Brief 8. Consumer Spending on Transportation
About the AASHTO Census Transportation Planning Products Program

Established by the American Association of State Highway and Transportation Officials (AASHTO) and the U.S. Department of Transportation (U.S. DOT), the AASHTO Census Transportation Planning Products Program (CTPP) compiles census data on demographic characteristics, home and work locations, and journey-to-work travel flows to assist with a variety of state, regional, and local transportation policy and planning efforts. CTPP also supports corridor and project studies, environmental analyses, and emergency operations management.

In 1990, 2000, and again in 2006, AASHTO partnered with all of the states on pooled-fund projects to support the development of special census products and data tabulations for transportation. These census transportation data packages have proved invaluable in understanding characteristics about where people live and work, their journey-to-work commuting patterns, and the modes they use for getting to work. In 2012, the CTPP was established as an ongoing technical service program of AASHTO.

CTPP provides a number of primary services:

- **Special Data Tabulation from the U.S. Census Bureau**—CTPP oversees the specification, purchase, and delivery of this special tabulation designed by and for transportation planners.

- **Outreach and Training**—The CTPP team provides training on data and data issues in many formats, from live briefings and presentations to hands-on, full-day courses. The team has also created a number of electronic sources of training, from e-learning to recorded webinars to downloadable presentations.

- **Technical Support**—CTPP provides limited direct technical support for solving data issues; the program also maintains a robust listserv where many issues are discussed, dissected, and resolved by the CTPP community.

- **Research**—CTPP staff and board members routinely generate problem statements to solicit research on data issues; additionally, CTPP has funded its own research efforts. Total research generated or funded by the current CTPP since 2006 is in excess of $1 million.

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Pub Code: CA08-4 ISBN: 978-1-56051-578-4
Brief 8. Consumer Spending on Transportation

This brief is the eighth in a series of briefs that constitute a body of knowledge describing commuting in America. This body of work, sponsored by American Association of State Highway and Transportation Officials (AASHTO) and carried out in conjunction with a National Cooperative Highway Research Program (NCHRP) project that provided supporting data, builds on three prior Commuting in America documents that were issued over the past three decades. Unlike the prior reports that were single volumes, this effort consists of a series of briefs, each of which addresses a critical aspect of commuting in America. These briefs, taken together, comprise a comprehensive summary of American commuting. The briefs are disseminated through the AASHTO website (www.transportation.org). Accompanying data tables and an Executive Summary complete the body of information known as Commuting in America 2013 (CIA 2013).

A key factor in understanding how commuters select the mode of transportation they use to get to work is their access and ability to use the various modes of travel. In particular, auto and transit availability and cost are important factors in commute trip mode choice. Brief 7, Vehicle and Transit Availability, explored vehicle availability; this brief, Brief 8, explores household spending on travel.

Spending on Transportation

Transportation is an important component of household budgets. While it is not feasible with existing data to completely isolate commuting costs from transportation costs for all other purposes, the data available can help shed some light on the subject and gain insight into the nature of the costs involved.

The premier source for detailed transportation expenditures information is the Consumer Expenditure Survey (CEX) prepared annually by the Bureau of Labor Statistics.¹ This is the source of the basket of products and their prices that establishes the government’s Cost of Living Index. All transportation expenditure data employed in this brief are from the 2011 reporting of the survey or predecessor reports, unless otherwise noted.

The CEX captures direct household expenditures that can be attributed to transportation; however, it does not capture indirect costs or non-user-fee-based methods of paying for transportation. Indirect costs might include such things as the share of cost of various products that is a result of transporting the materials through the chain of production and

¹ All comparisons made here are for expenditures. Incomes are identified in the survey, but comparisons of spending to incomes can be very misleading, particularly, as often happens, in cases where total spending exceeds income.
distribution. Examples of non-user-fee-based costs might include sales taxes or property taxes used by many communities as a means of funding public transportation.

These expenditures are not associated with purchasing transportation services or equipment and, therefore, cannot be captured in consumer transportation expenditure data. Similarly, impact fees, mobility fees, or other assessments on individuals or developments are not captured in transportation expenditure data. Nor are local, state, or federal General Fund transfers or allocations to transportation facilities and services. For example, federal General Fund transfers to the Highway Trust Fund, General Fund appropriations for aviation or Amtrak, or even expenditures such as the Troubled Asset Relief Program (TARP) investments in automobile manufacturers offset costs that might otherwise have been borne more directly by travelers as gas taxes or vehicle prices. Thus, growth in non-user-fee-based mechanisms for paying for transportation results in an incomplete reporting of the full public resource commitment to transportation.

