UN Committee of Experts on Business Statistics

Part IV: Integrated Business and Trade Statistics: Micro Approach

Mexican SBR (RENEM) as the center of the processes for producing economic statistics

INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA

Mexico City, May 23, 2018

Content

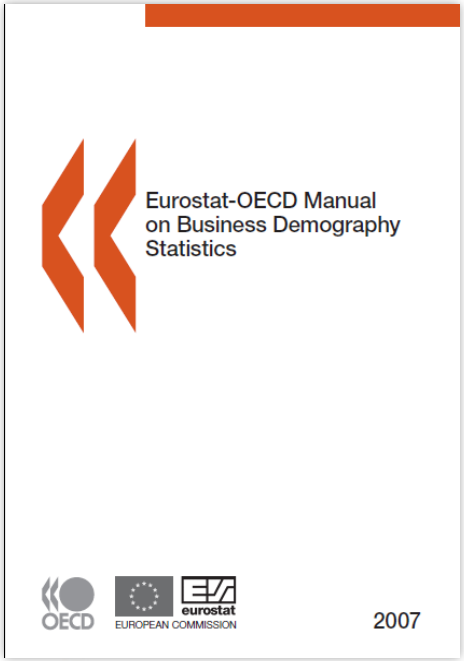
1. Main features of the RENEM
2. How is RENEM updated?
3. Some advantages of RENEM
4. Standardizing and linking activities
5. Linking results
    a. Trade by Manufacturing Enterprise Characteristics
    b. Exports by State
    c. Early estimate of the manufacturing activity level

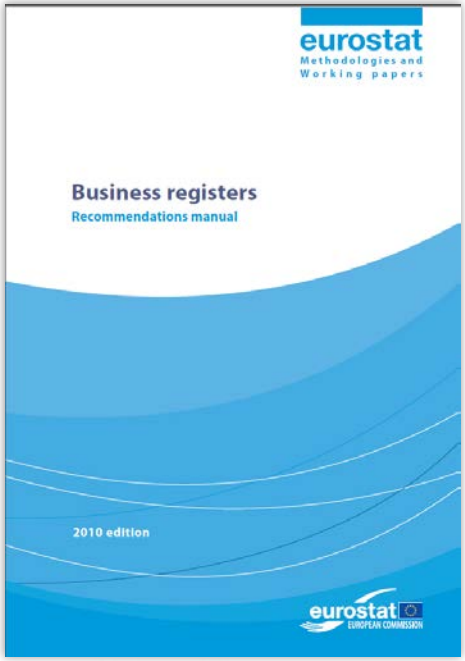
1. Main features of the RENEM

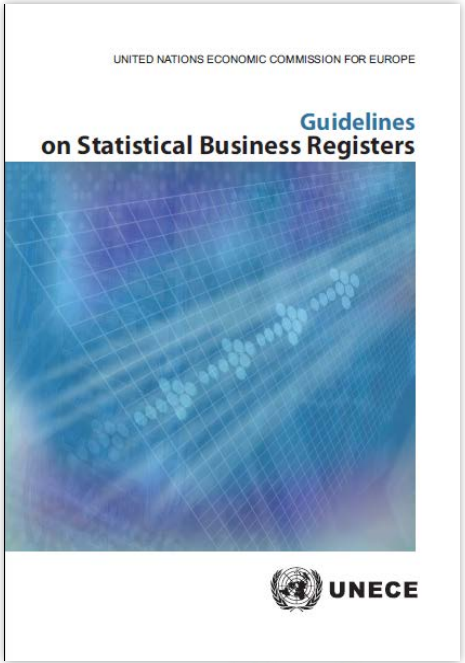
Definition

The Statistical Business Register of Mexico (RENEM) is the backbone for the economic statistics production processes that contain information on the characteristics of the economic units located in the country and it is periodically updated

International recommendations







Features of the RENEM

It is a unique source of information on economic units where all the processes that produce economic statistics are based on

It was created in 2010

It includes basic information on every establishment:

- Identification variables: establishment/business name
- Address, including the geographical coordinates
- Belonging to an enterprise
- It includes useful variables for the economic surveys design: employees and turnover

