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Sector Paper: Consumer and Household Goods Repair and Maintenance

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1.0 Introduction

The sector paper on the *Consumer and Household Goods Repair and Maintenance* summarizes international progress and challenges in the measurement of turnover and price changes. It also provides overview of classification structure.

This paper is based on presentations and summary notes from the 27th Voorburg Group meeting as well as results of the Voorburg Group survey of country progress.

The paper is organized as follows: Section 2.0 gives a brief overview of the industry; Section 3.0 covers issues related to industry and product classification; Section 4.0 describes the availability of turnover data, collection practices and measurement issues arising; Section 5.0 deals with price measurement and Section 6.0 gives a short summary and conclusions.

2.0 Industry Overview

The *Consumer and Household Goods Repair and Maintenance* industry comprises enterprises which provide a wide range of services such as the repairing and servicing of:

- consumer electronics such as radios and TVs,
- household appliances such as refrigerators, stoves, washing machines, clothes dryers and room air conditioners,
- garden equipment such as lawn-mowers and blowers,
- footwear and leather goods,
- furniture and home furnishings,
- clothing and clothing accessories,
- personal items such as watches and jewellery,
- sporting goods,
- musical instruments,
- hobby articles
- and other personal and household goods.

The services are provided to household clients rather than to other businesses.

The repair services of personal and household goods are provided by enterprises with the primary activity classified to the group 952 by the ISIC Rev.4 as well as enterprises that carry out repair as a secondary activity in combination with other activities (e.g. manufacturers and distributors of consumer and household goods). On the other hand enterprises with the primary activity within the group 952 can produce services and goods different from repair services.

The *Consumer and Household Goods Repair and Maintenance* industry is dominated by small enterprises. In the EU-27, 71.3% of the total value added of consumer and household goods repair in 2010 was generated by enterprises employing fewer than 10 persons. There is no national or international player conducting its activity in this area.

Many repair activities often face increased demand during downturns in the overall economic cycle as household postpone purchase of new goods and repair existing

items instead; equally demand for repair services may decrease during an upturn in the cycle.

3.0 Classification

3.1 Industry Classification

The three main industry classifications discussed in this paper are:

- UN International Standard Industrial Classification (ISIC Rev.4),
- Statistical Classification of Economic Activities in the European Community (NACE Rev.2),
- North American Industrial Classification System (NAICS United States 2012)

ISIC Rev.4 place *Consumer and Household Goods Repair and Maintenance* within Section S *Other service activities*, the division 95 *Repair of computers and personal and household goods*.

The group is divided into the following classes:

9521 Repair of consumer electronics

9522 Repair of household appliances and home and garden equipment

9523 Repair of footwear and leather goods

9524 Repair of furniture and home furnishings

9529 Repair of other personal and household goods

The NACE Rev.2 classification is very similar to the ISIC Rev.4 The only difference is that the NACE Rev.2 in comparison with ISIC Rev.4 presents more detailed breakdown at the class level. NACE Rev.2 identify class 95.25 which covers repair of watches, clocks and jewellery whereas in ISIC Rev.4 these kinds of activities are included in 9529 *Repair of other personal and household goods*.

NAICS (United States 2012) similarly like NACE Rev.2 and ISIC Rev.4 classify *Personal and Household Goods Repair and Maintenance* with other services within its classification hierarchy. Repairing services for household clients are placed in the subsector 811 which brings together most types of repair and maintenance establishments and categorizes them based on production processes (i.e. on the type of repair and maintenance activity performed). It is worth to notice that the NAICS classification does not delineate between repair services provided to businesses versus those that serve households (it especially concerns repair of electronics). Basically, repair and maintenance services for households occur in two industry groups: 8112 *Electronic and Precision Equipment Repair and Maintenance* and 8114 *Personal and Household Goods Repair and Maintenance*. The industry group 8114 closely correspond to the group 952 by ISIC Rev.4 but does not include repair of consumer electronics. Establishments providing repair of consumer electronics are included in the industry group 8112.

A full detailed list of industry classification in included in the Appendix 2.

