

Knox County Commuter Patterns

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Workers from Knox and surrounding counties commute in great numbers each day, using several means of transportation for their journeys to work. Their travel patterns are examined in this report.

COMMUTER MOVEMENT

According to the 1990 Census, 160,829 Knox County residents are in the workforce—46% live within the limits of the City of Knoxville, while the other 54% live in the county balance. Although *place of residence* is closely split between city and county, *place of work* is not (Fig. 1).

Figure 1

■ Where We Live...

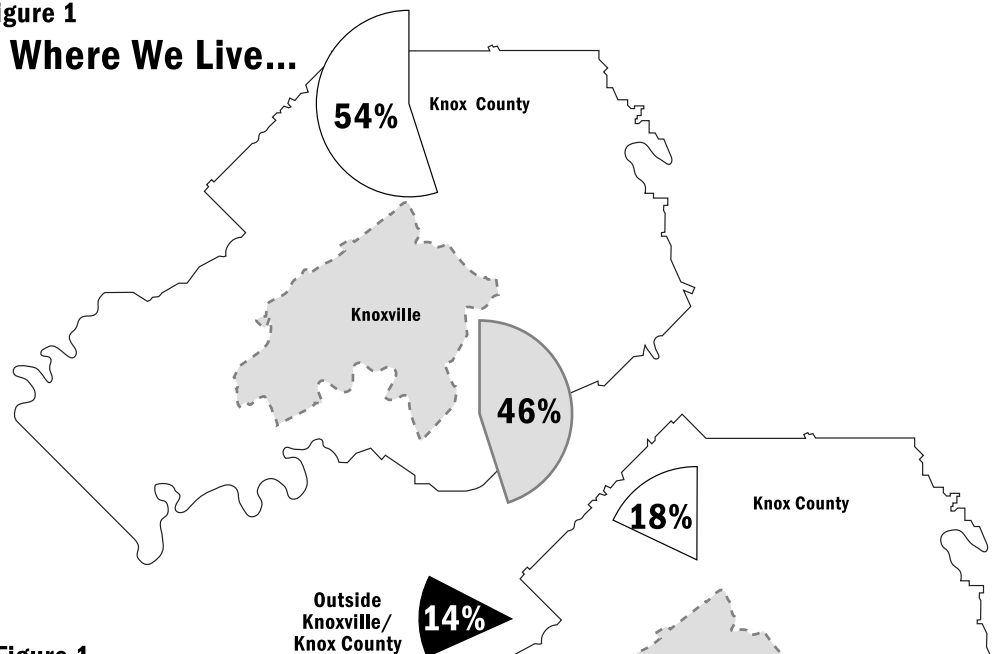


Figure 1

■ Where We Work...

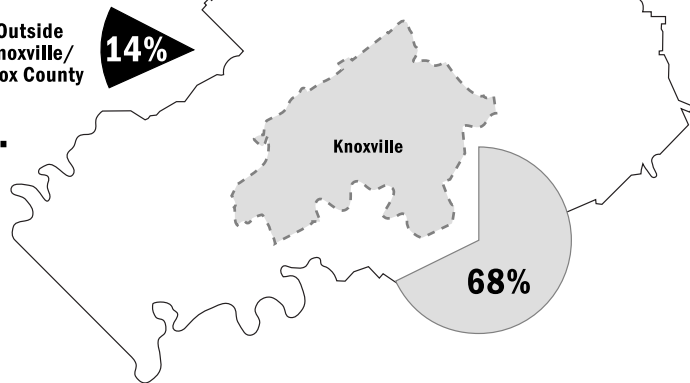
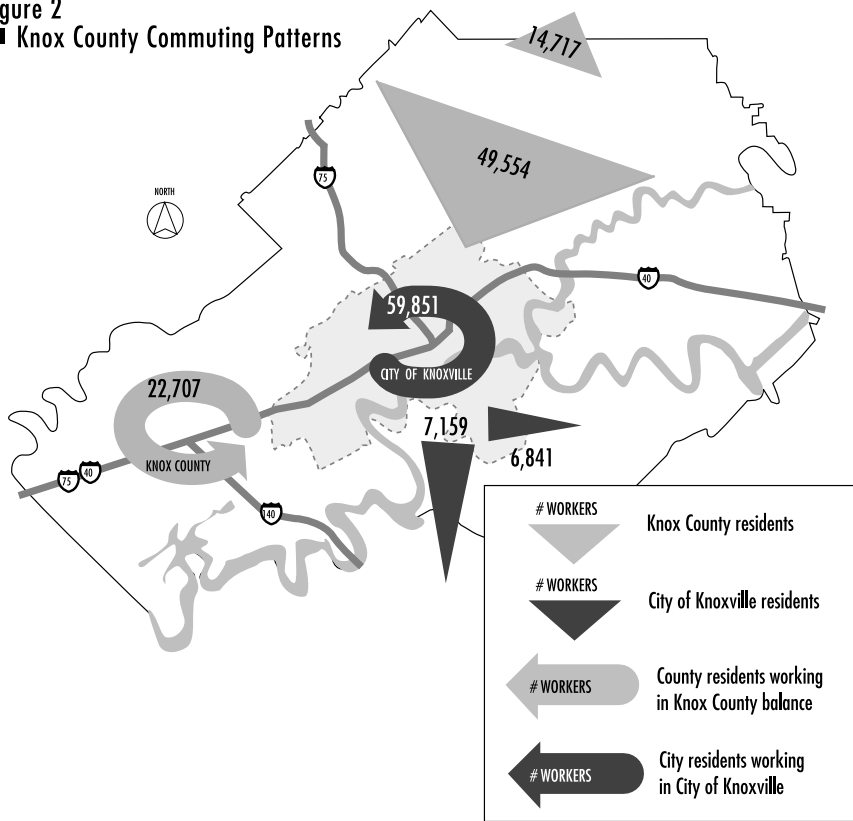