Goals of the RENEM

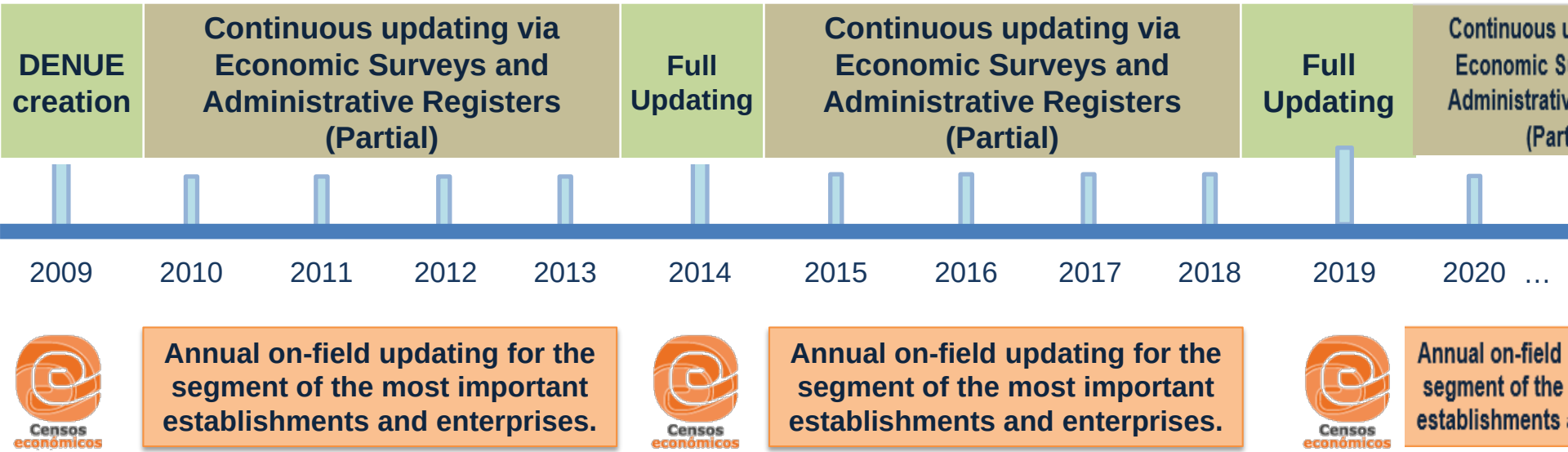
To be a bridge between the different internal and external sources of information for enhancing the use of data from all sources, generating new and more timely economic statistics

Follow-up on each of the economic units, keeping a historical record of their changes

To be the only source of information on economic units that provides directories and sampling frames

2. How is RENEM updated?

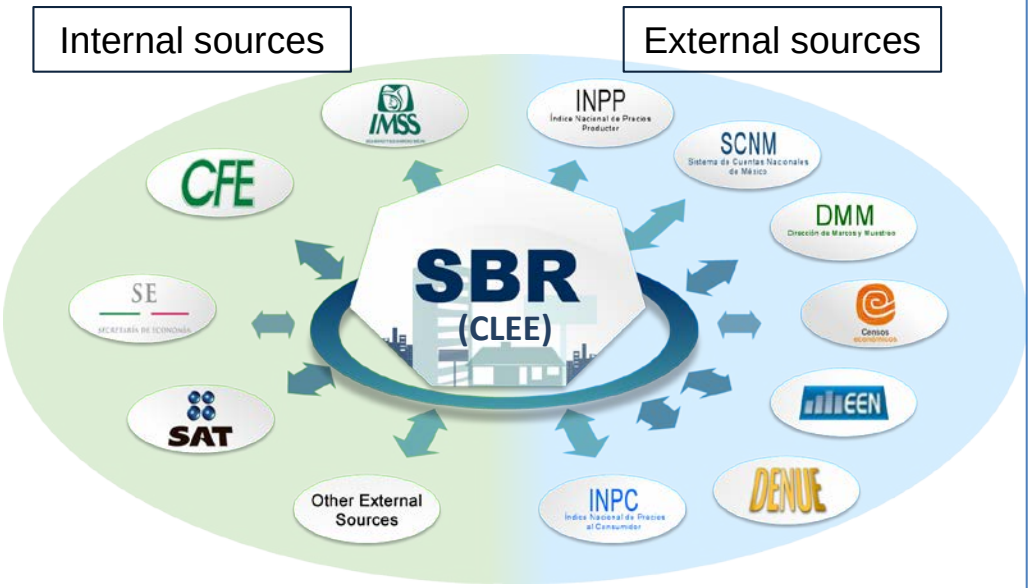
RENEM's updating process



- Births, deaths, and survivals are identified through the updating process
- On-field updating in intercensal periods is carried out by directory, but no exhaustive on-field collection is done

