Swedish Historical National Accounts

2023 Update, Revision and Underlying Principles

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Introduction

It is almost forty years since the Swedish Historical National Accounts (SHNA) project was first initiated. With the purpose of investigating structural changes in the Swedish economy during 1800-1980, Schön, Krantz, Ljungberg and Pettersson began this project by complementing, revising and extending series originally constructed in the pioneering publication *National Income in Sweden 1861-1939* (Lindahl et al., 1937). The results were published stepwise in nine volumes (Schön, 1984 (2015); Krantz, 1986; Krantz, 1987A; Pettersson, 1987; Krantz, 1987B; Ljungberg, 1988; Schön, 1988; Krantz, 1991; Schön, 1995), but it was not until 2007 that a complete version of the SHNA containing aggregated series was released (Schön & Krantz, 2007). Since then, the SHNA project has undergone two additional revisions, in which the accounts have been extended to include the periods 1560-1800 and 2000-2010 (Schön & Krantz, 2012), and later in current prices (Schön & Krantz, 2015). Tentative estimates of Swedish GDP for the period 1300-1560 have also been published by Krantz (2017).

Since the most recent edition of the SHNA only stretches as far as 2010, the main purpose of the current edition has been to update the accounts using more recent data from Statistics Sweden (SCB). However, little attention has been paid in previous publications to precisely how this should be done. While it is noted that most of the accounts use data from Statistics Sweden from various points during the 1950's and onwards (Schön & Krantz, 2007), and that data from Statistics Sweden are adjusted to match the level of the estimates of Schön & Krantz at those benchmark years (Lobell et al., 2008), little is said regarding technical matters such as data mapping and choice of method for linking the series. It is the aim of this paper that the SHNA keeps being updated according to a consistent framework, and therefore the paper provides a description of technical matters relating to the update that have been handled, as well as discussions regarding some of the choices that have been made.

There are two main issues that need to be addressed when extending the series. The first is that the SHNA and Statistics Sweden do not share a common system for categorizing economic activities, such as industrial and investment classifications. The purpose of the SHNA is to provide consistent time series describing the evolution of Sweden's economy over the centuries, meaning that any categorization of economic activities will need to be broad and inclusive in order to be appropriate for both historical and contemporary data. By contrast,

contemporary classifications of economic activities are highly detailed. This naturally begs questions on how to match SHNA series with contemporary data, something that occasionally also implies choices regarding omission or revision of data.

The second issue is that there are some moderate differences between Statistics Sweden data and the SHNA estimates at the original benchmark years. This means that if one were to add contemporary, unrevised data from Statistics Sweden to the historical estimates of the SHNA, the full series would be tainted with sharp breaks at those years. In order to avoid such breaks without manipulating the historical estimates, the issue has in previous editions been handled by adjusting the Statistics Sweden series to match the SHNA levels at the benchmark years. Naturally, this method implies that the differences between the SHNA and the Statistics Sweden accounts at the benchmark years are maintained for all subsequent years as well. While these differences are usually so small that the SHNA and the Statistics Sweden accounts are still comparable (meaning that they have little implication for analysis of the evolution of the accounts over time), they also imply that new Statistics Sweden data must be adjusted when updating the SHNA.

The paper is structured according to the order of the tables in the complete data set, with the exclusion of duplicates and tables that have not been updated. Section I regards value added in main sectors and GDP, section II regards unpaid domestic services, section III regards GDP and population, section IV regards GDP by destination, section V regards total exports and imports, and section VI regards employment. Finally, the appendix contains a description of the mapping of ESA 2010 subindustries to the SHNA main sectors, as well a comparison between the SHNA and the Statistics Sweden series at the benchmark year 2010.

I. Value added, Main Sectors and GDP

Current prices

The industrial classification of the SHNA is comprised of seven main sectors: Agriculture, Manufacturing, Building and Construction, Transport and Communication, Private Services, Public Services and Services of Dwellings. The reason for this relatively broad industrial classification is that each series must be appropriate for both contemporary and historical data. Since contemporary industrial classifications, such as the NACE Rev. 2 framework that is used by Statistics Sweden, by contrast are considerably more detailed, the main issue in updating the value added in main sectors is to match NACE Rev. 2 subindustries to the SHNA main sectors.

