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Agenda item: 3.2

Global Production - Factoryless Goods Producers

Introduction

The Task Force on global production (TFGP) was created by the Conference of European Statisticians (CES) Bureau in November 2011. The TFGP is preparing a Guide to measuring Global Production, which aims to assist national accounts and balance of payments compilers in recording global production related activities in their accounts. The draft Global Production Guide is due to be presented for endorsement to the CES plenary in June 2015.

In May 2013 the TFGP presented to the 8th AEG meeting an issue paper on 'Factoryless Goods Producers' (FGPs) dealing with their industrial classification. FGPs outsource completely the manufacturing transformation activities, including the acquisition of material inputs, but own the underlying intellectual property products and control the outcome of the production process. A strict interpretation of the *International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4* means that a FGP should be classified as a distributor if the FGP does not provide (own) the material inputs subject to processing, even though the FGP provides the technical specifications of the output and owns and supplies other critical inputs. The opinion of the TFGP was that ownership of material inputs should not be the sole determining factor in classifying a FGP. A FGP should be classified in manufacturing, preferably as a separate subcategory.

The 8th AEG meeting supported the TFGP proposal. The present (second) issue paper examines the nature of the transactions between the FGP and the contractors and the delineation between three types of global production arrangements: manufacturing services on physical inputs owned by others, merchanting and factoryless goods production.

Guidance on documentation provided

• The document "Transactions of Factoryless Goods Producers"

Main issues to be discussed

• The AEG is requested to consider the discussion points and the conclusions of the TFGP on the recording of the transactions between the FGP and the contractors (sections 2 of the issue paper)

• The AEG is requested to consider the discussion points and the conclusions of the TFGP on the delineation between the different types of global production arrangements (sections 3 of the issue paper)

• The AEG is requested to express their views on the recommendations by the TFGP as formulated in section 4.

Transactions of Factoryless Goods Producers

Task Force on Global Production

1. Introduction

1. A first issue paper on factoryless goods producers (FGPs) was discussed by the AEG at its 8th meeting held on 28-31 May 2013 in Luxembourg. The UNECE Task Force on Global production (TFGP) developed a typology of global production arrangements. One arrangement examined in depth was that of factoryless goods production. A traditional manufacturer may use a contractor to provide specialization in a certain type of transformation activity to allow the manufacturer to focus on "core" manufacturing activities. However, there are a growing number of cases, especially in the production of high tech products, where the full transformation process, including the acquisition of material inputs, is outsourced and the principal becomes purely factoryless.

2. In this sense a key defining characteristic of FGPs is that they add value to the production of any particular good through intellectual property products (IPP), innovation and marketing stages of production. While the FGP does not supply (significant) material inputs into the production process, the FGP does supply substantial service inputs in the form of technology, know-how, and product design. In addition, the FGP maintains control over the outcome of the production process, including the contractor's contributions, by providing technical specifications that are essential for the transformation of the material inputs. The FGP controls access and delivery of the final output to consumers.

3. When the FGP does not obtain direct ownership of the material inputs prior to transformation, the industrial classification of the FGP is not straightforward. A strict interpretation of paragraphs 142 – 145 of ISIC Rev. 4 would mean that a FGP should be classified as a distributor if the FGP does not provide (own) the material inputs subject to processing, even though the FGP provides the technical specifications of the output and owns and supplies other critical inputs. 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 IPP inputs should also be used to determine the classification of FGPs. It submitted to the 8th AEG meeting and issue paper proposing that FGP be classified in manufacturing.

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

> "16. 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.
>
> 17. 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.
>
> 18. Supported the classification criteria proposed by the Global Production Task Force on defining the boundary between goods production and distribution services based on intellectual property products (IPP) inputs and other inputs of goods and services."

5. Based on these conclusions in November 2013 the Inter Secretariat Working Group on National Accounts submitted a position paper on the treatment of FGPs in ISIC to the UN Expert Group (EG) on International Statistical Classifications. At the time of writing of this second issue paper the EG has

confirmed that discussions on the implications of the proposed alternative classification of FGPs in the ISIC have started, but a decision is still pending.

