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# **Turnover and Output for Human health activities in Sweden**

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## 1. Definition of service being collected<sup>1 2</sup>

The statistical classification of NACE 86 *Human health activities* in the European Union (NACE Rev. 2) belongs to section Q *Human health and social work activities*.

In NACE Rev. 2 human health activities is divided into three groups:

- 86.1 Hospital activities
- 86.2 Medical and dental practice activities
- 86.9 Other human health activities

In the Swedish National Classification (SNI2007) there is a possibility to divide NACE classes further into sub-classes. This is the case for all the groups in human health activities.

The group 86.1 includes only one class (86.10) but three different sub-classes 86.101 (Hospital primary health activities), 86.102 (Specialised hospital somatic activities) and 86.103 (Specialised hospital psychiatric activities).

The group 86.2 includes three classes (86.21, 86.22 and 86.23) and five different sub-classes. Those are 86.211 (General primary medical practice activities), 86.212 (Other general medical practice activities), 86.221 (Specialist medical practice activities, at hospitals), 86.222 (Specialist medical practice activities, not at hospitals) and 86.230 (Dental practice activities).

The group 86.9 Hospital activities includes only one class (86.90) but six different sub-classes. These are 86.901 (Activities of medical laboratories etc.), 86.902 (Ambulance transports and ambulance health care activities), 86.903 (Primary health activities, not physicians), 86.904 (Activities of dental hygienists), 86.905 (Activities of physiotherapists etc.) and 86.909 (Other human health activities n.e.c.).

For more information on classification, see chapter 4.

## 2. Unit of measure being collected

The unit of measure being collected is turnover in local currency, Swedish krona (SEK). This measure of turnover is excluding VAT and other taxes and subsidies.

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<sup>1</sup> NACE Rev. 2 Statistical classification of economic activities in the European Community

<sup>2</sup> SNI2007 Swedish Standard Industrial Classification 2007

### 3. Market conditions and constraints

NACE 86 is a relatively small group in the Swedish business sector (excluding financial services), contributing to 1 percent of total turnover and 2 percent of value added. In section Q, NACE 86 accounts for 59 percent of the turnover and 51 percent of value added. The largest group within NACE 86 is 86.2, medical and dental practice activities with 66 percent of turnover and 65 percent of value added.

**Table 1: Basic data on human health activities 2012 (enterprise level)**

Variable	86.1	86.2	86.9	Total 86
No. of enterprises	399	10 593	16 035	27 027
No. of employees	12 766	38 793	9 464	61 023
Net turnover, SEK million	11 786	47 236	12 785	71 807
Value added, SEK million	7 609	27 490	7 417	42 516
Total assets, SEK million	20 802	60 727	22 229	103 758
Net investments, SEK million	527	1 516	222	2 265

In 2012, there were 27 027 enterprises performing human health care activities in Sweden according to the SBS. Those enterprises had 61 023 employees<sup>3</sup>, a turnover of 71.8 SEK billion ( $\approx 8.2$  € billion) and a total value-added of 42.5 SEK billion ( $\approx 4.9$  € billion). The total assets amounted to 103.7 SEK billion ( $\approx 11.9$  € billion) and net investments to 2.2 SEK billion ( $\approx 0.3$  € billion).