**Spending on Personal Vehicle Travel**

Figure 8-1 provides disaggregated statistics on total consumer spending by broad spending categories. In this figure, spending for gasoline has been separated from overall transportation spending to gain a better sense of the nature of the spending. The six-year period shown (2006–2011) is significant because it encompasses good years, bad years, and years of weak recovery in the economy. Overall, transportation costs (inclusive of fuel) are typically the second largest cost in household spending after housing.

The range in total consumer unit expenditures (the sum of the lines shown on Figure 8-1) in this period is substantial, running from a spending high of $50,486 in 2008 to a low (two years later) of $48,109, with a value mid-way between these numbers in the recovery year of 2011 of $49,705—almost identical to spending levels in 2007. This aids in the understanding of much of what happened in the period. Of significance are the rising levels of health-care spending and the generally fluctuating or stable levels of spending in the period for other non-transportation purposes, including housing. The range of transportation spending (excluding fuel spending) shows significant continuing declines after 2007, with a slight upturn in 2011. Spending for gasoline shows rather dramatic levels of sawtooth-like rising and falling for the entire period. Fuel price levels continued to rise in 2012. Total transportation including fuel spending was at its height in the 2006–2008 period at approximately $9,000. It declined to the range of $7,700 per year in 2009 and 2010, before turning upward to about $8,300 in 2011.

2 A consumer unit is similar to a household—its prime attribute is that it is a distinct entity in terms of economic decision making. There were roughly 122 million consumer units in the Consumer Expenditure Survey, contrasted to 115 million households estimated by the Census Bureau in the 2011 American Community Survey (ACS). Part of this difference is explained by persons living in group quarters who may be consumer units but are not households.
Figure 8-1. Consumer Spending Trends

Source: Consumer Expenditure Survey
Figure 8-2 shows the long-term trend of transportation shares of consumer unit annual spending (including fuel) over a 25-year period. The range is substantial, from a high in 1986 of 20.0 percent to an all-time low of 15.6 percent in 2009, 16.0 percent in 2010, and 16.7 percent in 2011—the three lowest years in transportation share reported. So, as incomes and overall spending fell, transportation spending fell even faster.

Figure 8-3 fills out the spending picture within the main transportation spending category, which helps to ascertain the nature of the downturn. Components of consumer unit expenditures in transportation are for new and used cars and trucks, comprising about a third of total transportation spending; spending on gasoline defines almost another third; and other vehicle expenses, such as finance charges, maintenance, and insurance, cover just less than a third. Finally, there is purchased transportation—all the modes that require a ticket purchase for use, including transit, intercity bus, rail, air, cruise ships, cabs, etc.—at about 6 percent of spending.3

Following this level of detail further, Figure 8-4 shows the change in these expenditures from 2006–2011. Note that while overall consumer expenditures grew by 3 percent in the period, transportation spending declined by 3 percent. The big declines were in purchases of new cars (-30 percent) and used cars (-15 percent) and the accompanying finance costs (-22 percent). Other spending, for insurance (+11 percent), maintenance (+17 percent) and fuel (+19 percent), rose appreciably in the period.

Perhaps the most effective way to better understand this spending is to stratify the expenditures by important variables such as income, age, vehicle ownership, and metro area scale. For purposes of this brief, the key variable will be workers and their spending.

**Fuel Spending**

In Figure 8-3, it was shown that spending for fuel comprises a substantial part of transportation spending—32 percent in 2011. Fuel costs are among the most volatile of transportation costs and have varied sharply over the past decade. Although the use of fuel per mile has declined with the improved average fuel economy of vehicles, a rather dramatic increase in fuel costs since the late 1990s has impacted consumers and is considered one of the factors dampening travel demand.

