

Revised Definitions for Statistical Units – Methodology, Application and User Needs.

The Main Conceptual Issues of the “Units Discussion” of the Years 2009–2014

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INTRODUCTION

In the years 2009 to 2014 in the European Statistical System (ESS) modified definitions for basic statistical units have been proposed and discussed. The author took part in this discussion as regular participant in the ESS “Working Group Business Registers and Statistical Units”, as participant in the ESSnet “Profiling of large and complex multinational enterprise groups” (2009–2013) and as member of the Eurostat task force “Statistical Units” which worked from 2013 to 2015 on the main issues. This paper is based on a contribution which has been presented to the Conference of European Statistical Stakeholders, Roma, 24.–25. November 2014.² Starting from the main conceptual issues and bearing in mind the different functions of units the presentation in Roma addressed the users of statistics: Statisticians need a clear picture of the user needs from which to delineate to appropriate choice of statistical units and their optimised application.

This paper focusses on the issues of the conceptual discussion at the stage it had reached in late autumn of year 2014. In December 2014 Eurostat announced to the Business Statistics Directors’ Group (BSDG) a considerable change of strategy concerning the preparation of the FRIBS (Framework Regulation Integrating Business Statistics). Till then Eurostat had intended to modify by FRIBS the wording and content of the definitions of statistical units, which are a very fundamental foundation of business statistics. In December 2014 the definitions of the units have been excluded from FRIBS. The Statistical Units regulation (Council Regulation 696/93) will continue to be in force and FRIBS will refer to these definitions.

In focus of the units discussion in the years 2009–2014 was the “enterprise” concept of Council Regulation 696/93. This concept remained to great extend mere theory – in practice most Member

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States of the EU apply the “legal unit” as sole implementation of the enterprise. This article highlights the elements of the proposal to change the definitions of the enterprise and in consequence also the kind-of-activity-unit (KAU), which is conceptually derived from the enterprise. The proposal which aimed at bringing the definitions in line with developments in business reality raised many doubts and provoked much opposition. This opposition was most prominently expressed in a letter to Eurostat signed by statistical offices of 14 Member states as well as in the outcome of several seminars organized by Eurostat to promote her proposal.

1 STATISTICAL UNITS DEFINITIONS – RELOADED

In the course of the re-framing of official business statistics in the European Union (FRIBS-initiative; FRIBS=Framework Integrating Business Statistics) Eurostat has included an initiative to modify the definitions and operational rules of the statistical units for business statistics. Methodological expert groups (organised as European Statistical System networks – ESSnets) have triggered this in the course of the development of a methodology to profile multinational enterprise groups and in the course of investigating the consistency of today’s business statistics in the EU. The discussion about new definitions focussed most prominently on the statistical unit “enterprise”. Also the “kind-of-activity unit” is essentially affected.

The “unit discussion” has been re-started almost 20 years after some crucial and basic legislation of European business statistics has been laid down by a range of legal acts (Regulations of Council and Parliament of the EU), one of these being the Regulation on Statistical Units. Statistical unit definitions may not be an eye-catcher for statistical users, perhaps even less than classifications and metadata. But all three of these form the fundamentals of statistical work. All our statistical figures mean nothing without the verbal foundations.

The last two decades of official EU business statistics have shown more or less attempts to implement the current unit definitions (as they are laid down in European legislation). The discussion about new unit definitions started in 2009/2010 and has provoked considerable confusion among statisticians. Conception, percipience and also a great deal of interpretation have steamed up the discussion among experts as well as among decision makers.

Two phases of the discussion can be distinguished – and may be characterised by quite different descriptions of the purpose of the initiative to re-discuss the unit definitions:

- “We have to *change* the definitions to enable us to statistically describe today’s realities” (2009–2013).
- “We have to re-phrase the definitions and elaborate on operational rules to make it easier to *apply* the definitions” (2013 – today).

The proposals for revised definitions, initiated and firstly drafted by two ESSnets (“Profiling” and “Consistency”), were the outcome of a one year’s work of the “Task Force on Statistical Units” which has been launched by Eurostat. The Task Force gathers experts of statistical domains in Eurostat and experts of statistical units and business registers from some member states – among which also participants of the two ESSnets mentioned. This Task Force provided the wording of the definitions and the operational rules for the application of the renewed definitions both of which Eurostat intended (till December 2014) to include in the coming European FRIBS regulation.

