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Immigrants, Travel Behavior, and Implications for Transport Policy**

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Abstract

Despite the size and growth of the immigrant population in the U.S., only a handful of scholars have studied the travel behavior of immigrants and its impact on our nation's roads, highways, and transit systems. Yet immigration has affected and will continue to affect our transportation infrastructure significantly. In particular, the data suggest that immigration has contributed to increased travel across all transportation modes, the growth in transit commuters, and a shift in the demographic composition of transit riders. These trends have implications for congestion, the future of transit ridership, and opportunities to better address the travel needs of immigrants.

1. INTRODUCTION

Immigration has transformed the composition of the U.S. population. Almost 13 percent of the population is foreign-born, a percentage rapidly approaching its previous peak at the turn of the previous century (U.S. Census Bureau, 2006). In many traditional ports-of-entry cities, immigrants comprise an even larger percentage of the population—58 percent in Miami, 40 percent in Los Angeles, and 37 percent in New York (U.S. Census Bureau, 2006).¹ But population change is occurring rapidly in other cities outside of these traditional ports of entry as immigrants disperse to smaller communities. This recent trend has resulted in the emergence of new immigrant gateway cities such as Atlanta, Dallas, Ft. Worth, Las Vegas, Orlando, Washington, DC, and West Palm Beach (Singer, 2004). Hence, it is difficult to find a community that remains untouched by immigration.

Many scholars have analyzed the migration and economic assimilation patterns of immigrants. However, despite the size and growth of the immigrant population in the U.S., only a handful of scholars have studied the travel behavior of immigrants and its effect on our nation's roads, highways, and transit systems. Yet immigration has affected and will continue to affect our transportation infrastructure significantly. It has contributed to population growth and, as such, has increased travel across all transportation modes. Further, as the data presented here will show, it has altered the composition of transit riders who now are increasingly foreign born since immigrants are more likely than native-born adults to rely on alternative modes of travel.

¹ The percentage of immigrants in the greater metropolitan area is 37 percent, 34 percent and 28 percent respectively (U.S. Census Bureau, 2006).

The future effect of immigration on our transportation infrastructure remains uncertain—highly dependent on U.S. immigration policy, the robustness of the economy, as well as changes in the travel behavior of immigrants themselves. With respect to the latter, we know that with time in the U.S., immigrants “transportation assimilate,” gradually assuming the travel patterns of native-born workers and increasingly traveling by automobile. Should this trend continue, it would contribute to a growth in travel by automobile. Further, transportation assimilation combined with the expected slowdown in immigration will negatively affect transit ridership by reducing the number of recent immigrants, those immigrants most likely to rely on public transit.

In the following sections of this paper, I elaborate on each of these points. I first present data from the 2006 American Community Survey of the U.S. Census to describe the travel mode behavior of immigrants (Ruggles, 2008). Drawing on existing scholarship, I then analyze the determinants of these travel patterns, exploring the reasons why the travel patterns of immigrants might differ from those of native-born workers. Finally, in the concluding section of the paper, I draw on these findings to discuss the impact of immigration on our transportation infrastructure both historically and in the near future.

2. THE TRAVEL OF IMMIGRANTS

Immigrants travel differently than native-born adults, a finding shared by a growing number of scholars (Blumenberg and Shiki, 2007; Casas et al, 2004; Federal Highway Administration, 2006; Heisz and Schellenberg, 2004; McGuckin and Srinivasan, 2003; Myers, 1996; Rosenbloom, 1998). The most significant difference is

that immigrants are more likely than native-born workers to rely on alternative modes of travel, carpooling, public transit, walking, and bicycling. As Figure 1 shows, data from the 2006 American Community Survey (ACS) of the U.S. Census indicate that immigrants are 1.8 times more likely to commute by carpool, 2.8 times more likely to commute by public transit, and 1.4 times more likely to commute by walking and bicycling compared to native-born commuters, all statistically significant differences

The U.S. Census data are, perhaps, the best available to examine the travel of immigrants largely because relatively few data sources are available to do so. The census data also have some important advantages—large sample sizes over time and an extensive number of characteristics including detailed information on immigrants such as the number of years that they have lived in the U.S., race and/or ethnicity, country of origin, language proficiency, and citizenship status. A major limitation of the Census data, however, is that they focus on commute travel and, consequently, do not capture other household trips. This deficiency can be problematic since non-work travel comprises more than 80 percent of all household trips (Bureau of Transportation Statistics, 2001).

