

## KEYNOTE ADDRESS: The Census of Transportation and Related Surveys: 1987 and Beyond

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We're here today to talk about transportation data and the decisions that will be made with that data. Certainly the Census Bureau's highest priority at the moment is expanding our information on the service sector and the transportation area is an important part of that sector. Service industries account for nine out of ten new jobs in our economy and transportation issues are critical throughout the economy. Recently, Cabinet level groups have called for better service industries data. Our challenge is to focus this broad support and coordinate effective responses.

What I am going to try and do this morning is to aid and abet this effort with three contributions: one, a review of available Census Bureau data sources; two, a summary of planned improvements that we have in mind; and third, a discussion of the issues for the 1990s.

First, let's look at existing information. Economic and population censuses are our most important information resources. They provide encyclopedic detail. You can look at the Census information as an encyclopedia. We like to look at the annual reports as a book and the monthly numbers that you see all the time like a newspaper.

The first information resource, of course, is the Census of Transportation. This has been taken every five years since 1963. The latest is for 1987. Each census has three components: first, an enumeration of 140,000 transportation establishments; second, a sample survey of 135,000 registered trucks; and finally, a detailed survey of truck activities.

If you look at the establishment count, you'll see that we have improved in 1987 over 1982. We have complete coverage of SIC's 42, 44, and 47 (water transportation, freight forwarding and transportation arrangement services). We have implemented the 1987 SIC revision. New classifications include travel agencies, tour operators, and courier services. We have data for non-employers, such as owner-operator truckers. These data, because of certain problems that we had in 1982, were not previously available. And we're publishing sooner. We're going to be two or three months ahead of the 1982 schedule.

We also have a survey well known to this audience, the Truck Inventory and Use Survey, covering the use of our commercial and private trucking fleet, the products it hauls and personal uses.

We have new data on truck accidents: type of truck involved, resulting injury or property damage, and of

course, the basic data on the physical and operating characteristics, vehicle type, weight, engine size and use.

Finally, we conduct the Nationwide Truck Activity and Commodity Survey (NTACS), which provides details such as the truck's specific size, weight, materials, and stops made, for the period from October 1989 through November of 1990. We are in the process of mailing the questionnaires, a very complex, twelve page request. We're monitoring response quality very closely.

The second category of information resources are the other economic censuses. Data from these may be relevant to transportation issues. In the Census of Manufacturers, we cover over 10,000 manufacturers of transportation equipment. We have information relevant to questions about the size and the nature of equipment stocks, information on the value of shipments, the value added, capital expenditures, operating expenses, assets and inventories of these companies. And for the first time for 1987, we'll show the percent of foreign-made parts and supplies consumed by these U.S. manufacturers.

We have a Census of Governments. We're going out there and getting data on something like 83,000 units of state and local governments, including 1,300 special transportation districts. Getting information of interest to you, about infrastructure, spending and revenues, separate expenditure and employment data, highways, mass transit, air transportation, water transportation, and parking facilities are provided for with great geographic detail.

We have a Census of Construction which includes over 12,000 establishments involved in highway, street, bridge, and tunnel construction. Data are available at the state level. We changed in 1987 from a value of receipts to value of work completed during that year.

Finally, a Census of Agriculture, covering over 2 million farm operators, produces detailed operating information for each state and county in the U.S. As an example, 700 farmers in one Iowa county used nearly 2,300 trucks, three quarters of them more than five years old, to transport 30 million bushels of corn. I mean, come on, this is detailed stuff.

Let's talk about another available source of information, surveys and geographic information. It's been said by a colleague of mine at the Bureau that if you think about the Bureau's information, it's like drinking from a fireplug. You have lots of water, but

how do you get a only a glass full? There's so much. The Census Catalogue and Guide, is a definitive source, but it's one inch thick. Today, my colleague has a handout showing relevant resources in the transportation area.

Let me give you a little bit of the feel for some of that.

One, we have a Motor Freight Transportation and Warehousing Survey, an annual sample of 1,500 for-hire trucking firms. National estimates are available for 1984 through 1987. You've got 50 data items including operating revenues and expenses, number of truck tractors and trailers, and products hauled.

We have information on journeys to work. This comes from the periodic Journey to Work Surveys and includes information on method of transportation to work, travel time and distance, work location and special items, such as the use of public transportation.

We have seven separate surveys on transportation equipment manufacturers. These include manufacturing and investment surveys, quarterly financial surveys, and current industrial reports. Their frequencies include annual, quarterly, and monthly. We have data on equipment production, capital investments, and the financial status of these firms.