2 STATE OF THE ART OF THE PROPOSAL FOR NEW DEFINITIONS: CONCEPTUAL DIFFERENCES

2.1 Enterprise

The enterprise is currently defined by the EU Regulation 696/93 on Statistical Units as *“the smallest combination of legal units that is an organizational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit.”*

The first two paragraphs of the proposed definition read as follows:

(1) *An enterprise is an organisational unit which has a sufficient degree of autonomy in decision-making and sells in its own will goods and services to a third party. It can be constituted by one legal unit, a combination of legal units or of parts of legal units. An enterprise carries out one or more activities at one or more locations.*

(2) *An enterprise can correspond to either*

- *a single legal unit not controlled by any other legal unit*
- *an enterprise group as a set of legal units under common control, or*
- *an autonomous part of an enterprise group.*

The differences between the current and the proposed definition of the enterprise may not be obvious at first reading. So what is *new* about the proposed definition?

Autonomy is a first aspect that – compared to the current definition – becomes *more prominent and explicit* in the proposed one. *Autonomy* is the criterion which defines the perimeter of the unit “enterprise”, its demarcation against the “rest of the world”. To this “rest of the world” belong also other parts of an enterprise group to which the enterprise may belong. *Autonomy* is the constituent feature to be looked at for the identification and delineation of the enterprise.

Market orientation is not mentioned explicitly in the latest draft of the proposal although it had been mentioned in many versions of the drafts for two years. In the current wording of the proposal the reference to the market is given indirectly by the phrase “selling of goods and services to a third party” which is explained to have to happen “with an independent buyer on the basis of commercial considerations”. During the discussions about the unit definitions it became clear that the practical application of the enterprise today is not in all cases restricted to market actors. In the proposed definition the phrase “sells in its own will goods and services to a third party” makes clear that enterprises refer to the market sector. Thereby the proposed definition addresses this restriction to market activities *more explicitly*.

Territory is another important aspect in the discussion about the enterprise definition: Both the current and the proposed definitions of the enterprise do not refer to any regional territories. Both are indifferent about the regional coverage of an enterprise. Till date the issue has been “solved” – or better to say “dealt with” – by a “*virtual*” operational rule used by those who apply the current definition of the enterprise: As every statistical office has to produce data at national level (also the European regulations demand to produce data for Member States, that is at national level) everybody who applies the current definition of the enterprise does so in national context. This is not demanded by the current definition itself, it is just an operational rule – maybe not even realized properly as being such – coming from the purpose of the application of the definition: producing national statistical figures based on appropriate statistical units (nationally demarcated enterprises).

The operational rules accompanying the proposed definition address explicitly and *differentiate the reference of the enterprise to territory*: It is stated that where an enterprise is active in more than one country, it shall be called a “global enterprise” (GEN) and its national parts shall be called “truncated enterprises” (TENs). The operational rule explains that even though the truncated enterprises are not autonomous, they are considered to be enterprises. It also states the assumption that from one GEN in most cases there will result one TEN per country, but the delineation of more than one TEN is possible. This makes reference to experiences from global enterprise groups being subject to European profiling. In the process of profiling enterprise groups specific cases of global enterprises occurred for which the delineation of more than one truncated enterprise in a country has been considered sensible.

Legal units are dealt with *differently* in the current and the proposed definition. Conceptually the current definition provides a clear hierarchy of legal unit – enterprise – enterprise group: One or more legal units act as an enterprise and a multitude (more than one) of enterprises can form an enterprise group. The proposed definition does differently: It makes reference to either the legal unit (as the current definition does) or to the enterprise group. As a consequence – to make the definition conceptually consistent – the proposed definition allows building enterprises also by parts of legal units. An enterprise may consist of some *legal units but legal units may also be split* and the parts of them may be apportioned to different enterprises. This novelty can be seen as a very important conceptual motivation for the proposal to change the definition. This is for two reasons: Firstly the phenomenon can be observed in reality (so it exists and should therefore be covered by the definition to make the definition cover the reality). Secondly it may be very helpful for the practical delineation of enterprises by the method of top-down profiling of enterprise groups to identify the enterprises within the enterprise group without having to find out relations between enterprises and legal units (so the change of the definition would be helpful for practical work). The last element of paragraph 2 of the proposed definition (an enterprise as an autonomous part of an enterprise group) deals with this situation. In this case it is left open what the relation of the enterprise to legal units may be.

To summarize the proposed definition of the enterprise allows two constellations which the current definition does not include:

- An enterprise may be identical with an enterprise group.
- Legal units may be split and the parts may be apportioned to different enterprises.

Another implication that has so far not been tackled in the discussions is whether the proposed definition ties the enterprise to be demarcated inside an enterprise group only. The current definition is clearly open on this point since it allows enterprises to form an enterprise group but does not prohibit that enterprises can be formed (as combination of legal units) without reference to an enterprise group and therefore without reference to links of control.

