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Turnover for Specialized design activities
(ISIC/NACE 7410)

Hungary

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1. INTRODUCTION

The main purpose of this paper is to present statistics on turnover data aggregated for Specialized design activities based on data available on the website of the Hungarian Central Statiscal Office (HCSO). Both annual and short term turnover data are important concerning the economic cycle, from which several other indicators could be derived, especially performance indicators at constant prices, such as real GDP and Index of Services Production, ISP.

In Hungary, the development of methodology for observation of price data with the aim to produce deflators for this industry started in September, 2013 by studying the market conditions. The knowledge about the structure of the total turnover facilities the selection of a cost-efficient sample and necessary consistency between turnover data and deflators.

Specialised design activities industry is segmented into four distingt areas: interior design, industrial design, other specialised design and design originals. Operations of service providers incorporate fashion design, clothing and fashion accessories, furniture design and other interior decoration, industrial processes and specifications, activities of graphic designers as well as services related to the personal or household goods.

In Hungary, this market is dominated by activities of micro-level business enterprices. Industry operators are usually small design firms or independent designers that specialise in one of the four segments. Products related to this market could be charecterised by unique and heterogenous nature and for this reason hardly comparable. Work of a designer is difficult to account for in the traditional framework. Reputation of a particular agency or a designer could be evaluated as one of the most important price determining factors.

In Hungarian Central Statistical Office (HCSO) the related turnover indicators are published at the division as well as at class level including data aggregated by employment size category.

2. MARKET CONDITIONS AND CONSTRAINTS

Description of the industry (7410 ISIC 4 / 7410 NACE 2)

As mentioned above, this market is dominated by micro-enterprises that focus their activity on business customers. Services are provided for domestic as well as for non-domestic clients, thus globalisation also affects the firms.

Regarding Other professional, scientific and technical activities, in 2011 the turnover increased in the European Community by 3.8%, while in Hungary by 7.8% compared to the year 2010.

In the year 2010 for special aggregates of activities, the shares of the main economic indicators – number of enterprises, turnover, value added and number of persons employed – compared to the total values are shown in the Table 1.

The rates of number of enterprises and persons employed in Hungary were slightly higher than in European Community (by 0.8 and 0.4 percentage points). The proportions of turnover and value added were quite the same in the year 2010.

The most important European countries in Specialized design activities industry are presented by Figure 1.

Table 1

Main economic indicators, 2010
Division M74: Other professional, scientific and technical activities compared to the total business
(Total business economy except financial and insurance activities)
European Union (aggregate changing according to the context)

| Division M74: Other professional, scientific and technical activities compared to the total business economy (Total business economy except financial and insurance activities)	European Union (27 countries)			Hungary		
	Total business economy	Other professional, scientific and technical activities	%	Total business economy	Other professional, scientific and technical activities	%
Number of enterprises	21 801 180	561 739	**2,6**	554 886	18 709	**3,4**
Turnover or gross premiums written (mio EUR)	23 720 447	77 796	**0,3**	247 902	731	**0,3**
Value added at factor cost (mio EUR)	5 946 968	35 946	**0,6**	46 158	241	**0,5**
Number of persons employed (100 persons)	1 327 980	9 688	**0,7**	24 373	264	**1,1**

Source: Eurostat database (values in italic are estimates)

Figure 1

Other professional, scientific and technical activities

The turnover share of European countries compared to the total community turnover