The matching scheme applied in the current update is presented in Table 1-7 in the appendix and largely builds on the one presented in Schön & Krantz (2007). However, while the 2007 arrangement serves as a useful guiding example, it is not directly applicable. For example, Statistics Sweden no longer provides detailed data on public sector production per the NACE Rev. 2 framework, only on the aggregate value added by the public sector as a whole. The mapping of activities such as education and health care to private services in Table 5 thus only refers to the private sector contribution to these subindustries. Furthermore, Statistics Sweden does not provide data on value added in subindustries such as timber-floating or stevedoring but does provide data on subindustries not mentioned in the 2007 arrangement, such as printing and reproduction of recorded media.

Another issue is that there are some moderate differences between the historical estimates of Schön & Krantz and the estimates of Statistics Sweden at the original benchmark year of 1950. In order to maintain the historical estimates and avoid sharp breaks in the full series, the method chosen by Schön & Krantz to handle this issue was to extrapolate forward, meaning that the levels of the Statistics Sweden series were altered so as to match the levels of the historical estimates at the benchmark years. Therefore, the levels of the SHNA series at the current benchmark year chosen for updating the series will not completely match those of the Statistics Sweden data either (see Table 8 in the appendix for a list of the sizes of these differences). Consequently, we follow the method used by Schön & Krantz in previous editions and choose

to link the series by forward extrapolation. Formally, using data from Statistics Sweden (2022A, 2022B) on value added in factor prices, and using 2010 as the benchmark year:

$$Sector_{i,t} = \frac{Sector_{i,t}^{SHNA}}{Sector_{i,t}^{SCB}} * Sector_{i,t}^{SCB}, \quad for\ t = 2011, \dots, 2020 \quad (1)$$

where *i* is an index describing which of the seven main sectors is being considered, *t* is a time index, *SHNA* denotes an SHNA observation, and *SCB* denotes a Statistics Sweden observation. By this simple method, the trend in the Statistics Sweden data will be maintained but the values for all added years will be adjusted by a constant so that the series match at the benchmark year 2010. Finally, GDP has been updated by adding the value added in the seven main sectors for each year:

$$GDP_t = \sum_i Sector_{i,t}, \quad for\ t = 2011, \dots, 2020 \quad (2)$$

Constant prices

The simplest way to extend the series on value added by main sector in constant prices would be to repeat the approach listed above using data on constant prices instead of current. Unfortunately, this approach is not viable. The reason is that the SHNA estimates of value added in constant prices are expressed in factor prices, and Statistics Sweden only provides data on value added at constant prices expressed in basic prices. Extending the SHNA constant price series using the same approach as above would therefore imply an inclusion of indirect taxes and exclusion of subsidies.

In order to circumvent this issue, we use the Statistics Sweden data on value added in current and constant prices expressed in basic prices (Statistics Sweden, 2022A & 2022C) to calculate price level changes for each year in the period 2011-2020, and then use the price level changes to convert the updated SHNA current price series into constant prices. The price level changes are obtained in two steps. First, we divide the Statistics Sweden current price series by their constant price series in order to derive the deflators used to convert current prices into constant prices. Formally:

$$Deflator_{i,t}^{SCB} = \left(\frac{Current\ Price_{i,t}^{SCB}}{Constant\ Price_{i,t}^{SCB}}\right) * 100, \quad for\ t = 2010, \dots, 2020 \quad (3)$$

where $Current\ Price_{i,t}^{SCB}$ and $Constant\ Price_{i,t}^{SCB}$ denote Statistic Sweden observations for a main sector i at time t in current and constant prices, respectively. Having obtained these for each year in the period $2010 - 2020$, we are able to calculate the yearly price level changes, according to:

$$Price\ Change_{i,t}^{SCB} = \frac{Deflator_{i,t}^{SCB} - Deflator_{i,t-1}^{SCB}}{Deflator_{i,t-1}^{SCB}}, \quad for\ t = 2011, \dots, 2020 \ (4)$$

