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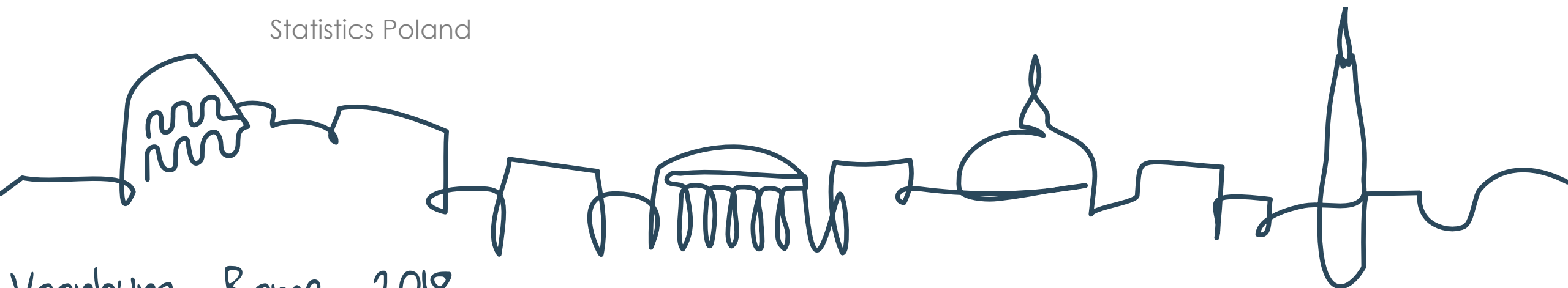
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2018

SPPI for Data Processing, Hosting and Related Activities (ISIC/NACE 6311)

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Statistics Poland



Voorburg · Rome · 2018



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Plan of presentation



Statistics Poland

- ① Introduction
- ② Description and characteristics of the industry
- ③ Measurement of SPPI
- ④ Evaluation of measurement

Introduction

- SPPI – variable compiled within the short-term statistics in the European Statistical System (ESS)
- Starting point of survey on SPPI – Q12008
- Pilot study 2014 -2015
- Development of the SPPI survey – 2018 reference year as the turning point;

Description and characteristics of the industry

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Data Processing, Hosting and Related Activities (ISIC/NACE 6311) includes:

- provision of infrastructure for hosting, data processing services and related activities;
- specialized hosting activities such as: web hosting, streaming services, application hosting;
- application service provisioning;
- general time-share provision of mainframe facilities to clients;
- data processing activities: complete processing of data supplied by clients, generation of specialized reports from data supplied by clients;
- provision of data entry services;



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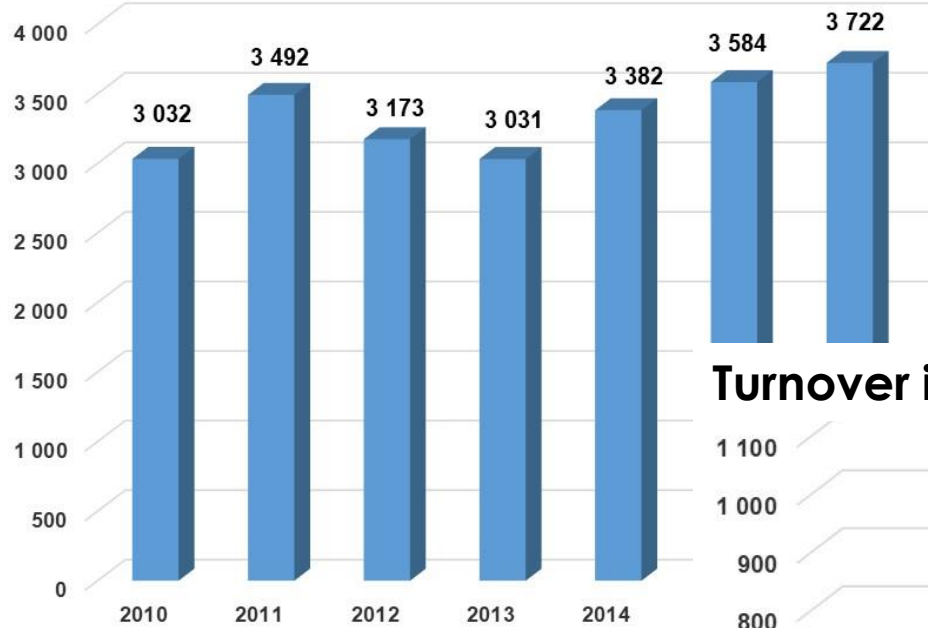
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Description and characteristics of the industry

