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Revisited Sector Paper on:

ISIC 6920

**Accounting, bookkeeping and auditing activities; tax
consultancy**

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1.0 Introduction

For the 16th Voorburg Group meeting in Örebro, Sweden, in year 2001, a sector paper was written regarding price statistics on accounting services¹. The authors of this paper were François Bordé and Gaëtan Garneau from Statistics Canada. Experiences from Australia, Canada, France, Japan, New Zealand, The United Kingdom and The United States were collected and presented. Now, in year 2008, more experience has been gathered as the surveys have been conducted for seven more years, and this paper aims at supplementing the original sector paper with these new experiences. The above mentioned countries have been contacted and have provided their view on the industry, strengths and weaknesses of the chosen methodology and other circumstances that affect the work of conducting price indices for the field of accounting services. In addition, a section regarding turnover statistics has been added. The notation in this paper corresponds to the notation in the “Thesaurus of Producer Price Indices for Services (SPPI’s)”².

The paper is divided into three sections; the first section presents the industry classification according to ISIC, NAICS, ANZSIC and NACE and complementing product classifications; the second section covers the findings on turnover statistics; and the final section presents the findings on price statistics. In the two last sections (regarding turnover and price statistics) some general considerations on the various methods and trade-offs between these are presented. The paper ends with an appendix providing an overview of the progress of turnover and price data collection of the accounting services industry in sixteen countries.

2.0 Classification

The various industry and product classification systems have undergone minor as well as major revisions during the last years. This has not only led to an extensive classification of services but also to improvements regarding the comparability of industry and product statistics around the world. Some differences in definitions between countries still remain however and these are important to identify.

The main industrial classifications considered in this paper are the International Standard Industrial Classification (ISIC Rev.4), the Statistical Classification of Economic Activities in the European Community (NACE Rev.2), the Australian and New Zealand Standard Industrial Classification (ANZSIC 2006) and the North American Industry Classification System (NAICS v.2007 US).

The three main product classifications considered are the Central Product Classification, CPC Ver.2 (draft), the Classification of Products by Activity, CPA 2008, and the North American Product Classification System, NAPCS, provisional version.

2.1 Industry classification

The International Standard Industrial Classification (ISIC Rev.4) is the international reference classification of economic activities, developed by the UN. Under section M - Professional, scientific and technological activities, division 69 - Legal and accounting activities, the group 602 - Accounting, bookkeeping and auditing activities; tax consultancy contains class *6920 Accounting, bookkeeping and auditing activities; tax consultancy*. This class includes several activities, such as: recording of

¹ Bordé F., Garneau G., *A Producer Price Index for Accounting Services*, 16th Voorburg Group meeting, September 2001

² Kennesey A. et al, *Thesaurus of Producer Price Indices for Services (SPPI's)*, 22nd Voorburg Group meeting, September 2007

commercial transactions from businesses or others, preparation or auditing of financial accounts, examination of accounts and certification of their accuracy, preparation of personal and business income tax returns, advisory activities and representation on behalf of clients before tax authorities.

The NACE Rev.2 is a derived classification from ISIC and used by European Union Member States. The NACE class 69.20 *Accounting, bookkeeping and auditing activities; tax consultancy* corresponds to the ISIC 6920 and at this level of detail the NACE Rev.2 covers and defines virtually the same activities as the ISIC Rev.4.

Also the Australian and New Zealand Standard Industrial Classification (ANZSIC 2006), class 6932 *Accounting Services*, consists of similar defined services as the ISIC Rev.4 and NACE Rev. 2. ANZSIC includes units mainly engaged in providing services such as auditing of accounting records, preparing financial statements, preparing tax returns and bookkeeping.

The NAICS (v.2007 US) class 5412 *Accounting, Tax Preparation, Bookkeeping, and Payroll activities* comprises establishments primarily engaged in providing services, such as auditing of accounting records, designing accounting systems, preparing financial statements, developing budgets, preparing tax returns, processing payrolls, bookkeeping, and billing. The NAICS identifies separate industries for *Offices of certified public accountants, Tax preparation services, Payroll services and Other accounting services*.

