VOORBURG GROUP ON SERVICE STATISTICS

Eighth Meeting
7th Session
Oslo, Norway
September 27 - October 1, 1993

THE CHALLENGES OF DEVELOPING SERVICE PRODUCT CODES

by

Pamela Powell-Hill
U.S. Bureau of the Census

F.F

INTRODUCTION

United States government agencies have begun a program to develop a complete and integrated standard system of product detail for use by the various agency programs in compiling and presenting data for goods and services. Consideration of the Central Product Classification (CPC) and of the work of the Voorburg Group will be an important part of our review. The sharing of experiences as reflected in the papers and discussions of this Group should aid both revision of the CPC and development of the national systems.

Classification work within the United States is probably more decentralized than in most countries with at least four different agencies involved. Primary responsibility lies with the Office of Management and Budget (OMB). This agency makes final decisions with participation and proposals by a wide range of government and non-government groups.

OMB has recognized the increasing criticism of economic classifications as a result of rapid changes in both the U.S. and world economies. In response, they have established an interagency Economic Classification Policy Committee (Policy Committee) to take a fresh look at the concepts, methodologies, procedures, and uses of economic classifications for statistical purposes.

The Policy Committee is charged with a "fresh slate" examination of economic classifications for statistical purposes, including industrial classifications, product classifications, and product code groupings. Among a range of criteria specified for the review is "compatibility with international classification, to facilitate analysis of domestic data and data of other countries as well as international trade data." The

Policy Committee has thus embarked on an extensive outreach program to obtain input from and work closely with a range of domestic sources and of national and international representatives, including especially those of Canada, Mexico and Eurostat.

The Policy Committee has in turn established two additional interagency task forces to work on the development of a standard product detail, one group for goods and one for services. The task force for services, the Service Product Code Task Force (Task Force), is also specifically charged with consideration of the CPC and the related Classification of Products by Activity (CPA). This paper summarizes the experience thus far of the task force assigned responsibility for services and outlines some issues yet to be addressed by the group.

TASK FORCE EXPERIENCE

The Task Force began by discussing some of the broad issues that would affect the overall development of service product codes. One of the first issues discussed was whether they should refer to these codes as commodity or product codes. After some discussion it was decided that product was probably the best term to use, at least in part because that is what most international organizations seem to be using. Commodity is also considered a term generally more closely associated with goods than with services.

The Task Force agreed that to the extent possible it would first examine existing systems or at least ensure a mapping capability. International comparability is also a major concern because of the globalization of the U.S. economy. They are thus looking at the CPC, CPA, the work that Statistics Canada and other members of the

Voorburg Group have done. In addition to these sources, they are also looking into other existing coding systems that might be useful. Some of these are sector specific like the Current Procedural Terminology (CPT), International Classification of Diseases (ICD), and Diagnosis Related Groups (DRG) which relate to health care. Others are broader like "A Taxonomy of Human Services."

Another concern of the Task Force was who would use service product codes and how. Answers to these questions will help provide some basic information for making decisions about what level of detail is needed. The primary interest is in statistical uses of a product coding system. The information will be used primarily for economic policy; in the national accounts, input/output tables, price indexes, productivity measures, and so forth. Since most of the major federal statistical agencies are involved in the Task Force and other federal agencies will be involved along the way, we have or will have a good idea of what federal users need. However, they also recognized the need for input from the private sector. The Task Force sent a letter to approximately 1800 data users asking for their input. Response was not strong at this time, but the mailing will provide a list of users who are likely to become more involved when they see specific proposals for detail. Several users expressed concern that drastic changes to the codes might affect historical comparability, and therefore, their data. Those who did have specific suggestions about products seemed to want a level of detail that would allow for data collection on a wherever produced basis, which confirms long-standing criticisms of the inadequacy of data for services.

