

The Use of administrative data sources for statistics in Sweden

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Aguascalientes, Mexico

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Historical background of Sweden statistical system

1749 Office of Tables Sweden

1858 Royal Central Statistical Office (SCB)

1960 Statistics Sweden begins to assume central control over public statistics

1994 Swedish statistical system is decentralised

1998 Swedish Energy Agency born

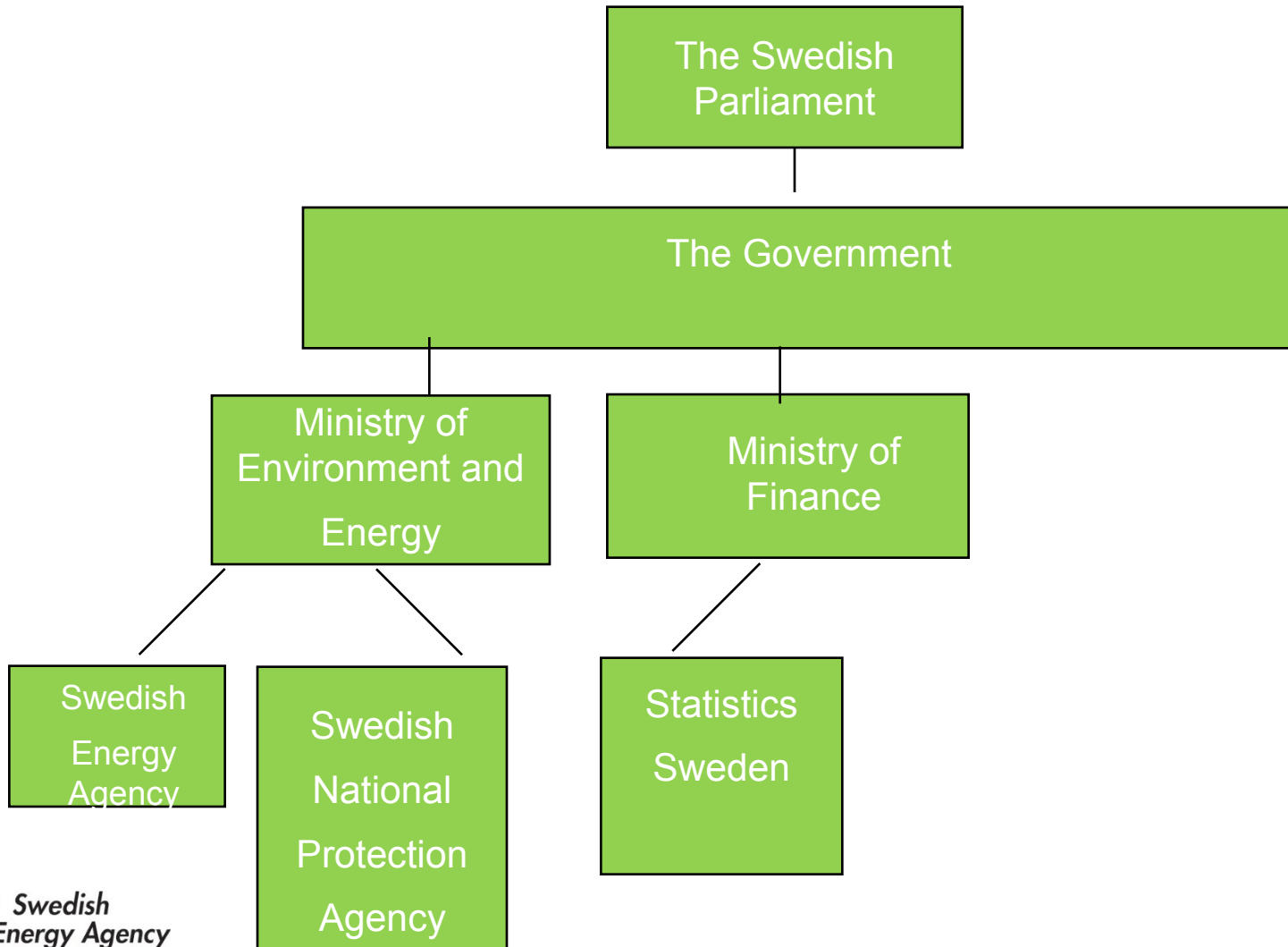
2002 The council for official statistics

