

### **Internationalisation and MDL**

Stylized facts on MNE using MDL

- What is the Monitor
- Results Monitor 2015/3 on MNE

MDL Framework Internationalisation studies

- Backbone of units
- Flexible selection of data

### Road ahead

- Integrative operations



#### Overview of content throughout the years

2007: idiosyncratic selection of 45 tables based on Statline (in Dutch)

#### In English

2008: trade and productivity by ownership

2009: R&D, employment and environment by ownership

2010: Trade by enterprise characteristics (ownership & type of trader)

2011: Employment by international orientation (ownership & type of trader)

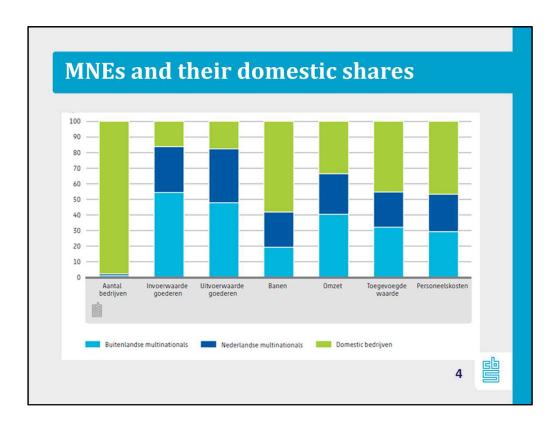
2012: Business dynamics and international orientation

2013: Internationalisation and regional impact

Over the years more than 65 articles bundled, over 450 different tables, one Linked Employer-Employee Database from 2002 on, serving as pivotal database for different micro data linking (see sheet #14)

From 2014 on Quarterly publication in Dutch

For English publications see http://www.cbs.nl/en-GB/menu/themas/internationale-handel/publicaties/publicaties/archief/2013/default.htm

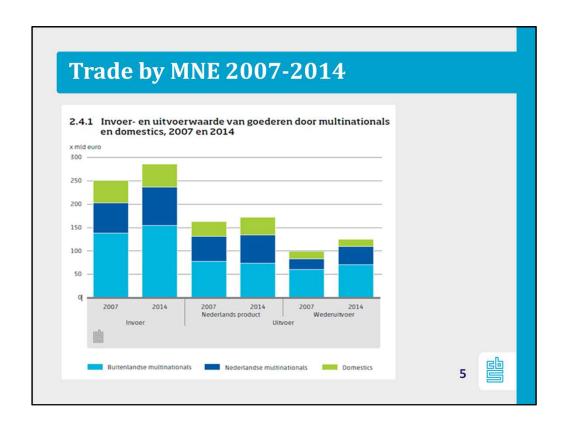


- Shares in Dutch economy gives impression of impact and importance
- Data used Structural Business Statistcis (SBS), International Trade in Goods Statistics (ITGS), Business Register (BR) and Foreign Affiliates Statistics (FATS).

#### Labels:

- Bar 1: Aantal bedrijven
- Bar 2: Importwaarde goederen
- Bar 3: Uitvoerwaarde goederen
- Bar 4: Banen
- Bar 5: Omzet
- Bar 6: Toegevoegde waarde
- Bar 7: Personeelskosten

- = Number of enterprises
- = Import value goods
- = Exportvalue goods
- = Jobs
- = Turnover
- = Value added
- = Costs of personnel
- Light green = Domestic enterprises
- Light blue = Foreign controlled MNE's
- Dark blue = Dutch MNE's



- Import and export value of goods by MNE's and domestic enterprises, 2007 and 2014, absolute values in Bln Euros
- Linking BR, FATS, ITGS
- · Gives insight in type of export (dutch products and re-exports) and who is active in it