2.2 Kind of Activity Unit (KAU)

The proposed definition states:

A kind-of-activity unit (KAU) is an enterprise, or a part of an enterprise, that engages in only one kind of productive activity, producing goods and services intended to be sold to third parties, or – in case of more than one productive activity - in which the principal productive activity producing goods and services intended to be sold to third parties, accounts for most of the value added.

The delineation of the activities should be based on the valid version of the NACE classification.

For the KAU it should be possible in principle to derive a minimum set of economic indicators related to its production activity (in particular value of production, intermediate consumption (except overhead costs), compensation of employees and gross fixed capital formation of buildings and structures, machinery and equipment as well as employment).

Ancillary activities should not be regarded as a KAU.

The KAU is understood to be a part of an enterprise that is *homogeneous* with respect to the class level of NACE although this level of NACE is not mentioned in the wording of the proposal. The prominent consideration in the “unit discussion” in case of the KAU is not to modify the definition itself, but to make the application of the KAU more operational. This is laid down in the operational rule which introduces thresholds which shall limit the fragmentation of enterprises into KAUs: It suggests that in practical implementation, it should be sufficient to delineate KAUs for:

- enterprises which because of their size (e.g. production value) have significant influence on the aggregated industry data at the level of the at KAU and
- if at least one secondary activity of the enterprise accounts for more than 30% of its total production at class level of the valid NACE classification, – or at least one secondary activity of the enterprise accounts for more than 20% of its total production at the division level of the valid NACE classification.

For enterprises respectively KAUs outside the thresholds it is considered to be justified to see the KAU be equal to the enterprise.

As the KAU is defined as equivalent or part of an enterprise, the *territorial aspect* of the enterprise bears implications for the delineation of KAUs. Strictly speaking the enterprise is seen as an actor regardless of territory. Reading the definitions of enterprise and KAU in context would suggest segregating GENs into multinational KAUs. The operational rule about the enterprise that allows to start with the principle (GEN) and then to apply a deviation (TEN), the latter respecting national territories, results in a consecutive ambiguity regarding the KAUs. A footnote in the operational rules for the KAU indicates that KAUs can also be delineated from TENs. The two ways obviously can result in different results: Starting from the GEN to derive TENs which to segregate into national KAUs or starting from GEN to derive “provisional multinational KAUs” which to segregate into national KAUs. Meanwhile an explanatory document “The Statistical Units Model” has been written which states that in practice the delineation of KAUs is restricted to the national territory. This seems to indicate that they should be delineated from TENs.

As KAUs by definition are to be delineated from enterprises they can only cover *market activities*, or – referring strictly to the latest wording – activities of “selling goods and services”. When this consequence from the definitions became clear the set of proposed definitions was enlarged to provide the KAU concept in two versions – one for enterprises and one for non-market units, which mean “government or non-profit institutional units”.

A kind of activity unit *of a government or non-profit institutional unit* is a unit, which engages in only one kind of productive activity, or – in case of more than one productive activity – in which the principal productive activity accounts for most of the value added.

For the KAU it should be possible in principle to derive a minimum set of economic indicators related to its production activity (in particular (secondary) market sales, intermediate consumption (except overhead costs), compensation of employees and gross fixed capital formation of buildings and structures, machinery and equipment as well as employment). Ancillary activities should not be regarded as a KAU.

The proposed two-fold definition of the KAU points out the fact that the KAU concept still refers to all production of goods and services – a concept which has been altered for the enterprise. The two-fold definition makes sure that the KAU concept can still be applied to all institutional units – that means enterprises in the market sector and government or non-profit institutional units for the non-market-sector – which produce goods and services and therefore produce value added.

3 THE VARIOUS PURPOSES OF (STATISTICAL AND OTHER) UNITS

Based on the conceptual aspects of chapter 2 and approaching the practical application of the definitions in chapter 4 we have to distinguish clearly three functions of units:

- Reporting unit: unit providing information to the data collector.
- Observation unit: unit about which information is provided/reported.
- Statistical unit: unit a statistical output refers to.

Statistical work is surely eased when all three aspects coincide: We ask subjects (respondents, reporting units) about some of their features (as observation units) and produce statistical figures about the quantitative dimensions of these features referring to these subjects (as statistical units). This may be one understandable reason why still many statisticians stick an equivalence of the legal unit and the ‘enterprise’. It makes work easier.

