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Business Register, Large enterprise management

Tema 1. Udvikling af statistikken: Globalisering

The impact of globalisation on defining the NACE code

Abstract: The international sourcing of production is redefining the role of many business enterprises. An enterprise that had been a major manufacturer may now source all production to establishments based in other countries - either inside the enterprise group or outside the enterprise group. According to the NACE codification rules the principal who owns the main material inputs is classified in NACE section C (Manufacturing). Otherwise, it should be classified in section G (Wholesale and trade) or in some other service section. This rule also applies if the contractor is a subsidiary unit. This paper suggests that the phenomenon of international sourcing within the enterprise group (sometimes called *insourcing*) would deserve to be handled as a separate issue in different manuals compared to international sourcing outside the enterprise group. The question of classification can have a great impact on the structure of the economy.

1. Introduction

International sourcing is becoming more and more common in general and in Finland, too. During 2001-2006 about 16 per cent of Finnish enterprises with 50 or more employees have sourced internationally. In Manufacturing the most commonly sourced function is the core business activity with a share of 71 per cent. Most often the model has been *insourcing*, i.e. the enterprise sources business functions within the same enterprise group.¹

In Finland we have noticed several cases where the enterprise located in Finland is heavily engaged in R&D, prototyping, marketing, etc. but lets its *foreign affiliates* do the manufacturing work, usually on a fee or contract basis. However, the Finnish company sells the end product to a customer and typically the manufactured product is transported directly from the manufacturing country to a customer in a third country.

We have been trying to solve which NACE class would be correct to such enterprises. The NACE codification rules rely on the fact whether the principal who has done the production by contractors owns the main material inputs. However, when the production is done within the enterprise or the enterprise group, the concept of ownership is not unambiguous and thus, it is difficult to decide the right code.

2. International recommendations

This chapter will first introduce some international rules related to the phenomenon of international sourcing, which has a variety of labels, such as

¹ Source: International Sourcing. Moving Business Functions Abroad. Statistics Denmark, 2008. In the study international sourcing is defined as moving business functions abroad. It does not cover other kind of expanding of existing foreign affiliates or acquisitions of foreign enterprises.

off-shoring, outsourcing or insourcing. These terms are often used without explicit definitions and for the time being there is no unambiguous definition for the phenomenon.

2.1 The view of new economic classifications (ISIC, NACE)

Both ISIC Rev. 4² and NACE Rev. 2 define that units, which completely outsource the transformation process, should be classified into manufacturing only if they own the raw material used as input to the production process. In NACE Rev. 2 the term *outsourcing* is also valid if the *contractor* is a subsidiary unit (=insourcing) and if the tasks are carried out on market conditions or not.

The rule is included in the introductory guidelines of NACE Rev. 2 as follows:

“A principal which completely outsources the transformation process should be classified under manufacturing only if it owns the raw material used as input to the production process (and therefore owns the final output).

A principal which outsources only part of the transformation process is to be classified under manufacturing.

In all other cases, the principals should be classified in accordance with the value added principle: this might be in Section G "Wholesale and retail trade" (depending on the activity and the specific good sold, see paragraphs 93-99 below) or in other Sections, e.g. M "Professional, scientific and technical activities" or N "Administrative and support service activities.”

2.2. The view of the Business register manual

According to the Business register manual³, one of the key stratification variables for enterprise is the principal activity code. The purpose of the principal activity code is said to be following:

“The code is also very important in judging the role of certain units in the enterprise group structure, mainly the group head, the head office and special purpose entities (SPEs included in NACE Rev. 2 class 6430), but also in general in enterprise group structuring and demography. The enterprise group’s worldwide dispersion of employment by activity can also be studied by its constituent units.”

Thus, it seems that according to the BR manual it is important to classify a national enterprise according to its own activity in the country. The group head is mentioned as an example. This would imply that group heads should be classified under NACE code 70100 (*Activities of head offices*). Following this logic R&D functions would be classified under NACE code 72 (*Scientific research and development*).

