



EUROPEAN COMMISSION  
EUROSTAT

Directorate C: Macro-economic statistics

# **INFORMATION NOTE ON THE RECORDING OF SELF-EMPLOYMENT AND RELATED INCOME FLOWS IN SECTOR ACCOUNTS**

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## **Foreword**

The joint Eurostat-ECB Expert Group on Sector Accounts (EG SA) identified deviations in the recording of self-employment and related income flows having a significant impact on the cross-country comparability of institutional sector accounts. Two questionnaires were sent out EU Member States (plus Norway), to help gather information for the analysis. The replies showed a wide diversity of recording practices resulting from the use of different sources and methods as well as different legal arrangements in countries.

Following this, it was agreed in the EG SA and subsequently in the National Accounts Working Group that Eurostat should prepare an information note on different recording treatments of self-employed and the related income flows. This note is based not only of the questionnaire results but also on further discussion and clarifications with the countries. The intention behind publishing the note is to make users of national accounts data aware of comparability issues, and to summarise the current state of affairs as a basis for encouraging efforts to improve data quality and cross-country comparability.

Eurostat would like to thank the European Central Bank for its collaboration on the note.

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# **Methodological note on self-employment in sector accounts**

## **1. Purpose of the note**

The accounts by institutional sector (sector accounts) describe the economic cycle from production and the generation of income, through its distribution and redistribution, its use for final consumption or for saving to provide for the accumulation of assets, both non-financial and financial, and interactions between domestic economy and rest of the world. A number of analytical ratios can be derived from sector accounts such as households' saving rate, investment rate by sectors, profit share of corporations, dividend yield, etc.

The cross-country comparability of such indicators relies on adherence to common methodological standards established by the European System of Accounts (ESA 2010). In few cases, deviations from the ESA 2010 methodology may occur due to country specificities or/and limitations of available data sources, which may affect the data comparability.

The present note aims to clarify the possible impact of deviations in the recording of self-employment on cross-country comparability of sector accounts data. Such deviations should be taken into account in relevant analysis of sector accounts data on compensation of employees, on employment and value added, and on derived ratios such as profit shares.

## **2. ESA 2010 requirements in recording of self-employment**

Self-employed persons as producers should be recorded in the household sector because it is generally not possible to separate the decision making related to the self-employed business from the decision making of the household for consumption purposes. Income from self-employment in this case implicitly contains both remuneration for work carried out by the entrepreneur and profits due to the entrepreneur, which are not separable from each other. Such income, neither strictly wages nor profits alone, is referred to as 'mixed income' in sector accounts.

For businesses that are recorded in the corporations sectors (non-financial and financial), all flows between the enterprise and its owner(s) are expected to be separately identifiable. If an owner is working for the enterprise (s)he owns, (s)he is considered as an employee of a corporation and should in principle receive a wage or salary as the remuneration for the work done. Thus, the operating surplus of corporations (the balancing item of generation of income account) is expected to reflect only profits earned by the enterprise activities.

The owner of a corporation is in addition entitled to receive a share of enterprise profits: dividends in the case of incorporated businesses, withdrawals from the quasi-corporations<sup>1</sup> in the case of unincorporated businesses. As a consequence of this recording, there are no self-employed to be recorded in the corporations sectors, in accordance with the European System of Accounts (ESA 2010) requirements.

### **3. Recording of self-employment in the corporations sectors in practice**

In most EU countries an owner working for an enterprise classified as a corporation may in practice retain self-employed status, for example due to fiscal incentives, instead of being treated as an employee. However, existing statistical data sources in most cases do not allow identifying directly the number of corporate self-employed owners (SEO). Thus, the impact of deviations in the recording practice of self-employed is not fully known in most cases, nor is reflected in the same way in sector accounts and sectoral employment estimates across EU countries.