Data from the 2001 National Household Travel Survey (NHTS) also can be used to examine the travel behavior of immigrants. These data include more extensive information on transportation and travel; however, the sample size of immigrants is relatively small and a comparison to the Census Data shows that the NHTS may under-represent recent immigrants, the population group most likely to rely on alternative

modes of travel.² Nevertheless, the NHTS data underscore the distinct differences in travel mode by nativity. Figure 2 shows travel mode by nativity for all trip purposes not simply the commute. In addition to many of the mode types presented in Figure 1, Figure 2 disaggregates carpoolers into two categories—those who carpool with household members (household carpools) and those who carpool with at least one person from outside of their household (external carpools). Compared to native-born adults, immigrants are more likely to carpool particularly with household members; they also are 2.5 times more likely to travel by public transit, almost twice as likely to travel by bicycle, and approximately 1.5 times as likely to travel on foot. With the exception of household carpools, these differences are statistically significant.

However, with time in the U.S. immigrants “transportation assimilate,” slowly assuming the transportation patterns of the native-born population. For example, 46 percent of recent immigrants commute as solo drivers compared to 72 percent of immigrants who have lived in the U.S. more than 20 years. Still, as Figure 3 shows, immigrants remain more likely than native-born adults to commute by alternative modes of transportation—particularly public transit and carpooling—even after living in the U.S. for more than twenty years.

These aggregate trends mask substantial differences across immigrant groups. Figures 4 and 5 show that mode choice *and* the rate of assimilation to solo driving vary both by ethnicity and by sex. Upon arrival, Hispanic immigrants are least likely to drive solo; forty percent of recent Hispanic immigrants, those who have lived in the U.S. less than six years, commute by single occupancy vehicle compared to 50 percent of recent

² Recent immigrants, those who have lived in the U.S. less than five years, comprise less than 14 percent of the NHTS immigrant sample. In contrast, recent immigrants comprise more than 23 percent of the immigrant sample from the 2000 U.S. Census (Blumenberg and Smart, 2008).

Asian immigrants. However, among the major racial and ethnic groups, Hispanic immigrants assimilate to cars most rapidly. Nevertheless, after 20 years in the U.S., non-white immigrant groups—Hispanics, Asians, and Blacks—remain less likely to commute by solo driving than native-born adults.

Immigrants also experience substantial sex differences in commute mode. Native-born women are slightly *more* likely (78.9%) than native-born men (78.2%) to drive alone to work. In contrast, female immigrants are more likely to rely on alternative modes of travel than male immigrants. In fact, as Figure 5 shows, the sex difference in solo driving increases with years in the U.S., as male immigrants more rapidly transportation assimilate compared to female immigrants.

3. EXPLANATIONS FOR THE TRAVEL BEHAVIOR OF IMMIGRANTS

What are possible explanations for these patterns? Figure 6 graphically represents six sets of factors that influence the travel behavior of immigrants. They include individual and household characteristics, the process of spatial assimilation, access to ethnic-specific resources, ethnic employment patterns, cultural differences, and federal, state, and local regulations particularly those governing immigration and driver's licensing. The relative contribution of each of these factors influences the current and future impact of immigrants on our transportation systems.