Light green = Domestic enterprises

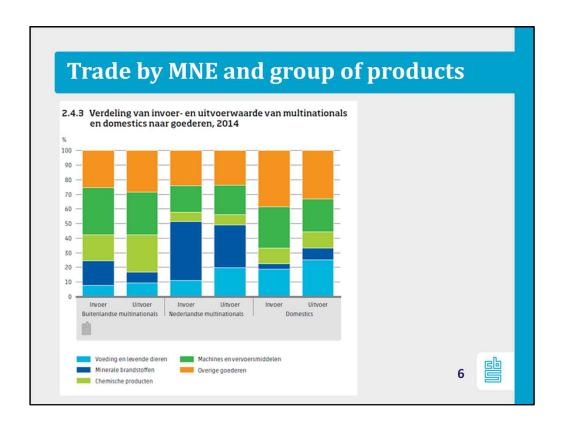
Light blue = Foreign controlled MNE's

Dark blue = Dutch MNE's

Bar 1 & 2: Importvalues 2007 and 2014

Bar 3 & 4: Exportvalue Dutch produce 2007 and 2014

Bar 5 & 6: Exportvalue re-exports 2007 and 2014



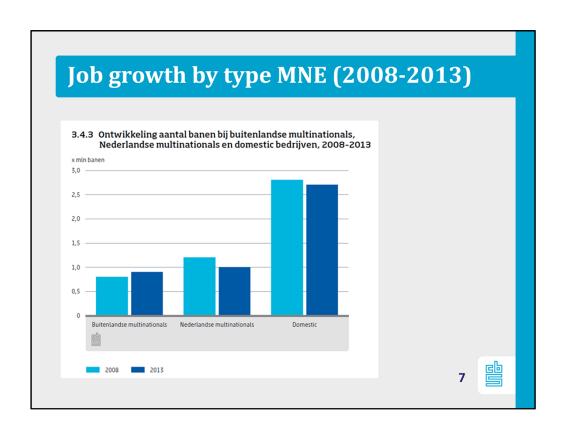
- · Value of import & export (goods) broken down by product and type of control
- · Linking of FATS, ITGS, deepening on profile of product groups

Bar 1 & 2 : Foreign controlled MNE, import (bar 1), export (bar 2)
Bar 3 & 4 : Dutch controlled MNE, import (bar 1), export (bar 2)

Bar 5 & 6: Domestic firms, import (bar 1), export (bar 2)

#### Product categories:

- Food, livestock (light blue)
- Fossil fuel (dark blue)
- Chemicals (light green)
- · Machinery and means of transport (dark green)
- Other (orange)

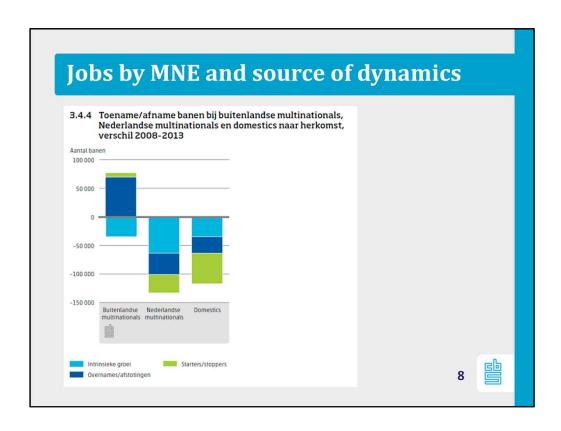


Job growth 2008 to 2013, broken down by type of MNE

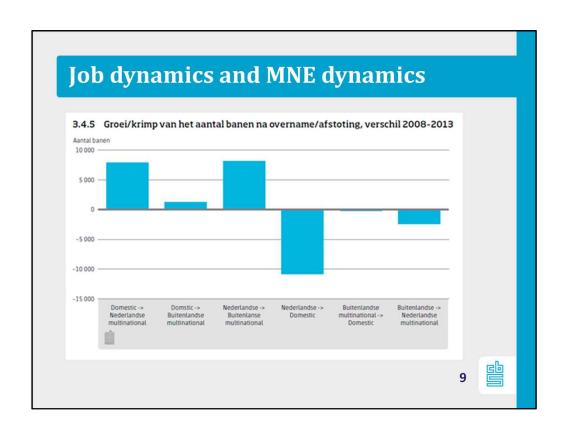
Jobs 2008 = light blue Jobs 2013 = dark blue