3.2. Product Classification

The following product classifications will be compared:

- Central Product Classification Ver. 2 (CPC Ver.2)
- Classification of Products by Activity (CPA 2008)
- North American Product Classification System (NACPS Ver.1)

The Central Product Classification, CPC Ver.2, the respective product classification to the industry classification ISIC Rev.4, recognizes the following products categories:

87151 Maintenance and repair services of electrical household appliances

87155 Maintenance and repair services of consumer electronics

87210 Repair services of footwear and leather goods

87220 Repair services of watches, clocks and jewellery

87230 Repair services of garments and household textiles

87240 Repair services of furniture

87290 Maintenance and repair services of other goods n.e.c.

The Classification of Products by Activity (CPA 2008) in comparison with CPC Ver.2 classification is more detailed. It recognizes eleven product categories. Moreover the link between CPA 2008 and corresponding industry classification (NACE Rev.2) is more direct.

NACPS Ver.1 goes into much greater level of detail than CPC Ver.2 and CPA 2008. It specifies about twenty repair and maintenance products provided to households.

4.0 Turnover Statistics

The *Compilation Manual for an Index of Service Production* defines turnover data as receipts from sales excluding VAT and other taxes on products plus any subsidies on products. According to the manual turnover data should be from a survey of repairers of personal and household goods or administrative data from tax returns which could be split by type of repair of personal and household goods.

4.1. Data Availability

There is very good turnover data availability based on country responses to the detailed summary report. Of the 22 countries who responded, 17 (for the class 9521 of ISIC Rev.4 – 18 countries) collect industry turnover data. However the level of detail is limited. Only 2 (for classes 9521 and 9522 of ISIC Rev.4 – 3 countries) out of the 22 countries indicated that their turnover detail currently available was greater than or equal to the CPC detail.

In the European Union (EU) information on annual turnover for 952 Repair of personal and household goods is compiled within the structural business statistics in compliance with the Regulation (EC, EURATOM) No 58/97 of the Council of 20 December 1996 as well as the Regulation (EC) No 295/2008 of the European Parliament and of the Council of 11 March 2008 concerning structural business statistics. Consequently data on annual turnover for the *Consumer and Household*

Goods Repair and Maintenance are available for most of the EU Member States at class level. Besides turnover also other variables such as value added, production value, gross operating surplus, number of enterprises, number of persons employed are surveyed.

4.2. Data collection

The data are collected through statistical surveys or administrative sources. The country can use one or several of these sources, according to the survey strategy they have adopted, taking into account the costs, the quality and the response burden on enterprises. As far as statistical surveys are concerned, large businesses are completely enumerated whereas small businesses are usually sampled only.

Both statistical surveys as well as administrative sources have their advantages and disadvantages. Statistical surveys allow direct control over the data content and data collection process but they are relatively costly. Use of administrative sources reduces the costs of data collection and the response burden on enterprises. However administrative sources contain information that is primarily collected for administrative purposes and not statistical one. In this connection when using administrative data various problems may arise (e.g. problems concerning concepts and definitions used, scope of available data, data quality, timeliness).

Two countries presented their turnover survey practices on the 27th Voorburg Group meeting, namely Norway and Poland.

In Norway the SBS survey from which annual absolute values of turnover are obtained is a census survey. A few data sources are used. From a sample of enterprises annual accounts are collected as well as a questionnaire, where enterprises are asked to breakdown turnover to establishment level (if they have more than one establishment). The sample is composed of all enterprises including more than one establishment as well as a few enterprises with only one establishment. For units not included in the sample annual accounts from tax authorities are received. If the annual account is not available, turnover data are collected from the VAT-register or the register for joint-stock companies. Short-term data on turnover are obtained from a bi-annual survey. The survey is a census survey. All data are collected from the VAT-register at the enterprise level. The information is broken down to establishment level, based on results from the latest SBS survey. From the short-term survey absolute values at 4-digit level are obtained.