EU-27 Turnover=100,0
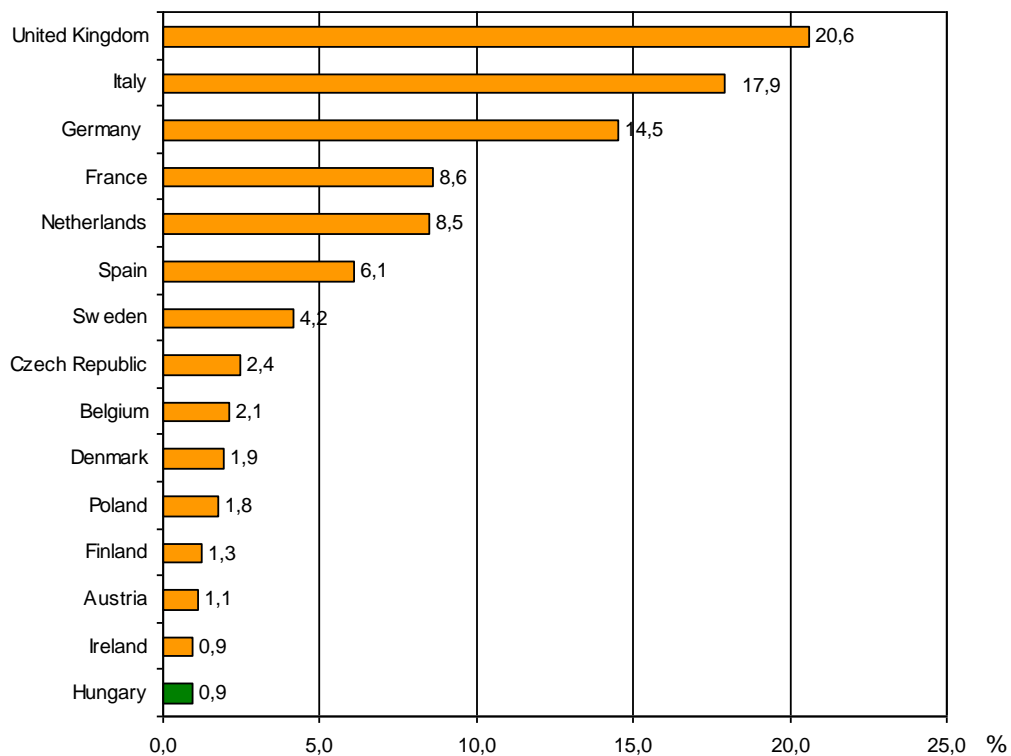
Eurostat database

Concerning the experimental data collection on services producer prices for division M74, it has been necessary to analyse the structure of the total turnover available via Hungarian Business Register, as well as the current statistical and administrative information systems of Hungarian service enterprises to select the market leading businesses – with the aim to receive the key factors influencing the market as well as prices.

The operations of this division are highly dominated by Other professional, scientific and technical activities n.e.c. with almost 80% from the total turnover of this division. The other three areas including Specialized design activities have less importance concerning the performance indicators (see Figure 2).

Figure 2

Net Turnover Structure in Hungary by the SBS (industry-based) statistics
Other professional, scientific and technical activities
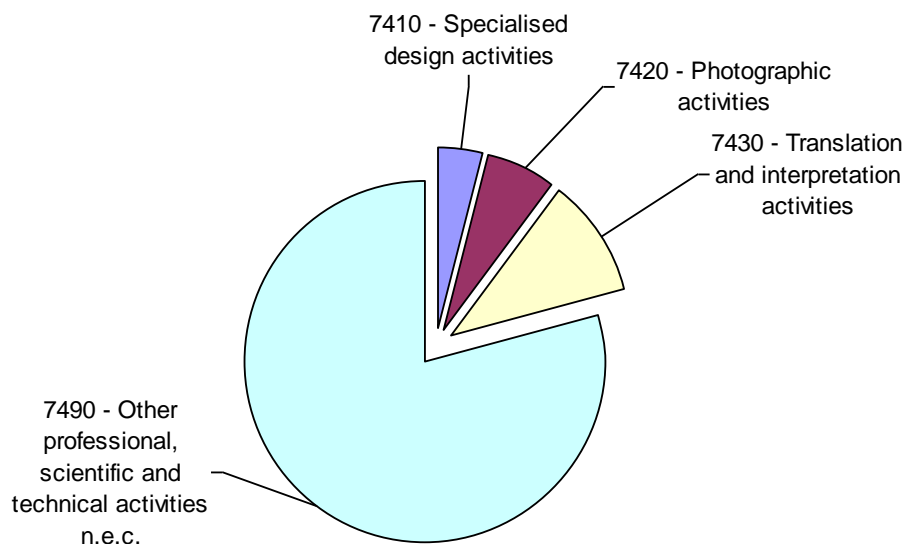
3. STANDARD CLASSIFICATION STRUCTURE AND DETAILS

Hungary – for annual structural business statistics (SBS) and short term (STS) statistics, concerning industrial products and services – applies harmonized national versions of the following main economic classification systems:

➢ **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).

