URBAN-RURAL DIFFERENCES IN MOBILITY AND MODE CHOICE: EVIDENCE FROM THE 2001 NHTS

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Abstract: This article uses data from the 2001 National Household Travel Survey to compare travel behavior in rural and urban areas of the United States. As expected, the car is the overwhelmingly dominant mode of travel. Over 97% of rural households own at least one car vs. 92% of urban households; 91% of trips are made by car in rural areas vs. 86% in urban areas. Regardless of age, income, and race, everyone in rural areas relies on the private car for almost all travel needs. Mobility levels in rural areas are generally higher than in urban areas. That results from the more dispersed residences and activity sites in rural areas, which increase trip distances and force reliance on the car. Somewhat surprisingly, the rural elderly and poor are considerably more mobile than their urban counterparts, and their mobility deficit compared to the rural population average is strikingly less than for the urban elderly and poor compared to the urban average. Data limitations prevented a measurement of accessibility, however, and it seems likely that rural areas, by their very nature, are less accessible than urban areas, especially for the small percentage of car-less poor and elderly households.

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Introduction

This paper uses data from the 2001 National Household Travel Survey to compare travel behavior in rural and urban areas of the United States. We examine levels of mobility and choice of mode for local travel, highlighting important differences among socioeconomic groups. The main intent is to determine whether mobility levels and modal choice are significantly different in urban and rural areas, especially for disadvantaged poor and elderly households. While such an analysis of actual mobility levels can help reveal the amount of travel and range of travel options, it can only suggest some possible implications for accessibility, and in particular, the degree to which disadvantaged households can actually reach needed destinations.

Our main purpose is simply to present this most recent information on rural-urban differences in mobility and mode choice. An in-depth economic and sociological analysis of the survey data is beyond the scope of this paper, although we note some possibly significant patterns. Many of the rural-urban comparisons

presented here may be interesting in themselves, since they reveal surprising similarities as well as expected differences. Moreover, the information may be useful to other researchers, not only transport planners but also geographers and rural sociologists.

Background on the 2001 National Household Travel Survey

The most recent comprehensive survey of personal travel in the United States is the 2001 National Household Travel Survey (NHTS). It is the only national survey that includes both work and non-work trips. The 2000 Census, by comparison, reports only journeys to and from work, less than a fourth of all trips. The 2001 NHTS reports a wide range of information about the socioeconomic characteristics of households as well as their motor vehicle ownership and many aspects of their travel. For example, it reports the number of trips per day and, for each trip, the means of travel, day and time of travel, trip distance, and trip purpose.

The 2001 NHTS incorporates several important improvements in survey methodology over its predecessor 1990 and 1995 Nationwide Personal Transportation Surveys (NPTS). For example, walk trips had been significantly underreported in all earlier surveys. Thus, the 2001 NHTS included several special prompts in the survey questionnaire to ensure that all walk trips were reported. Moreover, because earlier surveys had reported some questionable trip lengths, special attention was given to achieving more accurate trip distances. The 2001 survey also collected more detailed information on trips made to access transit services.

The NHTS still suffers from all the problems of telephone surveys. Most importantly, it undersamples low-income households without telephones. To correct for that problem, survey responses were weighted to make the overall sample representative of the population as a whole. Indeed, the weighting of undersampled households in the 2001 NHTS was more extensive than in any previous survey. The NHTS does not, however, take into account the increasing number of households with only cellular phones that cannot be reached by standard telephone survey techniques.

The 2001 NHTS was conducted over the 14-month period from March 2001 to May 2002, thus ensuring coverage of every month of the year. As with the earlier NPTS surveys, the NHTS only includes the civilian, non-institutionalized population of the United States. It explicitly excludes motels, hotels, prisons, military barracks, convents, monasteries, and any living quarters with ten or more unrelated occupants. The NHTS included college students, however, provided that the telephone number reached in a dormitory, fraternity or sorority house was used by fewer than 10 occupants. The 2001 survey interviewed 26,038 households nationwide, including 19,768 households in urban areas and 6,250 households in rural areas.