Poland collects information on annual turnover with the use of two questionnaires: *Annual survey on enterprises* (SP) and *Survey of small enterprises* (SP-3). *Annual survey on enterprises* is directed towards enterprises with 10 or more persons employed and collects information included in financial statements: the balance sheet and the profits and losses account. Moreover, enterprises report also additional information, for example number of persons employed, type of book-keeping system etc. Enterprises employing fewer than 10 persons are surveyed within the *Survey of small enterprises*. Data are collected from the 5 percent sample selected randomly within the settled strata. Short-term data on turnover are collected with the use of questionnaire *Monthly report on activity* (DG-1). All enterprises with the number of persons employed 50 and more and 10 percent sample of enterprises with the

number of persons employed between 10 and 49 are surveyed. Information on monthly turnover are available only at the level of division 95.

4.3. Data Issues

Surveys of turnover should be carefully planned as the industry is dominated by small enterprises which are particularly fragile in respect of any burden imposed by public administration. Statistical response burden can be reduced by using simple forms with a few questions, sending questionnaires to a small selection of enterprises and using administrative data.

The repair services of personal and household goods are provided by enterprises with the primary activity classified to the group 952 by the ISIC Rev.4 as well as enterprises that carry out repair as a secondary activity in combination with other activities (e.g. enterprises classified to division 47 *Retail trade, except of motor vehicles and motorcycles*). On the other hand enterprises with the primary activity within the group 952 can produce services and goods different from repair services. In such situation it is advisable to collect turnover data at product level in order to get the better insight into the industry.

Repair services provided within secondary activity of retailers or manufacturers are usually done within the warranty and free of charge. Sometimes retailers and manufacturers outsource this kind of activity. Moreover, they very often exchange the broken down item for a new one instead of repairing it. Therefore enterprises providing repair services within secondary activity might face difficulties to make distinction between sale and repair in the total turnover.

Due to the progress in technology a lot of goods, especially hi-tec electronic equipment, have the short life cycle. It is often useless to repair such a good because it is not produced and sold anymore. There are new and more effective models of a given good so it is reasonable to purchase new one. Moreover, consumer very often make decision to buy a new item instead of repairing old one because of low profitability of repair. Such consumers behavior will result in a decline in the output of activities related to the repair of personal and household goods.

4.4. Recommended Approaches

Table 1.0: Options for developing turnover statistics – Consumer and Household Goods Repair and Maintenance

Category	Data Source	Level of Detail Collected	Frequency	Cost
Best	Survey/Census	Industry and product detail	Annual and sub-annual	- Most expensive - Largest response burden
Good	Survey/Census and Administrative	Industry detail only	Annual and sub-annual	- Expensive - High response burden
Minimum	Administrative	Industry detail only	Annual	- Least expensive - Little or no response burden

5.0 Price Statistics

None price mini-presentation for the *Consumer and Household Goods Repair and Maintenance* was presented at the Voorburg Group meetings. Both countries which presented their practices on turnover measurement have not SPPI for this industry and have no plans for developing it. For the lack of information on experiences in developing SPPI, this section of the paper is mainly concentrated on the aspects connected with the use of Consumer Price Indices (CPI) as deflators for the *Consumer and Household Goods Repair and Maintenance*.

5.1 Data availability

Only two of 22 countries that completed the detailed status report indicated the availability of SPPI for the *Consumer and Household Goods Repair and Maintenance*. Low availability of SPPI is caused by resources constrains, small size of the industry and therefore low priority put on developing SPPI, no EU requirements for SPPI for the sector as well as by the fact that the Consumer Price Indices meet the national accounts needs well.

5.2 Use of CPI as deflators

According to the *Handbook on Price and Volume Measures in National Accounts* preferred deflators for repair of personal and household goods are consumer price indices (CPI). The CPI is regarded as an A method as there are little business expenditures on these services.

Before applying the CPI as a deflator it should be adjusted to reflect basic prices. Moreover various detailed CPI headings should be used as various different products are involved. Therefore deflation is necessary on a detailed level in order to be able to apply the various detailed CPI headings involved.

