

EMERGING AREAS, NEW
DEVELOPPMENTS AND USER
NEEDS IN BUSINESS STATISTICS

CES SEMINAR ON
STRATEGIC ISSUES IN
BUSINESS STATISTICS
GENEVA, 9th JUNE 2009

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3 EMERGING AREAS
WITH NEW DEVELOPPMENTS AND
NATIONAL EXPERIENCES TO SHARE

- How to establish Foreign Affiliates Statistics (FATS) using mostly administrative data?
- How to measure R&D and innovation in a consistent and efficient way?
- How to elaborate consistent time-series on import substitution and the growth of domestic outsourcing?

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ESTABLISHING FATS FROM ADMINISTRATIVE AND SURVEY DATA

- Objective: establishing statistics on the structure and activities of the foreign-controlled multinational companies in Norway (inward FATS statistics)
- Prerequisites :
 - Keep the response burden to a minimum by using administrative data
 - Amend existing surveys when necessary

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ESTABLISHING FATS FROM ADMINISTRATIVE AND SURVEY DATA

- The European FATS regulation framework
 - The 2007 Regulation
 - The pilot study on the characteristics of the Inward FATS population :
 - Number of enterprises, number of people employed, turnover, production value, value added, ..., gross investment in tangible goods, R&D expenditures, ...
 - The pilot study on exports and imports
 - Total and intra-group trade for both goods and services

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ESTABLISHING FATS FROM ADMINISTRATIVE AND SURVEY DATA

- First step : Establishing the proportion of Norwegian companies that are foreign owned
 - Main source : the Tax Directorate's Register of Shareholders :
 - for each shareholder : number of shares and value, country of residence, ...
 - Additional sources are needed when no information on the country of residence is available and to determine the ultimate foreign owner : company accounts, annual reports,...

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ESTABLISHING FATS FROM ADMINISTRATIVE AND SURVEY DATA

- First step : some results
 - 4300 foreign-controlled companies in 2006
 - Correct Ultimate Controlling Institutional unit (UCI) information for the 2300 largest companies (92 % of the value added)
 - For the immediate foreign ownership, Sweden and UK are the largest holders of nominal share of capital
 - For the ultimate foreign ownership, USA and France are the largest holders measured by value added

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ESTABLISHING FATS FROM ADMINISTRATIVE AND SURVEY DATA

- Second step : Uses of existing data sources to produce inward FATS for SBS Characteristics
 - A complete estimation system for Structural Business Statistics (SBS) mixing tax data and surveys data
 - Matching the SBS data with the inward FATS population
 - In 2006, 29 % of the total value added comes from foreign-controlled enterprises (36 % for oil and gaz exploration)

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ESTABLISHING FATS FROM ADMINISTRATIVE AND SURVEY DATA

- Third step : measuring exports and imports of respectively total and intra-group for the inward FATS population
 - For trade in services, amending existing surveys(Balance of payments survey and survey on water transport)
 - For trade in goods, additional work on the custom authorities files to estimate the intra-group breakdown
 - Many consistency checks needed when matching SBS results with external trade data

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ESTABLISHING FATS FROM ADMINISTRATIVE AND SURVEY DATA

- A few questions:
 - How to determine the Ultimate Controlling Institutional unit (UCI)?
 - How to use Structural Business Statistics data for the main characteristics of the inward FATS population?
 - How to measure intra-group flows of exports and imports for goods?

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INNOVATION AND R&D STATISTICS

- New development : from Frascati (R&D statistics) to Oslo (innovation statistics)
 - Linking these two surveys?
 - How to improve data collection on innovation?

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INNOVATION AND R&D STATISTICS

- The Spanish experience : Inconsistencies between R&D and Innovation statistics
 - For R&D statistics: A census collected only the odd years from 1965 to 2001
 - For technological innovation: A new survey every even year since 1992 with some basic R&D questions
 - Inconsistent indicators on R&D expenditures in the 90' s

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INNOVATION AND R&D STATISTICS

- Since 2002:
 - A common sample coordinating a census of potential research companies (26 600) and a random sample (26 700)
 - ...hence some consistent annual series for R&D expenditures for the years 2002 to 2007

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INNOVATION AND R&D STATISTICS

- Challenges and obstacles
 - The sampling is done with a mixed system
 - Introduction of additional concepts of innovation with the new series: marketing and organization
 - Creation of a specialized data collection team
 - Seminar with companies or institutions to clarify the concepts
 - Additional module on biotechnology

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INNOVATION AND R&D STATISTICS

- Future challenges
 - Regionalisation of expenditures on R&D and innovation
 - R&D expenditures on the Health Care sector
 - Looking for suitable questionnaires for some economic sectors :
 - Construction,
 - Accommodation
 - Health care

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INNOVATION AND R&D STATISTICS

- A few questions
 - How to limit the response burden?
 - More sampling?
 - Uses of external sources on innovative firms ?
 - How to improve the data collection?
 - Specialized data collection team?
 - Specific questionnaires suitable for construction, accomodation?
 - CATI or CAPI collection?
 - How will you provide regionalized results in the future?