3. Some advantages of RENEM

The work with other sources



- Strengthening the use of the Statistical Standard Code for Businesses (CLEE)
- INEGI works with government institutions to standardize and link statistical units with administrative units
- The possibility of statistical exploitation increases
- The main progress is with the Federal Electricity Commission (CFE) and the Tax Administration Service (SAT)

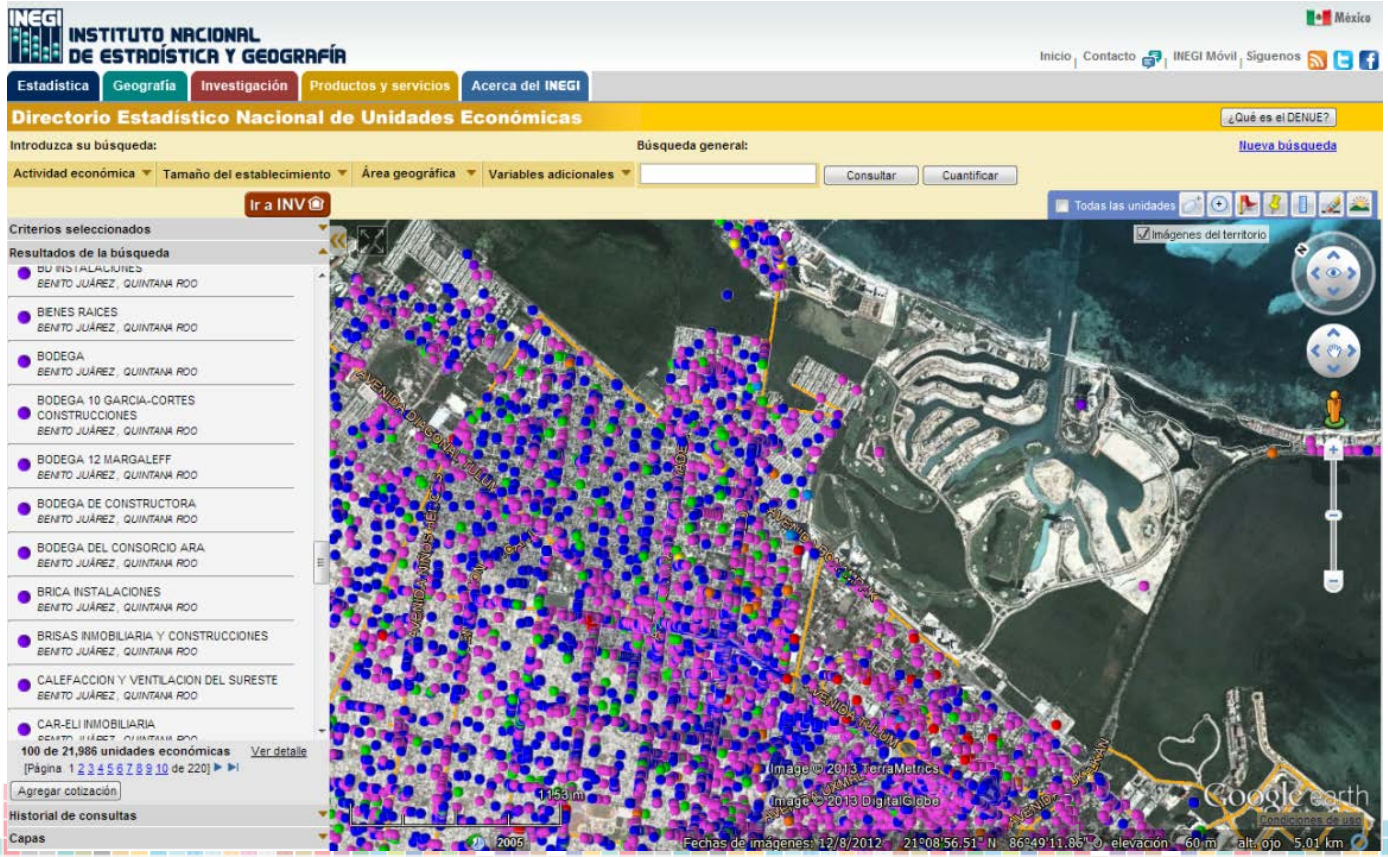
RENEM contains data on geographical coordinates for every establishments

Ways of obtaining and updating geographical coordinates:

1. At the establishment´s address, during the project's on-field operations performed to collect economic information

2. On deskwork, through the use of a computer application that allows obtaining the establishment´s coordinates when locating it on digital cartography

