EU Task Force on factoryless goods producers

Prepared by Eurostat

Summary

A European Union Task force was set up to analyse the methodological aspects of identification of Factoryless Goods producers (FGPs).

The Task force has worked on an operational definition of FGPs and considered useful to first limit the scope of investigation and have a two-step methodology consisting in identifying potential FGPs through existing indicators and confirming the FGP status through questions inserted in a European Statistical System survey.

A list of relevant indicators was elaborated and a methodology for the definition of thresholds was established.

The Task force considered that International Organisation and Sourcing of Business Activities survey, Community innovation survey, Structural business statistics, Profiling and Patent register were sources suitable for the confirmation of the FGP status.

The Task force has elaborated a specific question to be added in the International Organisation and Sourcing of Business Activities survey and is presently working on the elaboration of a small module of questions that could be used in the Community innovation survey.
I. Background

1. The issue of global production has been at the centre of the preoccupations of the Conference of European Statisticians (CES) since 2007 when an Expert Group on the Impact of Globalization on National Accounts was established.

2. More recently, in November 2011, the CES set up a Task Force on Global Production (TFGP) entrusted with the task of elaborating on the conceptual and measurement issues related to global manufacturing. This Task Force was chaired by Ireland.

3. The Task Force had 2 objectives. The first was to develop guidance on a number of unresolved conceptual issues arising from 2008 SNA and BPM6 in relation to global production. The second goal was to develop further guidance on implementation aspects.

4. The TFGP identified a number of conceptual issues related to global production arrangements, where additional guidance and clarification of the SNA and related international standards was required. The most critical issue was the industrial classification and the statistical treatment of ‘Factoryless Goods Producers’ (FGPs).

5. In May 2013 the TFGP submitted to the 8th Advisory Expert Group (AEG) meeting an issue paper on the industrial classification of FGPs in which disagreement was expressed with the rules defined in International Standard Industrial Classification of All Economic Activities (ISIC) - and consequently in the Statistical classification of economic activities in the European Community (NACE) - for classifying FGPs.

6. According to these 2 classifications, FGPs cannot be classified to manufacturing because they outsource completely their production and do not own the raw materials used to produce the goods (§ 142-145 of ISIC guidelines). The opinion of the TFGP was that while ownership and provision of material inputs is an important consideration, control over the outcome of the production process and ownership and provision of intellectual property products (IPP) should also be taken into consideration when determining the classification of FGPs.

7. The conclusions reached by the AEG at its 8th meeting on the issue of FGPs were as follows:

   • Agreed that factoryless producers — supplying intellectual property capital and marketing services, and controlling the production process while using contract manufacturers to produce goods — are to be considered goods producers and should not be classified in distributive services.
   • Recommended that factoryless producers producing manufactured goods should be identified separately within manufacturing, but that this need not be taken to a greater level of detail within subclasses of manufacturing.
   • Supported the classification criteria proposed by the Global Production Task Force on defining the boundary between goods production and distribution services based on IPP inputs and other inputs of goods and services.

8. Based on these conclusions the Inter Secretariat Working Group on National Accounts submitted in November 2013 a position paper on the treatment of FGPs in ISIC to the UN Expert Group on International Statistical Classifications.

9. This position paper was discussed by the UN technical Sub-group on ISIC in New York in October 2014. It was decided to adopt a prudent approach and do some additional investigation before proposing any changes to the ISIC structure or to the existing
guidelines on outsourcing. It was considered essential to ensure that the ultimate recommendation can be practically implemented by ISIC users.

10. Therefore, the conclusions of this meeting were the following:

- no structural changes to be made to ISIC for now
- no changes to the existing guidelines on outsourcing, but
- additional research to be conducted in order to:
  - fully understand:
    - the nature, composition, and importance of the activity of outsourcing the production of goods in national economies
    - its impact on statistics classified by economic activity
    - the consequences of any potential changes to their current ISIC treatment, in all relevant statistical domains
  - make sure the required data on outsourcing and in particular FGPs can be collected.

11. Therefore it was recommended that national statistical institutes (NSIs) flag FGPs in their survey programs or business registers to facilitate data analysis and future classification in ISIC.

