

Economic Classification Policy Committee (ECPC) Recommendation for Classification of Outsourcing in North American Industry Classification System (NAICS) Revisions for 2012

Executive Summary

The ECPC is recommending explicit guidance to classify factoryless goods producers (FGPs) in the manufacturing sector for NAICS 2012. The classification of FGPs should be together with the existing industries that include the integrated manufacturers and the manufacturing service providers. Programs are encouraged to provide sub-industry level identifiers to these three types of producers.

Introduction

Recent years have witnessed the rapid and widespread incorporation of specialization into goods manufacturing as global competition has forced producers to seek more efficient production methods. This has resulted in outsourcing manufacturing transformation activities (i.e., the actual physical, chemical or mechanical transformation of inputs into new outputs) to specialized establishments, both foreign and domestic. Such outsourcing can lead to inconsistent classification of business establishments in official statistics when the standard classification systems used by those programs do not provide adequate guidance.

The North American Industry Classification System (NAICS) does not provide clear guidance on classification of units that control the entire process but subcontract out all manufacturing transformation activities. To address this void, the Economic Classification Policy Committee (ECPC) of the Office of Management and Budget (OMB) chartered a subcommittee to study the issue and provide classification guidance that will result in consistent classification of outsourcing establishments and comparable data for these outsourcing establishments across various statistical programs. The work involved defining the types of outsourcing units that exist and require classification guidance, examining alternative classification schemes, and identifying their impact on existing economic statistics. From this study, the ECPC narrowed down to two of the primary choices for classifying these outsourcing establishments: manufacturing and wholesale trade. Subsequently, OMB published a Federal Register notice soliciting public input on this classification question on January 7, 2009.¹

Background

¹ Office of Management and Budget, 2007 North American Industry Classification System (NAICS) – Updates for 2012, Notice (74FR764-768)
http://www.census.gov/eos/www/naics/federal_register_notices/notices/fr07ja09.pdf

NAICS was jointly developed by the statistical agencies in the United States, Canada, and Mexico in 1997 to classify establishments. “The establishment as a statistical unit is defined as the smallest operating entity for which records provide information on the cost of resources – materials, labor, and capital – employed to produce the units of output.”² Core statistics such as the Quarterly Census of Employment and Wages from the Bureau of Labor Statistics (BLS) and the Economic Census produced by the Census Bureau generally define establishments as individual physical locations.

NAICS differed from previous classification systems in that a consistent conceptual framework - the production function - was applied when creating new industries. A production function describes the way inputs are used to manufacture a material good or to render a service.³ When producers subcontract portions of the production process to separate affiliated or unaffiliated units, the production function changes at the establishment level.

The rapid growth of global competition and outsourcing has complicated the application of the production function classification principle to units that control intellectual property and perform underlying entrepreneurial components of the production function but outsource all of the actual transformation activities to other specialized units. NAICS United States 2007 does not provide clear or adequate guidance on the classification of such units. This void resulted in different classification practices across programs.

Differences in classification practices across programs may lead to erroneous signals on the direction of the economy and could potentially result in faulty policy decisions. For example, if employment is classified in manufacturing in one program while the associated output is classified in wholesale trade by another program, estimates of productivity and GDP may potentially provide erroneous signals if the differences are not well understood and accounted for when developing and using the relevant statistics.

Establishments Involved in Producing Goods

In simple terms, there are three general types of establishments involved in the production of goods that must be classified in NAICS: (a) integrated manufacturers, (b) manufacturing service providers, and (c) “factoryless” goods producers.⁴ Each type is broadly defined in the following paragraphs.

² NAICS United States, 2007, Executive Office of the President, Office of Management and Budget, 2007 page 19.

³ For more information see The Economic Classification Policy Committee “Issue Paper No. 1” http://www.census.gov/eos/www/naics/history/docs/issue_paper_1.pdf

⁴ This terminology appeared in an unpublished 2004 discussion paper “Outsourcing Manufacturing Activities – Measurement and Classification Implications” by John Murphy, Assistant Division Chief for Classification Activities at the United States Bureau of the Census. The term was chosen to be generic and avoid association with any particular industry terminology.