**Table 2: Basic data on human health activities 2012 (enterprise level)**

#### Size class by no. of employees

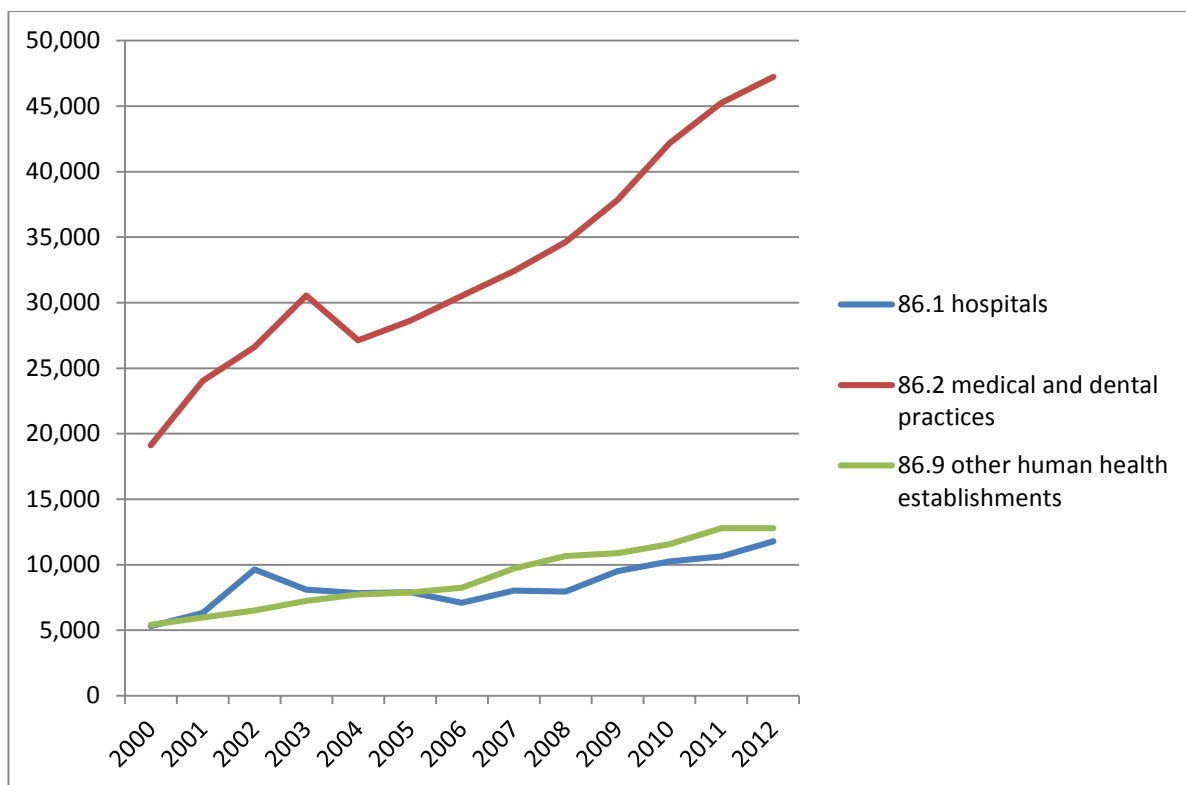
Variable	0-9	10-49	50-249	250+	Total
No. of enterprises	26 509	423	69	26	27 027
No. of employees	14 800	7 997	7 220	31 006	61 023
Net turnover, SEK million	21 968	9 520	8 962	31 356	71 807
Value added, SEK million	12 534	5 086	4 603	20 294	42 516
Total assets, SEK million	61 131	19 306	4 527	18 793	103 758
Net investments, SEK million	577	221	219	1 248	2 265

As in most industries, a small number of large enterprises produce a large part of turnover and value added as seen in table 2 above. The largest enterprises with 250 and more employees account for 43 percent of turnover and 48 percent of value added in human health activities. The micro enterprises with less than 10 employees contribute to 31 percent to turnover and 29 percent to value added.

<sup>3</sup> Number of employees in full/time equivalents

Figure 1 below shows the development of turnover for human health enterprises in the business sector over the past twelve years on kind-of-activity (KAU) level.

**Figure 1: Turnover in human health activities 2000-2012 (KAU), SEK million**



Source: SBS 2000-2012, Statistics Sweden. Values for the period 2000-2006 are back-cast.

Turnover in human health activities has increased a lot for all the three NACE groups during a twelve year period. Medical and dental practices (NACE 86.2) increased the most. Turnover rose by 28 SEK billion or 147 per cent between 2000 and 2012. One of the explanations to this can be that a dental reform took place in Sweden in 1999. The reform led to a larger amount of contribution from the national insurance system to basic dental care for the Swedish population. At the same time pricing for dental services went from regulated prices to market prices. Another dental reform was conducted in 2008 which also seems to have had a positive effect on turnover in NACE 86.2. Another explanation to the increase is privatization which is a reason to why the groups 86.1 and 86.9 are increasing as well. In Sweden the first private hospitals opened up in year 2000 and other human health activities is more frequently conducted by private enterprises today than was the case twelve years ago. For more information about the sectors see section 3.1 below.