We then calculate a deflator for the SHNA at the year 2010 using the approach in equation (3). Using this deflator and the yearly price level changes, we calculate SHNA deflators for each year in the period $2011 - 2020$ according to:

$$Deflator_{i,t}^{SHNA} = Deflator_{i,t-1}^{SHNA} * \left(1 + Price\ Change_{i,t}^{SCB}\right), \quad for\ t = 2011, \dots, 2020 \quad (5)$$

The value added in constant price series is then extended for the years 2011-2020 according to:

$$Constant\ Price_{i,t}^{SHNA} = \left(\frac{Current\ Price_{i,t}^{SHNA}}{Deflator_{i,t}^{SHNA}}\right) * 100, \quad for\ t = 2011, \dots, 2020 \quad (6)$$

Finally, GDP in constant prices is extended for the period 2011-2020 according to:

$$GDP_t = \sum_i Constant\ Price_{i,t}, \quad for\ t = 2011, \dots, 2020 \quad (7)$$

II. Unpaid Domestic Services

Current Prices

In accordance with the recommendations of the European System of Accounts (and previously the System of National Accounts), the ordinary national accounts of the SHNA only include estimates of production performed within the production boundary. This means that services such as environmental accounting, volunteer labor, and treatment of consumer durables are excluded from the estimates of GDP, employment, and value added in main sectors. However, the SHNA does include a satellite account on estimates of value added by unpaid domestic services, i.e., the value added by members of households that work full-time within the household. The reason that this satellite account is included is that it enables analysis of structural changes, such as the evolution of the share of unpaid work in relation to total work.

In accordance with previous versions of the SHNA, the value added by unpaid domestic services has in the current edition been estimated in the same way as that of paid work, i.e., by multiplying the number of workers with the value of their services, measured as wages. Since unpaid domestic workers do not receive wages directly, we estimate them using the average wages of paid home care personnel (SSYK code 9119: "Other home care workers") who provide similar services such as cooking, childcare, washing, and cleaning. Data on the number of unpaid domestic workers and the average wages of paid home care personnel are provided by Statistics Sweden (Statistics Sweden, 2022D; 2022E).

Unfortunately, Statistics Sweden only provides data on the average wages of paid home care personnel from 2014 and onwards, meaning that there is a gap for 2011-2013. Data for these years have been extrapolated using the average wage increase for 2014-2020. Formally, data for the years 2011-2013 have been constructed by first calculating the yearly change in average wages for the period 2014-2020:

$$\triangle Wage_t^{SCB} = \frac{Wage_t^{SCB} - Wage_{t-1}^{SCB}}{Wage_{t-1}^{SCB}}, \quad for\ t\ =\ 2014, \dots, 2020 \quad (8)$$

and then using the average of these changes to extrapolate backwards:

$$Wage_t^{SCB} = \frac{Wage_{t+1}^{SCB}}{1 + \frac{\sum_{t=2014}^{2020} \triangle Wage_t^{SCB}}{7}}, \quad for \ t = 2011, 2012, 2013 \quad (9)$$

Having filled in the gaps, the value added in current prices for each year in the period 2011-2020 have then been estimated as:

$$Value \ Added_t^{SHNA} = Wage_t^{SCB} * Number \ of \ Workers_t^{SCB}, \quad for \ t = 2011, ..., 2020 \quad (10)$$

Constant Prices

Since Statistics Sweden does not provide data on paid domestic work wages in constant prices, it is not possible to extend the series in constant prices with Statistic Sweden data or to calculate deflators for purposes of converting the current price series into constant prices. Instead, we have assumed that changes in value added in constant prices in unpaid domestic work are equal to the changes in the number of workers in the sector, implying the underlying assumption of no or negligibly small productivity increase during this period. Formally, the constant price series has been extended for the period 2011-2020 according to:

$$Value \ Added_t^{SHNA} = Value \ Added_{t-1}^{SHNA} * \left(1 + \frac{Workers_t - Workers_{t-1}}{Workers_{t-1}} \right) \quad (11),$$