The NHTS survey data analyzed here (January 2003 release) used the U.S. Census definitions of urban and rural:

> For Census 2000, the Census Bureau classifies as "urban" all territory, population, and housing units located within an urbanized area (UA) or an urban cluster (UC). It further defines urbanized areas and urban clusters as densely settled territory consisting of core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an

> overall density of at least 500 people per square mile. In addition, under certain conditions, less densely settled territory may be part of each UA or UC. The Census Bureau defines as "rural" all territory, population, and housing units located outside of UAs and UCs (U.S. Department of Commerce 2002b, pp. 1-3).

While urbanized areas include only the urban portions of counties, metropolitan areas are delineated on the basis of entire counties, often including rural portions. Thus, the Census's urbanized vs. non-urbanized classification used by the NHTS is more appropriate for dividing our sample into rural and urban portions.

There are, in fact, many alternative definitions of rural (Lapping 1992, McConnell and Zetzman 1993, Ricketts 1994, Halfacre 1995, Hibbard and Roemer 1999, U.S. Department of Health and Human Services 2002, U.S. Department of Commerce 2002). Different definitions would obviously yield somewhat different sample selections for the rural vs. urban comparisons. We have simply used the U.S. Census's rural classification available for the NHTS dataset. Overall, 24% of the surveyed households were classified as rural.

In order to isolate local travel, we eliminated all reported trips that exceeded 75 miles in length. The resulting sample included 173,974 trips by urban households and 55,288 trips by rural households. Our trip length limitation excluded 7% of all trips reported by rural households and 8% of all trips reported by urban households. Thus, our attempt to exclude long-distance intercity trips had approximately the same sample reduction impact both for urban and rural households.

Rural-urban differences in daily trip rates and distance traveled

As shown in Table 1, rural households make only slightly fewer trips per person per day than urban households. Although there are some variations by

income category, rural households make an average of 5% fewer trips per day than urban households. There is no difference among the poorest households, while the largest difference is among the most affluent households, who make 15% fewer trips per day in rural areas.

Table 1. Daily Travel per Capita by Income Class

Household Income	Trips per Day per Person		Miles Traveled per Day per Person	
	Rural	Urban	Rural	Urban
Less than $20,000	3.2	3.2	28.5	17.9
$20,000 to $39,999	3.7	3.9	35.6	26.4
$40,000 to $74,999	4.0	4.2	41.3	30.2
$75,000 to $99,999	4.2	4.3	41.6	30.7
$100,000 and over	4.1	4.8	41.8	31.8
All	3.8	4.0	37.1	26.9

Source: Calculated from the 2001 NHTS by Hikari Nakamoto.

Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.

The differences in daily distance traveled are much larger and in the reverse direction. On average, rural households cover 38% more mileage per person per day than urban households. The differences in distance traveled are greatest among the poor, with the rural poor covering 59% more miles per day than their urban counterparts. That is almost twice the 31% difference in daily travel distance between rural and urban affluent households.[1]

The same table shows that trip rates and travel distance fall considerably with declining income in both rural and urban areas, but the difference is greater in urban areas. The rural poor make 16% fewer trips per day than the rural average, while the urban poor make 25% fewer trips per day than the urban average.

Similarly, the rural poor cover 23% less mileage per day than the rural average, while the urban poor cover 33% less mileage than the urban average.

In short, the relative mobility of the poor appears to be higher in rural areas than in urban areas, both in terms of trip numbers and distances covered. That does not mean that overall accessibility is higher for the rural poor, but the differences in mobility rates between the poor and affluent are smaller in rural areas than in urban areas. Clearly, the rural poor are forced by more dispersed destinations and longer trip distances to be more mobile, while the urban poor are more likely to live in relatively compact communities that permit shorter trips.