First, individual and household characteristics influence travel behavior; so too do changes in the relative composition of the foreign-born population as new waves of immigrants—with different characteristics, migrate to the U.S. Overall, immigrants tend

to share many of the individual and household characteristics that, as a group, make them more likely to rely on alternative modes of travel. Among all population groups, the use of alternative modes of transportation is highest among those with limited access to automobiles because of age, income, or disability (Brownstone and Golob, 1992; Ferguson, 1997; Hwang and Giuliano, 1990; Teal, 1987). Income is also highly associated with race and ethnicity. For example, the median household income of Hispanics is only 74 percent that of Non-Hispanic whites (Webster and Bishaw, 2007).³ Over time, immigrants have become disproportionately non-white; they also tend to have lower incomes than native-born adults. On average, therefore, they are less likely than native-born adults to have the resources necessary to purchase, insure, and maintain vehicles. Immigrants are almost twice as likely as native-born adults to live in households without automobiles: 11 percent compared to 6 percent (Webster and Bishaw, 2007). They also are more likely than native-born adults to live in households in which the number of adults exceeds the number of available vehicles. Consequently, immigrants have more limited access to automobiles than native-born adults and, therefore, are more likely to use public transit as well as to find alternative ways to access automobiles such as sharing or borrowing cars and carpooling (Lovejoy and Handy, 2008).

Household size and age also influence mode choice. Carpooling tends to be highest among large households where family members can share rides, minimizing one of the principal difficulties associated with carpooling—finding reliable carpool partners. Immigrants tend to live in larger households than native-born adults, a characteristic that

³ Asians are the only population group with higher median incomes than non-Hispanic Whites.

is positively associated with their likelihood of carpooling (Blumenberg and Shiki, 2007; Blumenberg and Smart, 2008a). Age—particularly in combination with years in the U.S.—influences mode choice. Older immigrants are more likely to use alternative modes of travel such as local transit, walking, or working at home (Beckman and Goulias, 2008). Moreover, immigrants who arrive in the U.S. at older ages are less likely to change their travel behavior than immigrants who arrive when they are young and more adaptable to learning new behaviors and skills (Myers, 1997).

3.1. Spatial assimilation. Individual and household characteristics explain some of the travel differences between immigrants and native-born adults. However, differences between the two groups remain even after controlling for individual and household characteristics such as income, age, and household size (Blumenberg and Shiki, 2007; Blumenberg and Smart, 2008a). These differences can be explained, in part, by spatial assimilation, whereby with time in the U.S. the residential location of immigrants converges with that of native-born households. Many immigrants arrive in the U.S. through a process of chain migration, in which prospective migrants learn about opportunities and receive aid from friends and relatives already living in the U.S. (Alba, et al., 1999; Choldin, 1973; Logan et al., 2002). As part of this process, immigrants—particularly recent immigrants—tend to first locate in ethnic neighborhoods where social networks of friends and relatives can aid them in the assimilation process. Immigrant neighborhoods traditionally located in the central city serve as ports of entry for recent migrants to the U.S. Among recent immigrants (those who entered the U.S. in the 10 years prior to the survey), 48 percent lived in central-city neighborhoods, compared to only 28 percent of native-born residents (U.S. Census Bureau, 2003).

Many ethnic neighborhoods include ethnic-specific businesses and services that agglomerate around consumers of ethnic goods and services and preferred ethnic labor (Kaplan, 1997; Li, 1998; Light et al., 1994; Zhou, 2004). These businesses can offer residents one-stop shopping experiences similar to those found at shopping malls and centers, while providing ethnic goods and services not readily available outside the enclave. If immigrants living in ethnic enclaves frequent these neighborhood businesses—both as workers and as consumers—they would likely travel relatively short

distances and, therefore, be more likely than native-born adults to use alternative modes of travel.