6. One consequence of the change to ISIC proposed by the TFGP, and described in more detail below, is that flows that are currently accounted for as purchases and sales by distributors will need to be reallocated to intermediate consumption for purchases, and output in the case of sales.

7. In addition, the recommendation highlights the need for a clearer delineation between three global production arrangements: transformation of goods owned by others (in short: processing), merchanting and factoryless goods production.

8. The TFGP acknowledged the variety of FGP arrangements: some principals are providing certain (key) material inputs into the production process, while others leave it completely to the contractors to purchase the material inputs (according to predetermined specifications). It is important to stress that the principals under both arrangements are active in similar segments of the global value chain. They are providing the IPP related inputs, and possibly other inputs, to the contractor for processing. In terms of economic classification and analytical usefulness it is therefore important to classify them as a separate subclass within the existing ISIC industries that highlights the factoryless characteristic of the firm. The recording of their transactions however poses certain challenges.

9. Analysing the guidance provided in international standards the TFGP concluded that the first type of FGPs – responsible for the IPP related parts of the global production arrangement as well as the delivery of (some of) the material inputs – falls under the goods for processing arrangements. The transactions between the principal and the contractor should be treated according to the recommendations on recording goods for processing in SNA, BPM and related implementation guidelines. There is however, an extreme (or narrow) case of FGPs that are not purchasing and delivering any of the material inputs to the processor prior to the transformation. Applying the processing recording to this particular type of FGP will blur the accounts of the principal since it presents goods produced entirely from "services" and does not recognize the more active role taken by the contractor in the production process.

10. The task force's discussions and conclusions on the treatment of this extreme (or narrow) case of FGP are presented below. For simplicity and clarity of presentation the narrow view of FGPs is used in the following sections of this paper.

11. In the discussions it is assumed that the contract producer, the principal and the customer of the final product are each residents of different countries. This is done to illustrate and explain how these international transactions must be recorded. However, the contractor, principal and the final customer do not need to be located in different countries in order for our definition of FGPs to hold. In other words, a FGP may contract with a domestic contract producer under a factoryless goods production arrangement and then sell the final product to a domestic customer.

12. Furthermore, it should be noted that the principals and contractors are treated as if they are active in only one particular global production arrangement. The reality is often more complex and principals and contractors may work simultaneously under various arrangements. This means that transactions as observed should be evaluated in the context of the trading arrangements under which they are taking place.

13. Section 2 deals with the recording of the respective transactions in the accounts of the FGP (the principal) and the contractor; Section 3 elaborates further on the delineation of factoryless goods production from merchanting and goods sent for processing, and Section 4 summarizes the main recommendations of the TFGP.

2. Recording of output and trade inside a factoryless goods production arrangement

14. In order to obtain a clear picture of the production accounts of the principal and the contract producer under a factoryless goods production arrangement, the TFGP discussed the following three issues:

a. Defining the output of the principal;

b. Defining the output of the contract producer under a factoryless goods production arrangement: a good or a processing service;

c. Recording the respective transactions in the international accounts: general merchandise or merchanting?

15.These three points are further discussed below.

Defining the output of the principal

16. The 2008 SNA (6.146) explains that "although wholesalers and retailers actually buy and sell goods, the goods purchased are not treated as part of their intermediate consumption when they are resold with only minimal processing such as grading, cleaning, packaging, etc". Similarly, the goods they sell are not treated as part of their output. Accordingly, their output is a trade margin (or a trade service) whose value is determined by the difference between the actual price realized on a good purchased for resale and the price that would have to be paid by the distributor to replace the good at the time it is sold. When prices are constant, the trade margin simply represents the difference between the selling price of the good and the price for which it was purchased.

