

Manufacturing services on inputs owned by others

A new vision of economy

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Structure of the presentation

- 1 – What is a good? What is a service?
The ownership principle
- 2 – What European countries currently do in PPI
- 3 – What Sweden and Finland do and will do
- 4 – What Hungary already does
- 5 – What France progressively does
- 6 – Conclusion

1 – CPA 2008 introductory guidelines

“1.2. Distinction between goods and services

Goods are physical objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in transactions on markets. [...]. The production and exchange of goods are quite separate activities. [...]. The separation of the production of a good from its subsequent sale or resale is an economically significant characteristic of a good which it does not have in common with a service.

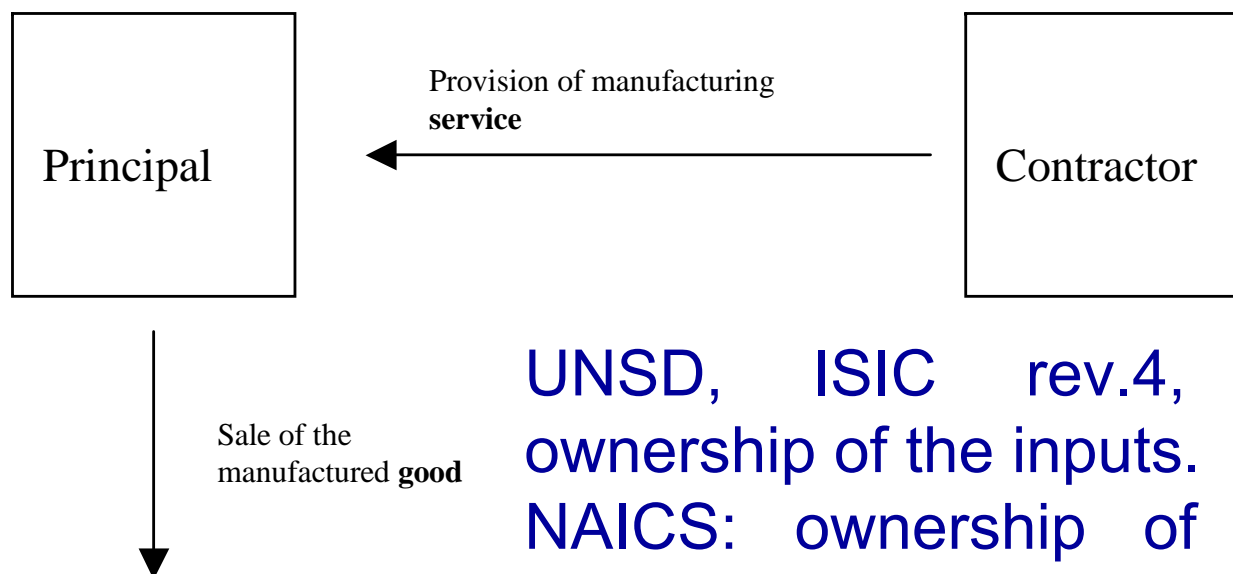
Services are entities over which ownership rights cannot be established. [...].

Much exaggerated...