12. The "Guide for Measuring Global Production" elaborated by the Task Force on Global Production was presented at the 2015 Conference of European Statisticians. A substantial part of this guide is dedicated to the statistical treatment and identification of FGPs (Chapters 2 and 5 mainly).

13. Concerning FGPs, the main recommendation was to keep them classified in trade as ISIC presently proposes; however, it was also recommended to isolate FGPs within the various trade classes. This would allow further analysis of their characteristics and potentially provide evidence for including them in respective manufacturing classes in a future version of international classifications. The guide also contained some useful guidance on how to identify FGPs and provided a review of the data sources available.

14. For these reasons, the EU Classifications Working Group\(^1\) decided at its 2015 annual meeting to set up a task force in order to look into the methodological aspects of the identification of FGPs.

15. In parallel, the United Nations Expert Group on International Statistical Classifications also asked its ISIC Technical Sub-Group to work on this subject. Synergies between the two groups have been ensured.

II. EU Task Force

16. The Task Force is composed of representatives from Denmark, Finland, France, Italy, the Netherlands, Slovenia, Sweden, United Kingdom and Switzerland. UNECE also requested to be an observer in this Task force.

17. The tasks assigned to the Task Force were the following:

- Analyse the existing documentation on the subject.
- Analyse the "Typology of global production arrangements and transactions involved" proposed by the TFGP and check its completeness and feasibility.

\(^1\) The Classifications Working Group has been renamed into Standards Working Group in 2016
• Identify indicators and thresholds to help properly identify FGPs and contractors in FGP relation.
• Report on limitations of these indicators.
• Identify sources for this auxiliary information. Propose a combination of European Statistical System (ESS) surveys or administrative data to help the identification of these enterprises. Propose if necessary a module of questions that could be added to an existing survey to target FGPs.
• Draft a set of rules to help identifying FGPs.
• Liaise with other international organisations dealing with this issue for cross-fertilisation and possibly synchronisation purposes.
• Report the main conclusions to the EU Standards Working Group. Inform also National Accounts, Structural Business Statistics, Balance of Payments, and Business Registers working groups.

III. Definition of FGPs

18. The Task Force had long discussions on how to define FGPs. In order to develop proper indicators and draft relevant survey questions, it was essential to arrive to an operational and succinct definition taking into consideration the essential characteristics of these enterprises.

19. The following definition was agreed upon.

A Factoryless Goods Producer:
• is a legal unit or a combination of legal units operating without a factory
• develops and owns (or acquires) the intellectual property rights on the design of the goods to be produced
• does not produce the goods itself but sub-contracts the production completely
• may or may not own the raw material inputs
• will own the goods produced, which the FGP may sell directly or via a contractor (e.g., against payment of a fee).

IV. Strategy for identifying FGPs

20. For cost/burden reasons, it would not be realistic to launch a large survey on this type of companies. Therefore, the Task Force considered useful to first limit the scope of investigation and have a two-step methodology:

• identification of potential FGPs through existing indicators to reduce the scope of investigation
• insertion of additional questions in existing ESS surveys to confirm the FGP status of the sample collected in the previous step.

21. The final objective of this exercise is to be able to identify FGPs and to flag them in the business registers.

22. The Task Force conducted some tests on the identification of potential FGPs and the general conclusion was that the number of "pure" FGPs in our economies was not expected to be very high. Therefore after eliminating the companies which clearly were not FGPs,
the remaining possible candidates were in such a low number that adding specific questions in existing surveys appeared quite reasonable in terms of costs.

23. Furthermore, it was felt that a multi-source approach could be more efficient to ensure a broader scope and coverage as in most cases use is made of sample surveys which, by definition, will never be exhaustive.

24. The approach of using a single source coupled with a set of indicators was considered too restrictive because so far the Task Force could not identify any single source ensuring a full coverage of FGPs.

25. The multi-source option will also offer more flexibility to countries in the choice of the most appropriate source and allow them to use a combination of sources if considered useful.