Our Center for Economic Studies has constructed longitudinal data bases, which trace individual manufacturing firms from as early as 1963. This has been used for in-house research. We've done some interesting work on the impact of leveraged buyouts through this data base. I believe that this experience suggests an even more interesting opportunity to start a longitudinal data base for the transportation industries.

I mentioned the Census of Governments. We have current government reports as well. Surveys of state and local government expenditures, covering 22,000 large governmental units, providing transportation spending categories comparable to the five year census. For example, data for 1988 show that since 1987 parking receipts increased nationwide to more than \$700 billion. Highway spending by cities is also included. You can see that a major northeastern city recently increased highway spending by 18 percent.

We have a new National Clearinghouse for Single Audit Reports which provides a library of audit reports from each recipient of \$100,000 or more in federal aid (over 20,000 recipients). Data are very detailed. For example, 20 percent of one Nevada airport's operating revenues came from slot machines.

We have data for business patterns by county. These summarize the business location, employment and payroll for each state and county since 1948. Data span virtually all economic sectors, including 44 three-and four-digit transportation industries.

We have detailed reports on merchandise trade and the trade balance. Here you have data items on commodity value and quantity by port, location of shipments to and from ports, and shipments by vessel, air or surface transportation. We've got vessel name and flag, the type of vessel. All on a monthly basis.

We do a quarterly Consumer Expenditures Survey of 5,000 U.S. households, providing data on how consumers spend their money. Data profiles of the transportation industry show that consumers spend just one heck of a lot of money on vehicle gas and oil.

We have new information, geographic information, through our TIGER files. TIGER is an acronym for Topologically Integrated Geographic Encoding and Referencing. What it means is that the Census Bureau together with the U.S. Geological Survey has created a cartographic data base, automated maps, down to the block level for the USA--an amazing accomplishment in an era of very, very tight budgets. This data base includes all the data found on the census maps. It's in a form that can be manipulated by computer, so you can update it readily. It's a new, consistent, nationwide framework for transportation planners.

Let me turn now to what's coming, already planned improvements at the Census Bureau. These are in the pipeline of improvements that we have in mind. We have a three part strategy: one, complete census coverage, two, an expansion of current data items, and three, an enhancement of our basic data series.

First, in terms of complete census coverage, for the 1992 Census of Transportation, we plan to cover all of the remaining four-digit transportation industries. New coverage will include railroad, highway passenger, pipeline and air transportation industries. For the first time, comparable and detailed measures will be available.

This full transportation coverage is part of the largest economic census expansion in 40 years. It's very ambitious. We have, in the field, a Record Keeping Practices Survey to help us understand what information is available in the newly covered industries, and how best to collect it. This is a formidable task. We're surveying something like 2,400 companies and conducting 299 personal interviews. We have a 1990 pretest, a data collection instrument to help us identify problems and frame how we can solve them.

You can appreciate the problems that we perceive in collecting new transportation data. For example, what is a transportation establishment? Census collects data for separate operating locations. What does this mean for an airline with thousands of ticketing locations, regional hubs, and support activities in far flung areas. What geographic detail is needed? Generally we provide it for county and sub-county areas, but what detail is feasible and most useful for railroads or airline traffic?

We plan to expand current data. Our effort here is to fill high priority data gaps. We have planned three new annual transportation surveys; each will update industry changes in between the Censuses. One is Charter Rural and Intercity Bus Survey (CRIBS). This industry adds more than 1,500 new firms a year, and has up to eight billion dollars in revenues. We would like to get data on revenues, expenses, inventories and ridership. An earlier CRIBS proposal was not approved, but we plan to resubmit.

An Annual Survey of Transportation Services, another substantial industry, 12 to 14 billion dollars of revenues, is proposed. Regulatory reform led to major changes in this industry. We need information here. We hope to get it.

We propose an Annual Survey of Water Transportation. Again, a big industry, seven to nine billion dollars. This industry has some 20 percent of all intercity freight.

Another area that we focused on is our industrial classification system. It does not pick up newly emerging industries and sometimes masks these under all other categories. We want to identify some of these high growth industries and get information about them. Tour operators, and courier services are examples. We plan a program of one-time surveys of sub-industry changes, between censuses, to target these high growth industries.

We plan to enhance basic data. A good example of this is the Decennial Population Census. 1990 will be the first census to cover the time people leave home to go to work. Other improvements include: better information on bus versus street car transportation, ferryboat transportation, "drive alone" commuting and multiple vehicle ownership. We are particularly grateful for DOT's continuing assistance in developing software to support the 1990 Census Transportation Planning Package.