The new concept underlying the distinction goods / services

1 – The situation of manufacturing services

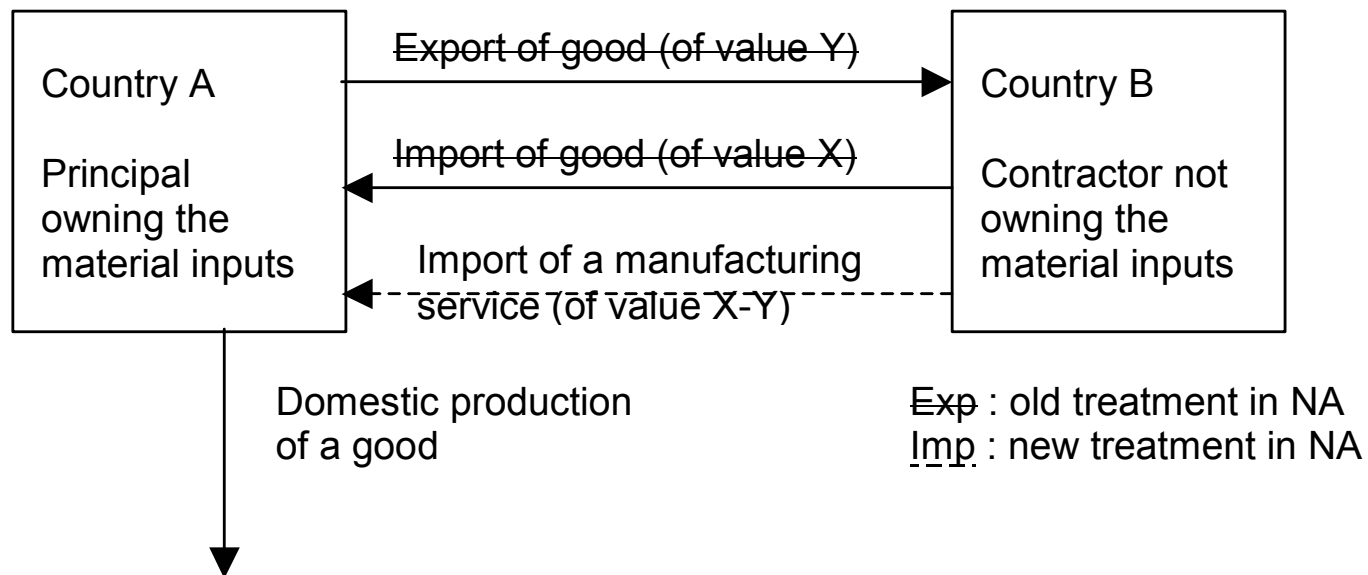
- (i) Principal owns the material inputs
 - contractor provides manufacturing services



UNSD, ISIC rev.4, NACE 2008:
ownership of the inputs.
NAICS: ownership of the intellectual
property and design.
Note that SNA 2008 quotes only the
ownership of the output.

1 – Goods sent for processing = external trade of manufacturing services

- (i) Country A (principal) owns the material inputs
 - Country B (contractor) exports manufacturing services



1 – The recommendation of SNA 2008

Input-output and supply and use tables

Goods processed by a unit not assuming economic ownership

- *par. 28.15: Previous editions of the SNA have recommended [...] The SNA now recommends that products should only be recorded as being delivered to another unit if there is a change of ownership [...].*

Table 28.2: Options for recording goods not changing economic ownership

	Year 1	Year 2	Option 1	Option 2
Cost of materials	90	90	90	180
Other costs	10	20	10	20
Total intermediate consumption	100	110	100	200
Value added	35	70	35	70
Output	135	180	135	270