V. Useful indicators for identifying FGPs

26. The first step towards limiting the scope of investigation was to identify the NACE Rev. 2 classes where FGPs are likely to be found. They are expected to be found in the following NACE divisions and groups:

   - Head Offices (70)
   - Trade (45-47)
   - Computer programming (62)
   - Branding (77.4)
   - Manufacturing (13-17, 20-32)
   - Engineering (72.1)
   - Design (division 71 and 74)

27. The next step consisted in selecting useful indicators for identifying potential FGPs.

28. FGPs have some specific characteristics which may help statisticians to distinguish them from other enterprises in the same NACE divisions:

   - Trade margins are higher than in traditional trade, because they encapsulate the value of IPP related activities
   - They employ mostly highly educated staff earning above-average wages, consisting mainly of high tech researchers or managers of production chains
   - Substantive ownership of IPPs
   - Significant R&D expenditures. FGPs can obtain R&D services from specialized R&D service providers and these services can be in the form of purchases of R&D assets or purchases of R&D related capital services.

29. Based on the specificities of these enterprises the Task Force proposed the following list of indicators:

   - Low employment and high turnover
   - Low employment and high production
   - Low employment and high profits

2 The detailed structure of the NACE classification is available here: http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2
• Low employment and high employment costs
• Low capital expenditures
• Low materials or fuels inventories
• Low work-in-progress inventory
• Low inventory of finished products
• High purchases of manufacturing services and high sales of goods
• High purchases of manufacturing services and low purchases of goods for resale
• Structure of employment in terms of ISCO and ISCED showing no occupations in production.

30. A given enterprise doesn't have to fulfill all these criteria to be considered a potential FGP. However, the discriminatory power of these indicators increases when they are used together. In fact, the long list of indicators allows the statistical offices to use different combinations according to data availability.

31. For these indicators to be fully relevant, thresholds needed to be defined. "Low" and "high" needed to be quantified not in absolute values but rather in relative values. The Task Force proposed a relatively simple methodology for the calculation of thresholds based on the distribution of the variable inside a NACE Division/class. For each variable considered deciles are calculated and the first(s) decile(s) are considered "Low" and the last decile(s) "High".

32. Finland worked on the calculation of these thresholds. France, Italy, and Sweden conducted some tests with real data using selected indicators; the result was a significant reduction in the scope of possible FGPs.

33. The tests were based on various indicators and sources. However, this was not necessarily a wrong approach because it gave a more general perspective and provided evidence that the methodology could be used in different countries using the diverse data available in these countries.

VI. Sources

34. Initially the Task Force had compiled a long list of possible sources for identifying FGPs:
• Structural business surveys
• Balance sheets
• Company accounts
• Business registers
• Investment surveys
• Tax administrative information
• Surveys on services and goods not crossing the border
• VAT data
• Extra and Intrastat
• R&D expenditure surveys
• PRODCOM
• Structure of earnings surveys
• European Sales List
• Profiling
• International Organisation and Sourcing of Business Activities
35. Some less conventional possible sources were also mentioned:
   - Land use/land cover registers (to check if a factory actually exists)
   - Patent information
   - Information from business associations which may know about the existence of FGP's in their sector

36. A deeper analysis revealed that most of these sources were rather incomplete for the purpose of identifying FGP's. Only partial information was available and only a methodology combining different sources could make them usable for the purpose.

37. However 5 information sources were considered appropriate provided some minor modifications were introduced:
   - International Organisation and Sourcing of Business Activities
   - Community innovation survey
   - Structural business surveys
   - Profiling
   - Patent register

A. International Organisation and Sourcing of Business Activities

38. The overall objective of this survey is to monitor the economic globalisation of businesses.

39. The last survey conducted was carried out in 2012 in 15 European countries (Belgium, Bulgaria, Denmark, Estonia, Finland, France, Ireland, Lithuania, Latvia, Netherlands, Norway, Portugal, Romania, Sweden and Slovakia) and a new instance of this survey will be conducted in 2018, with hopefully a wider geographical coverage.

40. The 2012 survey gathered data from nearly 40,000 European enterprises with more than 100 persons employed but this threshold is expected to be lowered in 2018.

41. The economic sectors covered were NACE Rev. 2 sections B through N excluding K (Total business economy except financial and insurance activities).