When comparing the four industry classifications the conclusion is that they broadly cover and define the same activities within accounting services. Some differences are however evident. The NAICS includes services such as payroll processing and billing, whereas the ANZSIC classify these services under another class. Also ISIC Rev. 4 and NACE Rev. 2 have bill collection excluded from accounting services.³ Furthermore the NAICS includes services such as designing of accounting systems, which ISIC Rev. 4 as well as NACE Rev. 2 does not place under accounting services but under other classes.

Table A.2 in the appendix provides a general overview along with industry classification details.

2.2 Product Classification

The Central Product Classification, CPC Ver.2, developed by the UN, identifies five separate classes and seven sub-classes for accounting services:

- 8221 – Financial auditing services,
 - 82210 – Financial auditing services
- 8222 – Accounting and bookkeeping services,
 - 82221 – Accounting services
 - 82222 – Bookkeeping services
 - 82223 – Payroll services
- 8231 – Corporate tax consulting and preparation services,
 - 82310 – Corporate tax consulting and preparation services
- 8232 – Individual tax preparation and planning services,
 - 82320 – Individual tax preparation and planning services
- 8240 – Insolvency and receivership services
 - 82400 – Insolvency and receivership services

³ Even though ISIC Rev.4 primarily places bill collection under class 8291 *Activities of collection agencies and credit bureaus*, our understanding is that if any accounting or bookkeeping is involved, ISIC Rev.4 would, like the NAICS, treat the activity as an accounting and bookkeeping activity.

The Classification of Products by Activity, CPA 2008, the European version of CPC, follows virtually the same breakdown and definitions for accounting services as the CPC Ver.2.

The North American Product Classification System, NAPCS, has a somewhat other structure and coverage than the CPC and the CPA. Under group *5412 Assurance, bookkeeping, compilation, payroll, taxation and related services*, the NAPCS includes five sub-groups, under which about 60 products at a more detailed level can be identified. In difference to the CPC and the CPA, the NAPCS classifies computerized accounting systems services as well as management consulting services under group 5412, whereas the other two product classifications classify these services under other groups.

Table A.3 in the appendix provides a general overview along with product classification details.

3.0 Turnover Statistics

The Voorburg Group has not previously addressed turnover practices in the accounting services industry. This section presents the turnover practices for the accounting services industry in four countries.

Most countries use a combination of methods for collecting turnover data, including surveys, census and administrative data. In Sweden, turnover data for the accounting services industry are collected annually as well as monthly. Both surveys are mandatory. Using a PPS sample, turnover data are collected yearly in the Structural Business Survey (SBS) at a more detailed level than available in the CPC. Detailed information on the characteristics of the business, such as revenues, expenses, assets, type of client etc. is collected. The total turnover in the industry is estimated with administrative data from the Swedish Tax Agency and is based on all establishments. The information from the SBS survey, such as shares on different products and clients in the industry, is used to make the breakdown on turnover on products, clients etc.

The monthly turnover collection is a sample survey which aims at capturing the turnover trends in the industry. The establishments are stratified according to turnover and number of employees, based on data from the Swedish Tax Agency. Establishments with a total turnover of less than 200 000 SEK (approximately 21,000 Euro) are not included in the monthly survey. The monthly industry estimates for the accounting services are included as part of the larger industry *Legal and Accounting Services*. Turnover statistics and Index of service production (ISP) are published monthly, approximately 50 days after the end of the measurement period.

In the United States, turnover data are collected each five years in the Economic Census. Industry and product level data for all of the accounting industries are collected and the details exceed the details available in the CPC for this area. Economic Census data are published in preliminary approximately 16 months after the end of the reference year.