2.3. The view of the new SNA and BPM manuals

A bit different but closely related issue is the treatment of transactions in different kinds of *global manufacturing arrangements*. There are several

² Classification of economic activities of the UN.

³ BR Manual, chapter 5.

types of arrangements, e.g. re-exports, goods under merchanting, goods under processing.⁴ These arrangements can be seen as forms of international sourcing. The treatment of these transactions is handled in the new SNA 2008⁵ and the new BPM6⁶.

Moreover, the change of the ownership principle is emphasised in the BPM6 accordingly:

“With globalization and outsourcing, it is becoming more common to have parts of a production process conducted in different economies. Showing these transactions on a change of ownership basis assists in identifying actual transactions and correctly attributing value added due to the owner for designing, marketing, financing, and so forth, rather than to the party that undertakes physical processes.”

Merchanting means a situation where goods are sourced from one non-resident enterprise and then sold on to another non-resident enterprise without entering or leaving the compiling economy. There is a change of ownership and the form of the goods does not change. The new treatment of merchanting recommends that:

”goods acquired by global manufacturers [...] should be recorded as negative exports on acquisition and positive exports on disposal. The difference between the two appears in exports of goods but appears as the production of a service in the merchant’s economy, analogous to trade margins applied to domestically traded goods.”

Treating the margin as the production of a service is in line with the interpretation that often the merchanting service is a return for marketing, research and development, financing and so on provided by the resident enterprise.

3. Is there any problem in practice?

3.1. Example of global manufacturing

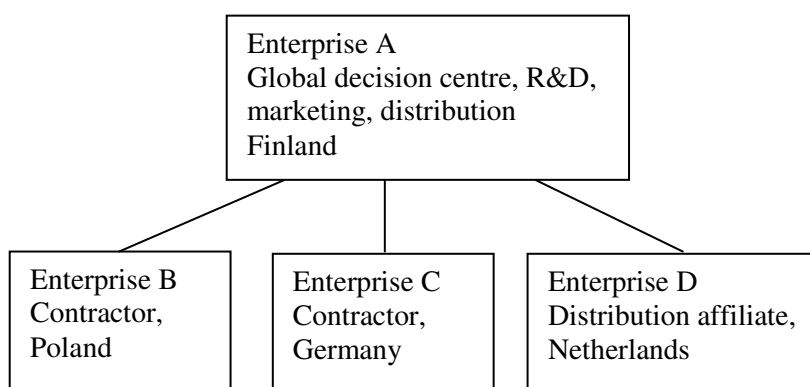
Let us take an example of a global manufacturer that is a Finnish industrial group. Let us assume that Finnish enterprise A (located in Finland) is the head of the enterprise group and it owns the raw materials used as input to the production process by contractor B (located in Poland). However, for some practical reason the Finnish enterprise does not own the material input for the production process by contractor C (located in Germany).

Finnish enterprise A is the global decision centre which is also involved in R&D and marketing, etc. Enterprise A buys the production service from enterprise B and the products from enterprise C and sells all those products further to a third country. The goods never enter or leave Finland. Enterprise A has a further distribution affiliate in country D (the Netherlands).

⁴ See Box 10.2. in the International Monetary Fund’s Balance of Payments Manual, Sixth edition 2009

⁵ System of National Accounts 2008

⁶ International Monetary Fund’s Balance of Payments Manual, Sixth edition 2009



Concerning the foreign affiliates B and C Finnish enterprise A records their output in “raw material” and the corresponding sales in “sold production of goods”. This is done independent of the fact whether B and C have bought the raw materials themselves.

However, in both cases there is no doubt that the responsibility for the production process is mainly assumed by the Finnish enterprise A. It would be hardly logical for the Finnish enterprise to be classified as a trading enterprise knowing it owns the technology and a major part of its employees in Finland are working in R&D, prototyping, etc.

According to the new NACE rules, we should “understand unambiguously” the concept of the ownership of raw materials and use it as the main criterion for the classification.