### 3.1 Sectors

Human health care activities are in most cases carried out within the public sector in Sweden. During the last decade there has been a shift towards more privatization although it is a politically sensitive issue. The debate on enterprises in human health care gaining profits has been lively during the past few years. To get an overview of the allocation of the expenditures for human health care activities in the Swedish economy we present data from the Swedish health accounts (table 3).

**Table 3: Total health care expenditures 2012 according to Health accounts, SEK million and percent**

Sector	SEK million	Per cent
Central government	6 381	2
Municipalities	26 464	8
County councils	243 442	71
Private sector (enterprises, households & non-profit institutions)	63 731	19
Total	340 018	100

County councils in the public sector accounts for over 70 percent of the total health care expenditures in Sweden. The private sector including enterprises, households and non-profit organizations accounts for 19 per cent of the total expenditures. The largest amount of this part is private household out-of-pocket expenditure. Municipalities accounts for 8 percent of the total health care expenditures. The human health activities contributes to approximately 10 percent of total GDP in Sweden.

Table 3 shows the financing of human health care. If we want to look at the production we have to study the providers of health care which are shown in table 4 below.

**Table 4: Providers of health care activities 2011 according to “Financiers and providers within education, health care and social services 2011”, percent**

Sector	Per cent
Central government	0,3
Municipalities	0,7
County councils	77
Private sector (enterprises & non-profit institutions)	22
Total	100

Despite increasing privatization county councils in the public sector still provided 77 percent of the total human health care activities in 2011. The private sector including enterprises and non-profit organizations provided only 22 per cent of the human health care services in Sweden 2011.

### 3.2 Turnover by product

**Table 5: Turnover by product in human health activities by industry 2012, SEK million**

Industry (NACE)	47	59	62	85	86	87	96	Total
Product (CPA)								
86.1	0	0	0	0	11 814	135	0	11 949
86.2	0	57	53	94	46 264	133	34	46 635
86.9	1 074	0	0	47	10 609	14	0	11 744
<b>Total</b>	<b>1 074</b>	<b>57</b>	<b>53</b>	<b>141</b>	<b>68 687</b>	<b>282</b>	<b>34</b>	<b>70 328</b>

Turnover from human health activities is highly concentrated to NACE 86. Almost 98 per cent of the total turnover is generated by enterprises in NACE 86. The rest is found in NACE 47, 59, 62, 85, 87 and 96 as shown in table 5. The largest amount of turnover in CPA 86.1 is classified as Specialised hospital somatic activities. In CPA 86.2 the turnover is divided almost equally between three different products: General medical practice activities, Dental practice activities and Special medical practice activities. CPA 86.9 consists of six different products of which Activities of physiotherapists, other human health activities n.e.c. has the highest share with 33 per cent of the turnover. A complete list of the products can be found in table 7 below.

## 4. Standard classification structure and product details/levels

### 4.1 Industrial classification<sup>4 5 6</sup>

The national industrial classification, *Standard för svensk näringsgrensindelning 2007 (SNI2007)*, is based on NACE Rev. 2 but has an additional hierarchical level, the five-digit level. For the human health care sector, SNI2007 is equal to the NACE Rev. 2 classification down to four-digit level. It is further divided into subclasses as shown in table 6 below.

**Table 6: Industrial classification of human health activities**

NACE Division	NACE Group	NACE Class	SNI 5-digit level	Name	ISIC Rev. 4
86	86.1	86.10	86.101	Hospital primary health activities	8610
		86.10	86.102	Specialised hospital somatic activities	8610
		86.10	86.103	Specialised hospital psychiatric activities	8610
	86.2	86.21	86.211	General primary medical practice activities	8620
		86.21	86.212	Other general medical practice activities	8620
		86.22	86.221	Special medical practice activities at hospitals	8620
		86.22	86.222	Special medical practice activities, not at hospitals	8620
		86.23	86.230	Dental practice activities	8620
		86.9	86.90	86.901	Activities of medical laboratories etc.
	86.90		86.902	Ambulance transports and ambulance health care activities	8690
	86.90		86.903	Primary health activities, not physicians	8690
	86.90		86.904	Activities of dental hygienists	8690
	86.90		86.905	Activities of physiotherapists etc.	8690
	86.90		86.909	Other human health activities n.e.c.	8690

<sup>4</sup> NACE Rev. 2

<sup>5</sup> Swedish Standard Industrial Classification 2007 (SNI 2007)

<sup>6</sup> ISIC Rev. 4

For human health activities NACE Rev. 2 corresponds to ISIC Rev. 4 down to group level. On the class level NACE 86.10 and 86.90 are equal to ISIC Rev 4 but 86.20 is divided into three classes in NACE Rev. 2.