Also the *Compilation Manual for an Index of Service Production* indicates consumer price indices as preferred deflators. According to the recommendations included in this manual the best variable for measuring the output of repair of personal and household goods is the gross turnover deflated by appropriate quality adjusted price index. The preferred deflators are the weighted appropriate price indices, for example: consumer price indices for repair of household appliances, repair of leather goods, repair of clocks and watches. Partially representative consumer price indices or general price index are mentioned as the alternative deflators.

The classification used in compilation of CPI is the Classification of Individual Consumption According to Purpose (COICOP). The prices of repair services of personal and household goods are observed in 6 divisions and 12 groups of COICOP.

03 Clothing and footwear	03.1 Clothing
	03.2 Footwear

05 Furnishing, household equipment and routine household	05.1 Furniture and furnishing, carpets and other floor coverings
	05.2 Household textiles

maintenance	05.3 Household appliances
	05.4 Glassware, tableware and household utensils
	05.5 Tools and equipment for house and garden
06 Health	06.1 Medical products, appliances and equipment
08 Communication	08.2 Telephone and telefax equipment
09 Recreation and culture	09.1 Audio-visual, photographic and information processing equipment
	09.2 Other major durables for recreation and culture
	09.3 Other recreational items and equipment, gardens and pets
12 Miscellaneous goods and services	12.1 Personal care
	12.3 Personal effects n.e.c.

5.3 Data Issues

Due to the fact that some repair services of personal and household goods are very rarely purchased there are two main constraints in compilation of the CPI indices:

- accessibility of reliable weights;
- difficulties in finding commonly purchased repair services of personal and household goods in order to ensure representativeness for elementary groups in all regions.

6.0 Summary of Main Conclusions

1. The group 952 by ISIC Rev.4 includes the repair and servicing of personal and household goods.
2. The industry is dominated by small enterprises. The repair services of personal and household goods are provided by enterprises classified to the group 952 by ISIC Rev.4 and also by other activities' enterprises.
3. International classifications are quite well harmonized. They identify similar activities and services although some differences can be observed (mainly concerning the structure and the level of detail). It seems that they reflect actual market reality very well.
4. The vast majority of countries produce turnover data for this sector at industry level. The data are obtained from statistical surveys or administrative sources.
5. Very few countries compile SPPI indices for this sector. However SPPI indices are not required for national accounts needs as CPI indices are regarded as preferred deflators.

Appendix 1 – Overview of international progress

ISIC	Survey Categories	# of countries	
9521	a. PPI details>=CPC	1	
	b. PPI details>=CPC soon	0	
	c. Turnover details>=CPC	3	
	d. Turnover details>=CPC soon	0	
	e. Industry prices calculated	2	
	f. Industry turnover collected	18	
	1. Detailed turnover and prices well aligned	0	
	2. Detailed turnover and prices well aligned soon	0	
	3. Industry level turnover and prices aligned	0	
	4. Industry level turnover and prices aligned soon	1	
	5. Other – no industry coverage for prices and/or turnover, etc.	21	
9522	a. PPI details>=CPC	1	
	b. PPI details>=CPC soon	0	
	c. Turnover details>=CPC	3	
	d. Turnover details>=CPC soon	0	
	e. Industry prices calculated	2	
	f. Industry turnover collected	17	
	1. Detailed turnover and prices well aligned	0	
	2. Detailed turnover and prices well aligned soon	0	
	3. Industry level turnover and prices aligned	0	
	4. Industry level turnover and prices aligned soon	1	
	5. Other – no industry coverage for prices and/or turnover, etc.	21	
9523	a. PPI details>=CPC	1	
	b. PPI details>=CPC soon	0	
	c. Turnover details>=CPC	2	
	d. Turnover details>=CPC soon	0	
	e. Industry prices calculated	2	
	f. Industry turnover collected	17	
	1. Detailed turnover and prices well aligned	0	
	2. Detailed turnover and prices well aligned soon	0	
	3. Industry level turnover and prices aligned	0	
	4. Industry level turnover and prices aligned soon	1	
	5. Other – no industry coverage for prices and/or turnover, etc.	21	

