

**8<sup>th</sup> Meeting of the Advisory Expert Group on National Accounts,  
29-31 May 2013, Luxembourg**

**Agenda item: 04**  
**Topic: Global Production (Factoryless Goods Producers)**

Introduction to the Task Force on Global Production

The Task Force (TF) on global production was created by the Conference of European Statisticians (CES) Bureau in November 2011 to support the implementation of the *System of National Accounts 2008* (SNA) and the *Balance of Payments and International Investment Position Manual, Sixth Edition* (BPM6) with respect to global production arrangements. The objectives of the Task Force are twofold: 1) further address a number of unresolved conceptual issues and 2) develop practical guidance on implementation aspects of the new global standard. The final outcome, to be presented to the CES tentatively in April 2014, will be a Guide, assisting national accounts and balance of payments compilers in recording global production related activities in their accounts. Information on the terms of reference and the work plan of the TF was already presented at the AEG meeting in April 2012 (<http://unstats.un.org/unsd/nationalaccount/aeg/2012/M7-24.pdf>).

So far, the TF has identified a number of conceptual issues related to global production arrangements, where additional guidance and clarification of the SNA and related international standards may be required. The most important among them is the industrial classification and the statistical treatment of 'Factoryless Goods Producers' (FGPs). FGPs are producers that outsource the manufacturing transformation activities but own the underlying intellectual property products (IPPs) 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 an 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 TF is that *ownership of material inputs should not be the sole determining factor in classifying an FGP. An FGP that controls the outcome of the production process and provides (owns) either the IPP inputs or 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.* The proposal of the TF was supported by the Group of Experts on National Accounts, which held a meeting in Geneva on 3-4 April 2013 in order to review the draft chapters of the TF Guide. The attached issue paper describes in more detail the proposal and the recommendations of the TF.

Guidance on documentation provided

- The document Issue Paper on factoryless goods production

Main issues to be discussed

- The AEG is requested to consider the discussion points raised in section 3 of the issue paper.
- The AEG is requested to express their views on the recommendations formulated in section 6 by the TF.



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## **Issue Paper on Classifying Factoryless Goods Producers**

### **1. Introduction**

1. Recent years have witnessed the rapid and widespread incorporation of specialization into goods manufacturing allowing firms to divide the traditional vertically integrated production model into stages or tasks known as fragments. The fragmentation of production has allowed firms to outsource processing activities (i.e., the actual physical, chemical, or mechanical transformation of inputs into outputs) to specialized domestic and foreign establishments. Some firms – known as factoryless goods producers, factoryless manufacturers, virtual manufacturers, or fabless manufacturers – supply inputs of intellectual property products (IPPs) (i.e., the technology, know-how, and product design) but outsource the processing activities required to produce the output. The factoryless goods producer (FGP) is a principal that controls the outcome of production of a good by undertaking the entrepreneurial steps and providing the technical specifications required to produce the good. Increasingly, the processing activities are taking place offshore, creating new challenges for national accountants and compilers of international trade statistics. This issue paper addresses challenges associated specifically with classifying FGPs based on economic activities and makes recommendations for classification.

### **2. Background**

#### Fragmentation of Production

2. A number of forces are driving the fragmentation of production to specialized establishments and facilitating the creation of global supply chains and global value chains.<sup>1</sup> Advances in information technology, improvements in logistics, and lower trade and transportation costs allow firms to relocate production to new and often distant locations. International cost differences such as lower relative wages give firms an incentive to seek the lowest costs. Better contract enforcement and protection of intellectual property rights provide firms with necessary legal support to consider global fragmentation. Whereas the focus of a global supply chain is on the movement of goods and services through the stages of a global network structure, the focus of a global value chain is on the creation of value at each location (i.e., each country) in the network.

3. The fragmentation of production through the use of global network structures raises challenges for national accountants and compilers of international trade statistics, including the classification of firms, the measurement of trade in goods and services, and the measurement of trade in intermediate inputs. The *System of National Accounts 2008* (SNA) and the *Balance of Payments and International Investment Position Manual, Sixth Edition* (BPM6) include new guidelines to better reflect the related economic activities in national accounts and international accounts.