for $t = 2011, ..., 2020$. Is the assumption of no productivity increase reasonable? The notion is often recurring in the literature on unpaid domestic work and there are several reasons to suspect that it holds. Commonly referenced reasons are, for example, a lack of upward mobility and promotions, as well as the repetitive and drudging nature of the work, which combined provide no incentive to increase productivity. Furthermore, historically strong productivity increases in the sector have been owed to technological innovations such as dishwashers, vacuum machines, efficient stoves, washing machines, and so on, and no similar advances can be said to have been made during the past decade (Hirway, 2015). Moreover, the assumption is also made for some other subindustries in the service sector.

III. GDP in Factor and Market Prices and Population

GDP in factor and market prices

GDP in market prices has been estimated as the sum of total consumption, total investment, and exports minus imports. See section IV for a more detailed description. Indirect taxes and custom duties have been estimated as the difference between GDP in factor prices and GDP in market prices. For estimation of GDP in factor prices, see section I.

Population

The population series has been extended for the period 2011-2020 using data from Statistics Sweden (2022G) and using 2010 as the benchmark year, according to:

$$Population_t^{SHNA} = \frac{Population_{2010}^{SHNA}}{Population_{2010}^{SCB}} * Population_t^{SCB}, \quad for\ t = 2011,\ldots,2020 \quad (12)$$

IV. GDP by destination in market prices

Current Prices

In the SHNA, the GDP by destination account consists of four series: total consumption, total investments, exports and imports. Total consumption and total investments are, in turn, composed of two subcategories each: public consumption and private consumption, and buildings investments and machinery investments, respectively. Unlike GDP from the production side (see section I), this classification system is highly similar to that of Statistics Sweden (Statistics Sweden, 2022H), making the issue of matching contemporary data to the SHNA series a much simpler task. Private consumption, public consumption, total consumption, exports, and imports all directly correspond to series provided by Statistics Sweden. The only exception is investments, where in addition to investments into buildings and machinery, Statistics Sweden considers cultivated biological resources and intellectual property products. While the former is small enough that it can be matched to any category without having much of an effect in the aggregate, intellectual property investments are today of comparable size to buildings and machinery investments. According to the ESA2010

definition, by which Statistics Sweden categorizes investments, intellectual property products are:

> *"Fixed assets that consist of the results of research and development, mineral exploration and evaluation, computer software and databases, entertainment, literary or artistic originals and other intellectual property products [...] intended to be used for more than one year."* (European Commission, 2013).

Further investigation of the subcategories that make up the Statistics Sweden estimates of intellectual property product investments reveal that most of the account is made up of research and development and computer programs and databases, with no record being kept of mineral exploration and evaluation, or of entertainment, literary or artistic originals during 2010 – 2020 (Statistics Sweden, 2022I). Since computer programs and databases can arguably be considered machinery, and since research and development should naturally be more closely associated with the development of new machinery than of new buildings, we have chosen to match data on such investments to the machinery series. The same choice has been made with regards to cultivated biological resource investments.

In the SHNA, total investments correspond only to gross fixed capital formation, implying that investments in inventories and valuables are not included in the series. The reason for this is once again that such investments should historically tend toward zero and are even today negligibly small. The omission should therefore cause little discrepancy between the SHNA and other contemporary series of GDP from the expenditure side.

Private consumption, public consumption, buildings investment, machinery investment, exports and imports series have been extended for the period 2011-2020 using data from Statistics Sweden (2022H & 2022I) and using 2010 as the benchmark year, according to:

$$Account_{i,t}^{SHNA} = \frac{Account_{i,2010}^{SHNA}}{Account_{i,2010}^{SCB}} * Account_{i,t}^{SCB}, \quad for\ t = 2011, \dots, 2020 \quad (13)$$

where *i* is an index describing which series is being considered.

Total consumption and total investments have been estimated as the sum of their subaccounts, and GDP by destination in market prices has been estimated as:

$$GDP_t = Total\ Consumption_t + Total\ Investment_t + Exports_t - Imports_t \quad (14)$$

for t = 2011, …, 2020.