Over time, immigrants adapt to life in the U.S. and their economic status improves. With higher incomes they, like many other central-city residents, have an increased tendency to relocate to higher-income neighborhoods. As part of this economic and spatial assimilation process, immigrants also tend to purchase automobiles and move to suburban neighborhoods where residential and employment densities are low and transit service minimal. Thirty-three percent of immigrants who entered the U.S. prior to 1970 lived in the suburbs, a figure approaching that of the native-born population (U.S. Census Bureau, 2003). Over time, therefore, the residential location and travel mode of immigrants begin to resemble those of native-born adults.

Spatial assimilation is a plausible explanation for the travel patterns of immigrants, but alone, it is not sufficient. Differences in commute mode between immigrants and native-born adults are not fully accounted for when controlling for residential location (Blumenberg and Shiki, 2007). Further, some settled immigrants who have lived in the U.S. for many years and have earnings and incomes that approximate those of the native-born population remain in central-city neighborhoods. Finally, this theory cannot easily accommodate recent changes in the residential location patterns of immigrants. Over time, new suburban ethnic enclaves have emerged as immigrants relocate from the central city to higher-income neighborhoods on the urban periphery yet maintain a desire to live in close proximity to others of the same ethnicity, religion, or country of origin (Alba et al., 1996; Li, 1998; Logan et al., 2002; Massey, 1985). In response to the growth of suburban ethnic neighborhoods, a small but growing number of

new immigrants are settling in suburban locations rather than in traditional central-city ports of entry (Li, 1998; Singer, 2004).

3.2. *Ethnic-specific resources.* An additional explanation for immigrants' disproportionate reliance on alternative modes of travel lies in the body of scholarship on the relationship between ethnic-specific resources and economic outcomes of immigrants. This theory posits that ethnic neighborhoods enhance the economic outcomes of immigrants through local and ethnic-specific economic and cultural networks (Portes and Bach, 1985). In other words, immigrants use ethnically-, religiously- or culturally-defined stocks of social capital to maximize the utility of their limited resources.

Similarly ethnic neighborhoods may enable immigrants to better utilize their limited transportation resources. Spatial proximity to other immigrants of the same ethnic, religious, or cultural group facilitates the use of social capital and helps to build social networks. Indeed, research suggests that kinship networks motivate migration, and that many immigrants rely upon immigrant networks to compensate for the limited availability of other forms of human and social capital (Boyd, 1989; Choldin, 1973). Recent immigrants often rely on help from family members to address a variety of needs, including their transportation needs. In a study of immigrants to Chicago, Choldin (1973) finds that 18 percent received transportation assistance when they arrived: 69 percent of those received aid from family members (either immediate family or other relatives) and 25 percent from friends, co-workers, or neighbors.

We might hypothesize that just as new immigrants seek to maximize their utility by co-locating to share social networks, they also may be more likely to share transportation resources and, in particular, to utilize carpools. Family and kinship

networks might allow adults to find carpooling partners more easily and, therefore, avoid one of the principal barriers to carpooling: the increased travel time associated with picking up and dropping off carpool members. Data from the NHTS suggest that 70 percent of all carpooling is within households and that immigrants are more likely to carpool with other household members compared to native-born commuters. Charles and Kline (2006) find that residential clustering along ethnic and racial lines contributes to higher carpooling rates. They show that individuals are more likely to engage in carpooling when their neighbors are similar to themselves, hypothesizing that carpooling represents a complex form of social capital production. Ethnic neighborhoods may provide a beneficial environment for the creation of the racially-, culturally- and linguistically-based social capital necessary for the formation of carpools.

3.3. *Ethnic labor market niches.* The types of sectors in which immigrants tend to work may also influence commute behavior. For example, immigrants are twice as likely as native-born workers to be employed in the agricultural and personal services industries, and 1.5 times as likely to be employed in construction (source). All three industries are more likely than others to have non-standard work hours, variable work locations, and, vehicle requirements.