Reasons why statisticians make use of legal units are:

- The possibility to *identify* them, since – like other units from the administrative world – they are defined and addressed by various public administrations.
- Data for statistical use can be *attributed* to them, e.g. financial accounting data or data on persons, like social security data about employment.
- Availability of data to *collect* from administrative bodies (which is easier for statisticians than collecting all data themselves by surveys).

These three aspects all refer to the use of legal units as *observation units*. Of course also their use as *reporting units* to address them as respondents in surveys should be mentioned.

There are also reasons not to make use of legal units. These aspects belong to the (partly missing) usability of legal units as *statistical units*:

- If we want to observe figures about complex enterprises (these are enterprises consisting of more than one legal unit) the unconsolidated flows between the legal units inside these enterprises disturb the picture of the observation unit (the complex enterprise).
- Legal units may not be autonomous and data on legal units may then not be meaningful but give a wrong picture, disturbed e.g. by non-market prices.

Applying the definitions of the statistical units “enterprise” and “KAU” implies to put efforts in distinguishing between reporting and observation units (for data collection) and statistical units (for data compilation and publication). If statisticians have to invest more to produce future’s appropriate statistics, they have to make sure to allocate their resources according to user needs. As described in chapter 2 the discussion on the definitions highlighted some crucial and decisive aspects of the units “enterprise” and “KAU”. Therefore clarification would be helpful about the users’ needs concerning these aspects of the units.

4 ADDRESSING THE USERS OF STATISTICS

There are interrelations between *definitions* of statistical units, the *operational rules* and their actual *application*:

- The *definitions* should capture decisive characteristics of units which are important from conceptual and analytical view. As concepts and analyses serve practical purposes these definitions are driven of course by issues of real life, they are not “purely academic”.
- The *operational rules* describe in more detail how the definition should be understood or how it can be handled in reality. Therefore the operational rules build a bridge between definitions – which should be concise but also as short as possible in wording – an application. When drafting definitions and operational rules it sometimes has to be worked out what belongs to the “pure” definition and what is already “practical” and therefore belongs to the operational rule.
- The *application* of the units starts by the decision which unit to choose for which statistical purpose. Operational rules often have to be detailed further and it has to be worked out how to handle the manifold practical aspects, e.g. how to collect data from respondents about observation units and how to transform this data to get figures for the statistical units.

The third aspect – application – cannot be dealt with extensively by a single expert group like the Task Force on Statistical Units. The application aspect belongs to the conceptual and methodological work of the domain statisticians. As these statisticians produce statistics to serve user needs it is ultimately the users’ needs that should determine the choice and the application of the statistical units.

All relevant users have to be addressed and asked for their views about the proposals to re-define the named statistical units “enterprise” and “KAU”. Analyses of the consequences of the proposed definitions – both methodological and practical – so far only scratch the surface. Many users of the statistical units’ definitions are just becoming aware that something is going on these days. Some are unsettled since they feel not able to think through the implications in short time. If we accept that the Task Force has worked well on content and wording for the *definitions* and the *operational rules* then we can take these two as a base to talk now (meaning in the years to come from 2014) about *application*. This should start by impact analyses, followed possibly, if needed by new statistical concepts and methodologies for the domain statistics and should consequently result in more appropriate statistical figures compared to the present ones.

Market orientation:

The proposed definition of the enterprise provides a clearer description of the aspect of market orientation. It makes clear that enterprises belong to the market sector and to the market sector only. If statistical figures shall describe the market economy this can therefore be expressed more clearly by using the proposed enterprise definition and call the statistics based on them “enterprise statistics”. Statistics that cover more than the market sector instead have to be named differently since they describe not only the activities of enterprises but also the activities of other institutional units besides market actors.

“Purity” in activity:

The obvious change in dealing with this aspect is done in the proposed definition of the KAU. As explained in chapter 2 thresholds have been introduced that allow for less purity in activity regarding the class of NACE. The thresholds introduced for the application of the KAU concept tend to move the KAU (in the practical application) towards the enterprise concept in the sense as the latter has been applied till now which is to take every legal unit as an enterprise). The “real” conceptual enterprise, although base for statistical figures which are prominently published by reference to NACE, is by definition not a unit which gives much information about NACE-based activity.

Also the proposed enterprise definition affects the “purity” issue: The larger the enterprises the less stringent the connection to NACE purity tends to be. NACE attribution merely means an indication of a “main” or “principal” activity which describes no more but that it is the activity of the highest relative score. The aim to broaden the application of the enterprise concept (and to abandon the common practice to simply use legal units instead of building enterprises as combination of legal units) justifies drawing attention to this aspect. Using complex enterprises diminishes the informative value of activity codes attributed to them. The breaking down of GENs into their TEN parts brings along the issue of double NACE coding of GEN and TENs.