Constant Prices

Conversion of the GDP by destination accounts from current to constant prices has been achieved by estimating SHNA deflators for each year 2011-2020. Following the same approach used in section I, we begin by calculating yearly deflators for the corresponding Statistic Sweden series using data on GDP from the expenditure side in constant and current prices (Statistics Sweden, 2022H):

$$Deflator_{i,t}^{SCB} = \frac{Current\ Price_{i,t}^{SCB}}{Constant\ Price_{i,t}^{SCB}} * 100, \quad for\ t = 2010, ..., 2020 \quad (15)$$

where *i* is an index describing which series is being considered. Having calculated deflators for these years, the next step is to calculate the yearly price changes. These are estimated as:

$$Price\ Change_{i,t}^{SCB} = \frac{Deflator_{i,t}^{SCB} - Deflator_{i,t-1}^{SCB}}{Deflator_{i,t-1}^{SCB}}, \quad for\ t = 2011, ..., 2020 \quad (16)$$

Having obtained the price changes, it is now possible to calculate yearly deflators for the SHNA accounts. We begin by estimating a deflator for the benchmark year 2010 using the same approach as in equation (16), and then extend the deflator series for 2011-2020, as:

$$Deflator_{i,t}^{SHNA} = Deflator_{i,t-1}^{SHNA} * \left(1 + Price\ Change_{i,t}^{SCB}\right), \quad for\ t = 2011, ..., 2020 \quad (17)$$

Finally, we convert each SHNA series from current into constant prices, using:

$$Constant\ Price_{i,t}^{SHNA} = \left(\frac{Current\ Price_{i,t}^{SHNA}}{Deflator_{i,t}^{SHNA}}\right) * 100, \quad for\ t = 2011, ..., 2020 \quad (18)$$

As for total consumption and total investments, these are simply estimated as the sum of private and public consumption, and buildings and machinery investments, respectively. Similarly, GDP by destination is estimated as the sum of total consumption, total investment, and exports minus imports.

IV. Exports and Imports of Merchandize at Current Prices

Exports and imports of merchandize[1] in current prices have been extended for the period 2011-2020 using data from Statistics Sweden (2022H) and using 2010 as the benchmark year, according to:

$$Exports_t^{SHNA} = \frac{Exports_{2010}^{SHNA}}{Exports_{2010}^{SCB}} * Exports_t^{SCB}, \; for \; t = 2011, \dots, 2020 \quad (19)$$

$$Imports_t^{SHNA} = \frac{Imports_{2010}^{SHNA}}{Imports_{2010}^{SCB}} * Imports_t^{SCB}, \; for \; t = 2011, \dots, 2020 \quad (20)$$

V. Employment

A novelty of this edition of the SHNA is that the employment accounts have been fully revised. While the employment series were previously constructed to make the modern Statistics Sweden data on employment match the employment level recorded in the SHNA at the benchmark year 1950, this new edition conversely adjusts the historical SHNA estimates to match the employment level recorded by Statistics Sweden at the year 1980. This approach is more in line with recent accounts from, for example, Edvinsson (2005). The primary reason for revising the series is that previous SHNA estimates ended up being approximately 15-20% lower than the estimates of Statistics Sweden for each year following the benchmark. Since such a large discrepancy in levels could have considerable implications for analyses of the long-term evolution of employment, we decided to bring the historical accounts closer to the modern series by bridging them at the benchmark year 1980.

The reason for previously large discrepancies at the benchmark year is that the source material for the historical estimates of employment is considerably weaker than for the other accounts. The main source for historical employment levels are the Swedish censuses, which contain

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[1] "Merchandize" defined here as "goods".

statistics on the number of people that normally adhered to a specific profession, but not the number of people that were actually employed in that profession. Furthermore, these censuses occurred only once every five or mostly ten years, meaning that virtually no information is available for the years in between. The SHNA employment account in previous editions are based on estimates made by Jungenfeldt (1966), who in turn used the censuses as his main source for estimation. In the words of Jungenfeldt himself:

"... the obtained results regarding both the level of employment and the sum of wages paid are most likely tainted with considerable margins of error. It also does not seem possible to state their size, which is why one should emphasize the need of exercising great caution when analytically treating the series." (1959, own translation).