42. The survey aims to collect data on the international organisation and sourcing of business functions and it would be the natural survey to collect information on FGP's.

43. Nevertheless, this survey has some limitations.
   - It is a survey, which means that not all enterprises are covered. Nevertheless, in the 2012 survey, out of the 15 participating countries, 10 surveyed the complete population of enterprises with 100 or more persons employed, while the other 5 conducted sample surveys.
   - It covers only enterprises with more than 100 persons employed. Likely, many FGP's could have less than 100 employees. However, as mentioned previously, it will be proposed to lower this threshold to more than 50 employees and this would improve considerably the possible coverage of FGP's. In the 2012 survey, some countries already included in the sample smaller enterprises though the results transmitted to Eurostat included only enterprises with more than 100 persons employed.
• It is a voluntary survey. In 2012, only 15 countries conducted the survey. However the interest for this survey is increasing and it is likely that more countries will participate in the 2018 round.

44. In the 2012 survey the following useful information was collected:
• Q 2.2 Employment of the enterprise according to the different business functions, and especially employment on production of goods and/or services for the market. The list of business functions will be revised for the 2018 survey.
• Q3.1 Which functions has your enterprise sourced? This question provides information on functions that were sourced domestically and internationally.

45. An enterprise which had:
• low % of employment on the production of goods
• high % of employment on R&D
• outsourced the function of the production of goods

was considered as a potential FGP.

46. The missing pieces of information were:
• whether the production was outsourced completely or just partially
• whether the enterprise supplied service inputs in the form of technology, know-how, and product design
• whether the enterprise exercised control over the production process by providing technical specifications that were essential for transforming the material inputs.

47. Therefore the Task Force proposed the following question for a better identification of FGPs:

2.1 How would you describe the main activity of your enterprise at the end of 20xx?

Manufacturing
• Your enterprise produces (completely or partially) goods and owns them []
• Your enterprise produces goods under contract for others, but does not develop the goods or own the intellectual property rights on the goods []
• Your enterprise does not produces goods, but contracts out the production completely and has developed the goods or owns the intellectual property rights of the produced goods []

Construction []

Trade
• Your enterprise buys and resells goods without developing or owning the intellectual property rights of the goods []
• Your enterprise sells own goods, designs them and owns the intellectual property rights on the produced goods []

Services
• Your enterprise develops, designs and engineers services for clients []
• Your enterprise develops, designs and engineers services for clients, produces and owns goods []
Your enterprise develops, designs and engineers services for clients and controls goods' production process performed by others, and owns the intellectual property rights on the produced goods

Your enterprise provides other services for clients, e.g. transportation

Other please specify

Enterprises which selected the answers in bold are very likely FGPs.

B. Community innovation survey

The Community Innovation Survey (CIS) is a survey of innovation activities carried out by enterprises. The survey is designed to provide information on:

- the innovativeness of sectors by type of enterprises
- the different types of innovation and
- various aspects of the development of an innovation, such as objectives, sources of information, public funding or expenditures.

As FGPs are expected to have high expenditures on R&D services this survey was considered to be adequate for their identification.

The survey is currently carried out every two years across the European Union and some EFTA and EU candidate countries (CIS2012 covered 28 EU Member States, Norway, Serbia and Turkey).

It covers enterprises of 10 or more employees.

The mandatory economic sectors covered are NACE Rev. 2 sections and divisions B-C-D-E-46-H-J-K-71-72-73. However some countries cover more NACE sections and divisions.

The 2016 questionnaire included the following groups of questions:

- General information about the enterprise
- Product innovation (good or service)
- Process innovation
- Ongoing or abandoned innovation activities for product or process innovations
- Innovation activities and expenditures for product and process innovations
- Public financial support for product and process innovation activities
- Sources of information and co-operation for product and process innovations
- Organisational innovation
- Marketing innovation
- Factors hampering innovation activities
- Effect of legislation or regulations on innovation activities
- Non-innovators
- Intellectual property rights
- Innovations in logistics
- Basic economic information on the enterprise

The Community innovation survey is an auspicious source for data on FGPs as it covers an important number of indicators which characterize FGPs.