Turnover data are also estimated annually with the Services Annual Survey (SAS) and quarterly with the Quarterly Services Survey (QSS). SAS data are estimates based on a sample survey that is updated every five years with the results benchmarked to the Economic Census. The sampling frame is the Business Register used in the Economic Census and units are stratified by size. The QSS data are also estimates based on a sample survey benchmarked to the annual data. The QSS provides revenue estimates at the NAICS industry group (equivalent to ISIC 6920) as well as breakouts by class of customer. The sampling frame for the QSS is the larger sample used for the SAS. The annual estimates

are normally published within 12 months of the survey year end data and quarterly data are published on a one quarter lag.

New Zealand collects output data for the accounting services industry solely on an annual basis in the Annual Enterprise Survey (AES). The AES survey is mandatory and provides data at a detailed level. The establishments to be sampled are randomly selected, and are stratified according to turnover and rolling mean employment, based on figures from the Inland Revenue Department (IRD) tax register. Establishments with total annual Goods and services tax (GST) sales or expenses of less than \$30,000NZD (approximately 15,000 Euro) are not included in the survey. Annual statistics are published with a lag of approximately three years. Plans are underway which will reduce this time lag to 2½ years.

In Canada, turnover data are collected annually in the Annual Survey of Accounting Services at a detailed level. The establishments are randomly selected and the sample is stratified by industry, geographical region and size. The size variable is mainly based on administrative data collected by the Canadian Tax Agency. The establishments are obligated to provide information. Businesses with revenues less than \$50,000 (approximately 31,000 Euro) are not eligible for sample selection but are included in industry estimates through the use of administrative data. Annual turnover statistics are published with a lag of approximately 15 months.

Table 3.0 provides a brief summary of some of the advantages and disadvantages of different turnover practises.

Table 3.0: Options for Developing Turnover Statistics

Category	Data source and method of collection	Level of detail collected	Frequency	Advantages	Disadvantages
Best	One or many surveys. May include Economic Census.	Industry detail (ISIC, NACE, NAICS, ANZSIC) and Product detail (CPC, NAPCS, CPA)	Annual and sub-annual (quarterly or monthly)	<ul style="list-style-type: none"> - Turnover data on a detailed level can be collected - Timely data 	<ul style="list-style-type: none"> - Most expensive - Large response burden
Good	One or many surveys	Industry detail <u>only</u>	Annual and sub-annual (quarterly or monthly)	<ul style="list-style-type: none"> - Turnover data on a detailed level can be collected - Timely data 	<ul style="list-style-type: none"> - Expensive - Large response burden - The national accounts' need of product detail may not be fulfilled
Minimum	Administrative data (tax data, industry association data etc.)	Industry detail <u>only</u>	Annual	<ul style="list-style-type: none"> - Least expensive - Little or no response burden - Large coverage 	<ul style="list-style-type: none"> - Can be less precise in terms of level of detail - Least timely

3.1 Other considerations

For national accounts purposes it is essential that there is coherence and consistency between the concepts and definitions used to measure and collect turnover data and price statistics. The national accounts may not be the only user of turnover data, however a very important one, and a good communication between the national accounts and the primary statistical sources is vital to ensure that the needs of national accounts, e.g. when it comes to the level of product detail, are met. In Sweden for instance, an increased cooperation between the national accounts and the turnover statistics sources has resulted in the collection of data well suited to the needs of the national accounts. The turnover surveys provide industry revenue broken down by a large number of products in concordance with the national accounts' need for product detail. It is thereby possible to measure an industry's revenue from its primary as well as from a set of its secondary activities.

4.0 Service Producer Price Index (SPPI)

The accounting firms deliver a wide range of services within accounting, auditing, tax consultancy and bookkeeping. When calculating price indices for the accounting services industry there are mainly three types of pricing methods used; actual price of repeated services/contract pricing, pricing based on working time and model pricing.⁴

The method of collecting **actual price of repeated services/contract pricing** gives an accurate price index that is representative for the industry and is hence regarded as the best practise. The problem that many statistical offices have faced is that it is hard to find a representative service that is repeated frequently; the accountants work in an environment that is constantly changing with clients that are seldom identical. Even a long-lasting contract with the same client is bound to change as the client's turnover grows or diminishes, the client changes its business structure or face new legal claims. Unique services such as for example the handling of bankruptcy are impossible to capture with this pricing methods.