However, since the required adjustment of the historical estimates is to inflate them, the question still remains if it is reasonable to suspect that the poor source material has led to an underestimation of the employment level. There are reasons to suspect that this is the case. Most notably, the estimates of Jungenfeldt do not include assisting family members, which in contemporary definitions of employment are considered self-employed. Assisting family members are suspected to have constituted a considerable part of the labor force in the 19th and 20th century, particularly in the agricultural sector where housewives are suspected to have devoted roughly one third of their workday to agricultural production (Schön & Krantz, 2012). Another reason is that the SHNA estimates of the Swedish employment level is consistently and significantly lower than the historical estimates of employment in Sweden's neighboring countries. The new estimate of employment calculated as employment rates demonstrates a reasonable long-run correspondence compared to the most recent estimates of employment in neighboring Denmark, Norway and Finland as shown in Figure 1 below.

Figure 1. Employment Ratio: Comparison Between Revised HNS with Denmark, Finland and Norway
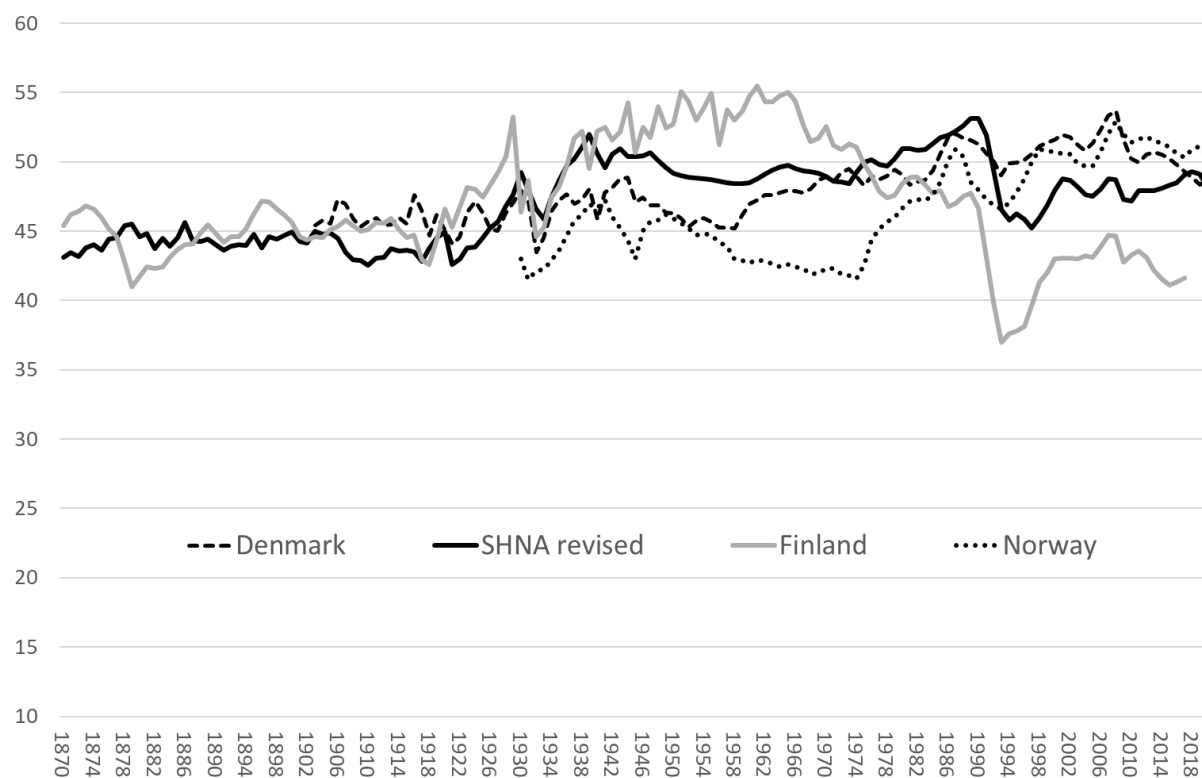
Note: Employment Ratio (Number of employed as share of total population (%))

Sources:

Denmark: Employment as share of total population (Calculations based on: Danmarks statistik, StatBank Denmark, Historical national accounts, VHNRB: Population figures from obsolete National Accounts for Denmark, published since 1945-. 1903-1975: table SH1983: Svend Aage Hansen: Økonomisk vækst i Danmark, bind II, 1983; and 1976-2020: table NR2014: Nationalregnskabet, gældende fra 2014, til 2016.)