Option 1 = net value of manufacturing services

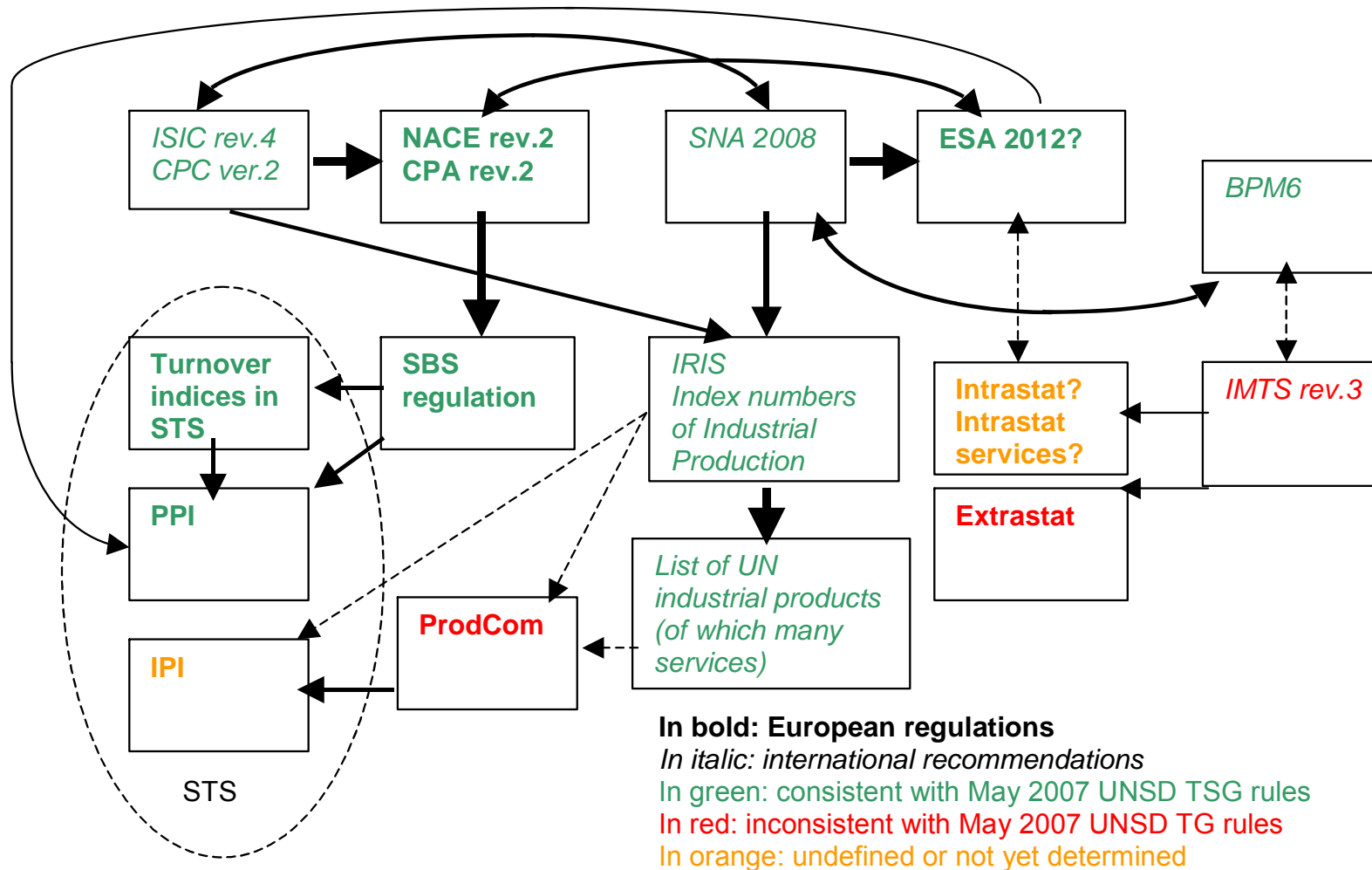
Option 2 = gross value of good processed (provisional)

1 – The different kinds of manufacturing services in CPC

Most “services” are provided by manufacturing industries... Division 88 is the most typical and broken down by manufacturing classes in CPA (XX.XX.99).

CPC ver.2
86 Support services to agriculture, hunting, forestry, fishing, mining and utilities
861 Support services to agriculture, hunting, forestry and fishing
862 Support services to mining
863 Support services to electricity, gas and water distribution (on a fee or contract basis)
87 Maintenance, repair and installation (except construction) services
871 Maintenance and repair services of fabricated metal products, machinery and equipment
872 Repair services of other goods
873 Installation services (other than construction)
88 Manufacturing services on physical inputs owned by others
89 Other manufacturing services; publishing, printing and reproduction services; materials ; recovery services
891 Publishing, printing and reproduction services
892 Moulding, pressing, stamping, extruding and similar plastic manufacturing services
893 Casting, forging, stamping and similar metal manufacturing services
894 Materials recovery (recycling) services, on a fee or contract basis

1 – Propagation of new concepts, and resistances



1 – Resistances?

External trade: International Merchandise Trade Statistics (IMTS) manual, rev.3 has not adopted the ownership principle, although the point was discussed, but the obstacle was more technique than conceptual. But the concept has been adopted by Balance of Payment Manual version 6 (BPM6) and by System of National Accounts (SNA) 2008, hence, some statisticians have now to work on customs statistics in order to produce consistent data for BoP and NA.

ProdCom: a new regulation is in discussion. Could be inspired by the UN list of industrial products, ended by 21 items of “manufacturing services on inputs owned by others”, by kind of manufacturing activity (manufactured goods processed).

2 – What European countries currently do in PPI

Questionnaire sent in October 2009 to the 17 countries of Eurostat TF “PPI methodology”.

Most countries rely on ProdCom survey for the sampling, but ProdCom resists to the new concepts...