Traditional or Integrated Manufacturer

The traditional or integrated manufacturer utilizes inputs such as capital, labor, and energy to transform material inputs into a new product to be sold. Characteristics of integrated manufacturers include:

- Owns rights to the intellectual property or design (whether independently developed or otherwise acquired) of the final manufactured product;
- Owns the input materials;
- Owns production facilities;
- Performs transformation activities;
- Owns the product they manufacture; and
- Sells the final product.

An integrated manufacturer can provide a full accounting of input costs and output values. *NAICS classifies traditional integrated manufacturers to the manufacturing sector.*

Manufacturing Service Provider

The manufacturing service provider (MSP) provides contract manufacturing services that utilize inputs such as capital, labor, and energy to transform material inputs according to the contract specifications. The growth of MSPs (foreign and domestic) is the result of traditional integrated manufacturers substituting away from direct expenditures on capital and labor (i.e., factories, equipment, and production workers) to purchases of capital services and labor services. MSPs provide the capital and labor services. Characteristics of manufacturing service providers include:

- Does not own or control the intellectual property or design of the final product manufactured;
- May or may not own input materials;
- Owns production facilities;
- Performs transformation activities;
- Does not own the manufactured products contracted to produce; and
- Does not sell the final product.

The manufacturing service provider can provide information on the value of the contract work, the types of transformation activities it performed, and the value of the labor and the plant and equipment utilized in the transformation activities. However, it cannot report the market value of the final product. *NAICS classifies manufacturing service providers to the manufacturing sector.*

Factoryless Goods Producer

The factoryless goods producer (FGP) outsources all of the transformation steps that traditionally have been considered manufacturing, but undertakes all of the

entrepreneurial steps and arranges for all required capital, labor, and material inputs required to make a good. Characteristics of FGPs include:

- Owns rights to the intellectual property or design (whether independently developed or otherwise acquired) of the final manufactured product;
- May or may not own the input materials;
- Does not own production facilities;
- Does not perform transformation activities;
- Owns the final product produced by manufacturing service provider partners; and
- Sells the final product.

The FGP can provide information on the purchase of the manufacturing service, that is, the cost of the contract, but would not necessarily have production worker payroll or capital expenditures on plant and equipment. However, it can provide data on the number of units that were produced and the market value of the final product. *NAICS United States 2007 does not provide clear or unambiguous guidance on the classification of FGPs.*

Current Classification Practices

The treatment of units that outsource all manufacturing transformation varies among the agencies in the ECPC. Some programs classify the units to manufacturing if the value of intellectual property is a significant portion of the value of the finished good. Other programs classify the units to wholesale trade because there are no factories, plants, or mills to classify in the manufacturing sector. In summary, there is not consistent classification of units that outsource manufacturing transformation in current economic statistics.

International Classification Guidance and Recommendations

The International Standard Industrial Classification of All Economic Activities, ISIC Revision 4, bases classification of units that outsource transformation solely on ownership of input materials. If a unit purchases materials and contracts with another unit to process those materials, they are classified to manufacturing. “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.”⁵ For ISIC, a unit that outsources transformation but owns inputs is a manufacturer and a unit that outsources transformation and does not own inputs is treated as being engaged in trade. ISIC applies the ownership of materials classification criterion to units that outsource transformation activities to either domestic or foreign manufacturing service providers.

The ISIC classification based on ownership of materials alone is consistent with the proposed procedures for classification of goods sent abroad for processing in the System

⁵ United Nations Statistics Division, International Standard Industrial Classification of All Economic Activities, Revision 4, ST/EAS/STAT/SER.M/Rev.4, 2008, page 30.

of National Accounts (SNA) 2008. The SNA revision for 2008 specifies that goods sent abroad for processing should be measured as the import of a service. For example, a unit that exported silicon wafers to a semiconductor fabrication plant in another country would be considered purchasing semiconductor manufacturing services rather than exporting wafers and importing semiconductor devices.⁶

Recommendations from the Balance of Payments and International Investment Position Manual, Revision 6 (BPM6) are consistent with the treatments recommended in the revised SNA. However, the BPM6 indicates that the manufacturing service fee could include the cost of materials purchased by the processor.⁷

It is not clear if that treatment can be reasonably implemented based on current trade in goods practices. The International Merchandise Trade Statistics (IMTS) manual requires recording the value of materials exported for processing as goods and recording the return imports as different goods. IMTS does not use the convention of import of a service so the IMTS and SNA/BMP6 recommendations do not agree. Regardless of the classification decision in NAICS 2012, national accountants will need to clearly understand the classification and make appropriate adjustments to data for domestic production, trade in goods, and trade in services to properly reflect net industry output, domestic supplies, and value added.