4. In the past, a traditional manufacturer maintained some processing capabilities and economic ownership of material inputs and final output coincided. As one example, a traditional manufacturer may

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<sup>1</sup> U.S. International Trade Commission, “Economic Effects of Significant U.S. Import Restraints,” Publication 4253, August 2011.

have used a contractor to perform processing activities to ensure sufficient capacity during periods of high demand. As another example, a traditional manufacturer may have used a contractor to provide specialization in a certain type of processing activity to allow the manufacturer to focus on “core” manufacturing activities. Under the traditional manufacturing arrangement, ownership of material inputs was a relevant factor in determining whether goods were being produced on own-account or under contract.

5. Now there are a growing number of cases, especially in the production of many high tech products, where the traditional manufacturing arrangement does not hold. A firm may become purely “factoryless” in the sense that it does not supply the material inputs or undertake the transformation of the material inputs into a good but hires a contract processor to supply and transform the material inputs. In this case, the firm is an FGP.

6. The FGP concentrates on innovation and marketing decisions. While the FGP does not supply 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 supply of material inputs by identifying key material inputs and monitoring the quality of material inputs through selection or preapproval of certain material input providers. Likewise, the FGP maintains control over the outcome of the production process by providing technical specifications that are essential for transformation of the material inputs. The FGP controls access and delivery of the final output to consumers.

7. The contract processor manages the transformation process by supplying material inputs and transforming the material inputs. The contract processor is a manufacturer that delivers pre-specified goods to the FGP at pre-determined prices and cannot sell the goods to parties other than the FGP.

8. While a transaction in goods takes place between the contract processor and the FGP, the transaction cannot be seen as an unconditional market transaction. Key in this arrangement is that the transaction is conditional, which makes the contract processor captive—it cannot sell the good to other parties. In the case of factoryless manufacturing, control over the outcome of the production process and ownership and provision of the IPP inputs seem to coincide with the economic ownership of the final output.

### Current Standards

9. The *International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4* (ISIC) was published in 2008, and the updated standards include guidelines for classifying a unit that outsources production. Paragraph 137 of ISIC defines the term “outsourcing” as “...a contractual agreement according to which the principal requires the contractor to carry out a specific production process.” The principal may outsource parts of the production process or may outsource the complete production process. In either case, the term “outsourcing” defined by ISIC is a broader use of the term than is generally used by economists. Usually the term “outsourcing” refers to service or manufacturing activities that are contracted out to unrelated (i.e., unaffiliated) parties in either the domestic economy or a foreign economy and is generally meant to apply to activities that were once internal functions. The ISIC definition does not restrict the use of the term to unrelated parties or to activities that were once internal functions.

10. In drafting the updated standards, classification of the contractor was determined to be handled consistently across countries but classification of the principal was not. Therefore, paragraphs 140 – 145 of ISIC clarify the criteria for classifying a principal that outsources a production process as follows:

#### *Outsourcing of parts of the production process*

140. *If only part of the production process is outsourced, the principal is classified to the class that corresponds to the activity representing the complete production process, i.e., it is classified as if it were carrying out the complete process, including the contracted work, itself.*

141. *This applies not only to the outsourcing of support functions in the production process, such as accounting or computing activities, but also to the outsourcing of parts of the core production process, such as parts of a manufacturing process.*

#### *Outsourcing of the complete production process*

142. *In general, if the principal outsources the complete production process of a good or service, it is classified as if it were carrying out the production process itself. This applies in particular to all service-producing activities, including construction. In the case of manufacturing, however, the following special considerations apply.*

143. *In manufacturing, the principal provides the contractor with the technical specifications of the manufacturing activity to be carried out on the input materials. The input materials (raw materials or intermediate goods) can either be provided (owned) by the principal or not.*

144. *A principal who completely outsources the transformation process should be classified into manufacturing if and only if it owns the input materials to the production process—and therefore owns the final output.*

145. *A principal who completely outsources the transformation process but does not own the input materials is in fact buying the completed good from the contractor with the intention to re-sell it. Such an activity is classified in section G (wholesale and retail trade), specifically according to the type of sale and the specific type of good sold.*

11. Given that an FGP does not supply material inputs in a factoryless manufacturing arrangement, the ownership requirements of paragraphs 142 – 145 of ISIC call the classification of an FGP into question. As a result, the ownership requirements run the risk of inaccurate classification to trade and inconsistent classification across countries based on different interpretations across countries in arrangements where the transformation process is completely outsourced.