The structure of the above mentioned classifications is the following:

CPA 2008 is fully harmonized with NACE Rev.2. Namely, from the 6 digits (XXXXYY) the first four are the same as those for the NACE Rev. 2.

Within these statistics the hierarchical structure of the CPA is appropriate to coordinate the computation steps of the higher level indicators. This coordination ensures to create details more homogenous from the lowest level of CPA.

4. EVALUATION OF STANDARDS

Hungarian national versions of the classification systems NACE Rev 2 and CPA 2008 are fully harmonized with the European classification systems.

5. DEFINICION OF THE SERVICE

Industry Classification

According to the European classifications (NACE Rev.2, CPA 2008), Specialized design activities industry is one of the four classes of the division Other professional, scientific and technical activities (M74), which is part of the section Professional, scientific and technical activities (M, see Annex 1).

The different services of specialized design activities could be summarised as design operations related to textiles, wearing apparel, shoes, jewellery, furniture and other interior decoration and other fashion goods as well as other personal or household goods. Also included are industrial design, i.e. creating and developing designs and specifications that optimize the use, value and appearance of products, the determination of the materials, mechanism, shape, colour and surface finishes of the product, taking into consideration human characteristics and needs, safety, market appeal in distribution, use and maintenance activities as well as operations of graphic designers and interior decorators.

Product Classification

The CPA 2008 (Statistical Classification of Products by Activity in the European Economic Community) – also used in Hungary – includes 4 subcategories with a direct link to the NACE industry classification (see above point 3.).

74.10 Specialized design services

74.10.11 Interior design services;

74.10.12 Industrial design services;

74.10.19 Other specialized design services;

74.10.20 Design originals.

In Hungary, according to the annual SBS statistics, this industry is dominated by micro-level companies (with less than 10 employees), which share was 77% in 2011, however the turnover proportion of these companies was 87% compared to the total class level data.

Turnover is defined as the total net sales value. Value added tax is not included, price supplements are accounted for.

The time-series of SBS statistics – which could be used as weights for computation of price indices – are available on the HSCO's online database at four digit level as well as at higher aggregated level.

The production of short-term statistics indicators for specialized design services is also compulsory for members of European Union (but data are included at a division level indicator). However, in Hungary, these data are available at class level (e.g. for experimental calculation of an index of services production, ISP).

5.1. Size of the industry in Hungary

The main macroeconomic indicators, according to the annual SBS statistics at division level are shown in the Table 2.

Macroeconomic indicators for Hungary by employment category

In Hungary, concerning the number of population, operations related to the Other professional, scientific and technical activities are dominated by micro-level companies, which share is close to 100%. The proportions of all other macroeconomic indicators are the highest also in this category.

Table 2

NACE_Rev. 2: Other professional, scientific and technical activities, M74

Macroeconomic indicators, 2010
Hungary (aggregate changing according to the context)

SIZE_EMP/INDIC_SB	Number of enterprises		Turnover or gross premiums written		Value added at factor cost		Number of persons employed	
		%	mio EUR	%	mio EUR	%	persons	%
Total	**18 709**	**100,0**	**731**	**100,0**	**241**	**100,0**	**26 377**	**100,0**
250 persons employed or more								
From 50 to 249 persons employed	*11*	*0,1*	*146*	*20,0*	*61*	*25,3*	*1 875*	*7,1*
From 20 to 49 persons employed	44	**0,2**	47	**6,4**	22	**9,2**	1 249	**4,7**
From 10 to 19 persons employed	130	**0,7**	66	**9,0**	19	**7,9**	1 693	**6,4**
From 0 to 9 persons employed	18 524	**99,0**	472	**64,6**	139	**57,6**	21 560	**81,7**

Source: Eurostat database (values in italic are estimates)

The number of active enterprises by staff categories is presented in Table 3.