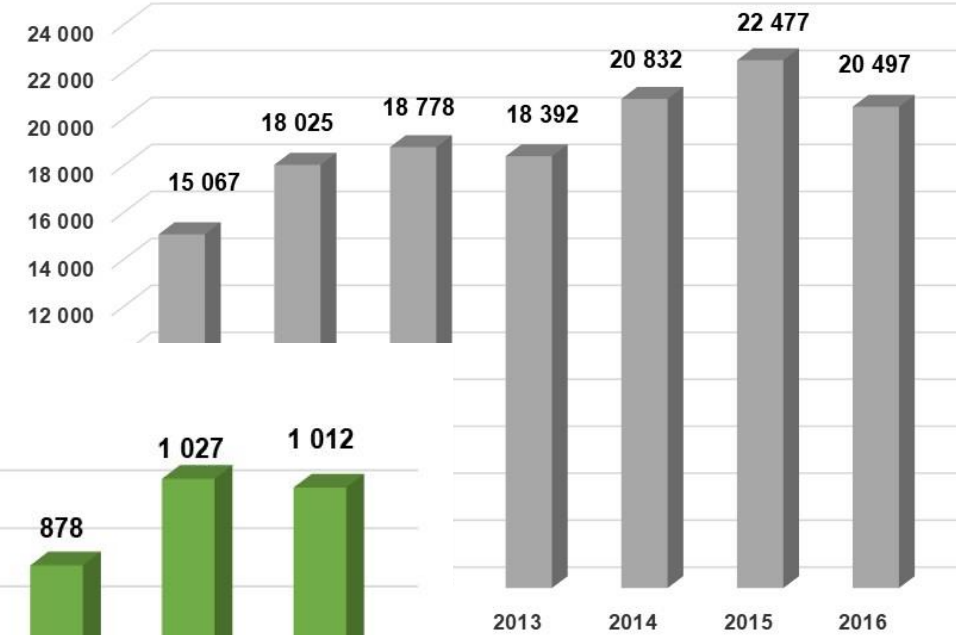
Data Processing, Hosting and Related Activities (ISIC/NACE 6311)



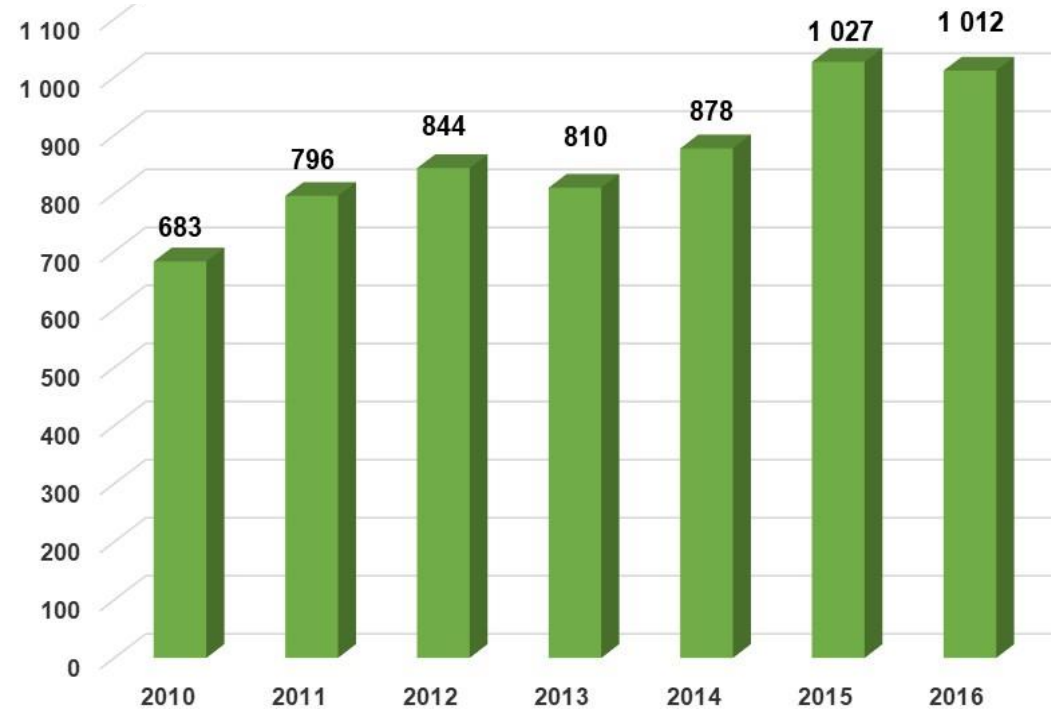
Number of enterprises



Number of persons employed



Turnover in EUR bln



Source: Statistics Poland, Structural Business Statistics

Description and characteristics of the industry

- Population dominated by entities with the number of persons employed 9 and less - in 2016 they constituted over 96% of total number of enterprises;
- However, entities with the number of persons employed 10 and more generated almost 83% of turnover and employed almost 73% of persons employed in that industry;
- Few shares services centers (SSC) operate on the market;
- In 2016 above 43% of turnover of entities with the number of persons employed 10 and more came from the sale of services abroad;
- In 2016 the export of services amounted to EUR 336 bln and increased more than 3 times in PLN and 2,8 times in EUR in period 2010-2016;