Figure 2
■ Knox County Commuting Patterns



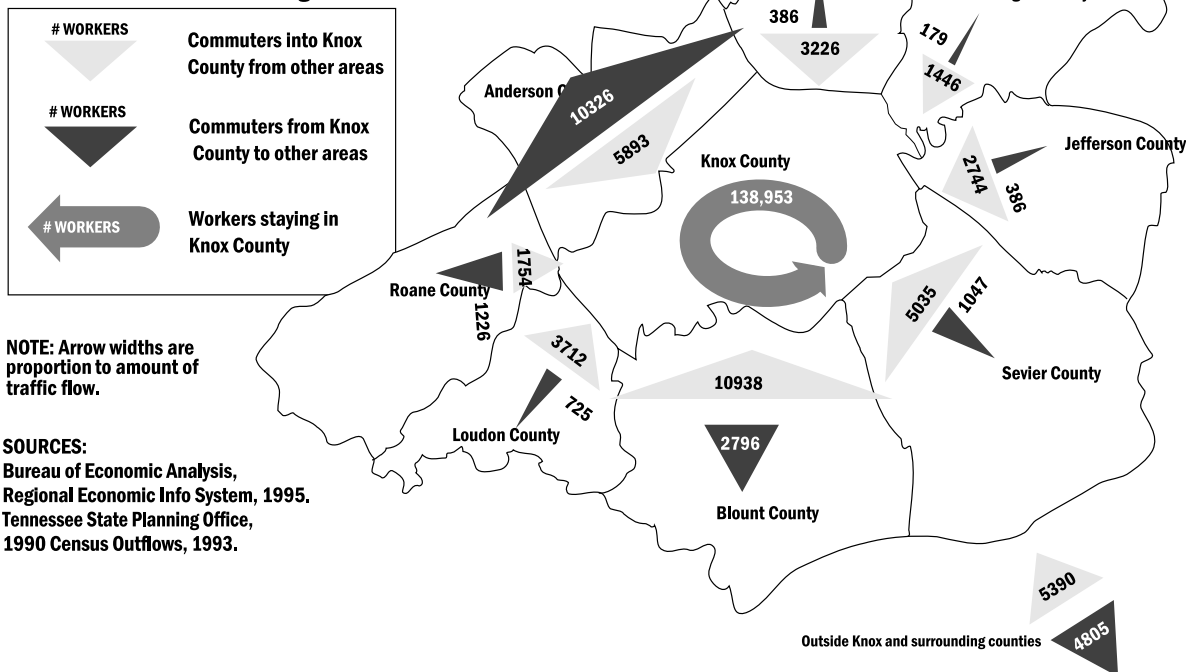
Almost 74,000 workers live in Knoxville, and 81% of that group stay in the city to work. At the same time, about 87,000 workers live in the county, but only 26% stay there to work—nearly 60% commute into the city each day for work. Less than 10% of city residents head to the county for work (Fig. 2).

About 22,000 people leave Knox County each day to work (Fig. 3). The largest share of these commuters (47.2%) is employed in Anderson County. The next largest portion travels beyond all surrounding counties entirely.

Blount County has been the leading source of commuters into Knox, providing more than 6% of the workforce employed in Knox County. Workers from Anderson and from areas beyond adjacent counties comprise an additional 6% of the local workforce. In total, more than 22% of all people working in Knox County live outside of the county (Fig. 3).

