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An Phríomh-Oifig Staidrimh
Central Statistics Office



Istat
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di Statistica



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Proposals for a revision of the statistical units regulation

Part 2

Proposal for a new definition of the statistical units KAU and LKAU

Author: NORBERT RAINER (STAT, AUSTRIA)

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INTRODUCTION

This document proposes revised definitions of the statistical units Kind-of-activity unit (KAU) and Local kind-of-activity unit (LKAU). These proposals were developed as part of the tasks of Work package 1 (WP 1) “Project on statistical units” of the ESSnet on Consistency of concepts and applied methods of business and trade-related statistics. First considerations on these revised definitions were already presented at Statistical Units Workshop organized by this ESSnet that took place from 19 – 20 June 2012 in Riga.¹

The definitional framework for the proposals on KAU and LKAU is the Regulation on Statistical Units (696/93). Further, reference is given to the ISIC manual as well as the UN and EU manuals on national accounts (SNA 2008 and ESA 2010, respectively). Concerning the implementation of these units in the member states, see the deliverables on the inventory that was undertaken by work package 1.

There are two types of reasons for a review of the regulation on statistical units:

- The first one relates to the fact that since 1993 when this regulation was adopted the economic situation has changed: new forms of units in the businesses have emerged which are not covered in the Unit Regulation; similarly, the changes in the organisation of the businesses also call for adaptations of the definitions in the regulation.
- The second type of reason has to do with the fact that a majority of member states do not really apply these units either at all or in forms that deviates from the definitions set down in the regulation. Thus the question arises about the reasons for this neglect. From our experience it is to a large extent the fact that the definitions given are either ambiguous or would require too big efforts and resources for the implementation. Also the necessary cooperation with the enterprises might not be given or a too big response burden is feared. Thus, for the proposal of revised definitions theoretical and practical aspects needs to be taken into consideration.

WP 1 on “Statistical Units” operates in the domain of the project “*Consistency between regulations and applied methodologies in different areas of statistics*”. The work on statistical units is the first task of the whole ESSnet Consistency. The final goal of the WP 1 is the development of recommendations for the revision of the *Statistical Unit Regulation*. The review should be based on the identification of statistical units that may be “theoretically” correct from a conceptual point of view and also realistically applicable in the economic realities of European countries.

This paper is fully focussing on the definitions of KAU and LKAU; it does not discuss whether these units should be part of the future European business statistics: it is only recognized that according to current European regulations certain data should be provided which should be based on these statistical units.

The work on the statistical units is the first task of this ESSnet as the statistical units are fundamental for any kind of statistics. Using different statistical units or applying statistical units differently in the member states clearly result in inconsistencies in the statistical data and thus in a lack of coherence.

¹ N. Rainer: Presentation “Improved, new, operational, etc. definition of the main statistical units for European business statistics, Statistical Units Workshop, June 2012, Riga.

1 THE PRESENT SITUATION

The Council Regulation (EEC) No 696/93 of 15 March 1993 “on the statistical units for the observation and analysis of the production system in the Community” defines the statistical units KAU and LKAU in the following way:

- *“The kind of activity unit groups all the parts of an enterprise contributing to the performance of an activity at class level (four digits) of NACE Rev. 1 and corresponds to one or more operational subdivisions of the enterprise. The enterprise’s information system must be capable of indicating or calculating for each KAU at least*
 - *the value of production,*
 - *intermediate consumption,*
 - *manpower costs,*
 - *the operating surplus and*
 - *employment and*
 - *gross fixed capital formation.”*

- *“The local kind of activity unit is the part of a KAU which corresponds to a local unit.”*

The main characteristics of the present definitions are:

- Both KAU and LKAU are understood as observable statistical units. This means that it should be possible to collect data on these units from the enterprises directly based on their book-keeping, cost-accounting or internal information systems.
- Contrary to KAU and LKAU the unit of homogeneous production (UHP) as well as the local unit on homogeneous production (local UHP) are statistical models which are derived by using assumptions on the applied technology. Using such modeling procedures results in data structures of pure homogeneity. Both kinds of homogeneous units are therefore not observable statistical units and might be excluded from a future Unit Regulation.
- The definition of KAUs/LKAUs requires implementing these units whenever an enterprise engages in more than one productive activity; furthermore, the determination whether the enterprises engages in more than one activity has to be done using the lowest level of the activity classification NACE.
- The availability of appropriate data in the enterprises and their willingness to provide such data in the relevant surveys is the crucial factor whether a KAU or LKAU can be identified and implemented.
- In the current definition some six variables should be available for a KAU/LKAU. However, these variables are of different nature and some of them may not be directly observable.
- The definition of KAU and LKAU is strongly related to the concepts of ancillary activities: ancillary activities should never be identified as KAUs/LKAUs.

1.1 The application of KAU and LKAU definition in MSs

According to the current European statistical regulations, the statistical units KAU and LKAU are only relevant in certain statistical domains.² According to the results of this study the KAU unit should be applied in SBS and STS (industry and construction), the LKAU in tourism and waste statistics and in national and regional accounts. The regulation on statistical business registers does not request to implement the KAU nor the LKAU.

The above mentioned study concentrated on the legal situation only. In order to get evidence on the “de facto” situation concerning the actual implementation of the statistical units in the various domains of business statistics in the member states, an “Inquiry on the Statistical Units” was launched at the end of October 2011 by the ESSnet on Consistency WP 1 project.³

The main results with respect to KAU and LKAU of the inquiry were:

- Although neither KAU nor LKAU is mandatory for the business registers, half of the countries (total answers: 29) answered that they have either only KAUs, or only LKAUs or both KAUs and LKAUs in their business registers. Nevertheless, the other half of the countries have neither implemented KAUs or LKAUs, even if data provision on such units are mandatory.
- Asked about the reasons for not implementing KAUs in the business registers, most of the experts declared not to have enough information to identify the KAU (39%), or not enough resources (17%), that it is not mandatory (17%) or no value is seen (17%).
- The 11 countries that implemented KAUs in their business register were asked whether they do have information on the variables that should be available for KAU units. Nearly half of these countries answered that they do have all or most variables available.
- As regards SBS half of the countries answered that they take the KAUs as identified in the business register.
- In fact, more than 50% of the countries use local units as proxy for the LKAU; two thirds of the countries stated that they have not implemented LKAUs in their business register. Again most of these countries say that they do not have enough information, and that this unit is not mandatory by European law.
- This picture of at least half of the countries not implementing either KAUs or LKAUs in their business register and in their business statistics, has also consequences for national accounts: the national accounts experts answered that 71% (total answers: 24) produce their production data using mainly based on enterprises or legal units, even if some of them answered that they do further adaptations to the basic business statistics data to achieve more homogeneous units.
- The situation in regional accounts shows a similar picture: 10 countries use enterprises/legal units as their operational unit, 9 countries use LKAU, 2 uses KAU and the remaining 3 use mainly local units to compile regional accounts.

These inventory results clearly show that in about half of the countries the KAUs and LKAUs are neither implemented in the business register, nor in business statistics. This has also effects on the

² See: Josef Richter, Christian Engelage, Peter Thomas: External study on detail evaluation of the legal acts in the areas of statistics which were identified by member states as areas to revision, submitted to Eurostat July 2010.

³ ESSnet on consistency of concepts and methods of business-related statistics 2010 project on statistical units, Deliverable 2.4 Questionnaire design and test results, 2011.

compilation of national and regional accounts data as mentioned above. Furthermore, not all countries that have implemented KAU or LKAU have information on all six mandatory variables.