Half countries record net value of manufacturing services in production, half countries eliminate these atypical price series, Finland record the gross value of the good.

Most countries eliminate manufacturing services in imports, the rest try to estimate gross value of the good, except the Czech republic and Finland sometimes.

2 – What European countries currently do in PPI

The majority of countries think they have to avoid “double counting” between principals and contractors (and most try to keep principals only).

6 European countries (BG, CZ, DE, FI, HU, LT) consider they have already a specific experience in this topic, of which 4 in “14 - *wearing apparels*”.

Average hourly rates and unit values / goods processed are the main techniques to estimate manufacturing services prices.

What Sweden and Finland do and will do

◆ By Marcus FRIDEN

3 - Sweden

Only registered in Swedish PRODCOM

Production values reported on special 8 digit CN numbers for manufacturing services

Linked with PRODCOM

Price measurements started in 2007

Only measure sales inside Sweden

50% hourly charge out rates

Exports and imports need further investigation

3 - Finland

Only registered in PRODCOM

Extended PRODCOM classification

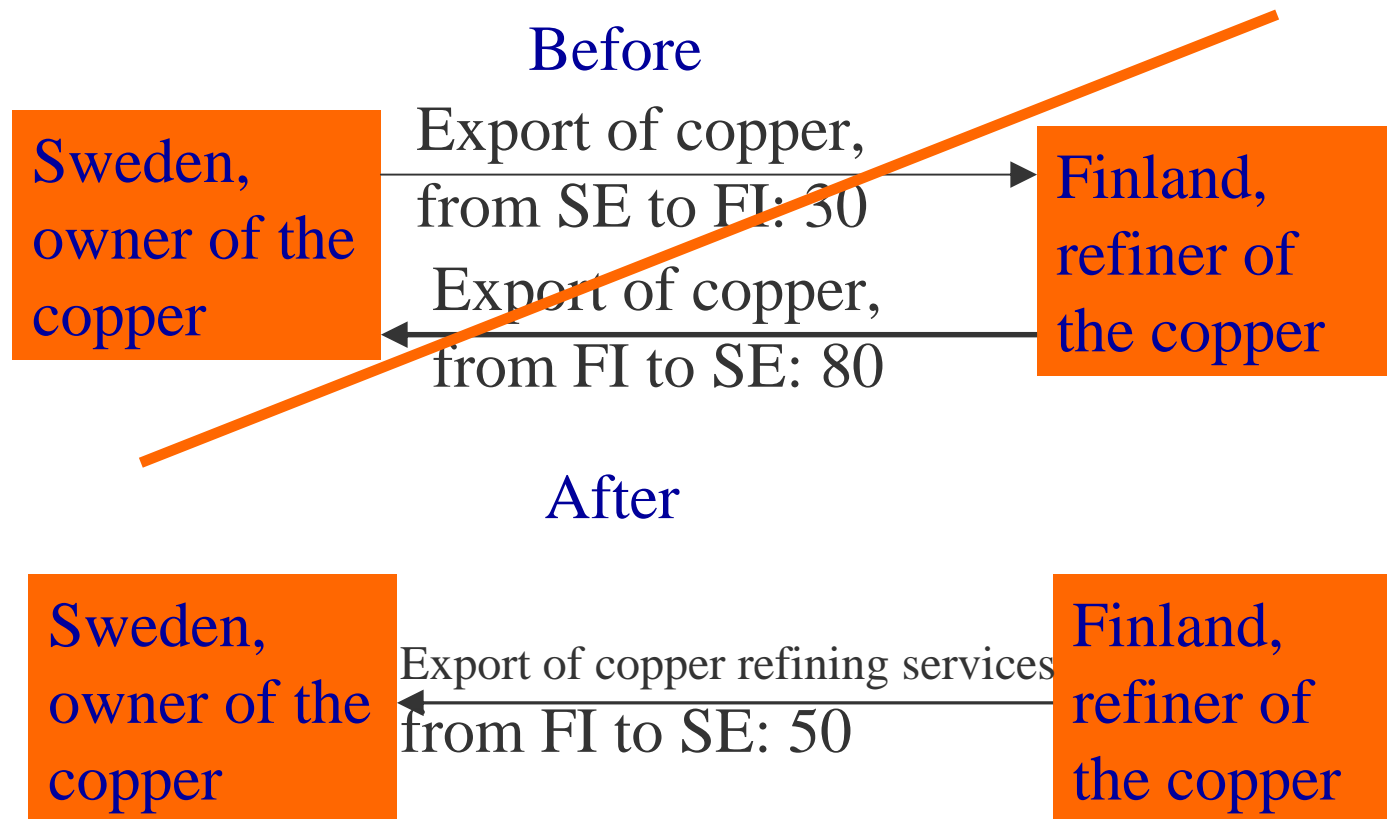
10 digits, ending with 90

Only measure sales inside Finland, no exports or imports of manufacturing services yet

Hourly charge out rates dominate

3 – External trade between SE and FI in the future

- (i) Sweden (principal) owns the copper to refine
- Finland (contractor) exports copper refining services



3 - Manufacturing services on inputs owned by others

Thank you for your attention!

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What Hungary already does

◆ By Ildiko HOLOCSY

4 - Manufacturing and classifications in Hungary