In line with NACE Rev. 2, the national industrial classification replaced the previous version (SNI2002/NACE Rev. 1.1) starting with reference year 2008. The Swedish Business Register contained both versions for reference years 2007 and 2008 and results were also published in both versions. Starting with reference year 2009 results is only published in the new classification. With backcasting, results for both short-term (STS) and structural business statistics (SBS) are available from 2000 and onwards according to the new classification.

## 4.2 Product classification<sup>7 8 9</sup>

The national product classification, *Standard för svensk produktindelning efter näringsgren 2007 (SPIN2007)*, is in most parts equal to the CPA 2008 classification. The code structure is slightly different (seven-digit code in national classification versus six-digit code in CPA) but most products have a one-to-one relationship. This however is not the case within human health activities, where only 13 of the 33 products have a one-to-one relationship in SPIN2007 and CPA 2008. Turnover within the SBS survey is divided into 13 specific variables/product groups as shown in table 7 below. For a complete list of SPIN/CPA codes, see annex 1.

**Table 7: Classification of products for human health activities in SBS**

Variable	SPIN 2007	CPA 2008	Name
v2475	86.101.00	86.10.19	Hospital primary health activities
v2479	86.102.01-06	86.10.11-13	
		86.10.15-19	Specialised hospital somatic activities
v2483	86.103.00	86.10.14	Specialised hospital psychiatric activities
V2874	86.211.00	86.21.10	
	86.212.02		General medical practice activities
V2925	86.212.01	86.21.10	Occupational healthcare
V2873	86.221.01-04	86.22.11-19	
	86.222.01-02		Special medical practice activities
V2495	86.230.01-02	86.23.11-19	Dental practice activities
V2499	86.901.01-02	86.90.15-16	Activities of medical laboratories etc.
V2503	86.902.00	86.90.14	Ambulance transports and ambulance health care activities
V2875	86.903.01-02	86.90.11-12	Primary health activities, not physicians
V2876	86.904.00	86.90.19	Activities of dental hygienists
V2877	86.905.01-03	86.90.13-19	
	86.909.01-05		Activities of physiotherapists, other human health activities n.e.c.
V1380	86.909.05	86.90.19	Vision screening

<sup>7</sup> CPA 2008

<sup>8</sup> Swedish Standard Classification of Products 2007

<sup>9</sup> CPC Version 2



As was the case with the industrial classification, SPIN2007/CPA 2008 replaced the older version starting with reference year 2008. For NA purposes results for structural business statistics were delivered in both versions for reference years 2007 and 2008. Regarding the demands from National Accounts (NA) there is at the moment no plans to divide the CPA into more detailed products.

The structure of the European CPA classification is almost the same as the structure of the international CPC classification for the human health activities. The products are held together in division 931 in CPC Version 2.

## **5. Evaluation of standard vs. definition and market conditions**

As shown in table 5 above almost 98 per cent of the turnover from human health activities comes from enterprises in NACE 86. This indicates that the NACE classification works rather well for this division of the Swedish economy. The industry closest to NACE 86 is NACE 87, Residential care activities. These enterprises contributes to about 0.4 per cent of the total turnover of human health activity products. On the contrary enterprises in NACE 86 contributes to 5 per cent of the turnover of residential care activity products.

## **6. National Accounts Concepts and measurement issues related to GDP measurement<sup>10</sup>**

Since the reference year 2008 National Accounts publish results according to the new industrial classification (SNI2007/NACE Rev. 2).

Since 1997, the main source for annual output calculations has been the SBS, although other sources are used when appropriate. SBS contains detailed information on both income and intermediate consumption. For quarterly GDP, the value is calculated either by extrapolating the value in the NA system using an indicator, using data directly from a source or by using a model. For the Human health activities the STS is used to extrapolate the value in the NA system.