9524	a. PPI details>=CPC	1
	b. PPI details>=CPC soon	0
	c. Turnover details>=CPC	2
	d. Turnover details>=CPC soon	0
	e. Industry prices calculated	2
	f. Industry turnover collected	17
	1. Detailed turnover and prices well aligned	0
	2. Detailed turnover and prices well aligned soon	0
	3. Industry level turnover and prices aligned	0
	4. Industry level turnover and prices aligned soon	1
	5. Other – no industry coverage for prices and/or turnover, etc.	21
9529	a. PPI details>=CPC	1
	b. PPI details>=CPC soon	0
	c. Turnover details>=CPC	2
	d. Turnover details>=CPC soon	0
	e. Industry prices calculated	2
	f. Industry turnover collected	17
	1. Detailed turnover and prices well aligned	0
	2. Detailed turnover and prices well aligned soon	0
	3. Industry level turnover and prices aligned	0
	4. Industry level turnover and prices aligned soon	1
	5. Other – no industry coverage for prices and/or turnover, etc.	21

Source: 2012 Voorburg Group Detailed Status Summary Report

Appendix 2 - Overview of industry classification

ISIS Rev.4	NACE Rev.2	NAICS 2012 (U.S.)
<p>952 Repair of personal and household goods</p> <p><i>This group includes the repair and servicing of personal and household goods.</i></p>	<p>95.2 Repair of personal and household goods</p> <p><i>This group includes the repair and servicing of personal and household goods.</i></p>	
9521 Repair of consumer electronics	95.21 Repair of consumer electronics	811211 Consumer Electronics Repair and Maintenance 811213 Communication Equipment Repair and Maintenance
		8114 Personal and Household Goods Repair and Maintenance
9522 Repair of household appliances and home and garden equipment	95.22 Repair of household appliances and home and garden equipment	81141 Home and Garden Equipment and Appliance Repair and Maintenance 811411 Home and Garden Equipment Repair and Maintenance 811412 Appliance Repair and Maintenance 81149 Other Personal and Household Goods Repair and Maintenance
9523 Repair of footwear and leather goods	95.23 Repair of footwear and leather goods	81143 Footwear and Leather Goods Repair
9524 Repair of furniture and home furnishing	95.24 Repair of furniture and home furnishing	81142 Reupholstery and Furniture Repair
9529 Repair of other personal and household goods	95.25 Repair of watches, clocks and jewellery 95.29 Repair of other personal and household goods	81149 Other Personal and Household Goods Repair and Maintenance 81299 All Other Personal Services

Appendix 3 – Overview of product classification

Correspondence between ISIC Rev.4 and CPC Ver.2

ISIC Rev.4		CPC Ver.2	
Code	Description	Code	Description
952	Repair of personal and household goods		
9521	Repair of consumer electronics	87155	Maintenance and repair services of consumer electronics
		87390*	Installation services of other goods n.e.c.
9522	Repair of household appliances and home and garden equipment	87151	Maintenance and repair services of electrical household appliances
9523	Repair of footwear and leather goods	87210	Repair services of footwear and leather goods
9524	Repair of furniture and home furnishing	87240	Repair services of furniture
9529	Repair of other personal and household goods	87220	Repair services of watches, clocks and jewellery
		87230	Repair services of garments and household textiles
		87290*	Maintenance and repair services of other goods n.e.c.

* part

Correspondence between NACE Rev.2 and CPA 2008

NACE Rev.2		CPA 2008	
Code	Description	Code	Description
95.2	Repair of personal and household goods	95.2	Repair services of personal and household goods
95.21	Repair of consumer electronics	95.21.10	Repair services of consumer electronics
95.22	Repair of household appliances and home and garden equipment	95.22.10	Repair services of household appliances and home and garden equipment
95.23	Repair of footwear and leather goods	95.23.10	Repair services of footwear and leather goods
95.24	Repair of furniture and home furnishing	95.24.10	Repair services of furniture and home furnishing
95.25	Repair of watches, clocks and jewellery	95.25.11	Repair services of watches and clocks
		95.25.12	Repair services of jewellery
95.29	Repair of other personal and household goods	95.29.11	Repair and alteration services of garment and household textile articles
		95.29.12	Repair services of bicycles
		95.29.13	Repair and maintenance services of musical instruments
		95.29.14	Repair and maintenance services of sports equipment
		95.29.19	Repair services of other personal and household goods n.e.c.