Usefulness: Possibility of locating the establishments in the place where their economic activity is developed (DENUE)



4. Standardizing and linking activities

Great challenge: Standardizing and linking RENEM´s economic unit´s data with other administrative sources

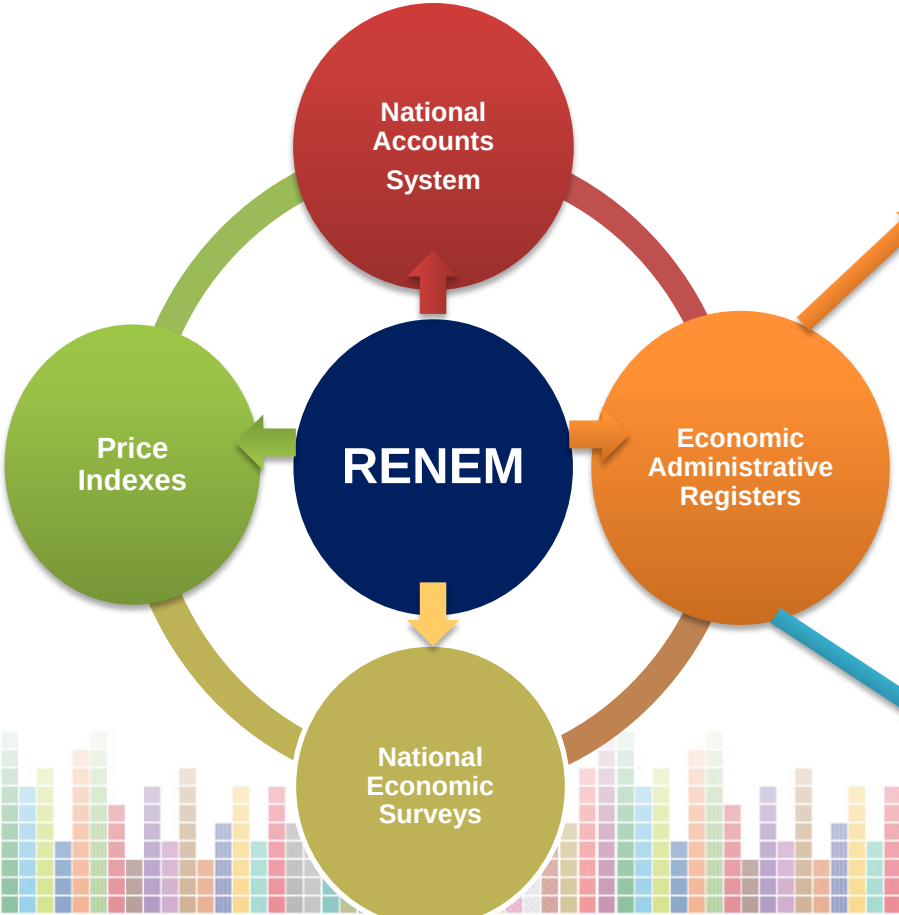
Standardization

Cleanliness

Linkage

5. Linking results

Linking data from enterprises



Linking data of international trade enterprises from custom declarations

- Trade by Manufacturing Enterprise Characteristics
- Exports by State

Linking data from the Mexican electricity agency → Early estimate of manufacturing