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3 It is important to recognize that the Consumer Expenditure Survey reports only personal expenditures; it does not include travel spending reimbursed by an employer or others, such as a church or social groups.
**Figure 8-2.** Transportation as a Share of Household Spending

*Source: Consumer Expenditure Survey*

**Figure 8-3.** Components of Consumer Unit Transportation Spending

*Source: Consumer Expenditure Survey, 2011*

**Figure 8-4.** Change in Household Transportation Spending, 2006–2011

*Source: Consumer Expenditure Survey, 2011*
Figure 8-5 shows the long-term trend in fuel prices on a current and constant dollar (historic prices inflated to 2011 levels) basis, indicating that current fuel costs are not significantly different from the prices experienced in the early 1980s, and with higher efficiencies of vehicles, the costs per mile traveled are appreciably less. On a per-vehicle-mile basis, fuel consumption measured in British Thermal Units (BTUs) has dropped from about 8,000 BTUs in 1980 to about 5,300 BTUs in 2010, a decline of about a third.4

**Transportation Spending by Area Size**

There is substantial variation in total spending and transportation spending by the type of area in which people live. Total annual household spending runs the gamut, from under $40,000 to more than $58,000 per year, an almost 50 percent swing, generally increasing with size of area, as shown in Figure 8-6. Transportation spending swings by area are not as extreme, varying by less than 20 percent, and do not necessarily track with income changes, making for sharp variations in shares of spending going to transportation.

Transportation spending does not have dramatic variations between various metropolitan area size groups. Overall, the transportation spending share is on the order of 17 percent, with a basic variation of about 3 percentage points, from just over 14 percent for the largest metropolitan areas up to 20 percent for rural areas. Spending seems to be least in total dollar terms in the smallest metro areas (below 100,000 in population), but because total spending and incomes are also lower, the share of spending for transportation in such areas is among the highest. Figure 8-7 shows the pattern of transportation spending and transportation percent of all spending.

Rural expenditures, in areas outside urban areas, are perhaps among the most significant spending statistics. Those outside urban areas spend the most for transportation, roughly $9,500 per year; at the same time, they are among the lowest in total expenditures and, consequently, exhibit the highest share of total spending on transportation, at 20 percent. It is notable that small town and rural areas spend the least on purchased transportation, roughly half the average for all areas.

Figure 8-5. Fuel Price Trends, 1978–2011
Source: ORNL, Transportation Energy Data Book

Figure 8-6. Total Spending and Transportation Spending by Area Type
Source: Consumer Expenditure Survey, 2011

Figure 8-7. Transportation Spending by Metro Area Size
Source: Consumer Expenditure Survey, 2011
When the data are adjusted for the number of vehicles or the number of earners in the consumer unit, the data presented in Figure 8-8 emerge.

**Figure 8-8. Transportation Spending per Household Vehicle and per Earner**
*Source: Consumer Expenditure Survey, 2011*

- Spending per earner is rather stable across areas, with only a small variation of a few hundred dollars above or below $6,000. The notable exception to this stability is, again, areas outside metros, with spending at almost $8,000 per earner, or about a third more than average.

- Spending per vehicle exhibits far greater contrasts. For purposes of analysis, expenditures for purchased transportation (spending unrelated to vehicles) have been deleted from the spending-per-vehicle data in Figure 8-8 to assure a balanced comparison.

- Perhaps surprisingly, areas outside urban boundaries show the lowest household spending per vehicle, at about $3,700, vs. the largest metro areas, exhibiting spending close to $5,000 per vehicle. Rural areas provide a unique picture in that their low spending per vehicle may be associated with the fact that they own the largest numbers of vehicles among all groups—2.5 vehicles vs. an average of 1.9 for all consumer units. This appears to be the product also of newer, more expensive but fewer cars owned by consumers in large metro areas, with the effect of those cars being used more extensively. At the same time, their spending for fuel is the highest in total among all groups—$3,316 in the largest metro areas vs. an average of $2,655 for all units—but their spending per vehicle for fuel is among the lowest.

- Rural spending per earner is, by far, the highest in total and for fuel ($2,700 vs. $2,040 average), suggesting that although the number of earners in rural households is only slightly fewer than in other areas, their travel is for greater distances.
• Small-town spending is the group with the lowest total spending for transportation, the lowest spending per earner, and among the lowest in spending per vehicle.

Incomes and Transportation Spending

Historically, expenditures for transportation have followed an almost standard pattern when examined among quintiles of population.5 The lowest-income 20 percent has had the lowest share of overall spending going to transportation spending over the years, at an overall level less than 15 percent. Then, not only total spending but the share of total spending for transportation rises as incomes rise in each quintile, declining only slightly in the highest-income 20 percent. Figure 8-9 shows that this pattern is repeated again in the current time period. These patterns suggest that transportation, like almost all other forms of spending, has a basic-necessity component, as indicated by the lowest income quintile, and a discretionary component that expands with income. This is borne out here as vehicle purchases increase with income and shift from used to new vehicles. Also, intercity travel—mostly air travel—rises sharply with income, indicating expenditures for more expensive recreational travel.