Official Statistics in Sweden

- A decentralized system
- The most important user have the responsibility for the subject area
- 28 national authorities are responsible for official statistics



Statistical responsibility in the national administration



Official statistics in Sweden

Subject areas
(Energy)

Statistical areas
(Energy balances,
Price trends in energy sector,
Energy supply and use)

Statistical products
(about 27 products)

- **From Statistical ordinance**
The government determines the subject areas and statistical areas.
- The government also decides which authorities are to be given responsibility for statistics.
- The statistical authorities decide about the content within the statistical area for which they are responsible. How much the invest and so on.



Statistics Sweden's organisation

Statistiska centralbyrån Statistics Sweden

Research and Development

Process Department
 Management
 Process implementation
 Process maintenance
 IT Unit 1, 2 and 3
Method Units for
 – Individual and Household Statistics
 – Enterprise, Organisation, Real estate and Environment Statistics
 – Unit for Cognitive Methods

Executive Office

Advisory Council
 National Accounts Board
 Construction Index Board
 Consumer Price Index Board
 The Council for Official Statistics
 The Scientific Council

Director General's Office

Finance Department
 Management
 Commissioned Services Support and Operations
 Financial Services and Accounting
 Facilities Management and Printing

Personnel Department

International Consulting Office (ICO)

Data Collection from Individuals and Households Department
 Management
 Interview
 Questionnaire
 Surveys

Data Collection from Enterprises and Organisations Department
 Management
 Business Data Collection
 Business Surveys
 Coordination, Corporate Affairs and Classifications
 Public Sector Surveys

Population and Welfare Department
 Management
 Democracy
 Economic Welfare
 Education and Jobs
 Forecasting Institute
 Labour Force and Work Environment Surveys
 Population Register Unit
 Social Welfare

National Accounts Department
 Management
 Coordination of Economic statistics
 Economic Analysis
 Economic Micro-simulations
 Financial and Sector Accounts
 Product Accounts
 Public Finance

