

**Measuring Detailed Sales of Service in the United States**

**by**

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## **Executive Summary**

This paper presents an overview of the U.S. Census Bureau's measurement program on services statistics with a focus on the measurement of detailed sales of services. Detailed sales of service are collected in the annual surveys and 5-year economic census program.

The Census Bureau publishes data for over 2,700 detailed sales of service categories. While the number of categories has increased substantially over the past twenty years, the richness of the data set pales in comparison to the manufacturing product measurement program that publishes data for about 9,000 product categories. Traditionally, detailed sales of service categories have been defined by trade sector or industry. A lack of a comprehensive system of detailed sales of services made it difficult, and often impossible, to calculate market share by industry for many detailed sales of service categories.

To address these measurement gaps, the statistical agencies of Canada, Mexico, and the United States began an extensive research project in February 1999 to identify the final products of service industries in the three countries. The ultimate goal is to create a comprehensive demand-based, market-oriented product classification system that will complement the supply-oriented industry classification system, the North American Industry Classification System (NAICS) that was introduced in 1997. The product classification system is known as the North American Product Classification System (NAPCS).

To date, we have identified over 1,700 provisional trilateral products for 111 services industries in four NAICS sectors and work continues on a new group of five more NAICS sectors. The U.S. Census Bureau has begun testing the provisional NAPCS products in our measurement programs with the 2001 annual surveys and the 2002 economic census.

The Census Bureau provides published data on detailed sales of services at [www.census.gov](http://www.census.gov).

## Survey Overview

The U.S. Census Bureau's Services Statistics program covers over 536 industries in 14 sectors as defined by the North American Industry Classification System (NAICS). The measurement program covers the following NAICS sectors.

- NAICS 42 - Wholesale Trade
- NAICS 44-45 – Retail Trade
- NAICS 48-49 – Transportation and Warehousing
- NAICS 51 – Information
- NAICS 52 - Finance and Insurance
- NAICS 53 – Real Estate and Rental and Leasing
- NAICS 54 – Professional, Scientific, and Technical Services
- NAICS 55 – Management of Companies and Enterprises
- NAICS 56 – Administrative and Support, Waste Management and Remediation
- NAICS 61 – Educational Services
- NAICS 62 – Health Care and Social Assistance
- NAICS 71 – Arts, Entertainment, and Recreation
- NAICS 72 – Accommodation and Food Services
- NAICS 81 – Other Services (Except Public Administration)

The U.S. Census Bureau conducts surveys of varying data detail and industry coverage monthly, annually, and once every five years. Attachment A provides an indication of the survey frequency for each of the sectors covered by the U.S. Census Bureau's Services Statistics Program.

The monthly surveys cover 149 industries in three sectors: retail trade, wholesale trade (merchant wholesalers only), and accommodation and food services (food services only). The monthly surveys produce sales and inventory estimates by industry. In addition, e-commerce sales are collected for retail trade and published quarterly. These data are a primary input source for the quarterly calculation of national output, the Gross Domestic Product (GDP).

The annual surveys cover over 400 industries in 12 of the 14 service sectors. The annual surveys provide data by industry on sales/revenue and e-commerce sales/revenue; inventories and purchases for the retail and wholesale trade sectors; detailed sales of services for selected industries; expenses and detailed expense lines for selected service industries; exported services for selected industries and other special inquiries for selected industries (for example, number of truck miles). The annual data are an important source for the calculation of national GDP and serve as a benchmark total for the monthly surveys.

The 5-year economic census program covers 536 industries in the 14 service sectors and is conducted for years ending in 2 and 7. This program provides for a complete enumeration of all establishments in the 14 service sectors. Data items include sales/revenue, annual payroll, first quarter payroll, employment, e-commerce

sales/revenue, inventories and purchases (wholesale trade only), detailed sales of services, and other special inquiry items (for example, number of hotel rooms). The 5-year economic census programs provide important inputs for the creation of the Input/Output tables that are the foundation for the National Accounts and specifically for the quarterly calculation of GDP. Further, they provide updated information to create the universe frame for the sample selection for the annual and monthly surveys and serve as a benchmark total for the annual surveys.

### **Measurement of Detailed Sales of Services**

Detailed sales of services are collected in both the annual surveys and 5-year economic census. The 5-year economic census provides detailed sales of services for over 536 industries in 14 sectors while the annual surveys only provide detailed sales of services for about 70 industries in 6 sectors.

Traditionally, the detailed sales of services have been called commodity lines for wholesale trade, merchandise lines for retail trade, and revenue/receipts lines for the other service sectors.