Bar 1 & 2: Foreign controlled MNE Bar 3 & 4: Dutch controlled MNE

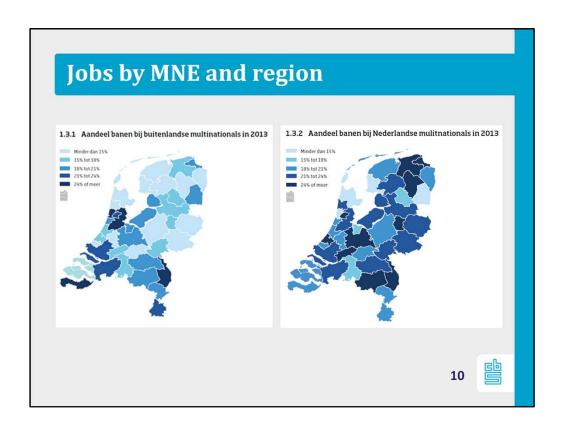
Bar 5 & 6: Domestic firms



- Growth/losses of jobs, broken down by type of MNE and source of growth
- · Linking BR, FATS and SBS
- Foreign controlled MNE positive both due to M/A and net growth due to new enterprises
- Jobs due to autonomous market effects (light blue)
- Jobs due to M&A and splitting up (dark blue)
- Jobs due to birth/death of enterprises (green)



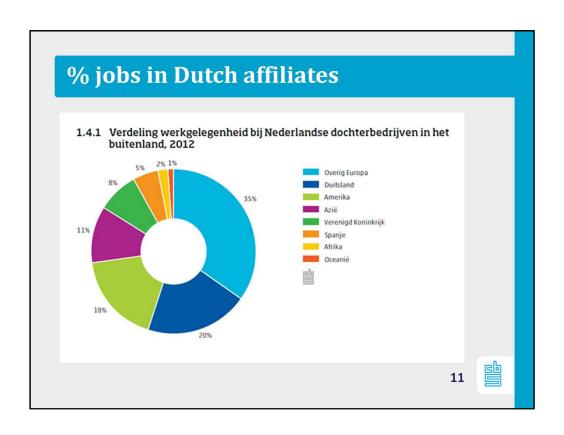
- Dynamics over time (2008 > 2013) in jobs, broken down by type of change
- Effects of changing ownership
- Bar 1: domestic > Dutch controlled MNE
- Bar 2: domestic > Foreign controlled MNE
- Bar 3: Dutch controlled MNE > Foreign controlled MNE
- Bar 4: Dutch controlled MNE > domestic
- Bar 5: Foreign controlled MNE > domestic
- Bar 6: Foreign controlled MNE > Dutch controlled MNE



Jobs by MNE and region

Left hand chart: share of jobs Foreign Controlled MNE by region (NUTS 3 regions) Right hand chart: share of jobs Dutch MNEs

Ranging light blue (less than 15%) to dark blue (25% and more)



Distribution of employment in Dutch affiliates abroad, by (group of) countries

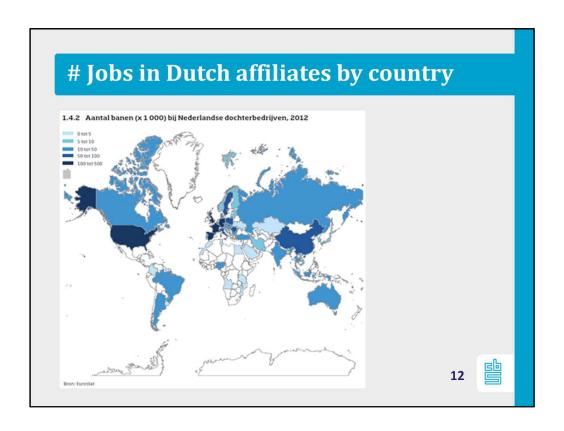
Light blue : Europe excluding Germany, UK, Spain

Dark blue : Germany Light green : USA Purple : Asia

Dark green : United Kingdom

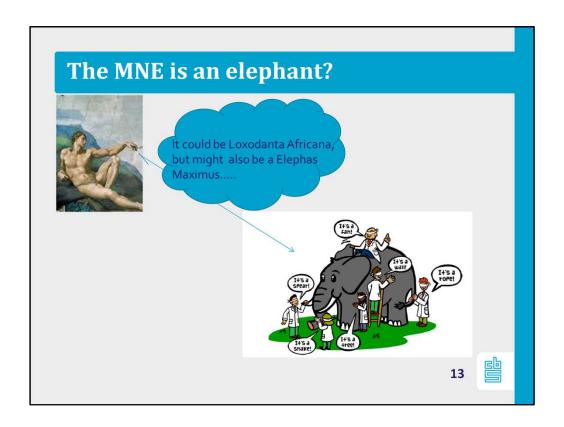
Orange : Spain Yellow : Africa Brown : Oceania

