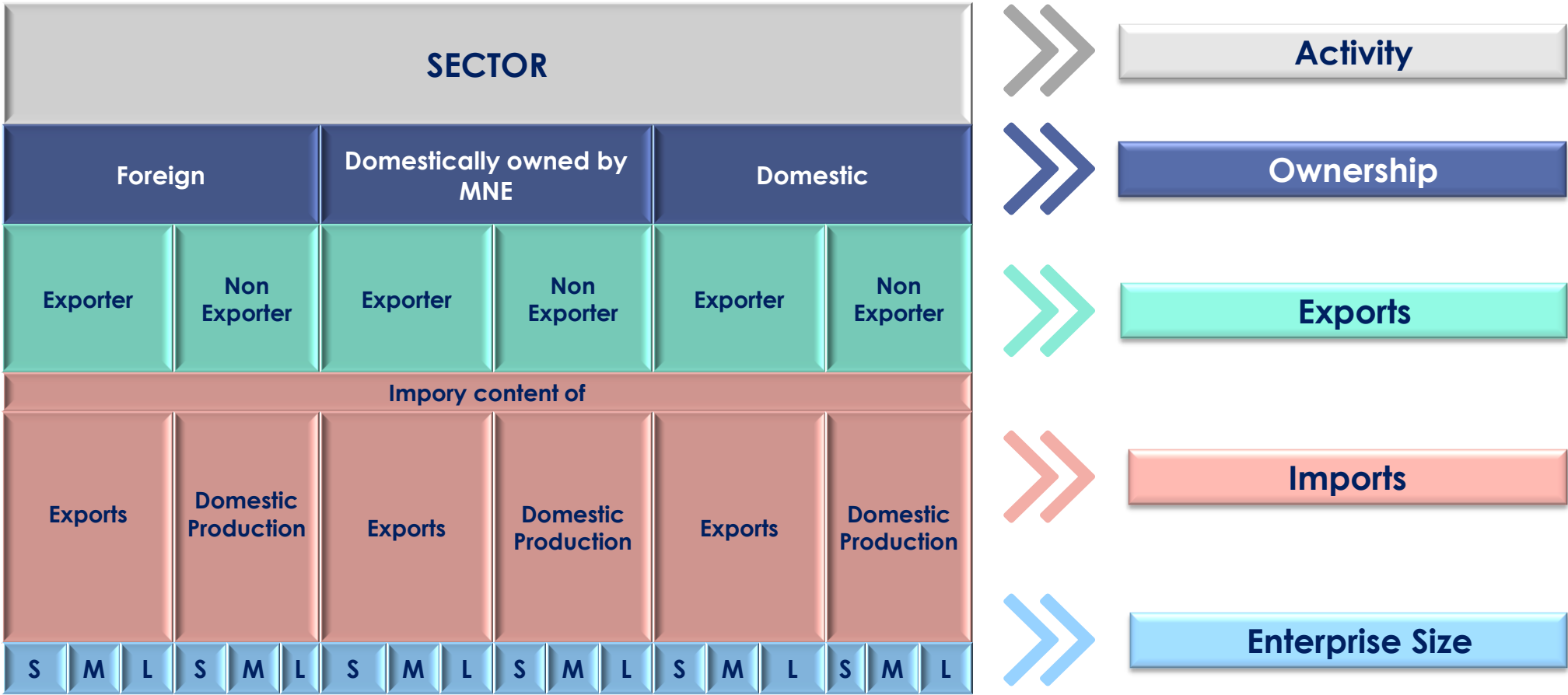
Determining the establishment size identified in the previous stage by economic activity

Stage 3. Ownership

Determining the ownership focus based on results obtained on stages 1 and 2

Extended Supply and Use Tables

OCDE terms of reference to conformation ESUT proposed the next **Ideal breakdown** level



1st level of breakdown: Ownership Focus (Domestic, Foreign)