Table 3

Number of active enterprises
Total Staff categories, Total NACE Rev. 2; 7410

Staff categories	Period of time			
	2011. year	%	2012. year	%
Total Staff categories	1229		1216	
Unknown and 0				
1-4	1198	97,5	1185	97,5
5-9	22	1,8	22	1,8
10-19	8	0,7	7	0,6
20-49				
50-249	1	0,1	2	0,2
250-x				

Source: website of the HCSO

Based on SBS data, between 2009-2011 enterprises with less than 10 employees accounted more than 70% of the total turnover, in 2011 this ratio was even higher, of 87% (see Table 4 and Table 5).

Table 4

Annual Turnover by size classes

Enterprises classified in national economic sections B to J, L to N, P to S
741= Specialised design activities, 2011 (thousand HUF)

Size class	Period of time							
	2008. year	%	2009. year	%	2010. year	%	2011. year	%
Total Size class	7354934	100	9200975	100	9481310	100	9207673	100
1-9 employees	4621285	63	6981754	76	6963495	73	7992968	87
10 to 19 employees	594344	8	1174921	13	982153	14	913587	11
20 to 49 employees	2139305	29		11				
50 to 249 employees						13		2
250+ employees								

Table 5

Annual structural indicators by size class, 2011

Enterprises classified in national economic sections B to J, L to N, P to S
741= Specialized design activities

Size class	Accounts					
	Number of employees (capita)	%	Turnover (thousand HUF)	%	Value-added at factor cost (thousand HUF)	%
Total Size class	855	100	9207673	100	2687889	100
1-9 employees	655	76,6	7992968	86,8	2189835	81,5
10 to 19 employees	94	14,4	913587	11,4	339698	15,5
20 to 49 employees						
50 to 249 employees						
250 and more employees						

It is worth nothing that approximately 97% of the active enterprises is operating in the size category of 1-9, however, the number of employees per enterprise is only about 2 people.

6. SPECIAL CONDITIONS AND RESTRICTIONS

6.1. Scope of the Survey

Specialized design activities in Hungary, regarding turnover data as well as other basic macroeconomic indicators are fully covered. Turnover is defined as the total net sales value. Value added tax is not included, price supplements are accounted for.

Turnover structure

Beside the total turnover the turnover structure according to the various indicators is also important and for special purposes may be necessary.

The structure of the total yearly turnover (B-All[1], business to all) could be described as follows (statistics with limited coverage and quality):

- **Main activity + secondary activities** – based on data of enterprises with more than 19 employees;
- **Domestic + non-domestic/export** (by residency) – based on data of enterprises performing dual accounting;
- **data from survey + administrative data** (e.g. for enterprises with less than 5 employees) **+ imputation of data** (concerning missing data).

It should be noted that the share of households for this industry is limited.

6.2. Record keeping practice

In Hungary, the data collection is based on a compulsory statistical survey. Combination of survey data and administrative data is used as well. Missing data are typically estimated by using administrative (mainly tax) data to reduce response burden. Turnover data are collected annually or on a quarterly basis. Annually survey is carried out within the frame of SBS, quarterly within the frame of STS statistics.

The data collection media is questionnaire by electronic data collection. In Hungarian Statistical Office questionnaires have been developed recently. Turnover survey is sampled usually under standard sampling routines. The main source of information is national Business Register. Reporting units are legal units considered as enterprises. In Hungary enterprises having 50 and more persons employed are observed by a full scope survey, while enterprises with 5-49 persons employed are observed by a sample survey. The selection of the sample from the sample frame occurs through random stratified sampling. The data for enterprises having less than 5 persons employed are estimated from the tax data of the previous two years. The observed sample is revised in each year.

7. QUALITY ADJUSTMENT AND METHODOLOGY

In Hungary, concerning the overall methodology, recommendations of international organizations and guidelines are taken into account. The missing data are estimated using administrative data sources, however, in most of cases they are not available or their quality is limited. Applying of data from other statistics and imputation of averages of similar or higher level categories is also common.