Only in four EU countries (Cyprus, the Netherlands, Sweden and partly the UK) and Norway are corporate SEO recorded in accordance with ESA 2010 rules in sector accounts. In these countries, taxation legislation requires such owners to declare part of their income as wages and salaries. Tax records are then used to reflect these flows in sector accounts. In Belgium and Romania corporate SEO working for their own enterprise are treated as providers of services to enterprises and thus, the costs of their services are recorded in companies' accounts as intermediate consumption. Consequently, in the national accounts of Belgium and Romania (and Switzerland, to be confirmed), all self-employed persons (including SEO) are recorded in the households sector, and all revenues of self-employment are recorded as households' mixed income. This is an alternative way of recording that allows identification of flows between a corporation and its SEO, although comparability of corporate profit shares can be impacted to some extent (as SEO labour input is recorded rather as an intermediate consumption, reducing value added, but not as compensation of employees).

Among other countries, only two currently compile and publish estimates of numbers of self-employed by sector based on cross-linking information from various available statistical and administrative registers: Italy<sup>2</sup> and Finland<sup>3</sup>. The table below presents the number and share of self-employed in total employment of the non-financial corporations sector for those two countries.

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<sup>1</sup> Unincorporated enterprises that are deemed to operate as a corporation, i.e. having a full set of accounts and autonomy of decision.

<http://dati.istat.it/?lang=en> (National Accounts/Annual sector accounts/Employment breakdown). FTE = full time equivalent

<sup>3</sup> [http://pxnet2.stat.fi/PXWeb/pxweb/en/StatFin/StatFin\\_kan\\_vtp/statfin\\_vtp\\_pxt\\_008.px/?rxid=bb61a8c9-b2b8-4ee7-90a8-1896723b613e](http://pxnet2.stat.fi/PXWeb/pxweb/en/StatFin/StatFin_kan_vtp/statfin_vtp_pxt_008.px/?rxid=bb61a8c9-b2b8-4ee7-90a8-1896723b613e) (Employment and hours worked)

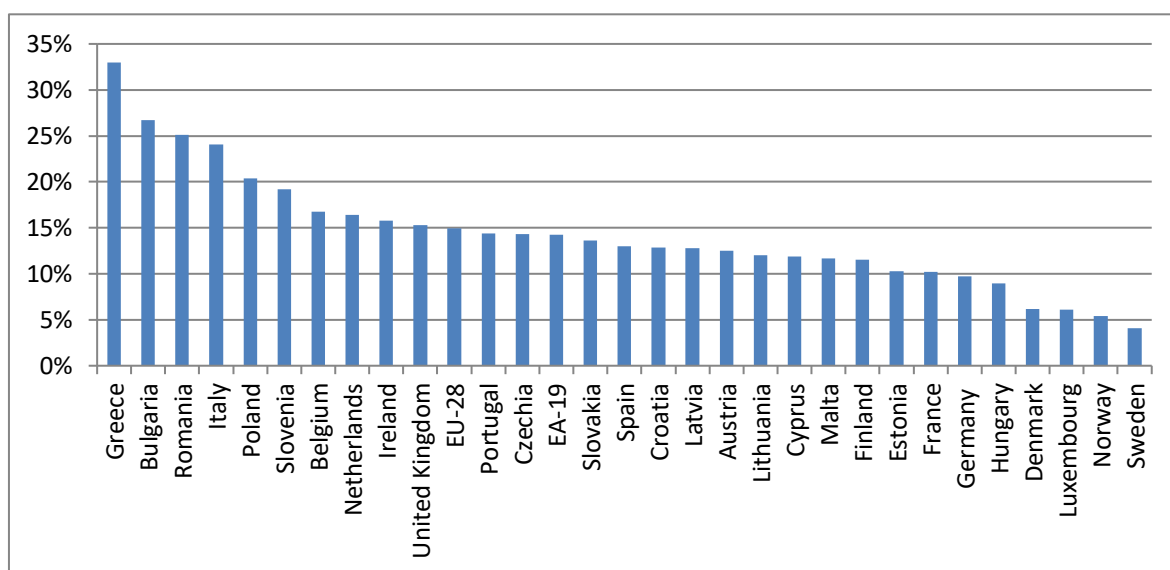
S11	Total employment ('000 persons)	Employees ('000 persons)	Self-employed ('000 persons)	Share of self-employed (%)
Italy (FTE)	11,827.2	10,096.3	1,730.9	14.6%
Finland	1,533.6	1,404.6	129.0	8.4%