But then, according to the BR Manual we should take a look at the activities done in Finland and classify our enterprise under Service sector (including at least NACE codes 70100 *Activities of head offices* and NACE code 72193 *Research and development on engineering and technology*).

On the one hand, it is clear that at the global level the above-introduced example of an enterprise group is a manufacturing group and should logically be classified under manufacturing in each country. On the other hand, the national view for the enterprises in countries A and D would be that they are in the service sector and trade, respectively.

Concerning the classification the main question is: should we approach the definition from a global or national point of view when the activity is defined?⁷

3.2. Special case: Turn-Key Project

In Finland we are currently working on a specific issue of turn-key projects that appear to be very challenging to interpret in our statistics. One of them is a project where a foreign company builds a nuclear power plant project could be a good example of a highly global and complex turn-key project for economic statistics.

In Finland we also have several large Finnish enterprises that supply such as power plants, mills or grids globally as turn-key projects. The projects may

⁷ These kinds of cases are presented and discussed in the ESSnet work that is related to the profiling of multinational enterprise groups.

take several months or years to complete and in most cases the construction work is carried out by enterprises from the destination country (or third country). Usually the Finnish enterprise is VAT registered also in the country of destination (a branch office or just VAT registration).

Typically the enterprises resident in Finland own the technology, own some critical raw materials (not all), design and engineer and manage the project. The total turnover of the project is reported for the Finnish company.

We have been trying to solve which NACE class would be correct to such enterprises. In order to do that we asked five EU countries how they deal with such cases. We asked their views and operational practices on two issues:

1. Industrial classification: Should such an enterprise (the main contractor) be classified in manufacturing or in some other section of NACE? Should we approach the definition from a global or national point of view when the activity is defined? The 'only' work carried out in the resident country is engineering and project management and all the manufacturing and construction work is subcontracted abroad. However, the final product is a power plant, for example, and the enterprise in the resident country carries the main responsibility for the project.
2. The recording of the project: Irrespective of the NACE code, how should the project be recorded in the main contractor's country? What to include in the exports and imports of goods and what in the exports and imports of services? In practice this is difficult, because the change in ownership is not consistent with the physical movement of goods and it may be very hard to know all links of ownership.

All five countries replied but their answers differed considerably from each other. The NACE codes Manufacturing, Services and Construction were all mentioned.

4. Conclusions

As a conclusion it can be said that more guidelines are needed on the issues concerning international sourcing and especially insourcing (sourcing within the enterprise group). It would be helpful if the activities of global enterprise groups were handled as a separate issue both in classifications and concerning the transactions.

Otherwise there remains a risk for significant incomparability in data collection and compilation of statistics in and between different countries. For example, when Finland queried the national practices from different EU countries concerning the turn-key projects, it became clear that the national practices are largely disparate. This was the situation concerning both the classification issue and the treatment of transactions.

Different solutions concerning the classification can have a great impact on the structure of the economy. In Finland we have so far classified the enterprises that supply turn-key projects mainly under Manufacturing. If we reclassify them under Services, it reduces the share of manufacturing value-added in GDP by about 1 to 6 per cent depending on the criteria used in the

reclassification. Decisions concerning other global manufacturers have yet a larger impact.

5. References

Commission of the European Communities, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations, World Bank (2008): System of National Accounts 2008.

European Commission (2010): Business registers - recommendation manual, 2010 edition.

European Conference on Quality in Official Statistics Helsinki, Finland 4-6 May 2010. The European Union project on "Profiling large and complex Multinational Enterprises" by Pierre Teillet and Vincent Hecquet.

Eurostat (2008): NACE Rev. 2, Statistical classification of economic activities in the European Community.

International Monetary Fund (2009): Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6), IMF, Washington DC.

Statistics Denmark et al. (2008): International Sourcing. Moving Business Functions Abroad.

United Nations (2008): International Standard Industrial Classification of All Economic Activities, Rev. 4, UN, New York.

65th Meeting of the Statistical Programme Committee, Luxembourg, 14 February 2008. CPS 2008/65/8/EN.