Similar comments were made at the 1991 International Conference on the Classification of Economic Activities (Conference). When talking about product (commodity) coding in general at the Conference, participants said they were interested in sufficient detail to provide them with the opportunity to aggregate data in

more than one way. For example, marketers looking at market share could aggregate one way, analysts of tourism could aggregate things another and policy analysts could aggregate yet another way. In other words, start with the product codes and aggregate into industries. Yet there are many people who think there should be a top down approach to creating a product coding system. That is, start with the industry and work down to the products. Since development of new industry system detail for services is not going to begin until 1994, the Task Force developing product detail must proceed without knowing the industry structure. Thus from both intent and practical considerations, the Task Force is trying to look at products in general and not specifically tie them to any one industry. While they are looking at one sector at a time, they are not (trying not to) looking at specific industries. This has been a difficult concept for some because they are so accustomed to thinking in terms of industries and collecting data--including product data--by industry. It is thought that the product work will feed into the industry and may in fact simplify the industry work.

One criticism of the current U.S. SIC system is that it does not provide enough detail in the service sectors. Yet when revisions are made to the system few concrete suggestions for specific improvements are brought forth. This may be due in part to the criteria used in the past, but also to the intangible nature of services. It is said if you go shopping for services you will come home with an empty shopping cart. Services are consumed on the spot. You cannot store them (like goods) and they are not transferrable. Hence, they are much more difficult to understand and measure than goods. If this is true when speaking of service industries in general, imagine the difficulty in trying to define products of service industries. If you cannot see the product or store it, how do you know what it is? Yet this is precisely what the Task Force has been asked to do. This is perhaps one of the most difficult aspects of developing a service product coding system.

Very little work has been done in the U.S. to address what the output of a service is. In a manufacturing industry, like SIC 2434-Wood Kitchen Cabinets, it is easy to see that a product would be "cabinets, wood: to be installed." It is not as simple to specify the products of a doctor's office. Are they a consultation, a diagnosis, an x-ray, lab work viewed as separate products or bundled together as an office visit? Similarly, what are the products of a lawyer's office, a consultation, a will, a divorce, a conviction?

Some people think that "sources of receipts" might be a good indicator of possible products. In the case of a doctor's office this could be lab work, x-rays, prescriptions or an "intermediate visit with an established patient", all items listed separately on your bill. Others think that service products should be thought of in terms of transactions, what is the consumer buying? For example, if you take a trip, purchasing an airplane ticket would be one transaction, but buying a drink or watching a movie on the plane would be separate transactions because you paid for them separately from your ticket. This fundamental question of what is a service product has created many stumbling blocks for the Task Force.

While the Task Force recognized the need to address several conceptual issues first, they found it difficult to discuss some of the issues without using examples. So, they selected health care services as a starting point. They selected health care specifically because they thought it would illustrate many diverse problems that would be applicable to other products.

The first thing that was done was to look at various existing coding systems like the Central Product Classification (CPC), the Classification of Products by Activity (CPA), the U.S. SIC, ISIC, Canadian SIC, the Producer Price Index Codes, and A Taxonomy of Human Resources and make a list of existing items. Most of these

systems are industry based which made many of the early discussions revolve more around which products should be associated with specific industries rather than strictly looking at products as products as the Task Force had planned to do. This also led them to some discussions about what data could or should be collected, and how to measure output rather than what health service products were.

Some members of the Task Force argued that a product like an x-ray is not the same product in one industry as it is in another. For example, some say that an x-ray taken at a doctor's office is not the same product as one taken at an x-ray lab. The argument is that an x-ray taken at an x-ray lab is just that, an x-ray with no value added. However, at a doctor's office the doctor not only takes the x-ray but he also interprets the x-ray. Thus adding value to the x-ray and making it a different service product, and actually only a part of the overall service, of an office visit. This same argument can be made for laboratory tests. Depending on where the tests are done, some maintain the product would be different.