In Hungary the harmonized national versions of the following economic classification systems are applied:

- **NACE Rev 2 / TEÁOR'08** (the statistical **classification of economic activities** in the European Communities / in Hungary).
- **CPA'08 / TESZOR'08** (the European/ Hungarian **classification of products by activity**).
- **PRODCOM / ITO** is the **classification of goods used for statistics on industrial production** in the EU / in Hungary).

4 - Manufacturing services and globalization

Section “C”, according to the **NACE Rev. 2**:

- processing of goods and
- providing services

Effects of globalization:

- Increasing roll of multinational enterprises;
- Improvements in traffic and communication infrastructure;
- Work can be outsourced to any part of the world, especially by the way of goods sent for processing = manufacturing services
- Hungary is more concerned by contractors than by principals, particularly for wearing apparels...

4 - Manufacturing services and ProdCom

Product statistics / PRODCOM in Hungary

are harmonized with relevant European rules

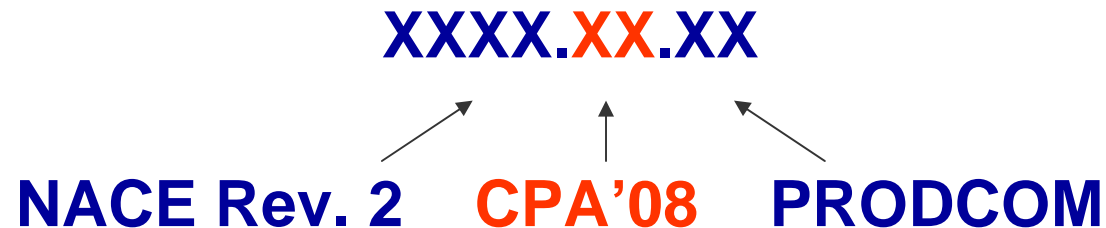
Source of data: statistical survey by questionnaire

For **PRODCOM** purposes

- **Sold quantities** and
- **Sales of products** are computed

4 - Manufacturing services and ProdCom

PRODCOM / (ITO in Hungarian) code:



According to the **PRODCOM** manual:

Case 1: producing a new product (**XXXX.XX.XX**)

Case 2: partial operations (**XXXX.99.00**)

4 - EXAMPLES, ProdCom survey

Mode	Quantity	Quantity sold		Turnover		Taxes
	total	export	domestic	export	domestic	
Case 1: 1413.31.20 Women's or girl's overcoats...						
T (total)	100	60	40	600	1200	
B (contr.)	60	60		600		
Case 2: 1413. 99.00 Sub-contracted operations as part of manufacturing of...						
T (total)	30	30		150		
B (contr.)						

4 - Manufacturing services in subcontracting

How big is the industry in Hungary?