1.2 The limits of the present definitions

The basic idea of the delineation of the units KAU and LKAU is to provide statistical data that are more homogeneous with respect to activity and (regional) location, respectively. Statistical data by economic activities are less homogeneous when based on enterprises rather than based on KAUs. As enterprises can have a broad range of production spread over various activities, data by industries cannot really be analysed as an unknown, but probably considerable part of the output shown in a single industry does not relate to the activity of that industry. This share of secondary output is greater when the data are tabulated at a lower level of the activity classification. At class level of NACE a tabulation of data based on enterprises may make no sense anymore. This is to a greater extent also valid for regional data.

Engaging in various activities is not only a fact of the bigger enterprises, but also for smaller ones. However, usually the bigger enterprises have a relatively higher share in the totals. “The majority of production, though, is carried out by relatively small number of large corporations that undertake many different kinds of production, there being virtually no upper limit to the extent of diversity of production in a large enterprise.” (SNA 2008, § 5.2) Thus, the SNA concludes that some enterprises must be partitioned into smaller and more homogeneous units, so that an analysis of production, in which the technology of production plays an important role, can be based on data of groups of producers that are engaged in essentially the same kind of production.

The current definition of a KAU in the Unit Regulation is quite stringent: whenever an enterprise is carrying out more than one activity, an appropriate number of KAUs would have to be implemented. Further, the determination whether the enterprise engages in more than one activity has to be done at the class level of NACE.⁴

Compared to the KAU the definition for the LKAU is more stringent. First of all, it is based on the KAU, and secondly, it is further split by location.

The inventory in the member states has shown that around half of them have implemented and use the KAU or LKAU, whereas the other half does not. This means that data between these two types of countries are not strictly comparable. Two main reasons were mentioned why these units are not implemented/used: lack of information and lack of resources. The first reason is of course the more important one from the conceptual point of view. It also should be mentioned that countries which have implemented KAUs and/or LKAUs may have done this only for certain parts of the activity spectrum, or only for certain kinds of heterogeneous situations, or have only data on few variables (mostly value of production and employment).

In the understanding of the countries, the limits in the present definitions are obviously based on the impossibility of performance in actually implementing the concepts of KAU and LKAU. This also refers to the question whether such units are observable at all and whether statistics based on such units are useful and relevant.

⁴ It should be mentioned that also the class level the NACE classification usually consists not just of one activity, but is itself an aggregation of several similar activities.

2 CONTEXT AND SCOPE OF THE PROPOSALS

The context of the proposal concerning KAU and LKAU is of course the same that as described in the background paper on the enterprise definition: need to streamline, need to make the production process in the statistical institutes more efficient, need to use administrative data, need to reduce response burden. However, the proposal concerning the enterprise definition is much more in the focus of discussion as it is the main statistical unit in European business statistics and the one which – when used in all domains in a harmonized way – guarantees a coherent data system. However, the limits of the enterprise unit are to be seen in the heterogeneity of the activity dimension. The same is true for the regional dimension. This is principally also true when in case that the countries use the legal unit rather than the “real” enterprise unit.

As mentioned in the introduction, this paper will not advocate in favour or against the use of KAU and LKAU in European business statistics as such. The choice of the adequate statistical unit is to be determined by the goals of the respective statistical domain and not the opposite. However, it is clear that aspects of feasibility, costs and burden, and probably also other factors will influence the choice on the unit. However, the fact remains that the selected unit determines the usefulness and relevance of the data: for example, it has to be discussed whether the turnover index in short-term statistics would still make sense when based on enterprises.

The implementation of any statistical units – be it enterprises, KAUs or LKAUs – is costly for the NSI as well as for the enterprises, as administrative data are usually not suitable for that purpose. Administrative data correspond to administrative units or legal units. Only in the case of small and medium enterprises normally these types of units are also more homogeneous with respect to the production profile and also the activity is mostly carried out at one location only. But even here, the size of the enterprises as such is not the determining factor whether problems of heterogeneity exist in a certain case or not.