A close contact with the respondent is necessary when using this pricing method and it is important to be prepared to adjust for quality changes in the service being measured. Canada is using contract pricing and the respondents are asked to report how much of the development is actually a quality change which leaves the remaining part to be the price change. The response burden is relatively high in the initiation of the survey when contracts are to be selected for the first time, but is decreasing as time goes.

Japan also uses the method of collecting actual price of repeated services/contract pricing. When the service is changed the production cost method is used as quality adjustment method⁵. As in Canada, the respondents are asked to specify the part of the price change attributable to quality. The quantity adjustment method is used when for example only the time spent on the service is changed. The difference in price per time-based unit is considered as the price change.

Pricing based on working time is used when it is hard to specify the service finally provided. Instead the time spent on providing the service is used as a proxy. The service is assumed to correspond directly to the chargeable hours actually worked for the client.

⁴ For a more detailed description of pricing methods, see "Methodological Guide for Developing Producer Price Indices for Services", European Communities/OECD, ed. 2006

⁵ For a more detailed description of quality adjustment methods, see "Methodological Guide for Developing Producer Price Indices for Services", European Communities/OECD, ed. 2006

A problem with the method is that changes in productivity are not reflected in the measures. Looking from a deflation perspective, if the price index is equal to the development of hourly rates, the resulting volume measure is the number of working hours and not the volume of the service itself. This makes it a less suitable method in industries where the technological development is fast. Within the accounting services industry there has been a rapid change of productivity during the last 10-15 years as computers and new accounting programs have been developed, and this productivity change is likely to continue. Hence, pricing based on working time can not be considered best practise in this industry. When calculating price indices for accounting services it is common to divide the staff into different categories by work experience and field of expertise. In this way the quality is to some degree held constant, but the productivity change within each category is still not considered.

The advantage of the method is that the price is easy to observe for the respondents and as a result the response burden is kept low. It is not uncommon that the data already are produced in the establishments' accounting systems. This method also allows unique services to be captured in the price index.

In year 2001, when the original sector paper was written, Australia used model pricing mixed with pricing based on working time to capture the price movement in this industry. Today only realised charge out rates is used. Every form is individually tailored to suit each respondent and the rates are split into categories for the different types of services within the firm, for example tax, audit, assurance and advisory. A similar method is used in Sweden, New Zealand and France. When using this method it is important to keep an eye on the development of the price index. Improvements in the working process that make the accountants more efficient, leading to a higher hourly rate, should not be considered as a price change. The sample size for the countries using this method varies. Sweden and New Zealand both have around 50 establishments in the sample while France has around 95.

During 2008 Statistic Sweden has made an attempt of changing pricing method for the accounting services industry. However, the majority of the establishments in the industry turned out to be reluctant to the change since it would increase their workload. The charge out rates method is already implemented and coordinated with the establishments' accounting systems. As the accountants are very diligent to answer and the response rate is very high it is important to maintain a good cooperation with the industry. Hence, it was decided that the main pricing method should remain time-based. However, a few of the largest firms will also make an attempt of providing the average prices for a couple of well specified services (actual price of repeated services).

Model pricing is used when it is hard to find representative services that are frequently repeated. Instead a fictitious service is being specified and the respondent is asked to make an estimation of what the price would have been if the service had actually been provided. When making the estimation it is important that the respondent takes labour costs, overheads and gross profit margin into account. As the labour costs are being recalculated each period, productivity is being considered which makes this a better method than the previous mentioned time-based method. A drawback with the model pricing method is that the workload is heavy for the respondent and that close contact is needed with the respondent. It is important to update the models so that they remain representative for the responding establishment.