17. When wholesalers buy and resell goods to and from foreign parties, without significant processing taking place in between, these arrangements are referred to as merchanting. The output in such cases represents likewise a trade margin. In the balance of payments this margin is shown as the net exports of goods under merchanting. This treatment is consistent with the national accounts where the output of a trade service is recorded as a trade margin on an exported good.

18. The TFGP also analysed the following guidance provided on merchanting in BPM6 par. 10.42 :

> "In cases where the merchant is the organizer of a global manufacturing process, the selling price may also cover elements such as providing planning, management, patents and other know-how, marketing, and financing. Particularly for high-technology goods, these nonphysical contributions may be large in relation to the value of materials and assembly."

19. FGPs may seem to be engaged in a similar sequence of international goods transactions. However, as concluded by the TFGP and the AEG, the FGP's activities differ from trading due to the significant contribution made by IPPs owned by the principal which can be considered transformative. The scale of value added generated by FGPs as returns to IPPs, management and other services provided clearly exceeds the amount generated from the core distribution activities such as minimal processing, grading, cleaning and packaging as referred to in the 2008 SNA. Furthermore, the TFGP's interpretation of BPM6 10.42 is that it applies only in cases where the addition of value provided by IPP services (corresponding to the range of IPPs that are recorded as fixed assets in the 2008 SNA) is not significant (less than half of the overall observed 'merchanting' margin). Guidance on how to make the distinction in practice is provided below.

20. In identifying FGPs as a special category of manufacturers, their output should reflect the full value of the manufactured good as sold to (foreign) customers, and not a trade margin. Similarly, the supply of goods by the contractor should be recorded as part of the FGP's intermediate consumption. This accounting approach is supported by all task force members.

Does the contractor under a factoryless arrangement produce a good or a service?

21. Under the simple case of goods sent abroad for processing[1] a principal purchases and supplies all of the material inputs sent a contractor for processing. The well-established accounting rules for goods sent abroad for processing explain that the contractor's output represents a manufacturing service. This treatment also applies where some element of the material inputs are purchased by the contracting firm on own account. Under such conditions the manufacturing service will include the value of these material inputs (see BPM 6, par 10.64).

22. Whilst it is clear that FGPs are in the business of producing goods, the output produced by the contractor under a factoryless goods production arrangement (in short: a factoryless arrangement) requires some further elaboration Under a processing arrangement the contractor transforms material inputs provided by the principal to a final product. Under a factoryless arrangement the contractor buys and transforms material inputs into a final output on the basis of the product specifications, i.e. using the IPP related inputs, provided by the principal. In other words, a central feature of a factoryless arrangement is that the 'intangible' components owned by the FGP are physically embodied in the contractor's output, even though they are not included in the price as settled between the contractor and the principal.

23. Under a processing arrangement the contractor is not at liberty to sell its output to any purchaser. Such a restriction also holds under a factoryless arrangement. The transaction between the contractor and the FGP is based on an off market price for a product that in reality has a greater value, including the IPP capital service. However, under a factoryless arrangement the contractor is responsible for acquiring the material inputs in accordance with the specifications of the required output as defined by the FGP. Under such conditions the contractor takes more risks and plays a more active role in the production process compared to a contractor under a purely processing arrangement. Under a factoryless arrangement the contractor is expected to be exposed to risks related to fluctuating input prices and holding inventories.

24. So, the key question is whether or not the contractor under a factoryless arrangement provides a manufacturing service, similar to a contractor's output under a processing arrangement. This question is tightly linked to the issue of economic ownership of the good being produced. Under processing, the principal owns substantial parts of the material inputs used in production. This implies the principal is also expected to own the final product. As a logical consequence the contractor is providing a manufacturing service.