Table 2. Impact of Age on Mobility Levels

Age	Trips per Day per Person		Miles Traveled per Day per Person	
	Rural	Urban	Rural	Urban
5 to 15	3.3	3.4	27.1	17.1
16 to 24	3.9	4.0	37.5	28.3
25 to 39	4.2	4.4	46.5	32.9
40 to 64	4.1	4.4	42.5	32.4
65+	3.2	3.4	26.0	18.7
65 to 69	3.7	3.9	31.0	24.4
70 to 74	3.3	3.8	26.3	20.8
75 to 79	2.8	3.1	24.4	16.2
80 to 84	2.9	2.8	22.0	13.6
85+	2.0	1.9	13.9	9.2
All	3.8	4.0	37.1	27.0

Source: Calculated from the 2001 NHTS by Hikari Nakamoto.

Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.

As shown in Table 2, mobility rates fall considerably above the age of 65, both for urban and rural households. With the sole exception of people 80 years of

age or older, urban households in every other age category make more trips than their rural counterparts. Yet rural households in every age category, without exception, cover much longer distances per day. For all age groups combined, rural households covered 37% more mileage per day than urban households. Differences are much larger among the most elderly, however. Seniors between 80 and 84 years of age covered 62% more mileage per day than their urban counterparts, and seniors aged 85 or more covered 51% more mileage per day in rural areas.

Thus, the very age groups one might have expected to suffer the most from mobility problems in rural areas have the highest levels of mobility relative to their age cohorts in urban areas. Not only do they make slightly more trips per day, but they also cover much longer distances. Of course, these statistics cannot be interpreted as indicating no accessibility problems of rural seniors. In particular, they do not reflect the disadvantage of having virtually no travel options in rural areas, where public transport is almost non-existent, and most trip distances are too long for walking and cycling. The rural elderly without cars are forced to rely on relatives, friends, and neighbors for rides and are thus deprived of their independence as well as flexibility in the timing and route of their travel. They also make about a third fewer trips per day than elderly households with cars and driver's licenses (U.S. Department of Transportation 1999, Glascow and Blakely 2000). For those elderly who have cars and can drive safely, getting around may not be much of a problem, but for those without access to a car, living in such a car-dependent environment surely impairs their overall quality of life. Finally, whether

or not they have access to cars, the rural elderly miss out on the daily physical exercise they would get from walking or cycling for some local trips.

Notwithstanding all these warnings about interpreting the NHTS statistics too positively, they do suggest a surprisingly high degree of mobility, especially among the most elderly.

Table 3. Vehicle Ownership by Income Class

Vehicles per Household	Households Earning Less than $20,000		Households Earning More than $20,000		All	
	Rural	Urban	Rural	Urban	Rural	Urban
0	11.3	26.5	0.7	3.0	3.3	8.3
1	44.9	48.3	14.9	28.8	22.0	33.2
2	27.2	17.5	41.6	43.2	38.2	37.4
3 or more	16.5	7.7	42.7	25.0	36.5	21.1
All	100	100	100	100	100	100

Source: Calculated by the authors from the 2001 NHTS.

Note: Vehicles include passenger cars, as well as station wagons, pallenger vans, sport-utility vehicles, pickup trucks, light trucks, motorcycles, mopeds, and recational vehicles.

Rural-urban differences in car ownership

Given the lower density of rural areas, and the longer distances between various possible trip origins and destinations, the much greater mileage covered by all rural income and age groups is perhaps inevitable. That high level of rural mobility is made possible almost entirely due to the extensive road network in American rural areas and almost universal car ownership. Indeed, as shown in Table 3, only 11% of poor rural households have no car, compared to 27% of poor urban households. Moreover, 44% of poor rural households have two or more cars, and 17% of poor rural households have three or more cars. Those rates are much higher than in urban areas, where only 25% of poor households have two or more

cars, and only 8% have three or more cars. Clearly, the flexible, convenient transportation provided by the private car is virtually indispensable for virtually every rural household, regardless of income.

