The Potential of register based statistics in Denmark

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Some basic preconditions

• Act on Statistics Denmark in 1966
  - Access to administrative registers
• Administrative Base registers established in the 1960’ties and 1970’ties
  - Central register on persons 1968
  - Central register on businesses 1975
  - Central register on buildings and dwellings 1977
• Widespread use of computerized registers in public administration from 1970’ties
• Centralisation and standardisation of public administrative registers
The Strategy of Statistics Denmark

- Statistics Denmark took the strategic choice to utilize administrative registers in the 70’ties
- The first register based population census in 1976
- The first register based housing census in 1980
- The first register based population and housing census in 1981
- Social Statistics most advanced: To day a register based statistical system
- Business Statistics trying to catch up with social statistics
Why this strategic decision?

Advantages:
- Lower response burden and costs
- Lower production costs
- Total population
- - more detailed statistics
- Microdata linking
- - across subjects
- - over time (longitudinal studies)

Drawbacks:
- Restricted set of variables
- Definitions and concepts not statistical
- Dependent on administrative systems
- Not close to actual data collection
- Timeliness
Surveys vs register based statistics

• Both survey data and administrative data has to be used to meet all user needs
• Not a question of if but how to use administrative data

Totally register based statistics
Combined use of surveys and register data
Register data supplemented by survey data
Register data used in surveys
Sampling frames
Improving information
Editing/Estimation
The Basic Conceptual Model

Personal Identification number (PNO)

Statistics on persons

Registers

Statistics on real estates

Owners PNO

Address

Statistics on businesses

Owners PNO

Address

Identification number of real estate

Business identification number

Identifikation number of workplace
Administrative registers and social statistics

- A register based system of social statistics in Denmark
- Base register: Central register of persons
- Covers most subject matter areas in social statistics
- Many different types of statistics
  - based on one administrative register
    - eg. demographic statistics
    - unemployment statistics
  - based on integration of several registers
    - eg. labor market statistics
  - longitudinal statistics
  - micro databases for researchers
Administrative registers and business statistics (1)

- Not so well developed a register based system as in social statistics
- Base register: the central business register
- Not so well covered by administrative sources – more surveys needed in business statistics
- Largest donor is the tax authorities
  - eg. VAT – statistics
    - account statistics
    - wage and employment statistics
Administrative registers and business statistics (2)

• Many different types of statistics
  - based on one administrative register
    eg. business demography
  - based on integration of several registers
    eg. value added statistics
  - based on registers and surveys
    eg. account statistics
  - longitudinal statistics
  - micro databases for researchers
Cross-cutting statistics

Linking social, business and building registers
   - Population and housing census

Linking social and building registers
   - Housing statistics

Linking social and business statistics
   - activity statistics
     - employment statistics
     - entrepreneurs
     - education statistics
Example: Statistics on income

The use of module variables

- Education
- Labour force
- Social security
- Health insurance
- Hospitalizations
- Pensions
- Economic models
- Preventive medicine
- Agriculture
- Labour m. research base
- Social research base
- Foreigner research base
- Fertility research base
- Elderly research base
- Motor vehicles
- Household budget
- EU-SILC
- Research projects

Primary register on Personal income & Employment classification
Challenges

- Pressures to reduce administrative burden
- New administratives sources – eIncome
- Linking register data and survey data
- Coordination and coherence
- Dissemination of microdata to users