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Convergence of NACE and NAICS

Implications for Services Statistics

Session on Classification

Paul Johanis
Statistics Canada

Standards Division
E-mail: Paul.Johanis@statcan.ca

Introduction

In June 2000, a project to achieve greater convergence between NACE and NAICS, the industry classifications used by Europe and North America respectively, was initiated under an agreement signed by the heads of the statistical agencies of Canada, the European Union and the United States. The agreement outlines a series of phases towards the achievement of the objectives of the project, the first of which calls for the preparation by a working group of a report on the technical and cost implications of convergence. As the results of this work are expected to be relevant for the next revision of ISIC, a report on convergence will be tabled at the UN Statistical Commission in March 2002. This paper presents a summary of the current work of the working group as regards the implications of convergence for services statistics.

What does convergence mean?

Convergence can take two fundamental forms: the adoption of the same structure or an improvement over existing concordances between NACE and NAICS. The needs of analysts interested in transnational studies and comparisons could be satisfied by better concordances between the two classifications, while those of organizations, enterprises or institutions, which code their constituent units, clients and/or suppliers according to industry, would be better served by the adoption of a common structure and coding for both classifications.

The objective of the better concordance form of convergence would be the establishment of 1 to 1 links between NAICS and NACE, with minimal "noise", at an agreed target level of the classifications. Each of these approaches could be applied at various levels of detail of the classifications: at the top level only; at the most detailed level (defined for this purpose as the level at which the 3-country NAICS is harmonized, representing 478 classes) or at some middle level. Together, these dimensions form a 2x3 matrix, yielding 6 possible options.

Same structure	Better concordance
Top level	Top level
Mid-level	Mid-level
Detailed level	Detailed level

Different variants of the middle level can be constructed. All would be constrained at the bottom by the 3-country NAICS level, as foreseen for 2007. For example, if it were foreseen that the lowest level of NAICS harmonization in Public Administration will be at the 2-digit level, then NACE-NAICS convergence would also go to this level only. A possible middle level variant would be at the NAICS sub-sector – NACE division level, representing approximately 100 classes. NACE rev.1 only has 72 divisions currently but Eurostat has expressed a desire to increase this number. Another mid-level variant would be at the NAICS industry group – NACE group level, for approximately 300 classes. This also represents the level at which a

relationship would be established with ISIC rev. 4 and proposals will be made to the United Nations in this respect. A hybrid level combining the mid-level and the detailed level for, at minimum, the Information sector, and other sectors as identified, can also be defined. Each middle level option includes the higher levels of the subject classifications. For example, the same structure-middle level 100 class option implies that the top level is also harmonized.

The working group agreed to examine two forms of convergence: 1) the adoption by NACE and NAICS of the same structure at the top of the classification down to varying levels of detail across the classification, yielding a common structure of about 400 classes; and, 2) an improvement over existing concordances between NACE and NAICS at the most detailed level (478 classes that are common to all three NAICS partners).

Assessing the impact of convergence

In its first report in October 2000, the working group ascertained that were no fundamental conceptual differences between NACE and NAICS standing in the way of convergence. It also defined the various forms that convergence could assume and established which specific options would be further analyzed in the first phase of the project.

After the initial meeting in Ottawa in August 2000, Mexico was invited to join the working group for the next meeting in Washington and the United Nations Statistical Division was invited to send an observer. In this way, all NAICS partners are part of the discussions and the UNSD is kept apprised of issues and changes that may affect the revision of ISIC in 2007.

To assist in the analysis of differences and similarities between NACE and NAICS, the working group decided to produce and validate a new concordance between the two classifications rather than try to use and reconcile existing, often conflicting concordances. This was a massive undertaking and the result is the best concordance ever produced between these classifications, fully reviewed and validated by their respective custodians.

Analyses of differences and similarities between NACE and NAICS were conducted based on this concordance, sector by sector, according to an agreed upon division of labour. The results of these analyses were circulated between working group members and were discussed at the meetings of the working group. At the first meeting in November 2000, in Washington, the work process and division of labour was agreed. At the next meeting, in February 2001 in Aguascalientes, a first batch of analyses was reviewed and preliminary convergence scenarios were developed for theses sectors. At the last meeting in June 2001, in Ottawa, most of the remaining analyses were reviewed and the first comprehensive convergence scenario was developed, which is still in the process of being finalized.

A scenario for services

A convergence scenario contains a combination of changes and restructuring that minimizes the impacts on either classification and maximizes comparability between them, while preserving an

analytically useful framework for industry statistics. It results from an in-depth review of all areas of divergence between NAICS and NACE and an identification of which of the two, or both, would require change for greater commonality to be achieved. The working group has made no recommendations regarding the adoption of any changes at this time, nor should any aspect of the scenario be construed as a commitment to change by any party. Rather, a scenario should be considered as the basis for further consultation and negotiation with a broader community of stakeholders.