Further, carpooling is made easier when travelers share not only similar origins but also common destinations (Lee, 2007). Residents of ethnic neighborhoods may be more likely to travel to similar destinations, perhaps even the same workplace location, than residents living outside of ethnic neighborhoods. Thus far, research in this area is only suggestive. Studies show that many immigrants find employment—particularly their first jobs—through friends and relatives (Tilly, 1990) who may also reside in their

neighborhoods. Immigrants also are highly likely to find employment in jobs at work-sites that consist mainly of co-ethnics, employees who share common racial, national, religious, linguistic, or cultural heritage (Catanzarite and Aguilera, 2002; Wilson, 2003).⁴ Further research is needed to test the relationship the relationship between residential and workplace location. In other words, is there a positive relationship between the percentage of immigrants living in ethnic neighborhoods and the likelihood that they will travel to similar employment destinations?

3.4. Culture. Over time, most immigrants adapt to life in the United States but still maintain strong ethnic and cultural identities. In other words, assimilation may be uneven across different aspects of immigrants' lives. With respect to transportation, immigrants may not drive cars because they are unfamiliar with driving having had less access to automobiles in their countries of origin. Although auto ownership is increasing rapidly internationally, large cross-country variation in auto ownership remains (Kenworthy and Laube, 2002).

Additionally, culturally-based gender roles may influence travel behavior. Female labor force participation rates are significantly lower in some countries—such as those in South Asia, North Africa, and the Middle East—than in the U.S. (International Labour Office, 2008). However, in many regions, women make many trips largely for domestic-related purposes; yet they consistently have less access than men to transportation resources including cars (when available), motorcycles, wheelbarrows, and animals (Fernando and Porter, 2002). In some countries women are officially

⁴In a study of IRCA-amnestied immigrants in Los Angeles, Catanzarite and Aguilera (2002) find that 64 percent of Latino men and 67 percent of women were employed at jobsites where coworkers are primarily Latinos. (Her sample includes individuals who worked alone such as housecleaners or childcare providers.)

discouraged from using automobiles; the most extreme example is Saudi Arabia where women are legally banned from driving. Some of these patterns may linger when women migrate to the U.S. Foreign-born men are much more likely to work for wages than foreign-born women. And, women born outside of the U.S. are less likely to possess driver's licenses or know how to operate vehicles than U.S.-born women (Pisarski, 1999).

Scholars often attribute unexplained variation in statistical models to cultural differences. However, it is difficult to test the role of culture in explaining travel behavior since it is both hard to define and to measure with any certainty. Putting this issue aside, the data are not available to test some of these relationships. For example, data linking the travel behavior and characteristics of immigrants in their countries of origin to those in the U.S. do not exist.

3.5. Regulations. Finally, national, state, and location regulations influence travel behavior. U.S. immigration policy determines both the number of immigrants who are allowed to enter the U.S. as well as their composition. If federal policies selectively discourage immigration from low-income countries or of low-income individuals, this policy would likely reduce travel demand and, at the same time, decrease the percentage of immigrants who rely on alternative transportation modes. Conversely, if federal policy selectively encourages the entry of higher-income migrants, these migrants would be more likely to rely on automobiles either because they had prior experience with driving in their countries of origin and/or because they would have the resources necessary to purchase and maintain automobiles once in the U.S.

Federal immigration policy will have the largest regulatory impact on travel and, therefore, our transportation infrastructure. However, transportation-specific regulations

also will play a role. In particular, regulatory barriers to obtaining U.S. drivers' licenses may negatively affect immigrants' use of automobiles. In 2005, Congress passed the federal REAL ID Act that sets federal driver's license provisions and includes specific immigrant licensing requirements (U.S. Congress, 2005). Among the provisions, the law mandates that driver's license applicants provide documentary evidence to demonstrate that they are either U.S. citizens or legal residents. Upon implementation, the law will effectively preclude many immigrants—illegal immigrants and perhaps some immigrants who cannot provide the necessary documentation—from obtaining federally-sanctioned drivers licenses. States were required to implement these provisions by May 11, 2008. However, many states have objected to the federal law, claiming that it imposes burdensome requirements without providing the necessary funding for implementation. All 50 states have requested compliance extensions through the end of 2009. Moreover, 18 states have publicly recorded their opposition to the law—either passing statutes prohibiting its implementation or resolutions denouncing the Act (American Civil Liberties Union, 2008).