Finland: Employment as share of total population (Calculations based on: 1870-1994: Table 15 Total Employment (Index 1926=100) and Table 1 Population. Appendix, Statistical Tables, in Hjerppe, R. (1997) Finland's Historical National Accounts 1860-1997: Calculation Methods and Statistical Tables. Bank of Finland; and calculations based on- and linked with data from 1994-2007 from Statistics Finland, in Statfin archive database: 115b -- Population by area, main type of activity, sex, age and year, 1987-2021.)

Norway: Employment as share of total population (Calculations based on: Vedlegg 2, Hansen, S. og Skoglund, T. (2005) Sysselsettning og lönn i historisk nasjonalregnskab. Beregninger for 1930-1969. Notater 2005/01. Statistisk sentralbyrå, and Statistisk sentralbyrå, Table 03781: Sysselsatte (AKU), etter alder, kjønn, år og statistikkvariabel, 07459: Befolkning, etter år og statistikkvariabel)

In order to extend and revise the series we have used Statistics Sweden data on average yearly labor input per subindustry (Statistics Sweden, 2022J). Since these data are categorized per the ESA2010 system, and since the SHNA divides employees over much the same main sectors as identified in section I, the matching of Statistics Sweden subindustries to SHNA main sectors follows the much the same system as in section I (see Table 1-7 in the appendix). The only exception is that the industrial classification "services of dwellings" is not identified as a

category in the SHNA employment account, so the Statistics Sweden/ESA2010 category "L68B: Management of Real Estate" has been sorted under private services instead.

For each main sector, Statistics Sweden data has been applied as is for the period 1980-2020 (Statistics Sweden, 2022J), and for the period 1850-1979 each series has been revised using 1980 as the benchmark year, according to:

$$Labour_t^{SHNA} = \frac{Labour_{2010}^{SCB}}{Labour_{2010}^{SHNA}} * Labour_{t-1}^{SHNA}, \quad for \ t = 1850, \dots, 1979 \quad (21)$$

The reason that 1980 has been used as the benchmark year and not 1950, which was the original benchmark year, is simply that the Statistics Sweden series on labor input only provides data from 1980. However, since the previous disparity between the Statistics Sweden and the SHNA series during the period 1950 – 2010 derives only from adjusting each Statistics Sweden series with a constant, the size of the disparity between the two series is also constant for each year in the period. Consequently, the choice of benchmark year for revision is of little consequence for the end result.

A consequence of this revision of the employment account is that the SHNA data on employment from 1980 and onwards will precisely equal the estimates of Statistics Sweden. Therefore, this series will henceforth be updated by simply adding new, unrevised data from Statistics Sweden.

Summary

In this paper, we have described the 2023 updates and changes to the Swedish Historical National Accounts, as well as provided discussions and explanations regarding some of the choices that have been made. The accounts on value added in main sectors and GDP, GDP by destination, unpaid domestic services, population, and exports and imports of merchandize have all been updated to the year 2020 using data from Statistics Sweden. In addition, the employment account has not only been updated but also fully revised to better match the aggregate levels in contemporary employment accounts. The framework laid out in this paper will serve as the guiding principle for future updates of the SHNA.