During the validation process, it is essential to check the completeness of quantity and value data as well as consistency between related statistics. To maintain

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[1] B2All: business to All, B2B : (business to business), B2C (business to consumer)

the quality of the data it is proposed to contact companies regarding any significant data changes.

8. EVALUATION OF COMPARABILITY FOR VALUE MEASURES

Inconsistency between turnover and price data could be expressed as follows:

- Different **deadlines** for dissemination of results (Turnover, SPPI, GDP and future ISP)
- Limited quality of the **structure of the total turnover/output** (by products: main activity, secondary activities; employment size: sample, other data sources; type of client: B-B,B-All; by residency: domestic, non-domestic client);

9. PRICES, EXPERIMENTAL SURVEY

Based on analyses of the correspondence table between CPA - COICOP (with limited coverage), this industry is dominated by business customers (see Annex 3). Therefore, in Hungary for the class 7410 a B2B SPPI could be proposed as proxy for a B2All SPPI.

9.1. Record keeping practice, SPPI

In Hungary the experimental data collection is based on a statistical survey. Price data has been collected quarterly, within the frame of the regular SPPI survey since Q1 of 2014. The data collection media is questionnaire by electronic data collection. The main source of information is national Business Register. Reporting units are legal units considered as enterprises.

A reduced sample, census of units was taken above a size threshold (with the main activity Specialised design activities). However, enterprises classified to different industries may be also selected for inclusion in the survey of this industry, if they generate a significant turnover share from the secondary activity related to the operations of Specialised design activities.

Sample design

In Hungary generally B2B prices are collected directly from the service providers. General questionnaires are available for respondents on the website of HCSO at the end of the reference quarter. New respondents are asked to complete a quite open general questionnaire specific to the observed Specialised design activities.

A "customized" questionnaire for each respondent is under development with the help of telephone or face to face interviews. As a result, pre-printed questionnaires will be used in the future regular data collection. In order to follow the methodological development and ensure the quality of reported data, follow-up calls are made (for example on how to deal with new or replacement products, new market conditions). Respondents are required to provide an average price over the reference period for each specified service transaction.

In Hungary, according to the general framework of SPPI observation system, domestic prices of services (sold to the resident customers) and export prices of services (sold to the non-resident customers) are collected on separate pages. Turnover data are also collected for the previous year at CPA 4 and 6 digit-level on the SPPI questionnaire.

9.2. Pricing unit of measure, SPPI

In Hungary for the selected price representative items as the pricing unit of measure, one design, one hour or one occasion is considered.

Recommended pricing methods for Specialized design activities are as follows:

- Model pricing for unique services (for design services);
- Pricing method based on working time (e.g. hourly or daily charge-out rates for design and consulting services).

Concerning the experimental survey, we have received data from respondents for two reference periods Q4/2013 and Q1/2014 for the next representative items:

- Company's brand design;
- Packing design on products;   - graphic design
- Notepaper/name card/logo design.
- Typography and operator services;   - graphic design, for
- 3D design.   - advertising area
- Concept design;
- Decoration works;   - interior decorations
- Design of exhibition stands;
- Furniture design for shops;   - fashion design
- Furniture design for furniture factory   - industrial design

It is worth to note, that prices may be highly influenced by the reputation of the company or an individual designer providing these services.

9.3. Weighting and aggregation, SPPI

Hungary employs two sources of turnover data for weighting. For aggregation of company-level and higher-level sub-indices of "big" companies "product-based" turnover data one year prior to the actual year collected by the SPPI survey are used. For industry-based SPPI, turnover data from two years prior is obtained at the 4-digit and higher levels from the SBS survey.

Lower (CPA 6-digit level) indices for the Specialized design activities are first calculated as a weighted arithmetical average or as un-weighted geometrical means. Next, the company's class level (CPA 4-digit) aggregates are computed as a weighted arithmetical average, continuing by calculation of national-level indices.

9.4. Quality adjustment and methodology, SPPI

In Hungary, the main used practices are the overlapping method, applying prices of previous periods, imputation of averages of similar categories or higher level aggregates as well as comparable adjustment – taking into account the nature of the service and the relationship between statistical office and data suppliers.