a. Trade by Manufacturing Enterprise Characteristics

Trade by Manufacturing Enterprise Characteristics

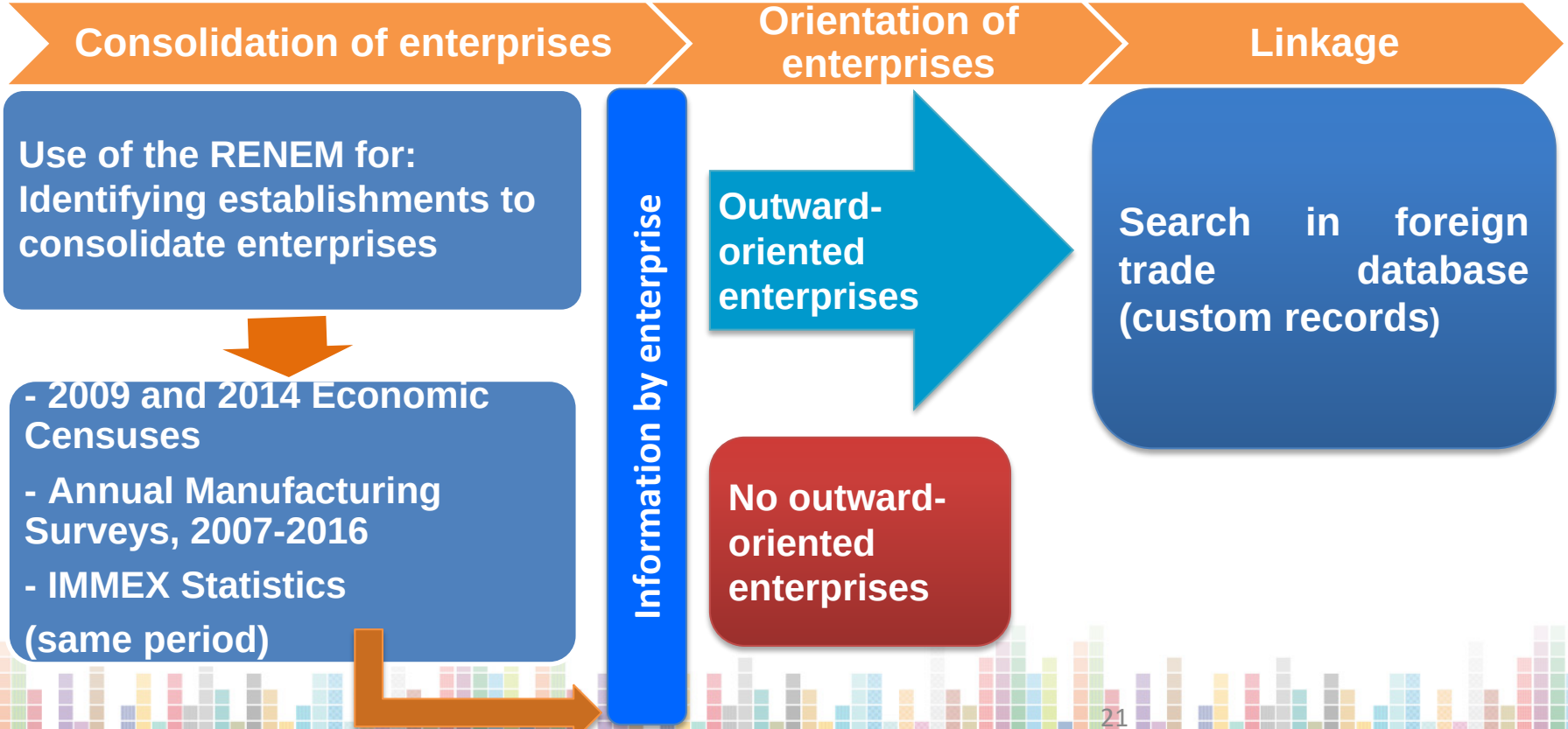
- The linkage between custom records, economic census and annual manufacturing surveys through the SBR (RENEM)

Profile of Manufacturing Export Enterprises

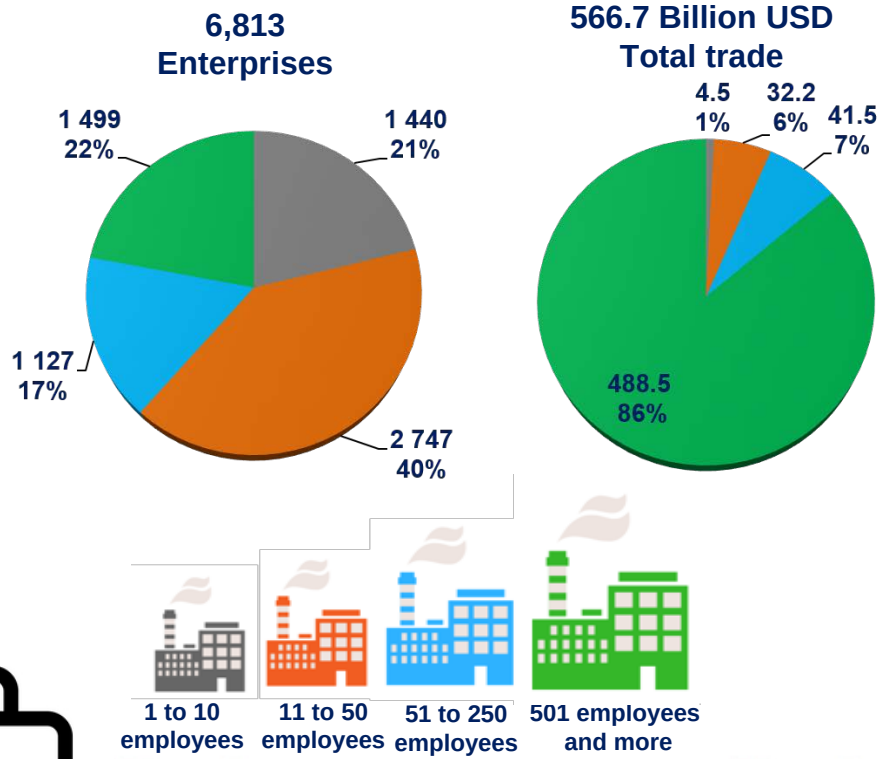
Profile of Manufacturing Export Enterprises
Objective