The 1997 economic censuses provided data for about 1,900 detailed sales of service categories including over 600 commodity lines for wholesale trade, over 400 merchandise lines for retail trade, and about 850 receipts line categories for the other services sectors.

The annual surveys provide measurements on over 180 categories for service industries. This includes no categories for wholesale trade and 13 categories for the Electronic Shopping and Mail Order industry in retail trade. For the other services sectors, over 170 categories are measured. This includes detailed sales of service categories for the following industry groups: Truck Transportation, Publishing, Broadcasting, Telecommunications, Information Services and Data Processing; Securities, Commodity Contracts, and Other Financial Investments and Related Activities; Computer Systems Design and Related Services, and Selected Health Care Services. Attachment B provides a count of the industries and the associated count of detailed sales of service categories published by sector for the 2000 annual surveys.

Through these programs the Census Bureau published detailed sales of services that provide information on the types of services produced by service industries, however, there are some measurement issues.

The service industries account for an increasing amount of the Gross Domestic Product (GDP) but the detailed information available to understand the contribution of these service industries is very limited and has not kept up with its growing importance. In the 1997 economic census, the Census Bureau collected about 1,900 detailed sales of service categories for the 536 service industries accounting for over 55 percent of GDP. By comparison, the Census Bureau collects about 9,000 product categories for the 474 industries in the manufacturing sector accounting for less than 20 percent of GDP.

A lack of a comprehensive system of detailed sales of service categories has made it difficult, and in many instances impossible, to calculate market share by industry. Traditionally, detailed sales of services categories have been defined by trade sector or industry. Detailed sales of services categories are defined by sector for retail trade, sector for wholesale trade and by sector, industry or industry groups for the other service sectors.

Further, detailed sales of services categories have been identified by survey. While an attempt is made to maintain similar service product categories between annual and 5-year economic census programs differences can and do exist.

The detailed sales of services categories have been defined using different defining principles. In retail trade and wholesale trade, merchandise line and commodity line categories reflect products sold or services rendered. For the other service industries, source of receipts categories are usually receipts for services provided. In some industries, the categories reflect other defining principles. For example, the detailed sales of service categories for Selected Health Care Services in the annual surveys reflect source of payment such as private insurance, patient (out-of-pocket), etc.

### **North American Product Classification System (NAPCS)**

To address some of the measurement issues mentioned above, the statistical agencies of Canada, Mexico and the United States began an extensive research project, in February 1999, to identify the products of service industries in the three countries. The ultimate objective is to create a comprehensive demand-based, market-oriented product classification system that will complement the supply-oriented industry classification system, the North American Industry Classification System (NAICS) that was introduced in 1997. The product classification system is currently called the North American Product Classification System (NAPCS).

NAPCS development is operating under the following guiding principles.

- Identify final products.
- Produce product titles and definitions that are consistent across the three NAICS countries.
- Organize final products in a comprehensive system that is market-oriented, demand-based, is not industry-of-origin based but can be linked to the NAICS industry structure.
- Give special attention to identifying service products, new products, and advance technology products.
- Promote compatibility with products across other international classification systems such as the Central Product Classification System of the United Nations.

The scope of initial NAPCS work was limited to the identification of products for industries in four NAICS services sectors.

- NAICS 51 – Information
- NAICS 52 – Finance and Insurance
- NAICS 54 – Professional, Scientific, and Technical Services
- NAICS 56 – Administrative and Support and Waste Management and Remediation Services.

The development work for these sectors became known as Phase I and was later broken into two parts. Phase I.1 was completed in December 2000 and produced well defined lists of nearly 1,500 products produced by 86 NAICS industries. Phase I.2 is nearing completion and is expected to identify another 200 more products of an additional 25 industries.

Development work for Phase II began in July 2001 and is targeting industries in the following five NAICS sectors.

- NAICS 48, 49 – Transportation and Warehousing
- NAICS 61 – Education
- NAICS 62 – Health Care and Social Services
- NAICS 71 – Arts, Entertainment, and Recreation
- NAICS 72 – Accommodation and Food Services

Phase III is scheduled to begin in mid-2003 with the goal of completing product development for all NAICS services industries except retail and wholesale.

Final product lists are developed for industries and in some instances, industry groups. Currently, each list has its own numbering scheme and provisional aggregation structure. The final NAPCS structure will contain for each product, a common title, definition, and unique product code. The final NAPCS aggregation structure will group products, regardless of industry, based on how the products are used from a demand-side perspective. Preliminary work is underway in the development of a final NAPCS structure.

In the United States, the NAPCS products are considered provisional and will not be considered final until the products are tested in the data collection programs.