This argument illustrates the major issue of bundled services, an issue already apparent to most participants in the Voorburg Group. At a doctor's office you go in with a sore arm, the doctor examines it, x-rays it, then makes a diagnosis, and recommends treatment which could include prescription drugs that he has available for sale at his office. Some would maintain that this is all inclusive--a bundled service--only one service product referred to as perhaps, an "office visit". Others say that there are several service products here; the consultation/diagnosis, the x-ray, and the prescription drugs because they are separate charges on the bill. The latter view would facilitate a wherever produced philosophy.

Those looking at the services bundled together could argue that the x-ray and drugs are merely inputs to the final output (product) of an "office visit." This point of view

is perhaps easier to see if you are looking at a hospital stay. During a typical stay in the hospital, doctors visit you, nurses assist you, you are given meals, drugs, x-rays, a bed to sleep in, lab tests--all inputs to your one product, a "hospital stay", some would say. Others would say that all of these activities are separate service products because they are listed separately on the bill.

It is possible to draw an analogy here between the hospital stay and the manufacture an of automobile. The various component parts of the car; the tires, windshield, head lights, and so forth are inputs to the final product of a car. However, these parts are also final products of other industries. This emphasizes the fact that inputs to one industry are often in fact products of another, and one does not necessarily preclude the other.

The Task Force is currently trying again to take a fresh look at health care service products. They are making a list of service products, ignoring industry references as much as possible. This is not as easy as it sounds because in some cases it is difficult to talk about products without referring to the industries.

Once the decision was made to develop a list of products, there were still lengthy discussions about what a service product is. Is it a source of receipts, a transaction, or something else? Should service products be items listed on a bill, like the x-ray, lab tests, medication, and so forth that were discussed earlier, or only the total of what the consumer actually thinks he is paying for "the hospital visit" as a whole--a bundled service.

The Task Force decided they would try to list products at the lowest level possible--products that could be, but are not always, paid for separately by the consumer. For example, it is possible to go to an x-ray lab to have an x-ray taken with no other

treatment; go to a lab to have tests conducted, buy a prescription from a drug store, or arguably you could buy food at a hospital cafeteria. Thus these are all possible service products for the health care sector. In addition, these could be parts of a bundled service like a "hospital stay" that might also get listed as a separate service product, much the same as an automobile.

FUTURE DIRECTIONS

The Task Force has just scratched the surface. Many difficult issues still need to be addressed. For example, once they have resolved some of these problems in the health care sector, will they easily translate into other sectors or will they need to readdress them. Is it necessary, or desirable, or even possible, to use the same approach for all service sectors? Some work done by Statistics Canada suggests that it may not be. They have divided service industries into five different categories. When categorizing the industries they focused on the main characteristics of the service industries including things such as markets served, employment mix, and data items of importance. While their main interest was in data collection strategies, a similar philosophy may be used to make decisions about the type of service products needed in various areas.

The Task Force still has to develop some type of numerical coding scheme. It is not clear yet, what direction this will go. Should it follow the industry coding scheme or should it have its own scheme that could be used for multiple purposes, one of which would be aggregating to industries?

A frequent complaint about the current SIC is that it is difficult to revise and therefore, is often thought to be out of date. Given the various possible uses for this

product coding system, it is important to make it as flexible as possible--flexible in that it could be used to aggregate data in more than one way and also, perhaps more importantly, be designed to permit updating on a regular basis.

The ability to collect data using the coding system was discussed. While this is a definite concern, the Task Force found such discussions always complicated the substantive issues and brought them back to considerations based on an industry concept or on exactly how to collect the data. These are important issues that they do not want to lose sight of and they will be addressed as part of the process.

Since health care is considered a non-marketed service in many countries, these particular issues may not be relevant to some countries. But health care has given the Task Force an opportunity to address many difficult issues that will undoubtedly surface again in reviewing other sectors. In particular, it has focused attention on the difficulties involved in attempting to unbundle services and obtain data on a wherever produced basis. This confirms some of the problems evident from various papers of the Voorburg Group.

Once the Task Force is finished with health care services, they plan to move on to discuss business services. The Task Force intends to take advantage of the wide range of work already performed in this area by Statistics Canada and by numerous other countries participating in the work of the Voorburg Group.