Model pricing is the main pricing method in the United States for this industry. The model's transaction price includes labour rates multiplied with the numbers of hours worked by each individual involved in the project plus any additional non-labour fees charged. This gives a price index that is accurate and representative. The greatest challenge is to retain cooperation from the sampled establishments. As the establishments try to maximize the amount of time that they are billing to clients the model is kept as simple as possible.

4.1 Main issues with the measurement of price indices

One of the main issues is to keep up a good relation with the responding establishments. The industry of accounting services is characterized by pressured time schedules and an aim to maximize the billable hours spent with clients. Too complicated and time consuming pricing methods, like model pricing might be, may have a negative affect on the establishments' will to cooperate and lead to lower reply frequencies and arbitrary answers.

On the other hand it is essential to receive useful information that is sufficient for the purposes of SPPI's. Too fast and easy methods may lead to a biased price index, like time-based methods might do. It is essential to be aware of the chosen method's shortcomings and to be prepared to adjust for these.

Another determining issue, when it comes to selecting pricing method, is the available resources at the statistical office. Some pricing methods, like model pricing, is more demanding for the statisticians, in time as well as in knowledge. To have a model that does not consider productivity changes may be no better than using pricing based on working time. Instead of choosing a less demanding pricing method than model pricing, the sample size could be kept down and more time could be spent on each respondent. Sources of error stemming from a too small sample might be insignificant compared to other sources of error.

Table 4.0: Choices for Developing SPPI Statistics

Category	Pricing method	Data type in the survey and frequency	Quality and Accuracy	Cost
Best	Observed transaction prices. Prices of repeated services or Contract pricing	Data are based on real transaction prices	Advantages: Real transaction prices give an accurate price index that is representative for the industry Disadvantages: Hard to find and specify repeatable services	Relatively high. Much work is needed to maintain constant quality. If contract pricing is used a big sample is valuable.
Good	Model Pricing	Expert estimate. The data are fictitious prices estimated by the respondent	Advantages: The quality of the service is held constant Disadvantages: Time consuming for the respondent	High. A good knowledge about the industry is essential.
Minimum	Time-based methods	Unit values or list prices. The price for the time spent on the service is used as a proxy for the real price	Advantages: Easy and fast for the establishments. The information is often already available in their accountings systems Disadvantages: Productivity changes are not accounted for.	Low.

Appendix

A.0 Overview of International Progress

Before the 23rd Voorburg Group meeting in Aguascalientes, Mexico, a request for country progress reports for a selected group of industries, including the accounting services industry, was sent out to those countries that will attend the meeting. Countries were asked to provide information on their progress on turnover and price data collection and on the alignment of their turnover and price data. Answers were received for sixteen countries and the result is summarized in table A.1 below.

Table A.1: Summary Results of Voorburg Group Survey, 2008

Category	Number of Countries	Percent
1. Countries responding	16	100
2. SPPI detail <i>currently</i> available is greater than or equal to the CPC detail	4	25
3. SPPI detail <i>soon to be available</i> will be greater than or equal to the CPC detail	0	0
4. Turnover detail <i>currently</i> available is greater than or equal to the CPC detail	7	44
5. Turnover <i>soon to be available</i> will be greater than or equal to the CPC detail	1	6
6. Industry-level prices calculated	13	81
7. Industry-level turnover collected	11	69
8. Detailed turnover and prices well aligned	1	6
9. Detailed turnover and prices well aligned <i>soon</i>	2	13
10. Industry-level turnover and prices aligned	5	31
11. Industry-level turnover and prices aligned <i>soon</i>	5	31
12. Other-no industry coverage for prices and/or turnover	2	13

Of the sixteen countries who responded, thirteen calculate price indices (81%) and eleven collect turnover data (69%) on industry level for the accounting services industry. Regarding the level of detail, four countries produce SPPIs at a level of detail greater than or equal to the CPC. Eight countries reported that the turnover details collected are greater, or would soon be greater than or equal to the details available in the CPC for this area.