Public Comments Received

In response to the Federal Register notice on January 7, 2009, the ECPC received 10 separate comments responding to the outsourcing question. Four responses, included in dockets 12-0011, 12-0020, 12-0025, 12-0053, suggested the most appropriate classification would be outside of the manufacturing sector. The response in docket 12-0011 supported a separate new sector between manufacturing and wholesale for FGPs. Docket 12-0053 supported classification to wholesale trade; professional services; or corporate, regional, and subsidiary managing offices. Docket 12-0025 supported classification in wholesale trade and docket 12-0020 supported classification in wholesale but as a fallback in manufacturing with separate identifiers based on the type of establishment.

Dockets 12-0026, 12-0030, 12-0031, and 12-0032 supported classification in the manufacturing sector.

Docket 12-0029 noted that the problem existed for sign manufacturers but provided no recommendation and docket 12-0042 noted that there was not enough description of the impact on existing programs or enough information on the size of the phenomenon to make a reasoned choice.

⁶ United Nations Statistics Division, System of National Accounts, 2008 revisions, chapters 6, 14 and 28.

⁷ International Monetary Fund, Statistics Department, Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6), pre-publication draft, December 2008, pages 237-240.

The ECPC faced the same issues and concerns developing classification guidance for units that outsource manufacturing transformation. The lack of quantifiable data and questions about current classification practices complicated the decision process. However, the known inconsistency in practice and implication for use and analysis of statistics demanded guidance in the 2012 NAICS manual even in light of the known data shortcomings.

Classification Guidance

The ECPC is recommending explicit guidance to classify FGPs in the manufacturing sector for NAICS 2012. The classification of FGPs should be together with the existing industries that include the integrated manufacturers and the manufacturing service providers. Programs are encouraged to provide sub-industry level identifiers to these three types of producers and to develop and apply appropriate editing and imputation methodologies that recognize not only the differences between integrated manufacturers, manufacturing service providers, and factoryless goods providers but also the different relationships among variables such as employment, shipments, and cost of materials for the three types of manufacturers.

The basis for this decision is both conceptual and practical and will provide a consistent and stable classification framework regardless of changing outsourcing decisions based on the relative cost of the factors of production across time and international borders.

Justification

From a conceptual standpoint, at the most aggregate level goods producers arrange for and bring together all of the factors of production necessary to produce a good. Goods producers accept the entrepreneurial risk of producing and bringing goods to market. When individual steps in the complete process are outsourced, an establishment should remain classified in the manufacturing sector. For example: 1) a decision to produce or purchase raw materials does not change the classification; 2) a decision to use contractors or a professional employer organization (PEO) rather than a traditional employment contract does not change classification; and 3) a decision to outsource marketing and distribution to a wholesaler does not change classification. In each case, the decision to perform or outsource a function changes the establishment production function but does not change the classification.

Often, goods producers will perform part of the manufacturing transformation but outsource individual steps. For example, a producer of generators may outsource generator castings to a casting producer, windings to an armature producer, and purchase hardware from additional producers. They then use those inputs to manufacture a generator. The classification would remain the same if they were vertically integrated and produced the castings, windings, and hardware albeit with a different establishment production function. In both cases, the establishment would be classified to generator manufacturing. If the final assembly were also outsourced, the establishment is still bringing together all of the factors of production to produce generators and is the only

establishment that can fully account for the value of generators produced. The establishment has managed (arranged and coordinated) the production process but contracted out the steps in the integrated production process to individual goods producers or manufacturing service providers.

Over time, differences in the relative cost of factors or production change the most efficient allocation of work. High wage rates in a country may provide an incentive to use less costly labor in other countries. That relative wage advantage could disappear or become a disadvantage as transportation costs increase or transportation capacity decreases. Shifting among input sources based on relative costs is a common practice and should not generally result in a change of industrial classification.