Provide information about the characteristics of enterprises which export and import manufacturing goods, contributing to the analysis of the international merchandise trade effects on the production and employment in Mexico

Methodology: Identification of outward oriented enterprises

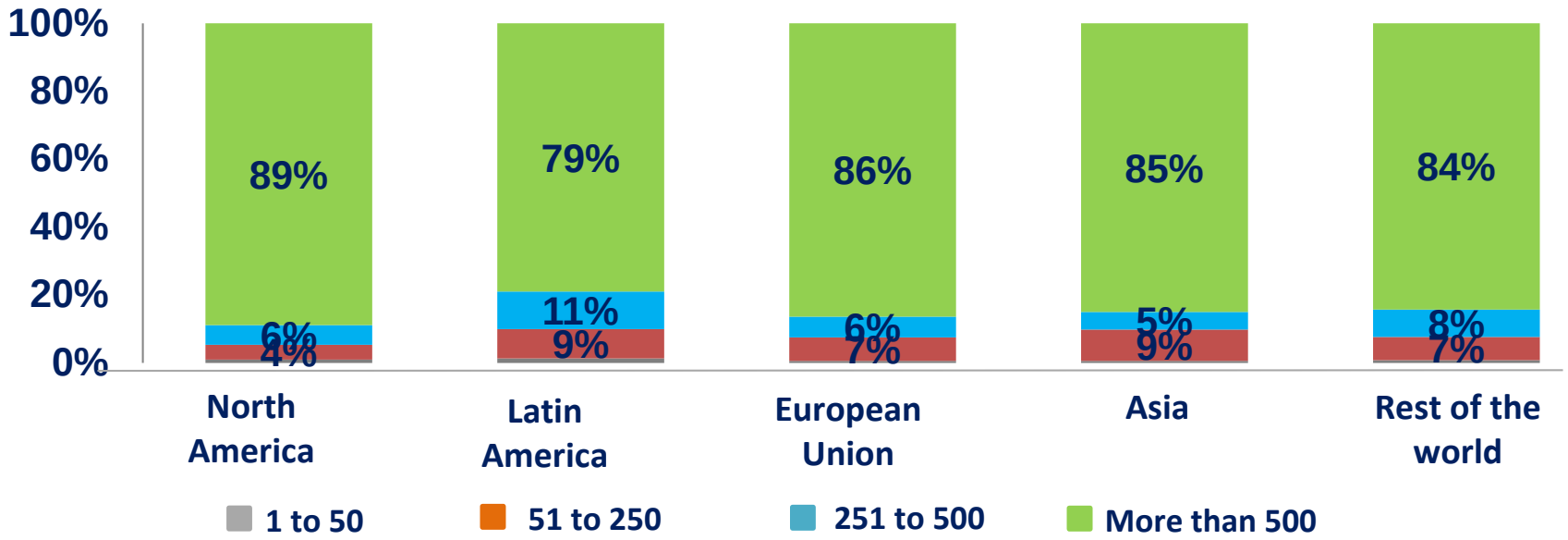


Some relevant results for 2016



In 2016, 100 enterprises generated 50% of the exports of manufactured goods

Distribution of exports according to destination regions by size of manufacturing enterprise, 2016



Note: Share of enterprises with 1 to 50 employees is 1% in all geographic areas.