**Table 1. Self-employment in the non-financial corporations sector (S11) in Italy and Finland, 2017**

Source: ISTAT, Statistics Finland

In the remaining EU countries there is no information published on statistical breakdowns related to self-employment in the corporate sectors. Eurostat surveyed which treatments for self-employment are applied in the national accounts of EU countries. The chart presented in the Annex summarises these results and shows the potential impact of different treatments on the non-financial accounts. Most EU countries do not have available statistical information on the number of self-employed by sector and, for this reason, do not adjust their accounts accordingly.

The appropriate recording of self-employment in the corporate sectors is particularly important in countries with a high share of self-employment in the total economy. The chart below shows the share of self-employed workers in total employment by country in 2017:



**Chart 1. Share of self-employed persons in total employment (domestic concept<sup>4</sup>) in 2017**

Source: Eurostat

<sup>4</sup> The domestic concept of employment includes both the residents and the non-residents who work for resident producer units.

## 4. Impact of self-employment on the corporate sectors

In the corporations sectors, if the labour input of a self-employed owner is not recorded (nor imputed) as wages in the accounts (nor as services rendered as part of intermediate consumption), the operating surplus reflects not only profits from the corporation's production activities, but also implicitly covers remuneration for the work done by the corporate SEO. In the same way distributed income (dividends or withdrawals) by corporations would partially include remuneration for the work done.

This may have the following implications for the comparability of sector accounts data across countries whose share of corporate SEO of enterprises is significant:

- Compensation of employees is underestimated;
- Operating surplus of corporations overestimates profits from production activities (for the SEO wages part, see example below);
- Dividends (or withdrawals) are overestimated in the same way;

Furthermore, this impacts on important indicators and ratios for the corporate sector as follows:

- Profit share (operating surplus divided by value added) of corporations is overestimated;
- Rates of return (dividends and withdrawals divided by equity) of corporations are overestimated;
- Labour productivity of the corporate sector (value added divided by employment) is overestimated if SEO are not taken into account as part of the corporate sector employment figures, while they have contributed to the generation of value added by their labour input.

The issue is mostly relevant for non-financial corporations. The impact on the financial corporations sector should be minor due to a much lower share of self-employed in that sector. Aggregates for the whole economy are affected accordingly.

Table 2 below presents a numerical example of the possible impact of self-employment in the non-financial corporations' sector on the sector's profit share, based on sector accounts data and employment estimates for Italy and Finland (the only EU countries with known corporate SEO numbers). The example shows that the recording of self-employment could have a significant impact on cross-country comparability.

Assuming that the self-employed of a corporate sector work on average the same number of hours as the sector's employees, and expect to receive remuneration of their labour input similar to the sector average, we can roughly estimate the amount of compensation for the work done if the corporate SEO is treated as an employee in line with ESA 2010 requirements. This allows adjusting the operating surplus to reflect only profits of production activities. It should be noted that dependent on data availability, more granular calculations are possible (using for example hours worked by groups of economic activities), although it would not alter significantly the magnitude of the results. Estimates based on sector average values are applied here for the sake of simplicity of presentation.

Table 2 compares, for Italy and Finland, profit shares using the operating surplus as currently recorded in sector accounts and an adjusted operating surplus, as explained above. It shows that in Italy, where nearly 15% of persons employed in the non-financial corporations sector are self-employed, the profit share as calculated from sector accounts data could be overestimated by around 9.5 percentage points due to 'mixed income' of self-employed. In Finland, with around 8% of self-employed in this sector, the profit share might be overestimated by around 5 percentage points.