Comparison with the total population indicators:

Statistics of production enterprises manufacturing in subcontract work:

➤ **Number of enterprises: ~ 9,3 %**

The biggest share: **Manufacture of textiles, wearing apparel,** ~ **250** enterprises

➤ **Total sales value: ~ 1,3 %**

4 - Structure of activities in Hungary

Published data of annual industry statistics	Number of companies %	Sales value %
Total Industry	100,0 %	100,0 %
Manufacturing („C”)	87,2 %	73,8 %
Manufacturing services in subcontracting	9,3 %	1,3 %

4 - Manufacturing services in Hungary

Published data of annual statistics, 2009	Number of companies	Sales value
Total manufacturing services (in subcontracting)	100,0 %	100,0 %
Manufacturing in subcontract work, „C”	98,8 %	97,2 %
Manufacture of textiles, wearing apparel	33,1 %	23,1 %
Manufacture of transport equipment	6,3 %	22,9 %
Manufacture of computer, electronic and optical products	2 %	19,2 %

4 - PRICE STATISTICS, PPI's in Hungary

PPI's

- are harmonized with the European short term regulation (STS)
- weighted average of **domestic** and **export** price indices at every aggregation level.

Source of data:

- monthly statistical survey
- enterprises classified in the industry

4 - PPI index calculation in Hungary

**Price relatives
of representative items**

**Indices of commodity groups
(CPA / PRODCOM 6. digit)**
(unweighted arithmetical mean of price relatives)

Indices of the CPA 4 digit level
(weighted arithmetical mean of commodity groups, **Laspeyres**)

Indices of higher level
(weighted arithmetical mean of CPA 4 digit indices, **Laspeyres**)

4 - Weighting structure

Weights **2 years prior to the actual year** are used

For aggregation of	Source of weights
Indices of CPA 4 digit	PRODCOM 6 digit
Indices of higher level	SBS data

The other type of indices are **chain linked**.

Long time series are chain linked with annually up-dated weights.

4 - Principles for manufacturing services

Contract processing / outsourcing

“**net values**” prices (fees or payment on a contract basis related to the good or service) are collected **for contractors** processing on material inputs owned by others.

“**gross values**” prices (prices of the good or service sold on own account) are collected **for principals**.

4 - Techniques in manufacturing services

Note: in most cases the **principal is a non-domestic company**, that's why it **is not included** in the sample.

Specific experience in the record of some “net values”, of ***”Manufacture of textiles, wearing apparel, leather and related products”***

Pricing methods:

- ***based on working time*** (mainly average hourly rates for a specific process)
- ***unit values*** (relative to the goods processed)

4 - Prices

The **price depends on the contracts specifications**: type of good/service, material (accessories) added, destination and size, such as the type of client and exchange rate.

Price = Fee or payment on contract basis for the contract work (+ price for accessories or a small quantity of additional materials needed for this work)



4 - Examples in 1413 Other outerwear, 1414 Underwear

Representatives of the fee of sewing + price accessories

- **price per** ready-made men's trousers of denim, model number 32 („1413”)
- **price per** women's blouses („1414”)

Representatives of the fee of

- **price per norm hour** of operations as part of manufacturing of women's dresses („1413”)
- **price per** setting of the arm of the women's blouses („1414”)

4 - Examples in 1512 Luggage, handbags, 1520 Footwear

Representatives of the fee of sewing + price accessories

- **price per 100 pairs** of preparation of the uppers of the boots („1520”)

Representatives of the fee of

- **price per** cutting of the component, model „id. code ...” („1512”)
- **price per 100 pairs** of preparation of the uppers of the sandals („1520”)

4 - Other examples

Representatives of the fee of

„2611” Manufacture of electronic components

➤ **Price per piecework** of preparation of the faces „id. code ...”

„2931” Manufacture of electrical and electronic equipment for motor vehicles

➤ **price per 1000 hours** of operations of the compound cables (model 1.)

4 - Manufacturing services in subcontracting

Summary

To produce **comparable macro-economic indicators** at word level, is needed:

- **Consistency** of main classification systems;
- „**Net**” approach for the contractor;
- **Validation process** to ensure completeness of quantity and value data;
- **International cooperation**;
- **Cooperation** between statisticians within each country ;
- **Cooperation** between data collectors of NSI's and data suppliers.

4 - Manufacturing services on inputs owned by others

Thank you for your attention!

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What France progressively does

◆ By Alain GALLAIS

5 – How France has adapted ProdCom survey

EAP has synthesized EAE (SBS) and EAB (ProdCom).