Three countries reported that they collect, or will soon be collecting, detailed and well-aligned turnover and price data. Ten countries reported that their industry-level turnover and price data are, or will soon be, aligned.

Table A.2: Overview of International Industry Classification

Classifications				
	<i>ISIC Rev.4 6920 - Accounting, bookkeeping and auditing activities; tax consultancy⁶</i>	<i>NAICS v.2007 US, 5412 - Accounting, Tax Preparation, Bookkeeping, and Payroll Services⁷</i>	<i>ANZSIC 2006, 6932- Accounting Services⁸</i>	<i>NACE Rev.2 69.2 - Accounting, bookkeeping and auditing activities; tax consultancy⁹</i>
Definition		This industry comprises establishments primarily engaged in providing services, such as auditing of accounting records, designing accounting systems, preparing financial statements, developing budgets, preparing tax returns, processing payrolls, bookkeeping, and billing.	This class consists of units mainly engaged in providing accounting services such as auditing of accounting records, preparing financial statements, preparing tax returns and bookkeeping.	
Inclusions	<ul style="list-style-type: none"> - recording of commercial transactions from businesses or others - preparation of financial accounts, examination of such accounts and certification of their accuracy - preparation of personal and business income tax returns - advisory activities and representation (other than legal representation) on behalf of clients before tax authorities 	<ul style="list-style-type: none"> - Offices of Certified Public Accountants (NAICS 541211) - Tax Preparation Services (NAICS 541213) - Payroll Services (NAICS 541214) - Other Accounting Services (NAICS 541219) 	<ul style="list-style-type: none"> - Accounting service - Auditing service - Bookkeeping service - Tax agent service 	<ul style="list-style-type: none"> - recording of commercial transactions from businesses or others - preparation or auditing of financial accounts - examination of accounts and certification of their accuracy - preparation of personal and business income tax returns - advisory activities and representation on behalf of clients before tax authorities
Exclusions	<ul style="list-style-type: none"> - data-processing and tabulation activities, (see ISIC 6311) - management consultancy such as design of accounting systems, cost accounting programmes, budgetary control procedures, (see ISIC 7020) - bill collection, (see ISIC 8291) 	Establishments providing computer data processing services at their own facility for others are classified in Industry 51821, <i>Data Processing, Hosting, and Related Services</i> .	Units mainly engaged in providing payroll processing, billing or record-keeping services are included in Class 7291 <i>Office Administrative Services</i>	<ul style="list-style-type: none"> - data-processing and tabulation activities, (see NACE 63.11) - management consultancy on accounting systems, budgetary control procedures, (see NACE 70.22) - bill collection, (see NACE 82.91)

6 <http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=27&Lg=1&Co=6920>

7 <http://www.census.gov/naics/2007/def/NDEF541.HTM#N5412>

8 <http://www.abs.gov.au/ausstats/abs@.nsf/Product+Lookup/5AC34D9FFE9CB10CCA25711F00147010?opendocument>

9

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_NOM_DTL_VIEW&StrNom=NACE_REV2&StrLanguageCode=EN&IntPcKey=18516944&IntKey=1851697

4&StrLayoutCode=HIERARCHIC&IntCurrentPage=1

References:

Bordé F., and Garneau G., “A Producer Price Index for Accounting Services”, presented at the 16th Voorburg Group Meeting on Services Statistics, Örebro, Sweden (2001)

<http://www.voorburggroup.org/english/voorburg/Documents/2001%20orebro/papers/2001-036.pdf>

Main writer Kennesey A., with contributions from Varjonen S., Mckenzie R., Davies P., and Moriya K., Thesaurus of Producer Price Indices for Services (SPPI's), 22nd Voorburg Group meeting, September (2007)

<http://www.voorburggroup.org/english/voorburg/Documents/2007%20Seoul/papers/03.pdf>

European Communities/OECD, “Methodological Guide for Developing Producer Price Indices for Services”, ed. (2006)

<http://www.oecd.org/dataoecd/44/40/36274111.pdf>