As one would expect, the rate of car ownership increases with income level, both in rural and urban areas. For example, 84% of all non-poor rural households have two or more cars, and 43% have three or more cars, roughly twice the percentages for poor households. It is noteworthy, however, that the car ownership gap between the poor and non-poor is considerably larger in urban areas, probably because the urban poor are more likely to live in denser, central city areas with public transport services and more walkable trip distances. Thus, there is a 24% gap between the urban poor and non-poor in their percentages of car-less households, compared to a gap of only 10% between the rural poor and non-poor.

Table 4. Impact of Auto Ownership on Mode Choice

Mode of Transportation	Vehicles per Household			
	None		One or More	
	Rural	Urban	Rural	Urban
Auto	63.5	34.1	90.8	87.8
SOV[1]	21.4	5.2	39.5	38.5
HOV[2]	42.1	28.9	51.3	49.3
Transit	1.0	19.1	0.1	1.1
Total Nonmotorized	24.4	43.5	5.9	9.2
Walk	20.9	41.1	5.3	8.9
Bicycle	3.5	2.4	0.6	0.8
School Bus	6.0	1.5	2.7	1.5
Other	5.1	1.8	0.5	0.5
All	100.0	100.0	100.0	100.0

Source: Calculated by the authors from the 2001 NHTS.

Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.

1. SOV (single occupancy vehicle) includes vehicles with driver and no plssengers.

2. HOV (high occupancy vehicle) includes vehicles with two or more occupants.

The availability of a car has an enormous impact on a household's travel behavior. As shown in Table 4, even households with no cars make 64% of their

daily trips by car in rural areas, roughly twice the percentage of car trips made by car-less households in urban areas (34%). With the availability of at least one car, virtually all trips are made by car, both in rural and urban areas (91% vs. 88%, respectively). Almost no one in rural areas uses public transport; even households without cars make only 1% of their trips by public transport, not much different from the 0.1% among households with cars. The drop in transit use with car ownership is far more dramatic in urban areas, falling from 19% for households without a car to only 1% of trips by households with a car.

Having a car has a considerable impact, however, on levels of walking and cycling in rural areas. The percentage of trips by walking drops from 21% to only 5%, and the percentage of bike trips drops from 3.5% to only 0.6%. The percentage of walk trips in urban areas falls even more as households get cars: from 41% to only 9% of all trips. The percentage of bike trips falls slightly less in urban areas: from 2.4% to 0.8%. It is also noteworthy that the rural car-less rely somewhat more than the urban car-less on bicycling for daily travel (3.5% vs. 2.4%). That might be due to higher cycling speeds that permit coverage of the longer distances in rural areas. Since many rural roads are lightly traveled, some are probably ideal for cycling, although in most cases, rural trip distances exceed the practical range of bike trips.

Impacts of income, race, and age on choice of travel mode

All income, race, and age groups in rural areas are almost entirely dependent on the car for all their trip purposes. As shown in Table 5, even the rural poor make 89% of their trips by car, much higher than the 76% of car trips made by the

Table 5. Modal Split by Income Group

Means of Transportation	Households Earning Less than $20,000		Households Earning More than $20,000		All	
	Rural	Urban	Rural	Urban	Rural	Urban
Auto	89.4	75.9	90.7	87.5	90.5	85.9
SOV[1]	35.8	30.0	40.0	38.5	39.3	37.3
HOV[2]	53.6	45.9	50.7	49.0	51.2	48.6
Transit	0.3	4.6	0.1	1.2	0.1	1.7
Total Nonmotorized	7.2	17.0	5.9	9.4	6.1	10.4
Walk	6.0	16.2	5.2	8.5	5.3	9.5
Bicycle	1.2	0.9	0.7	0.9	0.8	0.9
School Bus	2.9	1.9	2.7	1.4	2.7	1.5
Other	0.3	0.5	0.6	0.5	0.6	0.5
All	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculated by the authors from the 2001 NHTS.

Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.

1. SOV (single occupancy vehicle) includes vehicles with driver and no plssengers.

2. HOV (high occupancy vehicle) includes vehicles with two or more occupants.

urban poor. Indeed, the poor and non-poor in rural areas make virtually the same percentage of their trips by car (89% vs. 91%). Within urban areas, the poor are far more likely than the affluent to live in central cities with shorter, more walkable trip distances and the most public transport services. In rural areas, both the poor and non-poor live at low densities, with long trip distances and very little public transport service. In fact, 38% of rural Americans live in areas that have no public transit service at all (U.S. Department of Transportation 2001, pg. 13).

While the poor walk about twice as much as the non-poor in urban areas, the walk share of trips is about the same for the poor and non-poor in rural areas (6% vs. 5%). Similarly, both the poor and non-poor in rural areas make only a tiny percentage of their trips by public transit (0.3% vs. 0.1%), while the difference is much larger in urban areas (5% vs. 1%). The rural poor rely slightly more than

the urban poor on both cycling (1.2% vs. 0.7% of trips) and the school bus (2.9% vs. 1.9%). The main point, however, is that the car is practically the only way everyone gets around in rural areas, regardless of income.

Table 6. Variation in Modal Choice by Race/Ethnicity

Mode of Transportation	Black		Hispanic		White	
	Rural	Urban	Rural	Urban	Rural	Urban
Auto	90.6	78.9	89.7	83.1	90.5	87.6
SOV[1]	35.8	35.7	31.0	27.5	40.5	40.1
HOV[2]	54.7	43.2	58.7	55.5	50.1	47.6
Transit	0.3	5.3	0.5	2.4	0.1	0.9
Total Nonnotorized	4.3	13.2	5.5	12.6	6.3	9.6
Walk	3.9	12.6	4.8	11.8	5.5	8.6
Bicycle	0.4	0.6	0.7	0.9	0.8	0.9
School Bus	4.1	2.1	3.8	1.5	2.4	1.3
Other	0.7	0.4	0.6	0.4	0.6	0.5
All	100	100	100	100	100	100

Source: Calculated by the authors from the 2001 NHTS.
Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.
1. SOV (single occupancy vehicle) includes vehicles with driver and no plssengers.
2. HOV (high occupancy vehicle) includes vehicles with two or more occupants.
3. The Hispanic category was defined to be mutually exclusive of blacks and whites.

The same is true of racial groups, as shown in Table 6. Indeed, there is virtually no difference at all in rural areas in the car share of trips between blacks (91%), Hispanics (90%), and whites (91%). By comparison, car shares of travel differ considerably more in urban areas: 79% for blacks, 83% for Hispanics, and 88% for whites. One notable difference is that, in rural areas Hispanics use transit more than blacks, while in urban areas, blacks use transit more than Hispanics. Moreover, Hispanics bicycle at about the same rate as whites and considerably more than blacks, both in urban and rural areas. All three groups rely about twice as much on school bus transport in rural areas as in urban areas, highlighting the crucial role of school bus systems in rural areas.

Somewhat surprisingly, there is almost no difference between rural and urban areas in the reliance of the elderly on cars (92% vs. 89% of trips). As shown

Table 7. Impact of Age on Modal Choice

Mode of Transportation	Children[3]		Adults[4]		Seniors[5]	
	Rural	Urban	Rural	Urban	Rural	Urban
Auto	73.0	70.7	94.0	88.2	92.2	89.1
SOV[1]	0.8	0.5	50.8	46.7	43.6	45.7
HOV[2]	72.2	70.2	43.2	41.5	48.6	43.4
Transit	0.1	1.1	0.2	2.0	0.1	1.3
Total Nonmotorized	11.2	18.4	4.9	9.1	7.0	9.3
Walk	7.9	15.2	4.6	8.6	6.7	8.9
Bicycle	3.4	3.2	0.3	0.5	0.3	0.4
School Bus	15.0	8.9	0.4	0.2	0.0	0.1
Other	0.6	0.9	0.5	0.5	0.7	0.3
All	100	100	100	100	100	100

Source: Calculated by the authors from the 2001 NHTS.

Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.

1. SOV (single occupancy vehicle) includes vehicles with driver and no plssengers.
2. HOV (high occupancy vehicle) includes vehicles with two or more occupants.
3. Children include all respondents from age 5 to 15 years.
4. Adults include all respondents from age 16 to 64 years.
5. Seniors include all respondents 65 years or older.

in Table 7, they make roughly half of those car trips as drivers and half as passengers, both in rural and urban areas. The 3% difference is due to slightly more walking in urban areas (9% vs. 7%) and slightly more transit use (1.3% vs. 0.3%). By far the largest differences in travel behavior among children are that rural children rely on school buses for almost twice as high a percent of their trips as urban children (15% vs. 9%), while urban children are almost twice as likely to walk (15% vs. 8%). Most striking, however, is that children make over 70% of their trips as passengers in cars. With so little physical activity from daily travel, it is perhaps not surprising that childhood obesity in the United States has tripled over the past two decades (Ogden et al. 2002).

Similarly, both rural and urban elderly in the United States miss out on the daily physical exercise they would get from walking or cycling for some local trips. While Americans 65 years of age or older make less than 10% of their trips by walking or cycling, Germans and Dutch who are 75 years of age or older make 48%-55% of all their daily trips by either walking or cycling. That much higher reliance on active transport modes in Europe probably contributes to average healthy life expectancies (i.e. without major disabilities) that are 2.5 to 4.4 years longer than in the United States, in spite of per-capita health expenditures that are only half as high in Europe (World Health Organization 2001, Organization for Economic Cooperation and Development 2002, Pucher and Dijkstra 2003).

Table 8. Average Trip Length by Mode and Income Class

Mode of Transportation	All	
	Rural	Urban
Auto	10.5	7.5
SOV[1]	10.2	7.6
HOV[2]	10.7	7.5
Transit	15.6	8.3
Total Nonmotorized	0.8	0.8
Walk	0.7	0.7
Bicycle	1.5	1.9
School Bus	8.6	5.3
All	9.8	6.8

Source: Calculated by the authors from the 2001 NHTS.

Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.

1. SOV (single occupancy vehicle) includes vehicles with driver and no plssengers.

2. HOV (high occupancy vehicle) includes vehicles with two or more occupants.

Table 9. Modal Choice by Trip Purpose

Means of Transportation	Work and Work Related		Non-Work	
	Rural	Urban	Rural	Urban
Auto	96.8	92.1	89.2	84.7
SOV[1]	79.2	75.4	30.5	29.2
HOV[2]	17.6	16.7	58.6	55.5
Transit	0.1	3.7	0.1	1.2
Total Nonmotorized	2.3	3.9	6.9	11.8
Walk	2.0	3.4	6.0	10.8
Bicycle	0.2	0.5	0.9	1.0
School Bus	0.3	0.1	3.3	1.8
Other	0.5	0.3	0.6	0.5
All	100	100	100	100

Source: Calculated by the authors from the 2001 NHTS.

Notes: In order to isolate daily travel, the sample was limited to trips of 75 miles or less.

1. SOV (single occupancy vehicle) includes vehicles with driver and no plssengers.

2. HOV (high occupancy vehicle) includes vehicles with two or more occupants.

Differences in trip length and purpose

Surely the least surprising difference between travel in rural and urban areas is that rural trips tend to be much longer. As shown in Table 8, the biggest differences are for transit trips, which are 87% longer in rural areas, and school bus trips, which are 62% longer. Car trips are only 40% longer. The much longer transit trip lengths is probably due to the inevitably circuitous routing of public transit in low-density areas. Since there are also fewer passengers per bus, rural transportation is quite expensive to provide, requiring much higher subsidies per passenger than urban transit,[2] yet providing much less frequent service and more indirect, time-consuming routing (Federal Transit Administration 2003, American Public Transportation Association 2003, Community Transportation Association of

America 2003). As one might expect, walk trips are equally short in both rural and urban areas, but surprisingly, urban bike trips are considerably longer.