25. Under a factoryless arrangement, the material inputs are directly acquired by the contractor, who is expected to be in control of any material inputs held in inventory prior to transformation. In contrast, the IPP inputs are under control of the principal. This split in ownership of material and intangible inputs complicates the view on the economic ownership of the contractor's output prior to delivery and whether the contractor is de-facto producing a good or a service. There are two options to consider:

a. Under a factoryless arrangement the contractor is, during the transformation process and prior to the transaction, considered the economic owner of the good it produces. When the contractor sells the good the economic ownership of it is transferred to the FGP;

b. Alternatively, the principal is identified as the economic owner of the good during the transformation process and prior to its delivery. This implies the contractor provides manufacturing services on goods owned by the FGP. The transaction taking place between the contractor and the FGP is that of a processing fee or manufacturing service.

[1] Now termed "Manufacturing services on physical inputs owned by others" see BPM6 par 10.62

26. It should be emphasized that this choice does not affect the contractor's output value. Whether recording the transaction as a good (a.) or a processing service (b.), the output of the contractor will be covering the value of labour inputs, capital inputs and purchased materials, but will be excluding the value of the IPP related inputs.

27. Regarding an assessment of control, risk and rewards, as recommended by the SNA, it seems unlikely that any data will ever be available to make an informed decision on ownership of the contractor's output on a case-by-case basis. This means a workable convention is needed. The TFGP established such a convention on the basis of the following arguments.

28. The arguments brought forward by the TF in favour of option a are:

i. Besides factoryless arrangements, there are other examples where a producer and customer agree on the characteristics and the price of a (custom made) good prior to its production and delivery. These conditions may be such that the good cannot be sold to other customers. Generally, under such circumstances, the supplier will still be identified as the producer of the good and a transfer of ownership takes place at the moment the good is transacted. Also, before a transaction takes place, the contractor is expected to bear the risk of holding these manufactured goods in inventory, for example with respect to theft or accidents. This indicates that the supplier is the economic owner of the manufactured goods prior to being transacted.

ii. When recording a manufacturing service, the production accounts of the contractor and the FGP will both be blurred by the fact that the contractor produces industrial services combined with substantive use of material inputs (which seems odd) while the FGP produces a good without consuming any material inputs (idem). As such a processing type of arrangement does not seem to sit very well with the fact that the principal is not responsible for acquiring any of the material inputs of production. Therefore, processing and factoryless goods production should be seen as different global production arrangements.

iii. Although the physical characteristics of the good do not change between purchase and sale, the FGP will increase its value substantially by adding a return on IPPs. As such, one may conclude that in an economic sense the good purchased from the contractor is not at all the same as the good sold to final customers.

iv. In contrast to processing, the contractor under a factoryless arrangement, is expected to be more active on input markets and will as such face risks with respect to material input prices and holding inventories. These risks should under such conditions translate to higher profit margins of the contractor.

29. Alternatively, arguments brought forward by the TF to support option b are:

i. The contractor never becomes the economic owner of the good being produced under a factoryless arrangement because the contractor does not have the decision power to freely sell its output or to set its prices. The contractor assembles a good by strictly following the blueprints provided by the principal. The transaction between the contractor and the FGP is based on an off market price for a product that in reality has a greater value on account of the IPP services included in it, irrespective of the risk management involved on the contractor's part. In economic terms the contractor's output could more accurately be described as a manufacturing service encompassing material inputs. BPM6 (10.64) explains that manufacturing services may include the value of material inputs purchased by the contractor, even though this paragraph does not specifically address those cases where all material inputs are purchased by the contractor;

ii. As such FGPs fall nicely under the goods sent for processing arrangement which simplifies the overall picture of goods related global production arrangements, limiting them only to merchanting and processing cases.

iii. A good cannot be produced twice. The physical characteristics of the good are not altered by the FGP. This implies the transaction between the contractor and FGP resembles a manufacturing service.

30. Although there was not full agreement, the majority of the TFGP supported the recording of a transaction in goods (option a) between the supplier and principal under a factoryless arrangement. This recording follows the logic that, in economic terms, the good purchased by the FGP is an intermediate product to which the IPP value is subsequently added before being sold to the final customer. Furthermore, it has the practical advantage of minimising the recording of manufacturing services in the accounts for firms that own the material inputs and respectively recording only service inputs in the accounts of companies that produce goods.