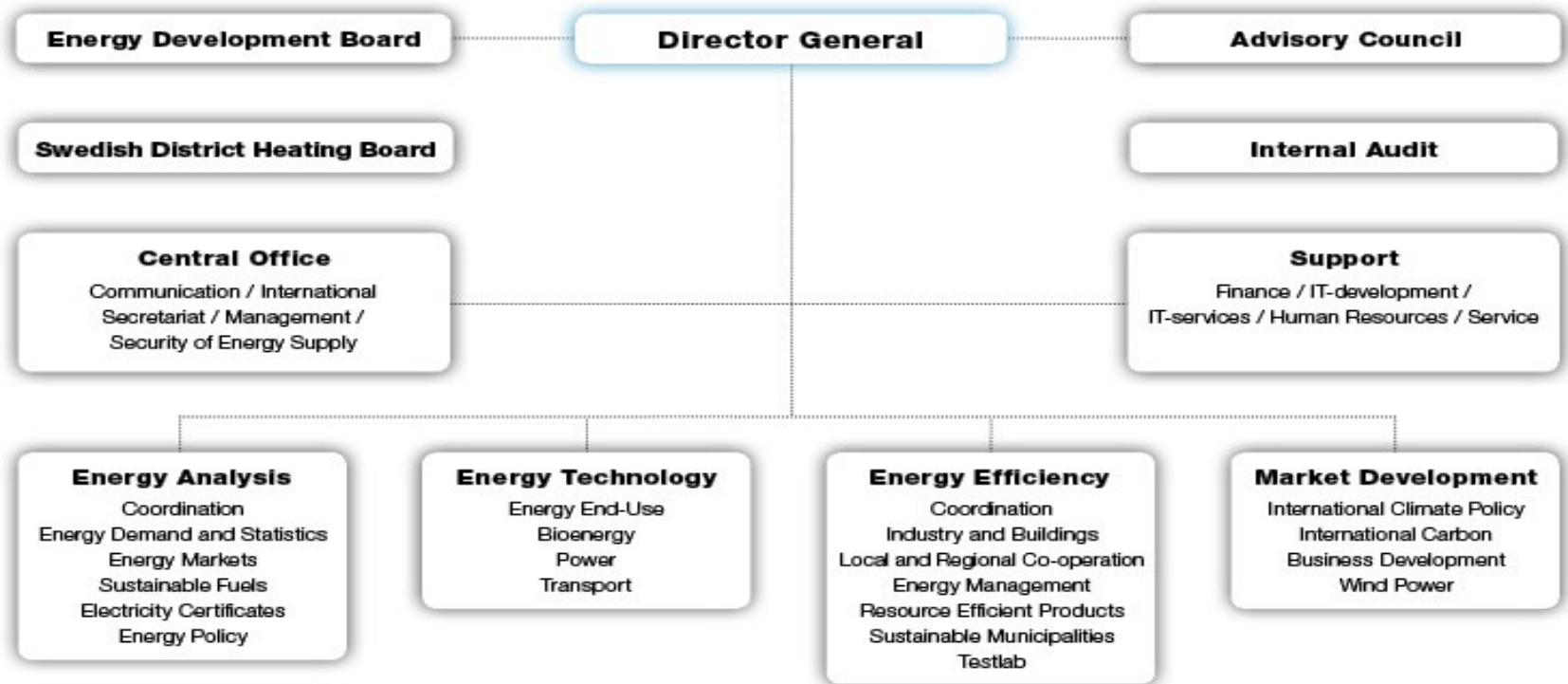
Business and Labour Market Department
 Management
 Balance of Payment and Financial Market Statistics
 Business Register
 Business Structure
 Enterprise- and Register-based
 Employment Statistics
 Foreign Trade and Industry Indicators
 Investments, R&D and IT Unit
 Price Statistics
 Salaries and Labour Cost

Regions and Environment Department
 Management
 Agriculture
 Construction, Rents and Real Estate
 Environmental Accounts and Natural Resources
 Energy and Transport
 Environment and Tourism
 Regional Services and Planning Unit

Communication Department
 Management
 Customer Service
 Editorial Office
 Information and publishing
 Marketing

Updated may 2008

Organisation of Swedish Energy Agency



Energy Analysis: Analysis of the energy system, energy markets and energy/climate policy, forecasts, official statistics

Research and innovation: Runs the Swedish energy research programme (ordering, funding and evaluation of research, development and demonstration of new energy technology)

Energy Efficiency: Energy efficiency improvement in housing, commercial premises and industry. Developing and monitoring the municipal energy and climate advisory service, testing of energy consuming products

Market Development: Making business from Swedish research by bringing together researchers and business developers, contractors, customers and capital. Also international climate policy and CDM/JI projects.

Swedish Energy Agency vision translated to english

SEA is supplying a sustainable energy system for next generation. SEA is transparent, trustworthy, reliable in the statistical information and the information is also adapted to customers' and user needs...

Administrative data in general

- **Purposes Building register for statistics**
 - **Make use of administrative data sources such as Tax Authority data, Geodata Gps coordinates from Lantmateriet, Swedish Power Grid, custom data from Swedish Custom,**
- **Historical use in Sweden**
- **Developed one of the best Business register in the World for Statistical purposes, developed an coordinated system for population and sample frame**
- **Registerframe for design surveys**
- **Total population register**
- **Building register**

Ways of using Administrative data

➤ Improving quality

New Yearly Economic business statistics from 2005

(Design Stratified GREG) Administrative data new part from Tax Authority which is used as a the total for the hole sample (all small enterprises have allready sent in the information) in a smaller questionnaire from tax Authority this SRU material is enough for small but the bigger ones get a complemented survey appr 600 enterprises now days get a more complexed questionnaires.