Nevertheless, when it comes to identifying FGPs, this survey has some limitations:
• It is a survey, therefore not all enterprises are necessarily covered
• It doesn't cover division 45 (Wholesale and retail trade and repair of motor vehicles and motorcycles) where some FGPs could be found. However some countries have a more extended cover of NACE activities than the minimum required at European level
• There are no questions on outsourcing of the production. However, for the 2018 survey a very limited number of questions of this nature could be envisaged.

57. In the 2016 survey the following questions provided useful information:
• Q 2.1 Implementation of goods innovations over the last 2 years.
• Q 2.2 Who developed the product innovation (the enterprise itself, the enterprise together with other enterprises or institutions, the enterprise by adapting or modifying goods or services originally developed by other enterprises or institutions, other enterprises or institutions)?
• Q 2.4 Percentage of the turnover derived from new products.
• Q5.1 Information on R&D activities carried out by the enterprise (occasionally, continuously or via sub-contracting). The same question could also ask for information on the design activities carried out by the enterprise.
• Q 5.2 Amount spent on the activities described under question 5.1.
• Q13.1 The question on intellectual property rights asks for information on patent applications, applications for an utility model, registration of an industrial design right, registration of a trademark, use of trade secrets, copyright claims.
• Q15.1 provides turnover.
• Q 15.3 provides employment.
• Q 15.4 provides the % of the enterprise's employees with tertiary education.

58. An enterprise that has:
• developed product innovation
• a high % of turnover coming from new products
• R&D services with high expenditures on R&D
• applied for patents
• a high turnover per employee
• a high % of employees with tertiary education

is a potential candidate to be a FGP.

59. The missing pieces of information are:
• whether the production is performed internally, completely outsourced or just partially
• whether FGPs exercise control over the supply of material inputs by selecting key material inputs and monitoring the quality of material inputs through selection or preapproval of certain material input providers
• whether they exercise control over the production process by providing technical specifications that are essential for transforming the material inputs.

60. The Task force is presently working on the draft of a small module of questions that could complete the information allowing the identification of FGPs.
C. Structural business statistics

61. Structural business statistics (SBS) describe the structure, conduct and performance of European businesses down to the most detailed activity level (several hundred economic sectors).

62. The majority of the data is collected by NSIs using statistical surveys, business registers or various administrative sources. Regulatory or controlling national offices for financial institutions or central banks often provide the information required for the financial sector (NACE Rev. 2 Section K / NACE Rev. 1.1 Section J).

63. Member States apply various statistical methods, depending on the data source, such as grossing up, model based estimation or different forms of imputation, to ensure the quality of SBSs produced.

64. SBS covers NACE Rev.2 B-N + S95. Information on Section K is very limited.

65. The data are provided by all EU Member States, Norway and Switzerland, as well some candidate and potential candidate countries.

66. All enterprise sizes should be covered.

67. SBS collects annual information but also multi annual variables which are only available for a very limited number of NACE codes.

68. The main variables collected in SBS are the following:

- 11 11 0  Number of enterprises
- 12 11 0  Turnover
- 12 12 0  Production value
- 12 130  Gross margin on goods for resale (for a limited number of NACE codes)
- 12 15 0  Value added at factor cost
- 12 17 0  Gross operating surplus
- 13 11 0  Total purchases of goods and services
- 13 12 0  Purchases of goods and services for resale in the same condition as received
- 13 13 1  Payments for agency workers
- 13 210  Change in Stocks of goods and services (for a limited number of NACE codes)
- 13 211  Change of stocks of goods and services purchased for resale in the same condition as received (for a limited number of NACE codes)
- 13 213  Change in stocks of finished products and work in progress manufactured by the unit (for a limited number of NACE codes)
- 13 31 0  Personnel costs
- 13 32 0  Wages and salaries
- 13 33 0  Social security costs
- 15 11 0  Gross investment in tangible goods
- 15 12 0  Gross investment in land (for a limited number of NACE codes)
- 15 13 0  Gross investment in existing buildings and structures (for a limited number of NACE codes)
- 15 14 0  Gross investment in construction and alteration of buildings (for a limited number of NACE codes)
69. This source can provide the input information for the calculation of several indicators defined in section V. However, this information will only help reduce the scope of possible FGPs but will not ensure that they are real FGPs. A set of additional questions should be designed to get the information necessary to properly assess their status as FGPs.