### **3. Issues for Discussion**

12. A strict interpretation of paragraphs 142 – 145 of ISIC means that an 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. This interpretation raises two important issues: 1) role of the IPP inputs and 2) control of production.

#### Role of the IPP Inputs

13. One issue pertains to the role of IPPs in the production process, which is implicitly considered in ISIC as being non-transformative for FGPs but not so for factoryless producers engaged in the production of services. The inconsistent treatment for manufacturing activities and service-producing activities implies that an FGP that develops and supplies IPP inputs to the production process will be classified as a distributor even if the IPP content of the final good contributes the majority of the value of the good.

- Based on economic activities, what is the appropriate classification of a principal that completely outsources processing activities but develops and supplies the IPP inputs required to make the good, especially in cases where the IPP content contributes significant value-added?
- Should the scope of “input materials” within the ISIC guidelines be extended to include the services provided by IPP inputs?

## Control of Production

14. Another issue relates to the control of production. For a contractual relationship where the principal controls the outcome of the processing performed by the contractor (whether de facto or de jure) and has an obligation to acquire the output that meets the requirements of the contractual arrangement, there is an argument that the principal has implicitly accepted the risks and rewards of the contracted work in terms of its outcome. In such cases, the classification of the principal should be made as if the principal is carrying out the production process, including the contracted work.

- Should control over the outcome of the production process and a contractual obligation to acquire the output be considered more appropriate criteria than ownership of the material inputs for determining the classification of the principal?

## **4. Justification for ISIC Review and Clarification**

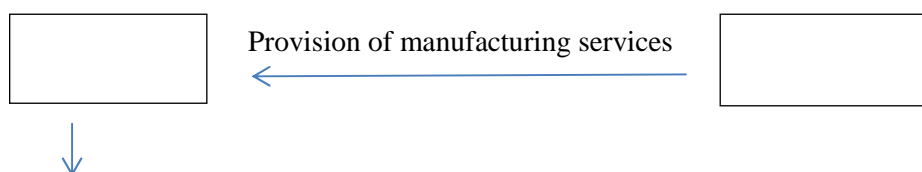
15. As stated in paragraph 142 of ISIC, outsourcing of the complete production process is treated differently for service-producing activities than for manufacturing activities. For service-producing activities, the principal is classified as if it were carrying out the production process itself. For the complete outsourcing of processing activities, the criterion of ownership of material inputs is included.

16. The issue of how to classify a principal that contracts with another unit to carry out specific aspects of the productive activity of the principal was addressed by the Technical Subgroup (TSG) of the Expert Group on International Economic and Social Classifications. The TSG was asked to identify a set of criteria that are distinct, observable, and consistent with the principles of the SNA and BPM6.<sup>2</sup>

17. For outsourcing manufacturing activities, the TSG considered three options to be applied as criteria to make the distinction in the activity classification of the principal: 1) ownership of the physical input materials by the principal, 2) ownership of the IPP inputs related to the production process or related to the final good, and 3) both the ownership of the physical input materials and the IPP inputs.

18. After deliberations, the TSG recommended that the classification of the principal should be based on a single criterion: ownership of the physical input materials. The TSG stated that this treatment of outsourced activities in ISIC was consistent with the product classification treatment defined in the Central Product Classification (CPC). Under outsourcing, the following products would be transacted by the principal and the contractor:

- (i) If the principal owns the material inputs then the output of the principal is goods and the output of the contractor is manufacturing services.



<sup>2</sup> Becker, Ralf and Ivo Havinga, "Treatment of Outsourcing in International Standard Industrial Classification (ISIC)," Rev. 4, Notes for OECD Structural Business Statistics Expert Meeting – Paris, pp. 10-11, May 2007.

- (ii) If the principal does not own the material inputs then the output of the principal is services (margin on the good) and the output of the contractor is manufactured goods.



19. The TSG also argued that the treatment of outsourced activities in ISIC was consistent with the SNA and BPM6 statistics on goods and services.

20. In many cases, the value of the output of FGPs reflects as much or more the contribution of IPP inputs as that of material inputs. The assumption in paragraphs 142 – 145 of ISIC that the final output of an FGP is simply a distribution activity seems inadequate when the services used in production, particularly IPP inputs developed and supplied by the principal, are taken into account. ISIC defines wholesalers and retailers as buying and selling goods without transformation of the goods. Classifying an FGP in the wholesale-retail sector seems to contradict this definition because the FGP does more than simply buying and selling. In particular, the value added by an FGP may be significantly more than the margin associated with the activities of merely distributing a good from a producer to a consumer because the IPP inputs embedded in the good may contribute significant value to the good. In addition, FGPs control the outcome of the production process, and therefore, the nature of their activities differs significantly from wholesale-retail trade.