SPPI in Sweden does not cover NACE 86.

Apart from principal production, human health activities, the industry's secondary activities, such as residential care activities, are recorded separately. Data on the output of human health activities within the business sector is obtained from the SBS. The industry's intermediate consumption is also provided by the SBS. Balancing and plausibility assessment are performed in the supply and use tables. Value added is obtained residually as the difference between output and intermediate consumption.

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<sup>10</sup> ESA95 GNI Inventory, Sweden, Reference Year 2005, Revision 5, October 2009

## **7. Turnover data methods and criteria for choosing different output methods**

Two EU-regulated surveys collect information on turnover in the business part of the human health activities division. Short-Term Statistics collect industry-level turnover monthly/quarterly and Structural Business Statistics collect turnover on industry-level as well as product-level annually.

### **7.1 Short-Term Statistics**

Turnover in the service sector is published quarterly in accordance with Council Regulation of Short Term Statistics, (EC) No. 1165/98 and amended by the regulation (EC) No. 1158/2005. The human health activities are not covered by the regulation but are included in the Swedish survey for National Accounts (NA) purposes.

The statistical unit as well as the unit of collection is enterprise. Results are only presented as development indices and not as absolute values.

The short-term statistics is a sample survey, with a certain number of large enterprises surveyed monthly, while the remaining enterprises of the sample surveyed quarterly (but with turnover divided into months). The monthly data is used for the service production index. The total number of enterprises surveyed in the service sector is approximately 10 100. The un-weighted response rate is approximately 80 percent while the weighted response rate is approximately 90 percent.

Results are published 35 days after the end of the reference period. The results are mainly used by the NA in their calculations of private consumption and Gross Domestic Product (GDP). In theory, NA would need the turnover divided into product groups, but due to the response burden only total turnover is collected. This turnover is then divided into product groups with various keys to meet the requirements of short-term NA calculations.

Administrative data is not used as input in the calculations at present. Work is however in progress with the use of VAT data, mainly to reduce response burden. The plan is that administrative data will be operational from April 2015.

### **7.2 Structural Business Statistics**

Structural Business Statistics is a survey carried out annually in accordance with "Regulation (EC) No. 295/2008 [...] concerning structural business statistics" (the regulation consists of a number of annexes and the description below is valid for annexes I-IV and VIII, or NACE 05-82 (excluding 64-66) and 95). The human health activities are not covered by the regulation but are included in the Swedish survey for National Accounts (NA) purposes. Detailed results (much more detailed than demanded in the above mentioned regulation) of the survey are delivered to National Accounts. The SBS has been produced in its current format since 2003.

Information is collected on enterprise level or in some cases KAU level. The statistical unit for NA purposes is KAU. Results are published on enterprise (institutional) level as well as

KAU (functional) level and for some variables local KAU (regional) level. The regional information is produced via a model-based approach.

The survey is based on administrative data, more precisely on income and balance sheet statements from the Swedish Tax Agency (Skatteverket). Three separate sample surveys (specification of income sheet, specification of investments and specification of shares) are carried out to provide more detailed information. In addition to this, the 600 largest enterprises in the business sector are surveyed separately.

The administrative data is, at least in theory, available for the entire population of around 1 000 000 enterprises. Non-response in administrative data (15-20 percent un-weighted, 3 percent weighted) are dealt with through mean value imputations based on industry and size class. This material is used for what is called the common variables within the income statement and balance sheet, such as turnover, other operating income, depreciation costs, personnel costs and total assets. Tax material was used for 26 743 enterprises in the human health activities 2012. Non-response was 16 percent un-weighted and 9 percent weighted.

The 600 largest enterprises in the business sector are surveyed independently of the tax data. This is due to their importance to the business sector (roughly one-third of value added) and their often complex organisations. These enterprises are asked to complete a questionnaire consisting of a detailed income statement (including turnover by product but also for example more detailed costs), a balance sheet, a specification of investments and a specification of shares. The response rate for these enterprises have been 100 percent in recent years. Ten enterprises within human health activities was surveyed this way for the reference year 2012.