### **Using NAPCS Products in Measurement Program for Service Industries**

The U.S. has begun testing the provisional NAPCS products in our measurement programs with the 2001 annual surveys and the 2002 economic census. These surveys will test the provisional NAPCS products for feasibility of collection and publication.

#### Annual Surveys

For the 2001 annual surveys, we added NAPCS provisional products to questionnaires designed to collect information for 20 industries in the Information Sector and the

Computer Systems Design and Related Services industry group. The net effect was the collection of about 120 more detailed sales of service categories for the 2001 survey year. Data collection is complete for the initial data from this NAPCS test. Data are undergoing final editing and review and will be released by the end of the year. Data, when available, can be found at [www.census.gov](http://www.census.gov).

Future expansion in the use of NAPCS products in the annual surveys is largely dependent on funding. Requests for additional funding have been submitted for both fiscal year 2003 and fiscal year 2004. Additional funding will allow us to use more NAPCS products in the annual surveys and fill critical data gaps by providing more detailed services measures on an annual basis.

### 2002 Economic Census

For the 2002 economic census, we added about 1,000 NAPCS provisional products to questionnaires for the 86 industries that were completed as part of NAPCS, Phase I.1. For the other 450 industries, we will continue to use the merchandise lines, commodity lines, and receipts lines similar to those used in the 1997 economic census. For the 2002 economic census we will use the term “product lines” to collectively describe the NAPCS provisional products, merchandise lines, commodity lines and receipt lines. In total, we will collect over 2,700 service product lines in the 2002 economic census. Attachment C provides a count of product lines by NAICS sector.

Questionnaires will be mailed in December 2002 and are available at [www.census.gov/econhelp](http://www.census.gov/econhelp) (sample forms). For the 2007 economic census and beyond we will continue to replace our proprietary sources of receipts categories with the NAPCS provisional products as they become available.

**U.S. Bureau of Census  
Services Statistics Program  
Industry Coverage by Frequency of Survey**

NAICS Sector		Monthly Survey	Annual Survey	5-year Economic Census
Code	Description			
42	Wholesale Trade	Y*	Y*	Y
44-45	Retail Trade	Y	Y	Y
48-49	Transportation and Warehousing		Y*	Y
51	Information		Y	Y
52	Finance and Insurance		Y*	Y
53	Real Estate and Rental and Leasing		Y*	Y
54	Professional, Scientific, and Technical Services		Y	Y
55	Management of Companies and Enterprises			Y
56	Administrative and Support, Waste Management and Remediation		Y	Y
61	Educational Services			Y
62	Health Care and Social Assistance		Y	Y
71	Arts, Entertainment, and Recreation		Y	Y
72	Accommodation and Food Services	Y*	Y	Y
81	Other Services (Except Public Administration)		Y*	Y

Y – covers all industries in the sector.

Y\* - partial industry coverage of sector.



**U.S. Bureau of Census**  
**Annual Survey Collection of Detailed Sales of Service**  
 (Based on 2000 Annual Survey)

<b>NAICS Sector</b>		<b>Number of Industries for which Detailed Sales of Services Are Collected</b>	<b>Number of Detailed Sales of Service Categories</b>
<b>Code</b>	<b>Description</b>		
42	Wholesale Trade	0	0
44-45	Retail Trade	1	13
48-49	Transportation and Warehousing	6	20
51	Information	17	115
52	Finance and Insurance	6	12
53	Real Estate and Rental and Leasing	0	0
54	Professional, Scientific, and Technical Services	4	14
55	Management of Companies and Enterprises	0	0
56	Administrative and Support, Waste Management and Remediation	0	0
61	Educational Services	0	0
62	Health Care and Social Assistance	39	12
71	Arts, Entertainment, and Recreation	0	0
72	Accommodation and Food Services	0	0
81	Other Services (Except Public Administration)	0	0

**U.S. Bureau of Census**  
**Product Lines By Sector**  
(2002 Economic Census)

<b>NAICS Sector</b>		<b>Number of Product Lines</b>
<b>Code</b>	<b>Description</b>	
42	Wholesale Trade	633
44-45	Retail Trade	421
48-49	Transportation and Warehousing	102
51	Information	406
52	Finance and Insurance	258
53	Real Estate and Rental and Leasing	94
54	Professional, Scientific, and Technical Services	343
55	Management of Companies and Enterprises	19
56	Administrative and Support, Waste Management and Remediation	202
61	Educational Services	13
62	Health Care and Social Assistance	42
71	Arts, Entertainment, and Recreation	51
72	Accommodation and Food Services	23
81	Other Services (Except Public Administration)	111