Almost 2,900 Knox County residents reported that they work in Tennessee counties beyond those adjacent to Knox. Another 1,900 work in one of 33 different states and the District of Columbia while maintaining permanent residence in Knox County (Fig. 4).

Figure 3
■ Metro Area Commuting Patterns



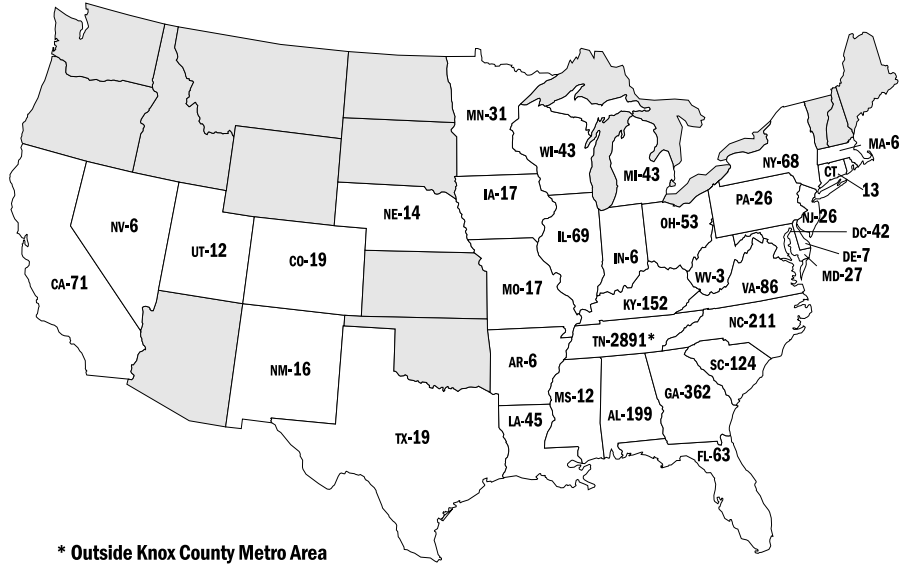
NOTE: Arrow widths are proportion to amount of traffic flow.

SOURCES:
 Bureau of Economic Analysis,
 Regional Economic Info System, 1995.
 Tennessee State Planning Office,
 1990 Census Outflows, 1993.

VEHICLES AND PASSENGERS

As we all know, most Knox County residents do not live and work in the same place—4,000 locals work at home, but the other 157,000 workers commute each day. The overwhelming choice for travel is the single-occupant private vehicle (Fig. 5). A small portion of workers carpool, ride public transit or travel by some other means, such as motorcycle, bicycle, or on foot (Fig. 5).

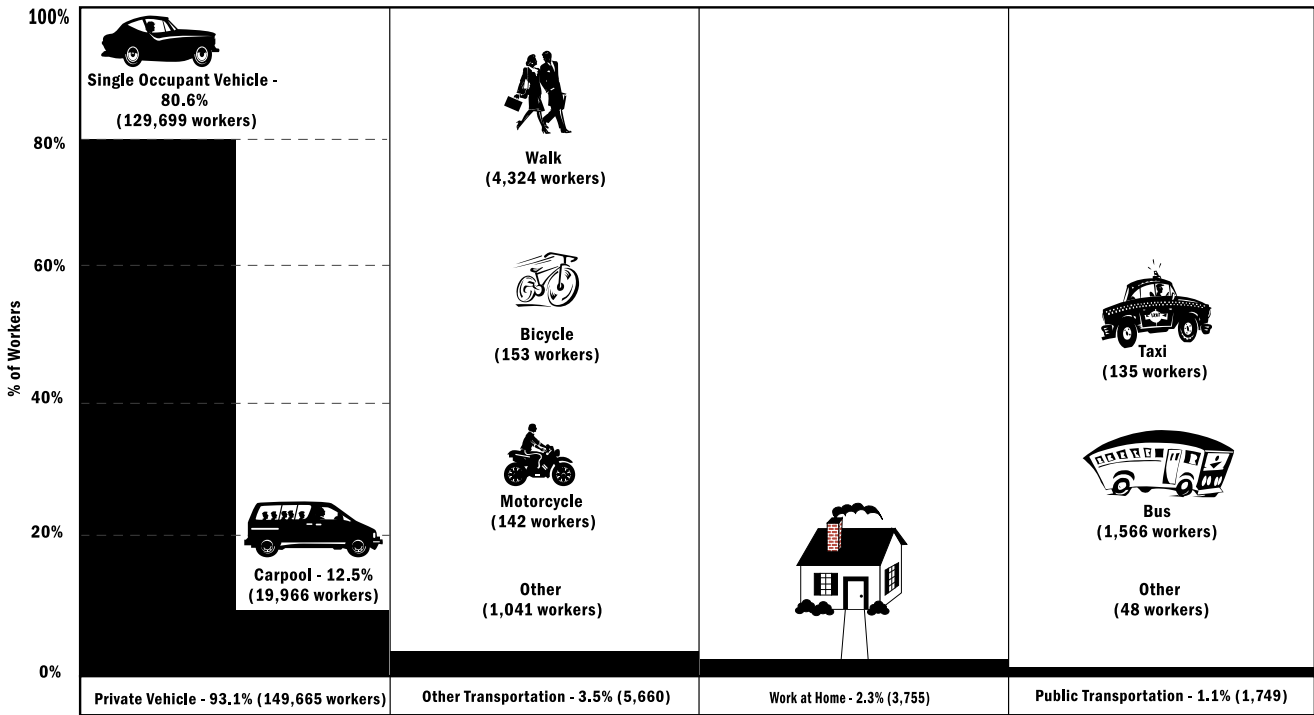
Figure 4
■ Knox County Residents Commuting Outside Metro Area