The specification of income statement is used to get more detailed information, e.g. turnover by product, for the remaining enterprises. A sample of some 17 000 enterprises is used for this part of the survey, allocated in 300 strata based on the demands of NA. 295 enterprises were sampled in human health care activities in 2012. The sample method used is  $\pi$ ps, i.e. probability proportional to size. The response in this survey is usually around 80-85 percent un-weighted and 88-90 percent weighted. The response rate in human health activities was 84 percent un-weighted and 92 percent weighted for reference year 2012.

Besides being an important input in the NA calculations, the collection of turnover by product is also an important input in the Business Register. The detailed information makes it possible to detect any change in activity within the enterprises, and thus keep the Business Register as updated and correct as possible.

The surveys regarding specification of investments and specification of shares are similar to the specification of the income statement. They are however less detailed and thus demand lower sample sizes.

Preliminary results are transmitted to Eurostat 10 months and definitive results 18 months after the end of the reference period. Definitive detailed results are transmitted to NA 15 months after the end of the reference period. Preliminary and definitive results

are also published in on-line databases, 11 months and 16 months after the end of the reference period respectively.

## **8. Evaluation of comparability of turnover data with price index practices<sup>11</sup>**

The product groups within the human health activity division are not covered by service producer price indices.

## **9. Summary**

Human health care activities is a relatively small part of the Swedish economy, contributing to 1 percent of total turnover and 2 percent of total value added in the business sector. The industry is extremely homogeneous. Looking at turnover by product, 98 percent of the turnover in NACE 86 comes from human health care enterprises. The total turnover has increased steadily over the past twelve years especially within medical and dental practices. Despite increasing privatization 77 percent of the health care in Sweden is still provided by the public sector. Only 22 percent of the health care is provided by enterprises in the private sector.

Human health care activities are not covered by the EU regulations but are included in both the STS and the SBS for NA purposes.

Regarding turnover by product, CPA 86 are divided into 13 variables. No further breakdown is planned at present.

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<sup>11</sup> Tjänsteprisindex 2012

## Annex 1

Variable	SPIN 2007	CPA 2008	Name
v2475	86.101.00	86.10.19	Hospital primary health activities
v2479	86.102.01	86.10.11	Hospital surgical services
	86.102.02	86.10.15	Hospital medical services
	86.102.03	86.10.12	Hospital gynaecological and obstetrical services
	86.102.04	86.10.13	Hospital rehabilitation services
	86.102.05	86.10.15	Other hospital services provided by medical doctors
	86.102.06	86.10.19	Other hospital services
v2483	86.103.00	86.10.14	Hospital psychiatric services
V2874	86.211.00	86.21.10	General medical practice activities
V2925	86.212.01	86.21.10	General medical practice activities at enterprises?
	86.212.02	86.21.10	Other general medical practice services
V2873	86.221.01	86.22.11	Hospital analysis and interpretation services of medical images
	86.221.02	86.22.19	Hospital primary psychiatric services
	86.221.03	86.22.19	Hospital primary rehabilitation services
	86.221.04	86.22.19	Other primary hospital specialist medical practice services
	86.222.01	86.22.11	Other analysis and interpretation services of medical images
	86.222.02	86.22.19	Other primary specialist medical practice services
V2495	86.230.01	86.23.11	Orthodontic services
	86.230.02	86.23.19	Other dental practice services
V2499	86.901.01	86.90.15	Medical laboratory services.
	86.901.02	86.90.16	Blood, sperm and transplant organ bank services
V2503	86.902.00	86.90.14	Ambulance services
V2875	86.903.01	86.90.11	Pregnancy related services
	86.903.02	86.90.12	Nursing services
V2876	86.904.00	86.90.19	Activities of dental hygienists
V2877	86.905.01	86.90.19	Occupational therapy services
	96.905.02	86.90.13	Physiotherapeutic services by licensed professionals
	86.905.03	86.90.13	Physiotherapeutic services by others than licensed professionals
	86.909.01	86.90.18	Mental health services
	86.909.02	86.90.19	Other human health services by licensed professionals
	86.909.03	86.90.19	Other human health services by others than licensed professionals
	86.909.04	86.90.17	Diagnostic imaging services without interpretation
	86.909.05	86.90.19	Other human health services n.e.c.
V1380	86.909.05	86.90.19	Vision screening