Available information
Profile of Manufacturing Export Enterprises
2007-2016P/

Number of Enterprises

Value of Exports and Imports

Enterprise Size by number of employees

Sector and subsector
(2 and 3 digit of 2013 NAICS MX)

Geographical areas and countries

P/ Preliminary data

http://www.inegi.org.mx/sistemas/bie/?idserPadre=11000457

Calculation of Value Added for Global Manufacturing Exports

The linkage between the custom records and the structural business statistics described before is the basis for this calculation made in the framework of National Accounts

For this purpose it has been established the following criteria for identifying the Enterprises that are connected with GVC's:

- Enterprises which inputs are of a foreign origin (2/3) and with production destined to exports.
- Enterprises with high foreign capital participation
- Not considered in the previous criteria, exporting intermediate goods

b. Exports by State

Exports by State
Objective

Generate information about the exports of each of the 32 states to know their specific participation in the international trade that Mexico carry out with the rest of the world

Methodology

Exports:
Thousands USD

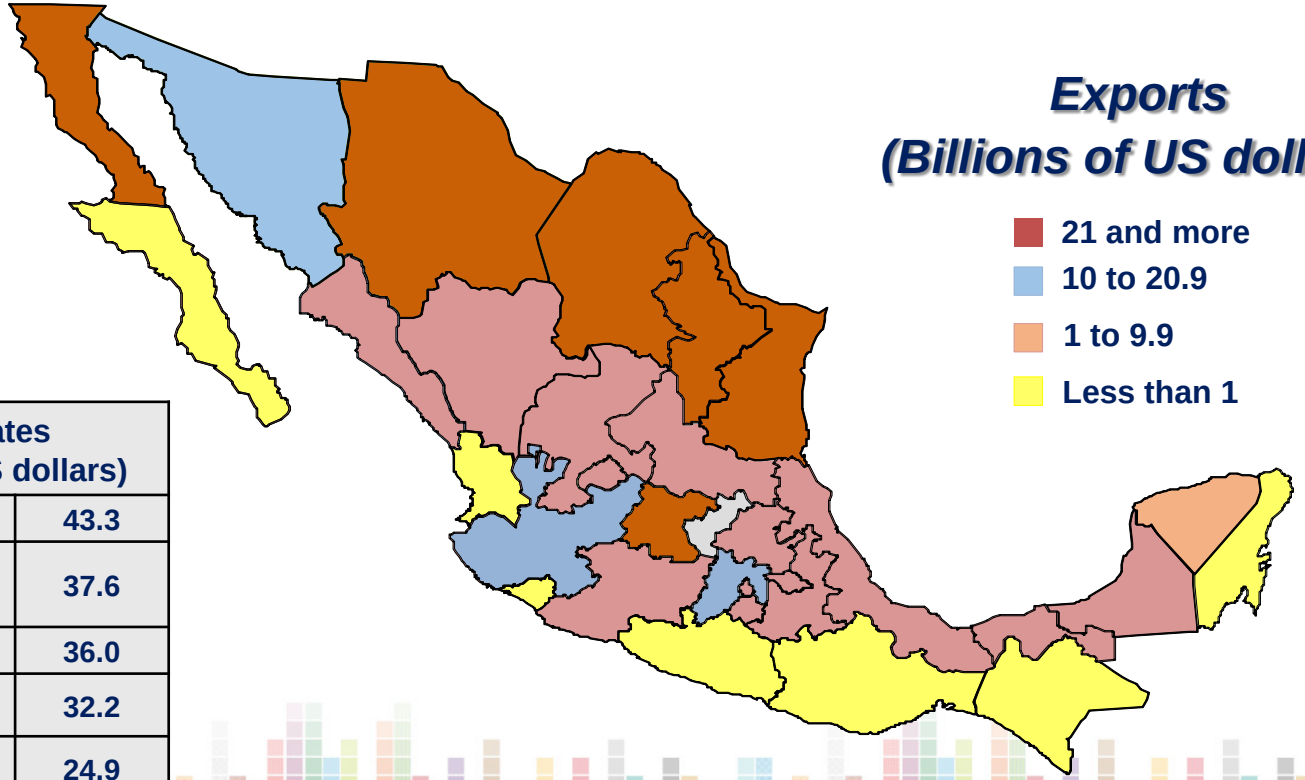
Enterprises:
Oil extraction, non-oil mining and manufacturing industries

Establishment:
Identification and assignment by state according to the RENEM

Administrative Records of International Trade:
exports by enterprise

Annual series 2007-2016

Mexican exports by state, 2016



Top 5 States (Billions of US dollars)	
Chihuahua	43.3
Coahuila de Zaragoza	37.6
Baja California	36.0
Nuevo León	32.2
Tamaulipas	24.9

Available information
Exports by state 2007-2016

National and 32 states

Value of Exports in US Dollars

The statistical results are presented for each state, with a breakdown of 23 subsectors (according to the 2013 NAICS MX)

http://www.inegi.org.mx/est/contenidos/proyectos/registros/economicas/exporta_ef/default.aspx

c. Early estimate of the manufacturing activity level

Early estimate of the manufacturing activity level
Objective

Calculate an early Monthly Industrial Activity Index (IMAI) in the manufacturing sector via a regression model based on the consumption of electricity from the largest manufacturing establishments