21. Given the increasing prevalence of firms fragmenting their production, the recommendation in ISIC appears untenable. Thus, additional criteria should be considered when classifying FGPs.

## 5. Classification Criteria

22. The assumption in paragraph 144 of ISIC that the unit that owns the material inputs also owns the final output seems inadequate in light of factoryless manufacturing. The previous view of a production process that only considers material inputs while failing to consider IPP inputs is at fault here and requires refinement. In addition, there are broader issues related to the control of the production process in a contractual relationship between a principal and a contract processor that merit further consideration.

23. Under a factoryless arrangement, the principal generally controls the blueprints of production, access to customers, trademarks, and other sources of significant value embodied in the final output. The contractor generally only manages the processing activities by strictly following the specifications provided by the principal. A key characteristic of the contractual arrangement is the captive nature of the contractor. Processing activities cannot be undertaken without the blueprints provided by the principal. Once processing is finalized according to the conditions of the contract, the contractor is entitled to compensation from the principal, and the output is no longer under the contractor's control. The contractor is not allowed to sell the output to other parties but must sell to the principal.

24. In a circumstance where a principal specifies the conditions required to make a particular product and guarantees acquisition of the product from the contractor when the conditions are met, the principal has assumed certain economic risks (e.g., product price changes, improved IPP inputs available to competitors, commercial success of the product, etc.) associated with production to a degree sufficient for the principal to be classified as a manufacturer. In this case, the transactions between the principal and the contractor are not standard market transactions but rather transactions subject to the conditions of the contract. Based on the conditions of the contract, the value-added contributed by the contractor does not reflect the full value of the final output because the contractor does not assume the economic risks

associated with owning the IPP inputs and controlling the outcome of the production process. Thus, ownership and provision of material inputs should not be the sole criterion to determine the classification of the principal as asserted in paragraph 144 of ISIC.

25. While ownership and provision of material inputs is an important consideration, the following three criteria are more complete and more relevant to determine economic ownership of the final output and classification of a principal: 1) control over the outcome of a production process, 2) ownership and provision of IPP inputs, and 3) ownership and provision of other inputs (goods and services).

## **6. Recommendations for Classification**

26. Differentiating between various contracts for the purposes of compiling national accounts and international accounts may be impractical, but a separate subset of existing classifications for FGPs and their transactions would improve the accounts. Central to the subset of existing classifications is the fact that FGPs differ in many respects from manufacturers that play a more active role in processing and from pure distributors that play a more passive role in production. Existing classification systems do not currently reflect this heterogeneity.

27. The classification of principals that control the outcome of the production process but completely outsource processing activities is an increasing concern to economic statisticians. To facilitate accurate classification and consistent classification across countries, the current ISIC guidelines are inadequate in light of the growing use of fragmented production processes. Clarification is needed concerning the classification of FGPs and, ideally, new subsectors need to be added to reflect their activities.

28. If the principal controls the outcome of the production process and provides (owns) either the IPP inputs or other inputs (goods and services), the principal should be classified to manufacturing as a separate and new subset of existing classifications based on the class that corresponds to the activity representing the complete production process of the final good being produced. According to the criteria identified in the preceding section, the following are recommendations by the Task Force on Global Production for classifying principals that control the production process but completely outsource processing activities (i.e., FGPs):

- A principal that owns and supplies 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 characteristics of the firm.
- A principal that owns and supplies IPP inputs and 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 characteristics of the firm.
- A principal that owns and supplies IPP inputs but no 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 characteristics of the firm. If separate accounts are available for the branch of the principal that produces the IPP inputs and for the remaining branches of the principal, then the former should be classified to the appropriate IPP industry and the latter to trade.
- A principal that owns and supplies no IPP inputs and no other inputs (goods and services) to a contract processor should be classified to trade.

29. Given the processing activities of the contract processor and the contractual arrangement between the principal and the contract processor, the contract processor should be classified to manufacturing, consistent with the current recommendations in paragraph 139 of ISIC.