Territory:

As explained, the current and the proposed definitions of the enterprise do not refer to any regional territories. Both are *indifferent* about the regional coverage of an enterprise. The perception that the purpose of a “new” definition was driven by the necessity to catch the multinational reality of big enterprises occupied much of the discussion among statisticians in the years 2009–2013. The multinational aspect has been highlighted of course by the circumstance that the proposal to re-think the definition – as described in chapter 1 – has been promoted by an ESSnet that dealt with the profiling of multinational units (enterprise groups as well as enterprises). The well known argumentation is: Economic (autonomous) actors act more and more globally – therefore enterprise statistics have to focus on global enterprises.

The work of the EU-Profiling-ESSnet of the years 2009 to 2013 surely questioned the practical handling of the current enterprise definition by putting emphasis on the issue that building actors (enterprises)

according to national borders was no longer appropriate in case of multinational groups. By the intensive promotion of the GEN concept the belief has been highlighted, that for the big international economic actors the relevance of the data was no longer given if data refers to national borders, since the parts of a multinational enterprise that are situated within the territory of a country are more or less random. This of course would have fundamental consequences for some of our most prominent economic statistics. Essentially the GEN-approach implies to go for *global* statistical figures – global figures meaning neither national ones nor European ones. Global economic actors care no more about European (or EU) borders than they care about national borders.

Since the current and the proposed definition allow generating “global enterprises” the decisive question is: What do users think of it? The production of statistical figures is so far organized according to national borders and the figures themselves refer to a national territory and to statistical units that are shaped to be within this national territory. The European statistical system – Structural Business Statistics (SBS), Foreign affiliates Statistics (FATS), Short Term Statistics (STS), National Accounts (NA) – and more – is aligned to national borders.

- Shall Structural Business Statistics (SBS) in the future describe a world of multinational actors?
- Shall National Accounts be replaced by European Accounts (or EU Accounts?) – or even World Accounts?

The distinction between “global” and “truncated” enterprises has been established, the truncated enterprises thereby being the national parts of the multinational enterprises. Autonomy has been attributed to the multinational enterprises (“global enterprises” – GEN), or to say it more precisely, autonomy was the criterion to delineate and demarcate the GEN. As a logical consequence, the national parts of these enterprises – the TENs – were necessarily *not* autonomous (since if they were they would be the enterprises and no need would be to truncate artificial parts). Figures for turnover of the TENs will not sum up to the turnover of the GEN since the consolidation within the units differ. NACE code of GEN and its TENs can differ so summing up of TEN statistics to multinational figures will differ from multinational figures based on GENs.

Discussions with users of statistical data, impact analyses or likewise actions are not very prominent so far. They would bring the chance to delineate – starting from the purpose of statistical outputs – the appropriate statistical units, as these are one of the very basic ingredients for the production of statistical figures. Two (maybe arbitrary) observations:

- Regarding National Accounts it has been stated lately (to be found in the 21st Meeting of the European Statistical System Committee Luxembourg 14th and 15th May 2014, item “Reports from Directors’ Groups”): “Eurostat underlined the fact that, as regards statistical units, FRIBS will not have any negative practical or theoretical impacts on national accounts.”
- Regarding EU short term statistics (STS) – a statistical domain which can be observed to already react to the aspects mentioned – Eurostat proposes no longer to use the enterprise as statistical unit but to refer solely to KAU in the future.

In tendency the proposed KAU definition moves towards the present definition of the enterprise (as it is supposed to be applied) whereas the proposed enterprise definition puts more emphasis on the multinational aspect of enterprises. Can announcements like the two mentioned be interpreted as statements how to make use of the new focal points of the proposed definitions? Or are they to be seen as attempts to avoid to be affected by the proposed changes in the definitions? Much clarification is needed.

CONCLUSION

This paper focussed on the issues of the conceptual discussion at the stage it had reached in late autumn of year 2014. As mentioned, the proposal to change the definitions has been cancelled. In exchange Eurostat in early 2015 started the first steps of an infringement procedure for the majority of the Member States to

enforce the application of the enterprise definition as defined by current European statistical law. Action plans and time tables have to be provided which describe the implementation efforts. In consequence, business statistics will change conceptually and by figures in the coming years apart from the changes connected with FRIBS. The directors of both business statistics and National Accounts have agreed in a notice of intention to apply the EU-enterprise concept in due time. Whether and when the ideas which lay behind the proposals to change the definition of the enterprise – as discussed here – will come up again has to be awaited.

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