70. This source presents also some limitations:

- The information is not always provided for the enterprise. Some countries provide the information for the legal unit which does not necessarily coincide with the enterprise unit.
- Unavailability of some data:
  - Variable 15 150 Gross investments in machinery and equipment would be interesting because FGPs should have very low values for it. However it is not collected for enterprises classified in Trade (where most FGPs should be classified according to ISIC/NACE guidelines)
  - Variable 23 110 (Payments to subcontractors) is collected every 3 years (2008-2011-2014 etc.) for NACE Sections B to F and their breakdowns. This means that again we will not have the information for enterprises classified in Trade.
  - Variable 15 420 (Gross investments in concessions, patents, licences and trademarks and similar rights) is collected every 3 years (2009-2012 etc.) for NACE Sections B to E and their breakdowns. Similarly information will not be available for enterprises classified in trade.

71. Nevertheless, one could assume that these limitations do not apply to all countries and that SBS could still be a useful source of information mainly because it is one of the rare sources that cover all size classes of enterprises.
72. The Task Force proposed some possible changes in SBS that could improve the identification of FGPs:

73. It was proposed to split variable 13 11 0 Total purchases of goods and services into:
   - Total purchases of goods
   - Total purchases of services
   to be able to identify those that are purchasing services.

74. It was also proposed to collect data on variable 23 11 0 Payments to subcontractors from enterprises classified in divisions 45-47 too (which presently is not the case).

75. Furthermore, the Task Force considered the 2 following indicators interesting for the identification of FGPs:
   - Operating surplus per head
   - Investment in machinery and equipment in percentage of total investment

D. Profiling

76. Profiling is a method to analyse the legal, operational and accounting structure of an enterprise group at national and world level, in order to identify the statistical units within that group, their links, and the most efficient structures for the collection of statistical data. The role of profilers is to a) identify the most appropriate statistical structure of the Global Enterprise Group and b) analyse and test the feasibility of its use for statistics compilation and data collection.

77. Since 2013, 22 EU Member States (Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, Germany, Estonia, Finland, France, Hungary, Italy, Lithuania, Latvia, Netherlands, Poland, Romania, Slovenia, Slovakia, Spain, Sweden and United Kingdom) and 2 EFTA countries (Switzerland and Norway) have taken part in a profiling exercise at EU level.

78. Profiling will not be a source of information to identify all FGPs as such. By its nature, profiling is only conducted for very large enterprise groups with at least 1500 employees, with a geographical scope that goes very often beyond the national boundaries and a complex structure of affiliates.

79. The methodology for profiling does not involve the collection of any specific information on FGPs. Nevertheless, a lot of relevant information for the identification of FGPs could be derived from and confirmed during the profiling exercise.

80. The methodology for profiling includes an intensive desk work to determine what is the legal and operational structure of the group as well as the countries in which the global enterprise group operates. This desk work is followed by a discussion with the global enterprise group for validation of the proposed profile. Information collected during the desk preparation could already help identify potential FGPs and this assumption could be confirmed during the discussion with the global enterprise group.

81. Profiling was considered a relevant source for the identification of FGPs. Although this exercise is not meant to identify FGPs, their identification is a natural output of the exercise.
E. Patent register

82. The Task force also suggested to consult the national patent registers every year in order to extract the list of patents registered during the year. This list of patents could be the sample basis of a survey with targeted questions on the use of these patents.

83. The members of the Task force were invited to contact their patent authorities in order to check whether and how the information could be used.

84. UNECE also suggested to contact the World Intellectual Property Organization to get more information on the available information on patents and intellectual property in their databases.

VII. Next steps

85. The Task Force is now finalising a proposal for question(s) to be included in the Community Innovation Survey and checking how the Patent registers could be used for the identification of FGPs.

86. A final report on the work conducted by this Task Force is expected to be finalized by end of June. The Working groups responsible for the different ESS sources recommended will be consulted to discuss the possibility of including the amendments proposed.