		Supply Table							Use Table																				
Activities		Q						m	ts pp	ttm	Txns	ts pp	Activities		ID			II. FD				tu pp							
		Goods and Services											Products		Goods and Services			pc	gc	gfcf	i		x	sd					
Products		S 1		S 2		S 3		D	F	D	F	D	F	S 1	S 2	S 3	D					F			D	F			
		D	F	D	F	D	F											D	F	D	F								
Goods and Services	Ownership	Sector 1	Domestic	Domestic Production						Imports	Total Supply at basic prices	Trade and transport margins	Taxes on products – subsidies on products	Total Supply at Purchasers' Price	Goods and Services	Ownership	I. Intermediate Demand						Private Consumption	Government Consumption	Gross fixed capital formation	Inventories	Exports	Statistical discrepancy	Total Use at Purchasers' Price
			Foreign																										
		Domestic																											
	Sector 2	Domestic																											
		Foreign																											
	Sector 3	Domestic																											
Foreign																													
S=Sector (1): D=Domestic, F=Foreign												GVA	III																
												TGP																	

2nd level of breakdown: Export Focus (Exporter, Non Exporter)

Supply Table														Use Table																																									
Activities														Activities																																									
Goods and Services														Goods and Services																																									
Sector 1				Sector 2				Sector 3				Sector 1				Sector 2				Sector 3																																			
D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F																																
E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE																																
Domestic Production														I. Intermediate Demand														m		ts pp		ttm		txns		ts pp		cp		gc		gfcf		i		x		sd		tu pp					
																												Imports		Total Supply at basic prices		Trade and transport margins		Taxes on products – subsidies on products		Total Supply at Purchasers' Price		Private Consumption		Government Consumption		Gross fixed capital formation		Inventories		Exports		Statistical discrepancy		Total Use at Purchasers' Price					
																												S1		S2		S3		S1		S2		S3		S1		S2		S3		S1		S2		S3					
																												Domestic		Foreign		Domestic		Foreign		Domestic		Foreign		Domestic		Foreign		Domestic		Foreign		Domestic		Foreign		Domestic		Foreign	
																												E		NE		E		NE		E		NE		E		NE		E		NE		E		NE		E		NE	
Goods and Services Proprietario														Goods and Services Proprietario																																									
S= Sector (1): D= Domestic, F= Foreign (2): E=Exporter, NE=Non Exporter														III																																									
GVA														TGP																																									

Future Outcomes

3rd level of breakdown: Size of establishment (Small, Medium, Large)

Activities		Supply Table													Use Table																
		Q													ID																
		Goods and Services													Goods and Services																
		Sector 1				Sector 2				Sector 3					Sector 1				Sector 2				Sector 3								
Products		D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	D	F	II. FD					
		E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE	E	NE						
		S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L						
Goods and Services Ownership	S1	Domestic	E	S	M	L	Production	m	ts bp	ftm	txns	ts pp	Goods and Services Ownership	I. Intermediate Demand	pc	gc	gfcf	i	x	sd	Total Use at Purchasers' Price	tu pp									
		Foreign	E	S	M	L																									
		Domestic	NE	S	M	L																									
		Foreign	NE	S	M	L																									
	S2	Domestic	E	S	M	L																									
		Foreign	E	S	M	L																									
		Domestic	NE	S	M	L																									
		Foreign	NE	S	M	L																									
	S3	Domestic	E	S	M	L																									
		Foreign	E	S	M	L																									
		Domestic	NE	S	M	L																									
		Foreign	NE	S	M	L																									
		GVA													III																
		TGP																													

(1): D= Domestic, F= Foreign
 (2) E=Exporter, NE=Non Exporter
 (3): S=Small, M=Medium, L =Large

Future Outcomes

Example

Supply Table															Use Table																				
Activities										Q					m	ot pb	mct	txns	ot pc	ID										II. FD					ut pc
										Goods and services																				Sector 1					
Products										E			NE			E			NE			E			NE			E			NE				
										S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L		
										Production										I. Intermediate Demand										cp	cg	fbkf	ve	x	de
Goods and services	Owner	S1	Domestic		E	S	Production										GVA	I. Intermediate Demand										GVA							
			E	S	M	L																													
				NE	S	M																							L						
			Foreign		E	S																							M	L	TGP				
			E	S	M	L																													
				NE	S	M																							L						

(1): D= Domestic, F= Foreign
 (2) E=Exporter, NE=Non Exporter
 (3): S=Small, M=Medium, L =Large

Concluding Remarks



Concluding Remarks

1. The identification of the companies participating in CVG will lead us to identify key sectors in the economy for decision making in terms of investment, commercial and public policies.
2. The composition of companies and their transactions will be a fundamental element for the construction of Extended Supply and Use Tables.





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