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MEASURING BOTH DOMESTIC OUTSOURCING AND IMPORTED INTERMEDIATE INPUTS

- A precise definition of outsourcing
 - Only a change in an industry's production process that results in the substitution of certain types of purchased services (domestic or imported) or imported non-energy materials for labour and domestically-produced materials.
- Estimates from data collected at the establishment level
 - Not at the company level and therefore not affected by mergers, acquisitions, and other changes in corporate organization or ownership.
- With auxiliary establishments classified according to the services they provide (NAICS convention)

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MEASURING BOTH DOMESTIC OUTSOURCING AND IMPORTED INTERMEDIATE INPUTS

- Indicators drawn from the national accounts
 - Integrated annual industry accounts provide production accounts and input-output tables
 - Additional information on the composition of intermediate inputs by industry by cost categories come from a KLEMS production framework
 - KLEMS = K-capital, L-labor, E-energy, M-materials, S-purchased services
 - With a distinction between domestic and imported input

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MEASURING BOTH DOMESTIC OUTSOURCING AND IMPORTED INTERMEDIATE INPUTS

- Using a broad definition of commodities for outsourcing-related services
 - Mainly business, professional and technical services
 - ... but also maintenance and repair services, transportation and warehousing services,
- Outsourced input costs in 2007 :
 - 12 % of gross output
 - 44 % of purchased services

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MEASURING BOTH DOMESTIC OUTSOURCING AND IMPORTED INTERMEDIATE INPUTS

- Estimates of imported inputs based on annual import tables
 - Share of total U.S. imports : 56.2 % in 2007; mainly from business, professional and technical services
 - For all private industries , import share of intermediate input from 8.3 % in 1997 to 10.8 % in 2007
 - For manufacturing, share increases from 13.5 % to 20.4 %
 - Import share of outsourcing can be interpreted as an indicator of offshore outsourcing : from 1.7 % to 2.6 % of outsourcing-related inputs

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MEASURING BOTH DOMESTIC OUTSOURCING AND IMPORTED INTERMEDIATE INPUTS

- Main conclusions
 - Offshore outsourcing should be studied in the broader context of domestic outsourcing which is considerably larger and may be a pre-cursor to offshore outsourcing.
 - Empirical indirect estimates can be drawn from integrated annual industry accounts with a specific concept of outsourcing :
 - Strong growth of outsourcing-related services but other types of purchased services have grown faster
 - Import intensity of intermediate inputs has increased sharply

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MEASURING BOTH DOMESTIC OUTSOURCING AND IMPORTED INTERMEDIATE INPUTS

- A few questions :
 - What are the limitations of this precise definition of outsourcing? What is out of the scope? What are the consequences of the choice of the statistical unit?
 - Would the results be quite different with another list of outsourcing-related services?
 - What about alternative approaches of outsourcing by survey?

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CONCLUSION OF THE SESSION

- How to measure R&D and innovation in a consistent and efficient way?
 - Toward coordinated surveys dealing with linked subjects or linking different surveys?
 - How to optimize the sample?
 - How to improve data collection?
 - Specific questionnaires
 - Specialized team
 - CAPI or CATI...?
- Other challenges :
 - Need for a broader concept of innovation in order to cover all industries (marketing and organizational innovation)
 - After R&D and innovation, trying to measure another driver of economic growth : entrepreneurship

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CONCLUSION OF THE SESSION

- How to establish Foreign Affiliates Statistics (FATS) by using mainly administrative data?
 - Combining and improving administrative data should provide most of the FATS data but with an adhoc methodology
 - Establishing the subpopulation of foreign owned companies by using administrative data with additional work to determine the UCI
 - Drawing the characteristics of this subpopulation from Tax data as for the main « Structural Business Statistics»
 - Measuring intra-group flows of exports and of imports with administrative data (custom files) and if not possible conducting light surveys every 3 or 5 years?

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CONCLUSION OF THE SESSION

- How to elaborate consistent time-series on the growth of domestic outsourcing and of import substitution ?
 - Indirect measure from national accounts can shed light on the development of import substitution and the growth of domestic outsourcing
 - What could be measured by surveys?
 - What could be estimated using administrative data?

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