Total for Dutch affiliates abroad within Europe (35+20+8+5= 68%) Outside Europe 32% of which 8% US, 11% Asia

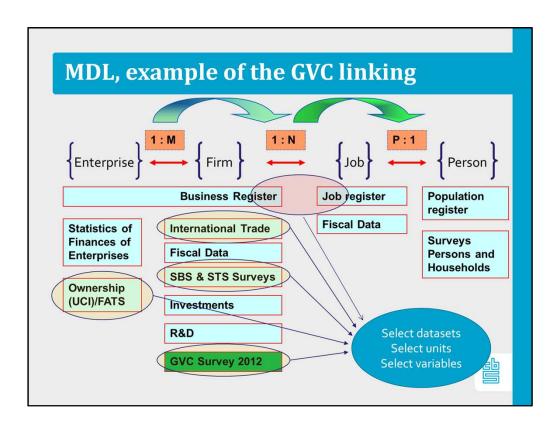


Number of jobs (X 1000) in Dutch affiliates abroad

Categories ranging from 0-5 (light blue) to 100-500 (dark blue)



- Results raises the question "is the MNE an elephant" (as we try to compile a complete picture of the structure and impact of it in the business economy). We are the little guys in white coats, enthousiastic and blindfolded.
- It would help if an authority would help us on way and gives a clue, but even authorities are not always sure.
- When we started to catch the elephant, our position was that the many dimensions of
  economic globalisation can only be captured by using a backbone of relevant units, and
  link the required variables from different sources on this backbone as is shown in the
  next slide. > Example of linking GVC survey with FATS, SBS, ITGS, BR and Job Register.



- Basically, a simple operation (once all key identifiers are in place) which involves
  selecting the relevant datasets, select the subpopulations under study and extract the
  required variables for the analysis. It really helps having some proper research questions.
  Nothing as practical as a good theory, to quote Kurt Lewin in his study on educational
  practices in 1945.
- Expanding analysis in order to analyse impact on individual income or effects of education the link between BR and Job register is pivotal.
- Not only analysis from the business perspective is possible (as we do in the work on the Monitor) but also from the perspective of the individual including the dynamics of the economic environment in the analysis will probably enrich all kinds of social studies (skills & tasks, job mobility).

## **Integrative work in 2016**

- Trade in goods & trade in service
  - Same breakdowns TEC/STEC for SBS population
  - Matching goods/services on firm level
  - Finding concordance services/goods classification
- Linking data on finances of enterprises with data on production, employment and performance (e.g. Escaith, 2014)

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TEC = Trade in Goods by Enterprise Characteristics (Eurostat project)
STEC = Services Trade by Enterprise Characteristics (Eurostat project)

# New promises and challenges...... (1)

- 'Data lake' and 'big data', getting into the deep structure of enterprises (interdependency of all relevant identification keys in administrations and statistics)
- Transaction information on the links between enterprises in value chains
  - Bank data on financial transactions?
  - VIES data (trade)
  - Deepening R&D, CIS and investment data collection

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VIES = VAT Information Exchange System

# New promises and challenges...... (2)

- Mapping value chains
  - Linking branch information to TEC/STEC, supplemented by expert assessment of chain positions?
  - Policy questions seems to be 'anecdotic'....
- Profiling large enterprises on
  - Business functions
  - Governance
  - Transactions & relations



### **Lessons learned in MDL**

- Longitudinal analysis and outcomes are complicated:
  - Different periodical samples
  - Changing concepts and definitions
  - Changing processes of collecting and data processing
- Combining registers and samples involves rethinking and combining underlying weighting and correction models (imputations, grossing up)
- And before you start "Nothing as practical as a good theory" (Lewin, 1945)



## **Elements of future development**

- Promote MDL including the methodological issues and the global dimension
- Introduce the notion of the globalised enterprise in the system(s) of globalisation indicators
- Introduce the international classification of Business Functions (and type of governances?)
- Better coverage for services sector (capturing services in the production of goods and services producing enterprises)
- Include the GVC survey in standard data collection(s), e.g.
   FRIBS in Europe.