'Goods under general merchandise' or 'net exports of goods under merchanting'

31. After concluding firstly that FGPs are engaged in manufacturing and secondly that a transaction in goods is recorded between the contractor and the principal, a subsequent question addressed by the TFGP was about the type of recording to be followed in the balance of payments and national accounts. Keeping in mind that the contractor, the principal and the final costumer are supposed to be resident in different countries. There are two options:

a. A gross recording of the import and export flows of goods (general merchandise);

b. A net recording, i.e. net export of goods under merchanting, taking the country's perspective in which the FGP is resident. This proposal was reviewed in relation again to par.10.42 of BPM6, highlighted above.

32. Although the recording of arrangements such as 'transformation of goods owned by others' and 'merchanting' is explained in detail in BPM6, factoryless goods production is not discussed as such. BPM6 provides no guidance on cases where the value from these additional IPP related services is much larger than the value related to distribution services. The TFGP concluded that the guidance in par.10.42 does not address specific cases of factoryless goods production.

33. A majority of the TF argued that the output of FGPs as manufacturers should reflect the full value of goods as sold to (foreign) customers instead of a trade margin. Similarly, the purchase of goods obtained from the (foreign) contractor (at prices excluding the IPP component) should be recorded as intermediate consumption. This gross recording in the production account of the FGP was found to be inconsistent with a net recording of the corresponding international trade flows in the balance of payments. In other words, a majority of the TFGP favoured a gross recording to be reflected also in the balance of payments of the international trade in goods under a factoryless arrangement (paragraph 28, option a).

3. Delineation of FGPs

34. The TFGP developed guidance explaining the differences between (a) factoryless goods production and mechanting, and (b), the differences between factoryless goods production and goods sent for processing. Chapter 2 of the Global Production Guide shows that each of these global production arrangements – processing, merchanting and factoryless goods production – lead to differences in the recording of goods and services transactions and related international trade flows. These differences affect the production accounts of both the principal and the contractor participating in these global production arrangements.

Factoryless goods production versus Merchanting

35. When examining the differences between trading (merchanting) and factoryless goods production the significance of IPP used in the production process of the principal firm plays a decisive role. Yet, concrete decision rules are needed as FGPs will often be active in several areas such as product development, supply chain management, marketing and trade. The Global Production Guide suggests that the role of a principal in a global production arrangement be assessed by looking at the dominance of IPP inputs and typical activities such as innovation, supply chain management and marketing versus the provision of purely distribution services. This should determine the firm's overall economic engagement: factoryless goods production or trading (merchanting).

36. This leaves open the role of branding in a factoryless arrangement. A principal may not supply the blueprints for production but instead purchases goods from manufacturers and resells the goods under the entity's brand name. These companies may spend substantial amounts of money on marketing assets (advertising) to elevate the attractiveness of the brand it sells. And the return on these 'investments' will show up as a substantial increase in the value of the good as sold to customers. One could argue that in the eyes of the customers the quality of the product has increased substantially due to branding. This would suggest that between purchasing and selling, the good is being transformed in an economic sense (although perhaps not in a physical sense).

37. Branding is often associated with arrangements that are led by firms involved in the downstream end of the global supply chain, such as retailers. In terms of 'economic transformation', one might argue that branding does not significantly differ from retailing. As a result, it is recommended that companies concentrating their activities on branding inside the global value chain should not be identified as FGPs.

38. The future research agenda of the 2008 SNA includes the recording of marketing assets (A4.53). According to 2008 SNA marketing assets include brand names, mastheads, trademarks, logos and domain names. Marketing is a key driver of brand value and big corporations invest heavily in building and supporting their brands by advertising, sponsorship and other measures to build a positive image with customers. The 2008 SNA treats marketing assets as being non-produced and the expenditures incurred in their creation as intermediate consumption. They appear in the balance sheet only when they are sold. The major reason for not treating marketing assets as fixed assets is due to the difficulty of measuring their value.