I've talked about what's available, and some of the things that are in the pipeline. Let me end by exploring briefly some of the transportation issues that I see ahead. Transportation needs will grow, industry will be dynamic, and money is going to be lean. But because and in spite of this situation, I suggest five questions that may merit the attention of all of us.

The first question, can we make better use of existing data? There is no question that the answer here is yes. Some transportation data has been too voluminous to publish. Recent program changes may make new applications possible. Two examples from the Census Bureau will illustrate.

One example relates to unanswered questions about the structure of transportation establishments and the composition of owning enterprises, the impact of the births and deaths on these establishments, and

longitudinal changes in company location, size and organization. We feel that our County Business Patterns and Standards Statistical Establishment List files contain very valuable, and previously unpublished information that could support annual publications describing these kinds of industry change. Developing such new data products would involve some costs, around a million and a half dollars, but this is valuable information, untapped information. It would be very informative and would not involve the cost of new data collection. No additional burden on the private sector would be entailed.

The other example relates to getting new information about international and domestic equipment markets is now possible. A major step was made in 1989, when we implemented a Harmonized System of commodity classifications. Now all international trade transactions are classified the same way by the United States and virtually all of our major trading partners. More direct comparisons of exports and imports flowing between the U.S. and these other countries are now possible. These will allow more precise and timely analyses of international trade in transportation equipment. We have also been working to try to harmonize our domestic product and international trade codes, to support better analyses of domestically produced equipment as compared to imported equipment.

The second question is can federal-state cooperation be strengthened? Again the answer is yes. States have important transportation program and oversight responsibilities. I suspect federal-state working relationships tend to be program-based and bilateral in character. The Census Bureau has a very rich data base of state and local government data, not fully published. We have a new Audit Clearinghouse with a large, untapped pool of information, and we have a highly automated system of state and local data collection that could be extended to include new information and uses. One thing about these state and local data to keep in mind is that they are not under Title 13 and are not subject to our usual confidentiality rules. So we can provide a lot more detail from this data set than we can from our conventional measurement surveys ordinarily subject to Title 13.

Another area is geographic information systems. Here, work with the states would be extremely profitable. Applying, expanding, and maintaining the TIGER files affords a big opportunity for the federal government to strengthen federal-state cooperation.

The third question is how should data needs and quality be balanced? Here I would suggest, "quite carefully". We have resources and burden limitations. We must be very careful to prioritize data needs and to recognize that quality is a subjective standard. A good starting point is, will the data be fit for use? Do

we need a Mercedes or will a pair of sandals do? What's good enough? Does it meet the standard? Does it meet the needs of the users?

In this connection, let me acknowledge a "C" word, commodity, as in commodity flows. Solid information on point-to-point commodity flows are a recognized need. Existing data are more than ten years old. Yet, quite frankly, collection methods that are effective and affordable have been beyond our grasp at the bureau. We think that the approach of this conference is encouraging, and we share a responsibility to work through commodity transportation data use and collection and financing issues. We are now working on "do-able" proposals. Let us continue and conclude this discussion at an early date.

The fourth question is a very simple question, an elementary question, one that we should know, but we do not is, what is the size of major transportation sectors? We do not know that, because we do not know much about transportation activities in non-transportation establishments. For the trucking industry, these captive or in-house transportation activities are estimated to represent half of the industry total. The present SIC system is based on the principal activity of each measured establishment or company. And in-house transportation activities do not get adequate coverage unless they generate a majority of business revenues. A near-term information priority would be to one, document the scope of unmeasured transportation activities and two, to develop new data collection methods adequate to describe the total industry scope and composition.

The fifth question is should there be a Center for Transportation Statistics? I would suggest that the time is ripe for this. Statutory centers have provided useful leadership, research and coordination functions for federal education and health statistics, and we need one in transportation. In these fields where information is fragmented, federal, state and private interests are strong, it is important that unresolved data questions merit collective attention.

A center might serve a number of functions. I know that the Transportation Research Forum provided a Transportation Users Guide as part of this conference, that is very valuable and could be expanded, extended by the center. The center could play an honest broker's role in prioritizing data needs regarding commodity transportation, sub-industry detail, and geographic detail, but also be an agent, a middle man, a facilitator of how best to implement expanded 1990 coverage of the transportation sector in the Census.

There are certainly a host of problems in the transportation area, coverage, classification, other data issues which I have mentioned, lots and lots of problems.

Thank you very much for the opportunity to talk to you today about transportation needs, and to tell you about what data resources we have at the Census Bureau. Certainly, we at the bureau appreciate the opportunity for this. We have a major program. We can be, I think, of substantial assistance here, and I would be happy to take your questions.