The car is most dominant for the work trip, accounting for 97% of all journeys to work in rural areas and 92% in urban areas (see Table 9). That suggests that it is almost impossible to get to jobs in rural areas without cars. Moreover, 82% of both rural and urban car commuters drive alone to work (SOV as percent of total auto). By comparison, carpooling (HOV) is almost twice as likely as driving alone for non-work trips, presumably because family members are more likely to be along for shopping, school, social, and recreational trips.

Currently used for only a tenth of one percent of both work and non-work trips, public transit is virtually irrelevant for anyone in rural areas trying to reach anything. Transit is far more important for work commutation in urban areas, but even there it only accounts for 4% of trips. Walking is about three times as important for non-work trips as it is for work trips, both for urban and rural areas. That suggests that it is mainly for recreational trips where travel speed is not the criterion. Due to longer distances between places in rural areas, walking accounts for roughly half the share of travel as in urban areas. Similarly, bicycling is much more important for non-work trips, both in urban and rural areas.

Conclusions

The overwhelming impression left from this comparison of urban and rural travel behavior in the United States is that for both types of areas, and for all social and economic groups, the car is the overwhelmingly dominant mode. Regardless of age, income, and race, everyone tends to rely on the private car for all their travel

needs. The degree of auto-dependence is somewhat higher, however, in rural areas, where public transit is rare, and most trips are too long for walking or cycling.

A somewhat more surprising finding is that the poor and elderly in rural areas are at least as mobile as their urban counterparts, making roughly as many trips per day and covering much more mileage. That higher mobility results largely from the lower density and more scattered trip origins and destinations in rural areas. Nevertheless, most rural poor are by no means immobilized by their lack of economic resources. Moreover, almost 90% of poor rural households own at least one car. Similarly, the rural elderly get around much more often and cover longer distances than their urban age cohorts.

The finding that mobility levels in rural areas are, in fact, at least as high as in urban areas does not mean that accessibility is not a problem for rural households. In particular, those without cars or unable to drive are clearly at a disadvantage in rural areas, since few destinations can be reached without a car. Moreover, the very lack of options to the car may, in itself, have a detrimental impact on quality of life, restricting independence and flexibility of travel and limiting opportunities for daily exercise, especially by walking or cycling.

Levels of mobility in rural areas are quite high for the vast majority of residents. Of course, the longer distances traveled per person per day in rural areas are mainly a reflection of the low density and dispersed locations of destinations. While they force rural households to be more mobile, that greater mobility can hardly be viewed as a benefit, since it requires more time and money spent traveling. Since we have only been able to measure mobility, we cannot really

assess the actual accessibility deprivation of any group in rural America. Surely, this is a topic for much more detailed research, including surveys that measure not only actual travel behavior but also travel needs.

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Endnotes

[1] Incomes in rural and urban areas are not fully comparable, since the cost of living in rural areas can be considerably lower than in most urban areas. Moreover, there are substantial variations in costs of living among regions of the country, and these data aggregate survey responses from every part of the country. It was not possible to obtain any Census breakdowns of cost of living between rural and urban areas, but it seems certain that reported nominal incomes of rural households understate their real incomes or purchasing power relative to urban households.

[2] The higher cost of providing transit services to rural areas is mainly due to primary reliance on demand-responsive paratransit services in small buses or vans, which virtually always costs more than conventional transit in full-sized buses. Paratransit services in urban areas are also much more expensive than regular bus service, but they account for less than one percent of urban transit riders.

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