39. More generally, in the 2008 SNA research agenda it is acknowledged that product innovation and product development involves, in addition to R&D, other activities such as product design, market research and marketing. FGPs are expected to play a significant role in each of these areas. Supply chain management is another characteristic activity of FGPs. With the exception of R&D, each of these activities does not lead to IPP capital formation and IPP use in the strict 2008 SNA sense.

40. Acknowledging that factoryless goods production involves this broader range of activities closely connected to product innovation, marketing and supply chain management, the TFGP examined three alternative decision rules that may be used to identify FGPs, and distinguish them from traders. These rules must be applied to those companies that are seemingly engaged in the reselling of goods but may be managing a factoryless arrangement.

41. The company under observation is a FGP,

a. In cases where more than 50% of its value added represents the returns on IPPs, i.e. IPP related capital services (in the 2008 SNA sense, expectedly R&D and software related);

b. In cases where the company is a substantive IPP investor and more than 50% of value added originates from returns on IPPs activities such as innovation, supply chain management, and market research and marketing;

c. In cases where more than 50% of the company's value added originates from activities such as innovation, supply chain management, market research and marketing. Following this decision rule, companies mainly engaged in branding would also be identified as FGPs.

42. A majority of the TFGP expressed a preference for decision rule b.

43. It is important to stress that this guidance may require refinement in the near future, based on country experiences with putting these guidelines into practice.

Factoryless goods production versus goods sent for processing

44. Manufacturing services on physical inputs (goods) owned by others (processing) is well described in the 2008 SNA and BPM6. The classic example of a processing arrangement is that of the principal shipping raw materials or semi-fabricated goods to a processor abroad. Where this type of arrangement presents a challenge is when the principal is not only responsible for product development, supply chain management and marketing but also for acquiring (some of the) material inputs prior to processing. These inputs may be purchased abroad and subsequently shipped to the processor. As the principal obtains economic ownership of (some of the) material inputs, this would be recorded as a case of processing. However, the principal in such a processing arrangement has become 'factoryless' similar to principals outsourcing all purchases of the material inputs and in line with the recommendation in paragraph 8 should be classified as a new subset of the existing classification.

45. A pragmatic choice is needed to distinguish the arrangements falling under processing from those falling under factoryless production (in a narrow sense). The dividing line drawn by the TFGP is whether or not the principal has obtained at least some of the material inputs prior to processing. This criterion is in accordance with how goods sent for processing is currently explained in 2008 SNA and BPM6. For example, BPM6 explicitly argues that processing fees may partly reflect the costs of supplementary (material) inputs purchased by the processor.

4. Recommendations

46. To sum up, the TFGP proposes the following guidance supplementing the treatment of FGPs as a special case of manufactures:

a. The output of a FGP should reflect the full value of the manufactured good as sold to (foreign) customers and not a trade margin. Similarly, the supply of goods by the contractor should be recorded as part of the FGP's intermediate consumption;

b. Under a FGP arrangement the contractor is, prior to the transaction, considered the economic owner of the good it produces. The contractor will be selling the good, whose value does not include IPP content owned by the FGP, where economic ownership is transferred to the FGP;

c. In cases where the contractor, the FGP and the final costumer are each resident in different countries, a gross recording of the import and export flows of goods (under general merchandise) is recommended in the accounts of the country in which the principal is resident;

d. Regarding the delineation between trading and factoryless goods production, a company under observation is a FGP in cases where the company is a substantive IPP investor and more than 50% of its value added originates from activities such as innovation, supply chain management and market research and marketing;

e. Regarding the delineation between goods sent for processing and factoryless goods production, the latter represents those arrangements under which the principal does not obtain any of the material inputs prior to manufacturing.

f. Regarding economic classifications the TFGP recommends that each principal owning and supplying the IPP inputs and possibly other inputs (goods and services) to a contract processor should be classified to manufacturing as a separate and new subset of existing classifications that highlights the factoryless characteristic of the firm.