![Figure 8-9. Shares of Spending in Transportation by Income Group, 2011](image_url)

The numbers of workers in consumer units, here, as elsewhere, plays a determinative role in transportation spending. High incomes in America often are the product of multiple workers in a consumer unit. Units in the highest quintile average four times as many workers as those in the lowest quintile and almost three times as many vehicles.

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5 Quintiles are obtained by ranking all consumer units in order by income and then dividing them into five groups of equal size, starting with the lowest-income fifth and proceeding to the highest-income fifth of the population. It has proven to be an effective guide to understanding transportation expenditures.
Table 8-1 presents a basic summary regarding total transportation spending in light of persons, earners, and vehicles in a household. Note that those in the highest quintile spend about 4.3 times as much as the lowest quintile in annual average spending, but their transportation spending rises even faster, at 4.7 times the lowest quintile. Their spending per person, per earner, and per vehicle is greater than the other quintiles.

Table 8-1. Spending for Key Related Factors by Income Group

<table>
<thead>
<tr>
<th>Attribute</th>
<th>All</th>
<th>Lowest</th>
<th>Lower Middle</th>
<th>Middle</th>
<th>Upper Middle</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons</td>
<td>2.5</td>
<td>1.7</td>
<td>2.2</td>
<td>2.6</td>
<td>2.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Earners</td>
<td>1.3</td>
<td>0.5</td>
<td>0.9</td>
<td>1.3</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1.9</td>
<td>1.0</td>
<td>1.5</td>
<td>1.9</td>
<td>2.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Avg. annual spending</td>
<td>$49,705</td>
<td>$22,001</td>
<td>$32,092</td>
<td>$42,403</td>
<td>$57,460</td>
<td>$94,551</td>
</tr>
<tr>
<td>Transportation spending</td>
<td>$8,293</td>
<td>$3,256</td>
<td>$5,142</td>
<td>$7,592</td>
<td>$10,205</td>
<td>$15,264</td>
</tr>
<tr>
<td>% Transp. spending</td>
<td>16.7%</td>
<td>14.8%</td>
<td>16.0%</td>
<td>17.9%</td>
<td>17.8%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Transp. spending/person</td>
<td>$3,317</td>
<td>$1,915</td>
<td>$2,337</td>
<td>$2,920</td>
<td>$3,645</td>
<td>$4,770</td>
</tr>
<tr>
<td>Transp. spending/earner</td>
<td>$6,379</td>
<td>$6,512</td>
<td>$5,713</td>
<td>$5,840</td>
<td>$6,003</td>
<td>$7,632</td>
</tr>
<tr>
<td>Transp. spending/vehicle</td>
<td>$4,365</td>
<td>$3,256</td>
<td>$3,428</td>
<td>$3,996</td>
<td>$4,437</td>
<td>$5,451</td>
</tr>
</tbody>
</table>

Source: Consumer Expenditure Survey, 2011

Figure 8-10 plots vehicles, jobs, and spending for transportation by income quintile. A strong relationship is evident, visually indicating how spending increases consistently with income.

Figure 8-10. Linkage among Earners, Vehicles, and Total Transportation Spending

Source: Consumer Expenditure Survey, 2011
Transportation and Age

One of the byproducts of the recent recession has been strong interest in the views of younger people (those under age 25 and from ages 25–34) regarding transportation and transportation spending. As shown in Figure 8-11, a greater share of their spending goes to transportation than other age groups. While they tend to have fewer vehicles than older consumers, they spend more per vehicle. Other than among the younger groups, average spending share for transportation is not affected by age.

Persons under age 25 spend on transportation a greater portion of their income (20 percent) than of their overall expenditures (18 percent), indicating that their spending is greater than their incomes, suggesting support by others or by loans. This certainly does not suggest that they have lost interest in spending for mobility in general; the two younger groups are the only ones with transportation spending above 18 percent of all spending.

The young, particularly those under age 25, do spend more on transit than persons who are older, but that has been the traditional pattern for many years and does not represent a recent shift. The young spend about 2 percent of their transportation spending (about $100 per year) for transit, greater than the average spending for all ages (about $75 per year, ~1 percent). To add perspective, those ages 25–34 spend more than three times as much on air fares as they do on transit.