<b>S11</b>	<b>Italy</b>	<b>Finland</b>
<b>Total compensation of employees, mio. EUR</b>	438,661.0	68,840.0
<b>Average annual compensation of employees per employee, EUR</b>	43,447.7	49,010.4
<b>Total estimated compensation of employees of self-employed owners working in corporations, mio. EUR</b>	75,203.6	6,322.3
<b>Operating surplus (currently recorded), mio. EUR</b>	338,657.0	52,070.0
<b>Operating surplus (adjusted for SEO)*, mio. EUR</b>	263,453.4	45,747.7
<b>Value added, mio. EUR</b>	795,182.0	120,052.0
<b>Profit share (current), %</b>	42.6%	43.4%
<b>Profit share (adjusted)*, %</b>	33.1%	38.1%
<b>Difference, percentage points</b>	9.5%	5.3%

**Table 2. Impact of self-employment on the profit share of the non-financial corporations' sector (S11) in Italy and Finland, 2017**

*Source: ISTAT, Statistics Finland, Eurostat*

## **5. Conclusions and further work**

The cross-country comparison of accounts by institutional sector is distorted by differences in the recording of the income from self-employment which is due to legal arrangements and data source constraints in the countries. A way of correcting this could be to impute the salaries not explicitly paid to the enterprise owners. Alternatively, self-employed might be treated as providers of services to enterprises, the costs of their services being imputed and recorded in companies' accounts as intermediate consumption, resulting in corrected operating surplus figures.



However, in most countries concerned by the problem, sound information (starting from the numbers of corporate SEO) needed for introducing such calculations into national accounts is not currently available.

The issue of recording of self-employed in sector accounts is being further analysed in the European Statistical System with a view to developing estimates of numbers of SEO in corporate sectors in a wider range of countries.

ANNEX: Treatment of self-employed owners of corporations in national accounts in EU Member States (and Norway, Switzerland)

## **ANNEX**

### **Treatment of self-employed owners of corporations in national accounts in EU Member States (and Norway, Switzerland)**

Survey results allow to group countries according to their treatment of corporate SEO. It appears as the classification strongly depends on the availability of data. There are countries with high availability of data from several sources on employment that can be linked at individual level. These sources provide therefore information at micro level on the relationship between the person employed and the business (registers, administrative data, business surveys) so that the self-employed can be identified and eventually classified as employees.

Other countries cannot perform the link between the person employed (and the status in employment) and the business unit, so it is not possible to know if self-employed are actually working in the household or a corporate sector. These countries therefore are not able to reclassify employment (corporate SEO are included in total self-employed) and income flow (corporate SEO remuneration is implicitly included in the corporate sector's gross operating surplus and can be distributed only via dividends). Only Spain is estimating a share of corporate SEO and corresponding employees' compensation at an intermediate level.

It should be mentioned that in some countries SEO tend to record themselves as employees if it is more advantageous for them. This happens when taxes and contributions paid as employees are lower than taxes and contributions that would be paid as self-employed. In this case, most SEO would be recorded as employees and their income included in employees' compensation in company accounts and business surveys, as well as in administrative records.

Chart A1 below summarizes the treatment of SEO in national accounts in EU countries (plus Norway and Switzerland), according to the results of questionnaires and subsequent clarifications. The result for Switzerland is to be confirmed.

**Key to chart:**

SEO	Self-employed owners
SE	Self-employed
D1	Compensation of employees
D4	Property income
D42	Distributed income of corporations
S11/12	Non-financial/financial corporate sectors
S14	Household sector
QC	Quasi corporations
B2	Operating surplus
B3	Mixed income

BE	Belgium
BG	Bulgaria
CZ	Czechia
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
HR	Croatia
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovak Republic
FI	Finland
SE	Sweden
UK	United Kingdom
NO	Norway
CH	Switzerland

**Chart 1A: Treatment of self-employed owners of corporations in national accounts in EU Member States (and Norway, Switzerland)**