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Appendix

Table 1 - Agriculture:
A01:
Crop and animal production, hunting and related services
A02:
Forestry and logging
A03:
Fishing and aquaculture

Table 2 - Manufacturing industry:
B05:
Mining of coal and lignite
B06:
Extraction of crude petrolium and natural gas
B07:
Mining of metal ores
B08:
Other mining and quarrying
B09:
Mining support service activities
C10:
Manufacture of food products
C11:
Manufacture of beverages
C12:
Manufacture of tobacco products
C13:
Manufacture of textiles
C14:
Manufacture of wearing apparel
C15:
Manufacture of leather and related products
C16:
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
C17:
Manufacture of paper and paper products
C18:
Printing and reproduction of recorded media
C19:
Manufacture of coke and refined petroleum products
C20:
Manufacture of chemicals and chemical products
C21:
Manufacture of basic pharmaceutical products and pharmaceutical preparations
C22:

Manufacture of rubber and plastic products
C23:
Manufacture of other non-metallic mineral products
C24:
Manufacture of basic metals
C25:
Manufacture of fabricated metal products, except machinery and equipment
C26:
Manufacture of computer, electronic and optical products
C27:
Manufacture of electrical equipment
C28:
Manufacture of machinery and equipment n.e.c
C29:
Manufacture of motor vehicles, trailers and semi-trailers
C30:
Manufacture of other transport equipment
C31:
Manufacture of furniture
C32:
Other manufacturing
C33:
Repair and installation of machinery and equipment
D35:
Electricity, gas, steam and air conditioning supply
E36:
Water collection, treatment and supply
E37:
Sewerage
E38:
Waste collection, treatment and disposal activities; materials recovery
E39:
Remediation activities and other waste management services

Table 3 - Building and construction:
F41:
Construction of buildings
F42:
Civil engineering
F43:
Specialised construction activities

Table 4 - Transport and communication:
H49:
Land transport and transport via pipelines
H50:
Water transport
H51:

Air transport
H52:
Warehousing and support activities for transportation
H53:
Postal and courier activities
J61:
Telecommunications

Table 5 - Private services:
G45:
Wholesale and retail trade and repair of motor vehicles and motorcycles
G46:
Wholesale trade, except of motor vehicles and motorcycles
G47:
Retail trade, except of motor vehicles and motorcycles
I55:
Accommodation
I56:
Food and beverage service activities
J58:
Publishing activities
J59:
Motion picture, video and television programme production, sound recording and music publishing activities
J60:
Programming and broadcasting activities
J62:
Computer programming, consultancy and related activities
J63:
Information service activities
K64:
Financial service activities, except insurance and pension funding
K65:
Insurance, reinsurance and pension funding, except compulsory social security
K66:
Insurance, reinsurance and pension funding, except compulsory social security
M69:
Legal and accounting activities
M70:
Legal and accounting activities
M71:
Architectural and engineering activities; technical testing and analysis
M72:
Scientific research and development

M73:   Advertising and market research
M74:   Other professional, scientific and technical activities
M75:   Veterinary activities
N77:   Rental and leasing activities
N78:   Employment activities
N79:   Travel agency, tour operator reservation service and related activities
N80:   Security and investigation activities
N81:   Services to buildings and landscape activities
N82:   Office administrative, office support and other business support activities
O84:   Public administration and defence; compulsory social security (OBS: Private)
P85:   Education (OBS: Private)
Q86:   Human health activities
Q87:   Residential care activities
Q88:   Social work activities without accommodation
R90:   Creative, arts and entertainment activities
R91:   Libraries, archives, museums and other cultural activities
R92:   Gambling and betting activities
R93:   Sports activities and amusement and recreation activities
S94:   Activities of membership organisations
S95:   Repair of computers and personal and household goods
S96:

Other personal service activities

T97:
Activities of households as employers of domestic personnel

T98:
Undifferentiated goods-and services-producing activities of private households for own use

Table 6 - Public services:
Collected as combined aggregate added by:

- Central government and social security funds
- Local government
- Non-profit institutions serving households (NPISH)

Table 7 - Services of dwellings:
L68:
Real estate activities

Table 8 - SHNA estimates as share of Statistics Sweden estimates, benchmark year 2010
GDP in Factor Prices (Current Prices): 0.98
GDP in Market Prices: 0.83
Exports of Merchandize: 1.0
Imports of Merchandize: 0.99
Employment: 1.0