A revised definition has to take into account that obviously so far a significant number of countries did not delineate and implement KAUs or LKAUs. It is true that the delineation of these units cannot be done without the cooperation of the enterprises (enterprise groups). The enterprises have to be contacted in a kind of profiling approach in order to detect different lines of production and to arrange with them the appropriate KAU/LKAU structure, and the relevant data deliveries.

A situation where European data for a certain statistical domain are not fully comparable between countries as the countries use different statistical units should not be acceptable. Theoretically, two solutions are possible: either not to use that kind of statistical unit that is not implemented in a couple of countries or that those countries should be enabled to implement the respective unit in their system. The first solution would mean that all countries use that statistical unit that is most likely to implement or already implemented. As the inventory shows this would presently even not be the enterprise unit. Of course, such a solution would also mean that the respective statistical domain which was earlier based on KAUs for instance would then be based on enterprises with all the consequences on the relevance of the data. Consequently, adaptations of the legal basis will also have to be made. However, not all statistical domains are pure European ones and might thus not be altered, at least not in the short run. This is relevant for the concepts of national and regional accounts, where, furthermore, currently a new legal basis is under negotiation, requesting data based on the LKAU as it is currently the case.

It can thus be concluded that the first solution would not be a real one. Therefore, the second possibility should be followed. The proposed new definitions set out in the next chapter are based on these considerations: make the definitions more practical so that the implementation would be easier, not only for those countries that have not yet implemented KAUs and LKAUs.

3 THE PROPOSED REVISED DEFINITION OF KAU AND LKAU

3.1 The revised definition of KAU

Principally, a KAU is to be considered as a statistical unit that is more homogeneous with respect to the activities performed than the unit enterprise is. However, the unit KAU will correspond to the unit enterprise in cases where appropriate homogeneity is actually given. The availability of data for the level of KAU is a prerequisite. If data are not available, then a KAU cannot be delineated and this enterprise would not be split into more homogeneous units. In fact, “availability” includes also willingness of the enterprise to provide data at KAU level. As this means a greater burden, the enterprises should be convinced of the need to partition their unit into appropriate subdivisions. It cannot be taken for granted that usually the organisational structure of the enterprise coincides with aspect of homogeneity of the activities as needed for a KAU.

The following proposed definition has been derived from the definitions in the current Unit Regulation, in the SNA 2008 and in ISIC Rev. 4. The draft ESA 2010 does not contain a definition on KAUs.

No change is proposed with respect to ancillary activities.

A revised **definition** of kind-of-activity unit could be the following:

A kind-of-activity unit is an enterprise, or a part of an enterprise, that engages - in ideal cases - in only one kind of productive activity, producing market output, or in which the principal productive activity accounts for most of the value added.

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

The enterprise's information system must be capable of indicating or calculating for each KAU at least the value of production, intermediate consumption (except overhead costs), manpower costs and employment and gross fixed capital formation of buildings and structures, machinery and equipment. In cases that not all of these variables are directly available in the enterprises' book-keeping, cost accounting or other information systems, they may also be estimated either by the respondents themselves or by the statistical expert in the national statistical offices.

Ancillary activities should not be regarded as a KAU.

This definition allows that KAUs may include one or more secondary activities. This is obvious in cases where the enterprise would not be capable or willing to calculate and provide KAU based data but it is also the case in other situations where it is not useful or feasible to separate KAUs because of the size of the enterprise or the size of the secondary activities.

With respect to the variables for which data at KAU level should be available the proposed definition takes into consideration that not all of them are really observable and measurable. This predominantly refers to the variable “operating surplus” which is a balancing item and for which also depreciation figures would be needed at the KAU level in order to derive operating surplus. Therefore, this variable was deleted in the definition. However, the same is also true to certain categories of intermediate consumption: realistically only those production costs of the enterprise can be split by KAU that are directly related to the production that takes place in respective KAU. This would mean that overhead costs need not to be attributed at the level of KAU. Lastly, also certain kinds of gross fixed capital formation, such as software, R&D, intellectual property rights, can also not meaningfully attributed to the single KAUs. It is therefore proposed only to refer to gross fixed capital formation of buildings and structures, machinery and equipment.