Classification of FGPs within the manufacturing sector is consistent with past practices in other areas, particularly in the construction sector. NAICS subsector 236, Construction of Buildings, includes establishments that are very similar to FGPs. An establishment that is engaged in the speculative construction of buildings is classified to construction if the establishment arranges for all of the factors of production necessary to produce the building even if they do not perform any actual construction work. Using specialized contractors or subcontractors does not change the classification in construction.

Classification of FGPs to wholesale trade would have resulted in the production process of wholesale trade being expanded beyond the buying and selling of goods. The output for FGPs would not appropriately be measured as a trade margin. If the output were considered a trade margin, the output would include the returns to intellectual property and entrepreneurial assumption of risk for the production of goods.

A strict adherence to the international recommendation to classify FGPs based solely on ownership of materials was considered and rejected as impractical. If the definition of ownership required physical possession, the ability to substitute between input sources in different countries to obtain the lowest cost could change sector classification in NAICS if the inputs were sent directly from the producer in country B to a manufacturing service provider in country C. The establishment that arranged for the production in country A would never take physical possession of the materials. If the definition of ownership were based on separate transactions, problems would still arise. Contracts between FGPs and their manufacturing partners change with market conditions. Payment terms and the allocation of risk can shift based on variations in the availability of credit and the market power or capacity of the individual parties. Classification of an establishment should not change simply because they have the market power to shift the timing of payment for the inputs from the front of the process to the end of the process or because critical shortages of transformation capacity provide outsized negotiating power to a manufacturing service provider. By focusing on the entrepreneurial aspects of the process (and therefore ownership of the goods being produced) rather than ownership of materials, the ECPC eliminates the aforementioned ownership of materials issues.

The ECPC also considered and rejected a proposal to base classification on the location of the manufacturing service provider. It is practical to consider FGP establishments that

use domestic manufacturing service providers in manufacturing because of the theoretical ability to link the establishments involved while treating FGP establishments that use foreign partners in wholesale trade because of the practices for trade in goods. This approach would result in some consistency among various statistical programs but does have problems. From a conceptual standpoint, two establishments operating in exactly the same way could be classified differently based on the source of their inputs. That is not consistent with NAICS in general. A practical problem exists for longer-term consistency in classification. A FGP establishment may move production from point to point based on the relative costs as noted previously. A movement from offshore contractors to domestic contractors because of transportation costs should not change the classification of the establishment.

Impact of Classification Decision in NAICS

Classification of FGPs to manufacturing will arguably expand the traditional definition of manufacturing beyond establishments known as factories, plants or mills to include a broader range of establishments undertaking the production of goods. Arguments can be made that this expansion will artificially increase the importance of manufacturing. Arguments can also be made that a strict requirement for physical, chemical, or mechanical transformation has unreasonably limited the definition of manufacturing in a global economy. Both arguments have merit. There is no “correct” argument or solution. The classification of FGPs to the manufacturing sector is not without concerns. This guidance will require a re-evaluation of current practices across a wide range of statistical programs. Employment programs will need to consider the different characteristics of “production workers” in light of a knowledge component for FGPs. Output programs will need to use a much more refined series of questions related to expenditures for manufacturing services and output of manufacturing services in order to provide accurate estimates of the three broad types of establishments classified to manufacturing.

There will be definitional changes to aggregate data in some cases that will not easily be back cast because of the lack of historical data. The ECPC understands these implications but takes the position that the inconsistency must be corrected through better classification guidance in NAICS. All of the ECPC agencies share a concern about the ability to identify and consistently classify FGPs.

Summary

The classification of units that control the production of goods but outsource actual transformation activities is a growing concern in economic statistics. The ECPC is recommending clear guidance in NAICS to ensure consistent classification of factoryless goods providers in the manufacturing sector. The ECPC acknowledges there are conceptual, measurement, and practical implementation issues with any guidance on the classification of FGPs. While the full impact of this recommendation on existing and future economic statistics is not known, the ECPC firmly supports the need to have

consistent guidance on the classification of units that outsource manufacturing transformation.