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Measurement of SPPI

- SPPI compiled and disseminated at the industry level, however, data collected at the product level;
- SPPI calculated based on data collected within the statistical report C-06 *Report on services producer prices* via reporting website;
- first reference period – Q1 2008
- sample frame:
 - ✓ established separately for each of services industry covered by the SPPI;
 - ✓ comprises enterprises with the persons employed 10 and more running, with their primary or secondary activity, in given industry;
 - ✓ selected purposively basing on information included in the business register as well as data on turnover collected within the business statistics;
- for the reference year 2018 – 57 enterprises with their core activity in ISIC 6311 in a sample;

Measurement of SPPI

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- number of representatives – 110 services representatives
- each enterprise with the number of persons employed between 10 and 49 obliged to report at least 1 representative, while enterprises with the number of persons employed 50+ at least 3;
- respondents establish the representative services which have the significant share in their turnover and are constant for the consecutive reference periods.
- each representative has its unique number unchangeable during the survey;



C-06 Report on services producer prices

- 22 modules – each dedicated to separate services industry
- each module includes as many sections as pricing methods possible for given industry – for ISIC 6311 module no 6 with 3 sections:
 - 1) representative services pricing method;
 - 2) long-term contract pricing method;
 - 3) unit value method;



Measurement issues – collected information

TYPE OF INFORMATION	POSSIBLE OPTIONS OF ANSWER	REPRESENTATIVE SERVICES PRICING METHOD	LONG-TERM CONTRACT PRICING METHOD	UNIT VALUE METHOD
UNIT OF MEASURE	<i>selected for the list</i>	X	X	X
TYPE OF CLIENT	enterprise, public body, individual client	X	X	X
RESIDENCE OF CLIENT	in country, outside country	X	X	X
TYPE OF PRICE	price from the representative transaction, average price from few comparable transactions, price from the list, price from the model estimated by respondent	X		
PRICE LEVELS	<i>for the current and previous reference quarter</i>	X	X	
REASONS FOR CHANGE IN PRICE LEVELS	<i>selected for the list</i>	X	X	X



Measurement issues – collected information

TYPE OF INFORMATION	POSSIBLE OPTIONS OF ANSWER	REPRESENTATIVE SERVICES PRICING METHOD	LONG-TERM CONTRACT PRICING METHOD	UNIT VALUE METHOD
LENGTH OF CONTRACT			X	
NAME OF CLIENT			X	
VALUE OF PROVIDED SERVICES	<i>for the current and previous reference quarter</i>			X
VOLUME OF PROVIDED SERVICES	<i>for the current and previous reference quarter</i>			X
UNIT VALUE	<i>for the current and previous reference quarter</i>			X



Measurement of SPPI

The procedure for SPPI estimation:

1. The basic indices for each reported services representatives are calculated with the previous quarter as the base reference period.
2. For each enterprise the price indices are compiled as a geometrical average of price indices for representatives reported by given responding unit.
3. For the class ISIC/NACE level the SPPI is estimated with the Laspeyres price index formula, i.e. weighted average of price indices at enterprise level. As the weights unit data on turnover for given enterprise are used.
4. For higher level of ISIC/NACE level, in order to aggregate indices there is also Laspeyres price index formula used. For the group, division or section levels system of weights bases on turnover values for the base year from the structural business statistics is used.

SPPI is presented with the base of previous reference period = 100, the base year = 100 and the same reference period of previous year = 100.

Measurement of SPPI

- SPPI for Data processing, hosting and related activities (ISIC 6311) calculated as a one stage of estimation procedure, however, not disseminated;
- SPPI for Data processing, hosting and related activities; web portals (ISIC 631) transmitted to Eurostat, at the division level published in the Knowledge Database http://swaid.stat.gov.pl/en/Ceny_dashboards/Raporty_predefiniowane/RAP_DBD_CEN_34.aspx
- SPPI used as deflators in national account statistics and business statistics:
 - ✓ annual turnover at the class level – SPPI for ISIC 631 not enough;
 - ✓ quarterly turnover at the group and division level - SPPI for ISIC 631 enough
 - ✓ planned under FRIBS monthly index of services production (ISP) for ISIC 631 – quarterly SPPI not enough – additional calculations necessary



Evaluation of measurement

The challenges and issues identified for consideration:

- 1) More methodological and experimental works needed in order to launch new products which are able to be compiled due to the modernisation of C-06 report (i.e. datasource for weights in case of SPPI for export);
- 2) In case of any changes in the methodology of the SPPI survey it should be regarded that the population of enterprises with their primary activity classified in ISIC/NACE 63.11 is dominated by the units with the number of persons employed 9 and less. It may cause problems related with representativeness of sample;
- 3) What about the shared services centers (SSC) which provide services to their affiliated units? Should be their prices covered by SPPI? Or maybe there should be separate index for services provided to affiliated units compiled?



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Thank you very much for your attention



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