A less strict definition as proposed does not really disturb the goal of KAU based data (greater homogeneity with respect to industries). It is therefore proposed to add some operational rules:

Operational rules:

- The delineation of KAU can be restricted to enterprises which because of their size (e.g. production value) have significantly influence on the aggregated industry data,
- and
- at least one secondary activity of the enterprise accounts for more than 30% of 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 total production at the division level of the valid NACE classification.

These operational rules should guarantee that only in really important cases KAUs should be delineated. This would considerably restrict the number of enterprises that should be partitioned into KAUs and at the same time improve the homogeneity of the industry data as the bigger enterprises have normally a quite high share in the values of the industry totals. No explicit thresholds concerning size criteria are proposed. They need to be empirically tested and defined in each country according to the structure of the business sector. The goal is to increase industry homogeneity in the data of each country and thus country specific situations need to be considered.

Contrary to the old definition, the new one would only require to separate those secondary activities into KAUs that are over the applied threshold. For other secondary activities of an enterprise below the threshold no separation would be required.

3.2 The revised definition of LKAU

As concerns the concept of LKAU the same basic logic is also valid for this kind of unit: it is a unit whose application should achieve a more homogeneous data set of business statistics data by industries, but additionally also by region. The LKAU is thus the adequate unit for structural and regional data and therefore the unit requested to compile regional accounts.

If data are not available, then a LKAU cannot be delineated and this enterprise would not be split into units that are more homogeneous with respect to locations. An enterprise which is engaged in more than one activity and produces in more than one location, should according to the present definition split into KAUs und LKAUs, but also perhaps - because of limits of data availability - only into KAUs.

The following proposed definition is based on the same spirit as the proposed definition of the KAU.

A revised **definition** of local kind-of-activity unit could be the following:

A local kind-of-activity unit is an enterprise or part of an enterprise that – in ideal cases - is situated in a single geographical location and in which – in ideal cases - only a single productive activity, producing market outputs, is carried out or in which the principle productive activity accounts for most of the value added.

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

The location should be based on the local unit.

The enterprise's information system must be capable of indicating or calculating for each LKAU at least the value of production, intermediate consumption (except overhead costs), manpower costs and employment and gross fixed capital formation of buildings and structures, machinery and equipment. In cases that not all of these variables are directly available in the enterprises' book-keeping, cost accounting or other information systems, they may also be estimated either by the respondents themselves or by the statistical experts in the national statistical offices.

This definition allows that LKAUs may include one or more secondary activities (as is the case with the KAU definition) and may also cover activities taking place in more than one geographical location. The reasons for that are analogous to the ones mentioned for the KAU level.

The operational rules for the implementation of LKAUs are based on the logic of the operational rules proposed for KAU and are aimed at implementing these units in the really important cases that would make the resulting data significantly more homogeneous as regards the regional structure of the activities.

Operational rules:

The delineation of a LKAU should mainly be done for enterprises for which KAUs have been defined and when these activities take place in different locations/regions.

Further, in cases where an enterprise is below the applied KAU threshold, but produces in different locations and the production value varies significantly over the locations with no location prevailing.

As regional accounts need to be compiled only at the regional level NUTS 3, it is not requested that the LKAUs strictly be a part of a KAU corresponding to a single local unit. It is also acceptable when the LKAU comprises the sum of all activities spread over various local units within the same NUTS 3 region.

For the proposed definitions of KAU and LKAU the overall goal is to set out definitions and operational rules that are theoretically correct from a conceptual point of view, but also realistically applicable. In cases where for reasons of analysis such units should be implemented, it is a better solution to apply these units less strictly than the theoretical definition would suggest than to apply these units not at all and compile the respective data based on an unit which by definition would not be adequate to achieve the goals of the data analysis.