* Outside Knox County Metro Area

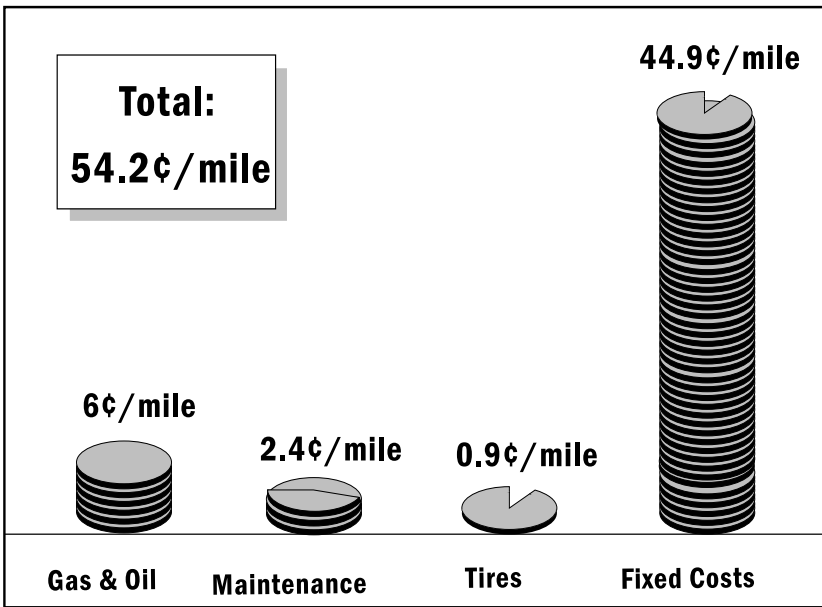
SOURCE: Tennessee State Planning Office, 1990 Census Outflows, 1993.

Figure 5
■ Means of Transportation to Work



SOURCE: Bureau of the Census, 1990.

Figure 6
■ Average Automobile Operating Costs



SOURCE: Bureau of Transportation Statistics, USDOT, Transportation Statistics Annual Report, 1994.

AVERAGE VEHICLE OCCUPANCY

American workers have shown a great propensity to commute by themselves: the local average vehicle occupancy for work trips is 1.08 persons per vehicle, marginally poorer than the state and national average of 1.09 persons per vehicle. Recent trends and indicators verify that vehicle occupancies continue to decline, despite efforts to encourage improvements.

The costs of this commuting preference are high. They include the expense of vehicle operation, road construction and maintenance, lost time spent on congested roadways, and environmental costs in the form of noise and air pollution and depletion of non-renewable resources. Figures released by the U.S. Department of Transportation show that, on average, drivers spend 54.2 cents per mile to operate their personal automobiles (Fig. 6).

If average vehicle occupancies for work trips could be raised even a small amount, costs could be reduced. For

example, increased local ridership in carpools, resulting in a 10% increase in average vehicle occupancy from 1.08 to 1.19 persons per vehicle, would remove 12,800 cars from Knoxville's morning traffic, or a total of 25,600 cars each day. This translates to 6,656,000 vehicle trips removed from local roads each year. A 20% increase in vehicle occupancy would eliminate more than 50,000 daily vehicle trips or 13,000,000 cars from Knoxville roads each year.

Average vehicle occupancy increases could be improved by implementing any of several measures: more extensive transit, development restrictions, tax breaks to businesses that sponsor ridesharing programs, caps on the number of parking spaces in existing developments and reductions of spaces required in new developments, raised parking costs, and dedicated high occupancy vehicle (HOV) lanes reserved for carpools and transit vehicles on expressways.