Figure 8-11. Transportation Shares of Spending and Income by Age Group

Source: Consumer Expenditure Survey, 2011
The Role of Workers and Transportation Spending

Figure 8-12 reveals an important attribute of transportation spending, in that, not surprisingly, it is closely associated with the number of workers in the household. Households without workers, often retired households, spend limited amounts on transportation, roughly $2,700 for single persons living alone without a job. Single persons living alone with a job spend an additional $2,800, about $5,500 per year, on transportation. Of course, their income rises as well, roughly by 50 percent, so working is clearly a factor in household transportation spending.

![Figure 8-12. Transportation Spending by Workers per Household, 2011](image)

Source: Consumer Expenditure Survey, 2011

In households where there are two or more people in the unit and none of them work, their spending is about $5,600 per year for transportation, roughly a bit more than double the spending for single non-workers, but they spend less on a per-person basis, given that the typical unit has 2.4 members. The key factor, as Figure 8-12 shows, is that transportation spending rises with each additional worker in the consumer unit. As in the case of the single worker, each added worker adds about $2,800 in transportation spending. However, spending for fuel declines with each additional worker, suggesting a role for distance traveled in the costs.

Many of the costs per vehicle are stable among the households with workers, at about $1,400 for gas per vehicle, as shown in Table 8-2, plus about $500 per vehicle for insurance and $400 for maintenance. It appears that each additional worker adds about 0.5 vehicles to the household fleet.
Table 8-2. Annual Fuel Spending per Vehicle

<table>
<thead>
<tr>
<th></th>
<th>1-Person/ Household</th>
<th>2 or More Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas/vehicle, no workers</td>
<td>$1,009</td>
<td>$1,139</td>
</tr>
<tr>
<td>Gas/vehicle, 1 worker</td>
<td>$1,461</td>
<td>$1,476</td>
</tr>
<tr>
<td>Gas/vehicle, 2 workers</td>
<td>—</td>
<td>$1,459</td>
</tr>
<tr>
<td>Gas/vehicle, 3+ workers</td>
<td>—</td>
<td>$1,441</td>
</tr>
</tbody>
</table>

Source: Consumer Expenditure Survey, 2011

Transportation Spending by Geographic Type

The Consumer Expenditure Survey provides another geographic stratification with which to assess consumer spending for transportation that is a differentiation by central cities, suburbs, and rural areas outside metro areas (Figure 8-13). This is a very revealing stratification. First, the total spending varies sharply, ranging from similar lows of $42,500 and $45,100 in rural areas and central cities to a high of $52,800 in suburbs. Transportation spending does not follow that pattern; rural areas spend almost as much as suburbs ($8,600 vs. $8,900), and central city spending is below $7,000. This makes for sharply varying shares of spending going to transportation, ranging from 15 percent in central cities to 20 percent in rural areas, and suburbs roughly in the middle at 17 percent. Most noteworthy is that rural spending for all purposes, which is about $2,600 less than central city spending, is $1,700 higher per year for transportation.

Figure 8-13. Transportation and Total Spending by Central Cities, Suburbs, and Rural Areas

Source: Consumer Expenditure Survey, 2011
On a per-vehicle basis, central city spending is the greatest, at about $4,600 per year, not appreciably greater than about $4,450 per year in suburbs, but both are sharply greater than spending of less than $3,600 per year in rural areas. Figure 8-14 contrasts the spending to vehicles owned.

Figure 8-14. Comparative Spending per Vehicle
Source: Consumer Expenditure Survey, 2011

Housing and associated costs are so great—exceeding a third of all spending—that they dwarf other spending. However, an important facet of this spending needs explanation: if transportation and housing are looked at as a total share of spending, then an important understanding arises—the sum of housing and transportation spending varies slightly across metro area types, with suburban totals being slightly less than central cities. The national average for the total has hovered around 50 percent for many years (Figure 8-15). Also to be noted is that both housing and transportation costs rise with the size of the metro area. For metro areas of 5 million or more, housing costs constitute almost 40 percent of spending; despite transportation spending decreasing to about 14 percent, the sum still yields the highest total housing and transportation share, between 53 and 54 percent.
Spending on Other Modes

The Consumer Expenditure Survey collects some other travel-related information, including expenditures for parking fees and tolls, but these are limited in coverage and produce data of extremely limited value. It is possible to shed some light on spending for public transportation. Figure 8-16 shows intracity mass transit spending per year by population age. In addition, data indicate out-of-town spending on transit averages $12 per year per household.