Statistical exploitation from linking RENEM and electricity administrative registers

Methodology:

Linkage between energy data (CFE) and the RENEM largest establishments (Master sample)

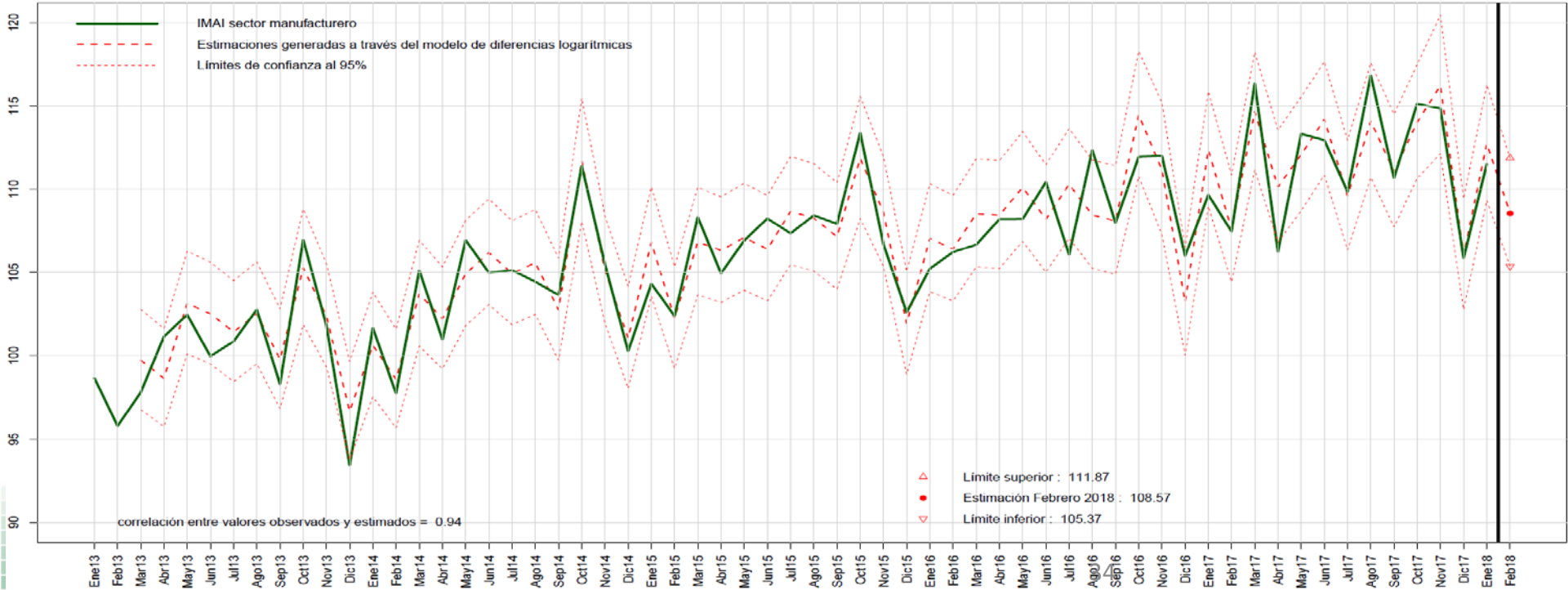
Construction of an index about the electricity consumption (ICEE) based on linked data

Correlation analysis between ICEE and IMAI for the manufacturing sector

Calculation of IMAI early estimates using a linear regression model, twenty days before the definitive data publication

Statistical exploitation from linking RENEM and electricity administrative registers

Results: IMAI estimates for the manufacturing sector using the model (dashed red lines) and real data (solid green line)



Statistical exploitation from linking RENEM and electricity administrative registers

Available information:

The monthly early estimates are not published yet, however they are made available to key officers from governmental agencies involved in designing and evaluating public policies in Mexico:

- **Central Bank**
- **Tax Office**
- **Energy Ministry**
- **Social Security Office**

The way forward

INEGI has re-organized it’s structure for strengthening the production of business statistics based on micro data linking through the RENEM

Thank you!

Contact:

Gerardo Durand Alcántara

Deputy Director General of Economic Administrative Records

gerardo.durand@inegi.org.mx

Conociendo México

01 800 111 46 34
www.inegi.org.mx
atencion.usuarios@inegi.org.mx

INEGI Informa