NAPCS Product List

Industry subject area	NAPCS code	Title
8112		Electronic and Precision Equipment Repair and Maintenance
	811212	Maintenance and repair services for communication and navigation equipment
	811214	Maintenance and repair services for consumer electronics, except computer hardware and peripheral equipment
	8112141	Maintenance and repair services for television
	8112142	Maintenance and repair services for home sound equipment
	8112149	Maintenance and repair services for other consumer electronics
8114		Personal and Household Goods Repair and Maintenance
	81141	Maintenance and repair services for personal and household goods
	811411	Maintenance and repair services for appliances and powered household equipment
	8114111	Maintenance and repair services for household-type lawn, garden, and snow removal equipment
	8114112	Maintenance and repair services for major household-type appliances
	8114119	Maintenance and repair services for other appliances and household equipment
	811412	Maintenance and repair services for household furniture
	811413	Maintenance, repair and alteration services for apparel, footwear, watches and jewelry
	8114131	Shoe repair services
	8114132	Maintenance and repair services for watches and jewelry
	8114133	Garment alteration services
	811414	Maintenance and repair services for recreational, sports, and fitness equipment, including recreational vehicles and musical instruments
	8114141	Maintenance and repair services for fishing and camping equipment
	8114142	Maintenance and repair services for water sports equipment
	8114143	Maintenance and repair services for personal firearms
	8114144	Maintenance and repair services for motorcycles
	8114145	Maintenance and repair services for bicycles
	8114146	Maintenance and repair services for non-powered boats and trailers
	8114147	Maintenance and repair services for powered watercraft and powered sports vehicles
	8114149	Maintenance and repair services for sporting, fitness and recreational equipment, nec.
	811419	Maintenance and repair services for personal and household goods, nec.

References:

Classifications:

UN International Standard Industrial Classification Rev.4

<http://unstats.un.org/unsd/cr/registry/isic-4.asp>

Statistical Classification of Economic Activities in the European Community (NACE Rev.2)

http://ec.europa.eu/eurostat/ramon/index.cfm?TargetUrl=DSP_PUB_WELC

North American Industry Classification (NAICS United States 2012)

<http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2012>

Central Product Classification (CPC) Version 2.

<http://unstats.un.org/unsd/cr/registry/cpc-2.asp>

Classification of Products by Activity (CPA) 2008

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=CPA_2008&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=HIERARCHIC

North American Product Classification (NAPCS)

<http://www.census.gov/eos/www/napcs/>

Mini-presentations:

Mini-presentation on Turnover/Output for Consumer and Household Goods Repair and Maintenance in Poland, Agnieszka Kaźmierczak, Agnieszka Matulska-Bachura, CSO Poland

http://www.voorburggroup.org/Documents/2012%20Warsaw/Papers/2023%20-%20Mini-presentation_on_Turnover_Consumer_and_Household_Goods_Repair_and_Maintenance.pdf

Turnover and Output Measurement for Repair of Computers and Personal Household Goods in Norway, Jakob Kalko, Statistics Norway

http://www.voorburggroup.org/Documents/2012%20Warsaw/Papers/2021%20-%20Turnover_minipaper_95_norway.pdf

Other:

Compilation Manual for an Index of Service Production, OECD 2007

<http://www.oecd.org/std/business-stats/37799074.pdf>

Handbook on Price and Volume Measures in National Accounts, Eurostat 2001

<http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-41-01-543--N-EN.pdf>

Computer and personal and household good repair statistics – NACE Rev.2, Statistics Explained, Eurostat

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Computer_and_personal_and_household_good_repair_statistics_-_NACE_Rev._2