Further possibility to ensure appropriate quality of reported prices could be to compare product-level average price of an enterprise with the average price at the national level.

10. SUMMARY

Specialized design activities are dominated by operations of micro-level business enterprices, in most of cases by activities of independent designers. Services provided could be charecterised by unique, heterogenous and for this reason hardly comparable products. Work of a designer is difficult to account for in the traditional framework. Prices could by higly influenced among others by the reputation of a particular agency or a designer.

This market is also affected by globalization. To produce comparable macro-economic indicators at word level, the development of methodology in order to handle export services would be necessary in the future. It would be helpful to establish close cooperation between statisticians and data suppliers, as well as good contacts between experts to exchange practices.

The main issues concerning the development of the turnover and price data – to ensure the consistency between related statistical indicators – could be expressed as follows:

- **Consistency between turnover and price data** (different deadlines for dissemination of results and limited quality of the structure of the total turnover/output);
- **Consistency in the valuation of the domestic vs. non-domestic market** by residency of the client).

ANNEX 1: Classifications for M7410

NACE Rev. 2

Statistical classification of economic activities in the European Community

M Professional, scientific and technical activities

74 Other professional, scientific and technical services

74.1 Specialized design activities

74.10 Specialized design activities

This class includes:

- fashion design related to textiles, wearing apparel, shoes, jewelry, furniture and other interior decoration and other fashion goods as well as other personal or household goods
- industrial design, i.e. creating and developing designs and specifications that optimize the use, value and appearance of products, including the determination of the materials, mechanism, shape, color and surface finishes of the product, taking into consideration human characteristics and needs, safety, market appeal in distribution, use and maintenance
- activities of graphic designers
- activities of interior decorators

This class excludes:

- design and programming of web pages, see 62.01
- architectural design, see 71.11
- engineering design, i.e. applying physical laws and principles of engineering in the design of machines, materials, instruments, structures, processes and systems, see 71.12

CPA 2008

Statistical Classification of Products by Activity in the European Economic Community

74 Other professional, scientific and technical services

74.1 Specialized design services

74.10 Specialized design services

74.10.1 Interior, industrial and other specialized design services

74.10.11 Interior design services Detail

74.10.11 Interior design services Detail

74.10.12 Industrial design services Detail

74.10.19 Other specialized design services Detail

74.10.2 Design originals

74.10.20 Design originals Detail

ANNEX 2: References – General methodological information

Handbooks

- Essential SNA: Building the basics, Eurostat, 2013
  http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-13-003/EN/KS-RA-13-003-EN.PDF;
- System of National Accounts 2008 (European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank)
  http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf ;
- Methodology of short-term business statistics interpretation and guidelines, European Communities, 2006
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- Handbook on price and volume measures in national accounts, European Communities, 2001
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- Methodological Guide for Developing Producer Price Indices For Services, OECD-Eurostat, 2005
  http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-BG-06-003/EN/KS-BG-06-003-EN.PDF

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International studies

- Business economy by sector - NACE Rev. 2, Eurostat, Statistics Explained, 2013
  http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Professional,_scientific_and_technical_activity_statistics_-_NACE_Rev._2

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  http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Professional,_scientific_and_technical_activity_statistics_-_NACE_Rev._2

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ANNEX 3: Possible areas of using CPIs as proxies for SPPIs

Correspondence table between CPA 2008 - COICOP 1999 (with limited coverage)
CPA 2008: M74

CPA 2008	Name of the service	COICOP 1999	Name of the service	B2B			B2C			B2All			B2B + B2C
				SPPI	CPI	B2All	SPPI	CPI	B2All	SPPI	CPI	B2All	
M74	**Other professional, scientific and technical services**												↳
7410	Specialized design services	04.3.2	Services for the maintenance and repair of the dwelling	↳			↳			↳			
7420	Photographic services	09.4.2	Cultural services	↳				↳					↳
7430	Translation and interpretation services	12.7.0	Other services n.e.c.	↳			↳			↳			
7490	Other professional, scientific and technical services n.e.c.	12.7.0	Other services n.e.c.	↳			↳			↳			