1st page (outlines) :

Employees on 31 st of December	_____
Number of people working for the enterprise at this date without distinction of status	
Number of months of activity	____
Should be equal to 12, except if your enterprise has been created or has ceased its activity during the civil year.	
Total turnover of the enterprise	_____ k€
To be divided in:	
SALES of industrial products including manufacturing services (excluding repair and installation services of machinery and equipment)	CP1 _____ k€
INSTALLATION services of machinery and equipment	CP2 _____ k€
REPAIR AND MAINTENANCE services of machinery and equipment	CP3 _____ k€
SALES of non industrial goods and services (not part of manufacturing or mining and quarrying activities)	CP4 _____ k€
Includes provision by network of electricity, gas, water, waste management, transportation, edition, telecommunications, rentals, packaging on a fee or contract basis, consulting, engineering, research & development, other support activities...	

developed
next page

5 – How France has adapted ProdCom survey

5 economic models (2 for principals, 2 for contractors)

Core questionnaire EAP:

Model 5 = manufacturing services on inputs owned by others

SALES OF INDUSTRIAL PRODUCTS including manufacturing services (excluding repair and installation services of machinery and equipment)

In order to properly fill in this table, please read explicative guideline 1.

Description of the products	Sales	Breakdown of sales according to the economic model					Sold quantities
		Good processed outside the enterprise (including by another enterp. of the same group)		Good processed by the enterprise (on the national territory)			
		Purchased in the same state on the market or to a contractor, inputs* not provided free	Purchased to a contractor, providing him free the inputs* to process	Conceived and processed by the enterprise	Conceived by a customer (principal) that has not provided free the inputs*	Inputs provided free by the customer (principal) or elementary operation on the good	
		Model 1	Model 2	Model 3	Model 4	Model 5	
* the inputs are the material components needed to process a good (raw material, components, pieces, subsets...); these material inputs are recorded in purchases of goods in the enterprise accounts, except if they have been provided free.							
3102 Kitchen furniture							
All products	_____ k€	___%	___%	___%	___%	___%	
3102100010 Kitchen furniture in wood type 1 Combined Nomenclature (CN) 33.99	_____ k€	___%	___%	___%	___%	___%	_____ pieces
3102100020 Kitchen furniture in wood type 2 Combined Nomenclature (CN) 33.99	_____ k€	___%	___%	___%	___%	___%	_____ pieces
3102100030 Kitchen furniture in wood type 3 Combined Nomenclature (CN) 33.99	_____ k€	___%	___%	___%	___%	___%	_____ kg
31027750S0 parts of kitchen furniture in wood Combined Nomenclature (CN) 33.99	_____ k€	___%	___%	___%	___%	___%	_____ pieces

CPA 4 digits

Prod Fra

5- Articulation between EAP and PPI

EAP, in its SBS format, is used for PPI sampling (with cut-off technique), at CPA 4 digits level.

EAP, in its “ProdCom format” combined with economic models, helps to determine which groups of CPA 6 digits will be used for sub-aggregates (including whether manufacturing services of the activity will be isolated), and which products (within which groups of CPA 6 digits) are logically to collect for each selected enterprise.

Weights are collected during the visit by field-surveyors (engineers-surveyors).

5 – Some French PPI price series

An example of imports

Definition of price series with kind of vendor	Precisions on prices
Making of jackets for women UJA Origin Bulgaria	Average price of the month, net invoiced, VAT excl, ex works, in € / piece
Making of jackets for women 123 Origin Bulgaria	Average price of the month, net invoiced, VAT excl, ex works, in € / piece

An example of domestic turnover (output)

Definition of price series with kind of purchaser	Precisions on prices
Whole service of dyeing and finishing warp and weft, cotton predominating	Average price of the month, net invoiced, VAT excl, Franco, in Euros / kg, all customers, France

5 – Some French PPI price series

An example of non-domestic turnover (export)

Definition of price series with kind of purchaser	Precisions on prices
Machine hourly cost Destination Switzerland	Index in base 100 = September 2011

6 - Conclusion

A matter for PPI, not for SPPI (but with SPPI techniques, sometimes SPPI team in subcontracting?)

Usually of minor importance in each manufacturing activity (perhaps underestimated).

Stimulating, but quite challenging for external trade.

Some national projects have been launched.

Some specific experiences should exist outside Europe (Mexico)?

Manufacturing services on inputs owned by others

Thank you for your attention!

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