While the services sector is not explicitly defined in industry classifications, a given set of high level aggregates is often identified as comprising the services industries. In a convergence scenario, these might include the following:

High-level groupings:

Wholesale and Retail Trade
Transportation and Storage
Information
Hotels and Restaurants
Finance and Insurance
Real Estate and Rental and Leasing
Professional, Scientific and Technical Services
Administrative and Support Services
Education
Health and Social Services
Arts, Entertainment and Recreation
Sanitation
Repair and Maintenance
Other Services
Public Administration

At this high level of aggregation, this scenario implies several important departures from the current structure of both classifications, in particular for NACE. As will often be the case, many of the changes that convergence would require are in fact changes that NACE would wish to pursue, with or without convergence, which were adopted earlier in NAICS. Examples include the Information sector and Professional, Scientific and Technical Services. In the case of Repair and Maintenance, these were grouped together in NAICS and this could be seen as a desirable feature for the converged classification. The scenario also implies the adoption by the NAICS countries of a high-level grouping for Sanitation, an existing NACE grouping. The harmonization of the other high-level groupings can be achieved through a series of more minor changes and moves, which are described below.

Wholesale and Retail Trade

Except for repair and maintenance activities, which is the subject of a separate proposed grouping in the convergence scenario, both NACE and NAICS cover essentially the same activities in wholesale and retail combined. However, different principles are used to determine whether a distributive trade activity is wholesale or retail. In NACE, this determination is made according to the class of customer. If the customer is business or institutional, then the activity is wholesale. Otherwise, it is a retail activity. In NAICS, the production process is used to determine whether an activity is wholesale or retail. If the activity is conducted in a store-like facility, using a retail business process, then it is retail, regardless of the class of customer. This difference in treatment creates a large number of incompatibilities between NACE and NAICS so that the best that can be achieved, without a massive recoding exercise across all classes, is a combined wholesale/retail high level grouping, with no further convergence at lower levels of the classification.

Transportation and Storage

Land transport
Water transport
Air transport
Scenic transportation
Support services
Courier and postal
Storage and Warehousing

The crucial issue to achieving convergence in this area is the NAICS concept of Scenic transportation, which cuts across modes of transport, the primary disaggregation logic in this sector. The scenario assumes that NACE can adopt this concept, but the converse (i.e. NAICS abandoning the concept) would also result in significant convergence possibilities.

Information

Publishing Industries
Motion Picture and Sound Recording Industries
Broadcasting, except Internet
Internet Publishing and Broadcasting
Telecommunications
Internet Service Providers, Web Search Portals and Data Processing
Other Information Services

In this sector, the scenario assumes that the definition of the Information sector for the 2002 version of NAICS forms the basis of the converged classification.

Hotels and Restaurants

Hotels

Other Traveler Accommodation
Food Serving and Special Food Places
Drinking Places

In this sector the coverage and concepts are identical in NAICS and NACE. However, the detail is different, without any clear justification in any of the systems. The proposed scenario can be achieved with no cost to either system and the degree of detail, even if aggregated, may be sufficient for the purpose.

Finance and Insurance

Finance
Insurance
Other Financial Industries

In this sector there is already a high degree of similarity. The main difference is the separate identification of Reinsurance in NAICS. The scenario assumes that NACE can adopt this concept.

Real Estate and Rental and Leasing

Real Estate
Rental and Leasing

NACE has two classes that fall outside the scope of real estate in NAICS. Development and selling of real estate by people that do not actually do any physical construction themselves falls under construction in NAICS and in real estate in NACE. The scenario assumes that NACE can accept to follow NAICS. NACE also has Buying and selling of real estate as a separate activity. The scenario assumes that most would be out of the scope of an activity classification. No further detail is possible, and perhaps not even necessary

For rental and leasing the coverage and concepts are identical in NAICS and NACE. However, as in other sectors, the detail is different, without any clear justification in any of the systems. The proposed scenario can be achieved with no or little cost to either system and the degree of detail, even if aggregated, may be sufficient for the purpose.

Professional, Scientific and Technical Services

Legal Services
Accounting Services
Architecture and Engineering Services
Computer Services
Management Consultancy services

Research and Development Services
Advertising Services
Market Research and Opinion Polling Services
Photography Services
Translation and Interpretation Services
Design Services
Management of Companies and Enterprises
Other Professional, Scientific and Technical Services

The scenario for business services is based on the fact that NACE would wish to pursue, with or without convergence, relevance enhancing structural changes in line with that which were adopted earlier in NAICS. Therefore, at the highest level the scenario proposes the split between Professional, Scientific and Technical Services and Administrative and support services. The detail in Professional, Scientific and Technical Services is very similar in the two systems.