Better estimation less burden on small enterprises

Ways of using Administrative data

➤ Energy statistics Project reviewing the Monthly fuel statistics

New frame

New design

New questionnaire

Checking variables in tax authority find (administrative data for better frame and for editing, estimation and imputation) Swedish Custom import and export

Finding Lack of responsibility at Chemical authority of register of fuel.

In the review they have found that missing data could be used by administrative data from tax Authority.

Monthly oil-, gas-, and stock statistics

- *Population:* About 80 coal- and oil trading companies. A handful distributors of natural gas. A sample of about 100 industrial enterprises and electricity, gas, and district heating supply enterprises.
- *Variables:* Quantity of stocks, imports, exports, production, own consumption, bunkers for foreign shipping and deliveries to consumers and retailers. Supply, consumption and deliveries of natural gas. Stocks of domestic heating oil and heavy fuel oils.
- *Publishing:* Statistical report, special web-report, Swedish Statistical Database.



Ways of using Administrative data

- **Register based Census (test in Sweden 2011)**
- Find that there were too many empty apartments in big city regions (Working apartments on weekdays)
- Needed estimation for electricity use in that kind of apartments (No data existed in any energy survey, at Swedish Power Grid, Swedish Energymarket Inspectorate or SEA). No source for estimation modelling existed.

Today request from Government

Swedish Power Grid and Inspectorate Service EL Hub and new informationmodell (demands and needs from Statistics Sweden, SEA and other authorities (Structure admin data for using instead of old questions in surveys))

Government Proposals after COP

Government of Sweden have request on all authorities as follows:

- Reduce response burden on enterprises
- One channel for enterprises in to government
- Technology first in the direction in Authorities
Metadata, documentation, storage microdata
- The Direction Model for Swedish authorities have to change to more modern and technical
- Enterprises have to have an service as respondent so they can get all obliged requests from authorities.
- Better cooperation between Authorities and there data metadata, documentation, defintions,

Direct collection

- **Electricity price was collected from electricity traders, netcompanies**

Now it is registerbased statistics from Swedish Energymarket inspectorate and that have given two opportunities first quality checks for supervision data there administrative register of electricity price monthly and second made it possible to get rid of question about electricity price in the official energyprice statistics.

The survey also have question about chancing contract and this part is still send out in webquestionnaire but with almost the same definitions that inspectorate have for type of electricity contracts. There still some work left for perfect harmonization.

Ways of using Administrative data

➤ As a substitute for survey data

EL Hub project and Centralized informationmodell for the Electricitymarket

Joint project Between Swedish Energymarket Inspectorate and Swedish Power Grid (Swedish EIHub)

Nordic cooperation between Sweden, Norway, Finland and Denmark

EL Hubb project

➤ Government Commission

Joint Cooperation between

Swedish Power Grid and Swedish
Energymarket Inspectorate

Responsibility for Swedish Power Grid

- Developing of a EI Hub and drive it

Iterim report in june,

- Technical solution IT, functions, processes Information modell
- Storage of information, measured data and so on from Hub
- Costbenifit analyse of the different choices which has been taken
- Planing and estimation of time schedule when the Hub IS FINISHED AND IMPLEMENTED

➤ **Swedish Energymarket Inspectorate**

Responsibility in HUB project

- Administration
- Legal aspects jurisdiction
- Invoices from Enterprises, statistics from HUB (Modells)
- Supervision of Electricity net, distributors, traders through HUB how
- Specification of needs from the Technical build IT system from Powergrid
- (Norway, Finland and Denmark also building HUB

Big data

- How do we proceed with Big data in Sweden statistical system
- Swedish Energy Agency, Vinnova, SCB, Formas, Swedish National Protection Agency

Joint project Swedish Power Grid, Swedish Energymarket Inspectorate (In future)

Some of Statistics Swedens Methodologists works in a consortium of companies, universities and Government organizations nationally and internationally

Opendatabase on Irland with country practices of bigdata where researchers can use data.

**Thank you for your
attention**

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