Figure 8-16. Annual Spending on Local Public Transit

Source: Consumer Expenditure Survey, 2011

The relatively modest levels of spending on public transportation are a reflection of the fact that transit use is modest relative to auto use and that the share of public transportation costs borne by spending per user is also modest. Nationwide, transit fares cover approximately 32 percent of transit operating costs and none of transit capital costs.6 Remaining costs are covered by various non-passenger revenues, taxes, and fees; thus, they are not

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6 2010 National Transit Profile Summary—All Agencies.
attributed and reported as spending on transportation in consumer expenditure data. Transit funds derived from the Transportation Trust Fund are counted in the Consumer Expenditure Survey data as vehicle operating costs, as they are derived substantially from fuel taxes.

Figure 8-17 shows the fare revenue reported per passenger mile of transit travel. This all-mode national average for reporting agencies indicates that transit fares averaged approximately $0.23 per mile in 2010.

![Figure 8-17. Trend of Fare Revenue per Passenger Mile for All Modes of Transit Service, U.S.](image)

**Source:** American Public Transportation Association, 2012 Fact Book, Appendix A.

**Summary**

Availability and costs of the various travel options are acknowledged in both theory and statistical analysis as critical elements in the mode choice decisions of travelers. The cost of travel and commuting also influences residential location and workplace as well as travel destination choices of travelers. The work trip, as one of the longer and most common trips of households, is, accordingly, influenced by cost considerations. Given the relatively mature U.S. transportation system and large existing fleet of vehicles, overall travel costs change modestly over time with fuel costs being the most volatile component. Transit fare costs have grown steadily over time and are now approximately $0.23 per passenger mile—a level relatively similar to the average cost per passenger mile for auto operations.7

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7 In 2011, the average household spent a total of $7,778 on auto ownership and operating costs. Based on the 2009 NHTS, the average household had 33,004 person miles of personal vehicle travel. As travel levels today are similar, net spending per person mile of travel is approximately $0.24.
Commuting in America 2013 Briefs Series

The CIA 2013 series will include the briefs listed below as well as a CIA 2013 Executive Summary and supporting data files, all available at the CIA 2013 website traveltrends.transportation.org. The website also includes a glossary of terms, documentation of data sources, and additional resources. The series of briefs included in CIA 2013 are:

1. **Overview**—establishes institutional context, objectives, importance, data sources, and products to be produced.

2. **The Role of Commuting in Overall Travel**—presents national trend data on the relative role of commuting in overall person travel; explores commuting as a share of trips, miles of travel, and travel time at the national level.

3. **Population and Worker Trends**—provides very basic and key national demographic data.

4. **Population and Worker Dynamics**—focuses on the dynamics of the population and workforce, including data on migration, immigration, and differential rates of growth.

5. **The Nature and Pattern of Jobs**—defines employment and describes it in terms of its temporal, geographic, and other features.

6. **Job Dynamics**—looks at trends as they relate to jobs, including work at home, full-time versus part-time, job mobility, and changes in the nature and distribution of job types.

7. **Vehicle and Transit Availability**—reports on vehicle ownership and licensure levels and the availability of transit services. It also references factors influencing the availability of bike, walk, and carpool commute options.

8. **Consumer Spending on Transportation**—reports on various trends related to household spending on transportation.

9. **How Commuting Influences Travel**—explores how commuting travel influences overall travel trends temporally and geographically.

10. **Commuting Mode Choice**—provides a summary of mode choice for commuting (including work at home).

11. **Commuting Departure Time and Trip Time**—reports descriptive information on travel time and time left home, including national and selected additional data for metro area sizes.

12. **Auto Commuting**—addresses trends in privately-owned vehicle (POV) and shared-ride commuting.

13. **Transit Commuting**—addresses transit commuting.

14. **Bicycling and Walking Commuting**—addresses bicycling and walking as commuting modes.

15. **Commuting Flow Patterns**—addresses commuting flow patterns for metro area geographic classifications.

16. **The Evolving Role of Commuting**—synthesizes and interprets materials developed in the prior briefs to paint a picture of the current role of commuting in overall travel and evolving trends to watch going forward.

ES. CIA 2013 Executive Summary