Administrative and Support Services

Office Administrative Services
Facilities Support Services
Employment Services
Business Support Services
Call Centres
Travel Arrangements and Reservation Services
Investigation and Security Services
Packaging and Labeling Services
Services to Buildings and Dwellings and Industrial Cleaning Services
Convention and Trade Show Organization Services
Other Support Services

This area is presently under-developed in NACE and the scenario assumes that NACE can accept a number of NAICS concepts, especially office administrative services, facilities support, and travel arrangement and reservation services.

Education

Primary and Secondary Education
Higher Education
Other Miscellaneous Education

This scenario is consistent with the latest ISCED, which seems to indicate that all learning activities are considered as education. This draft includes under education sport instruction and

education in recreational activities. The scenario also assumes that NAICS can accept to suppress education support services.

Health and Social Services

Hospital activities
Medical practice activities
Dental practice activities
Other human health activities
Veterinary activities
Social work activities

The scenario follows the NACE concept, which makes the distinction between medical services by doctors, medical services by paramedicals and social work activities without medical treatment. This would involve minor cost to NAICS. The crucial structural issue is the inclusion of veterinary activities in this area. The concept and coverage is already identical in NACE and NAICS. The scenario assumes that NAICS can adopt this grouping, but the converse is also possible.

Arts, Entertainment and Recreation

Museums, Historical Sites and Buildings
Botanical and Zoological Gardens and Nature Reserves
Gambling and Betting Activities
Other Arts, Entertainment and Recreation Activities

For Museums, Historical Sites and Buildings, Botanical and Zoological Gardens and Nature Reserves as well as Gambling and Betting Activities the scenario supposes the NACE level of detail.

However, Arts, Entertainment and Recreation Activities is the most difficult area in services. In the other sectors it is mainly borderline adjustments or clearly defendable concepts. Here there is no common ground on what is art and what is entertainment, and no clear underlying principles. The best that can be achieved, without a massive recoding exercise across all classes, is high a level grouping, with no further convergence at lower levels of the classification.

Sanitation

Collection and Treatment of Sewage
Collection and Treatment of Other Waste
Sanitation, Remediation and Similar Activities

Generally the concepts and boundaries are matching, but the scenario implies the adoption by

the NAICS countries of a high-level grouping for Sanitation, an existing NACE grouping. This would move sewage away from utilities in NAICS.

Repair and Maintenance

Repair and Maintenance of Motor Vehicles
Consumer Electronics Repair
Computer and Office Machinery Repair
Other Commercial and Industrial Machinery Repair and Maintenance
Appliance Repair and Maintenance
Re-upholstery and Furniture Repair
Footwear and Leather Goods Repair
Other Personal and Household Goods Repair

This scenario presumes that the treatment of repair and maintenance follow the NAICS concept.

Other Services

Services of Associations and Organizations
Personal Care Services
Washing and Dry Cleaning Services
Funeral and Related Services
Other Services (3)

The definition and a high degree of detail is common to both NACE and NAICS. To achieve convergence only borderline moves.

Public Administration

The definition of this sector is apparently the same in both NACE and NAICS. However, there are differences in application. Included in this sector are activities that are traditionally performed by governments. Lately, however, this has not been a stable concept, with the privatization of many activities previously performed by governments. While both NACE and NAICS classify to the appropriate activity outside of Public Administration various "private" activities performed by governments, there are some differences regarding privatized activities. For example, in NACE, fire-fighting and fire protection is by definition in Public Administration, regardless of the nature of the service provider. For some NAICS countries, the tendency will be to classify private fire-fighting services outside of public administration. There is a need to harmonize the treatment of these types of activities, first, around agreed upon definition of the activities of Public Administration, and secondly by distinguishing between activity classification and SNA sector classification. The latter is the appropriate framework for distinguishing private and public sector activities, not the former.

Conclusion

The foregoing is a summary of the types of issues that have been considered by the Convergence working group as regards the services industries. Their report on the cost and technical implications of convergence will be submitted to their Agency heads this fall, at which time decisions will be made regarding what, if any, further steps towards the convergence of industry classifications will be taken. From the point of view of services statistics, it would seem that having more comparable aggregates between Europe and North America, and also through ISIC, with the rest of the world, would be of great benefit in analyzing the structure and evolution of this important sector of the economy.