Absent the federal law, immigrants still face numerous state-level regulatory barriers to licensing. All but five states have lawful presence requirements; and all fifty states require documentary evidence such as a social security number to be eligible for a driver's license (National Immigration Law Center, 2008a). Some states such as New York and Maryland have abandoned proposals to offer state-issued driver identification cards that would allow illegal immigrants to drive despite the federal prohibition (Hayasaki, 2007).

Finally, local regulations and practices also influence the travel of immigrants. Increasingly, local jurisdictions—concerned about the increasing number of immigrants in their communities—have taken matters into their own hands and have implemented local anti-immigration policies (Garni and Miller, forthcoming; Ramakrishnan and Wong, 2007). These efforts have included policies to aid federal enforcement efforts (Su, 2008); indirect policies such as those that require landlords and employers to verify the legal status of potential residents or employees or limit immigrants’ access to services (Su, 2008; McKanders, 2007); and the adoption of neutral regulations that disproportionately affect immigrants including regulations aimed at day labor, street vending, unlicensed businesses, and overcrowded housing (Su, 2008 Varsanyi, 2009). The legality of some of these practices is currently under legal scrutiny.

Some of these local regulations and practices relate to transportation. For example, in many jurisdictions local law enforcement can question individuals about their immigration status when they are arrested or detained as a result of criminal activity including drunk driving (Rodriguez, 2008). This may lead some immigrants to avoid driving in order to avoid contact with police and potential deportation. Also, in some jurisdictions, local police indirectly regulate illegal immigration by impounding the vehicles of those who do not have driver’s licenses (Rojas, 2007).

Overall, federal, state, and local regulations may discourage some immigrants from driving, a finding—at least thus far—largely based on anecdotal evidence. However, the magnitude of the effect on travel mode remains uncertain. For example, we know that many immigrants report driving even without driver’s licenses (Lovejoy and Handy, 2008), a behavior that raises both safety and insurance concerns. In a fact

sheet supporting driver's licenses for undocumented immigrants, the National Immigration Law Center (2008b) argues that unlicensed drivers are more likely to get into crashes than licensed drivers, more likely to leave the scene of an accident for fear of contact with state and local law enforcement, and are uninsured, therefore, contributing to billions of dollars in annual insurance losses.

4. IMMIGRANTS AND THEIR IMPACT ON TRANSPORTATION SYSTEMS

These travel patterns and their determinants have implications for the relationship between immigrants and transportation systems both today and in the near future.

4.1. Increasing travel. Population growth due to immigration has increased and will continue to contribute to the growth in travel across all modes of transportation. Recent projections by scholars at the Pew Research Center show that from 2005 to 2050, the U.S. population will increase by 142 million, from 296 to 438 million (Passel and Cohen, 2008). Of this increase, 67 million or almost one half will be due to immigrants themselves (and much of the remainder to their offspring). Certainly, changes in the global economy that reduce the relative economic attractiveness of the U.S. as well as U.S. immigration reform could affect these projections. Nevertheless, although the exact figures are uncertain, current estimates suggest that

immigrants will contribute substantially to population growth and, therefore, to travel. **Add bit on daily trips and travel time**

4.2. Changing composition of transit ridership. Immigrants comprise a disproportionate and growing percentage of transit riders. As Figure 7 shows, as of 2006, more than a third (36%) of all transit commuters in the U.S. were foreign born, compared to 16 percent in 1980. In ports of entry, immigrants comprise a substantially higher

percentage of transit riders. For example, as of 2006 in the Los Angeles and Miami metropolitan areas, more than two-thirds of all transit commuters were foreign-born. Immigrants are increasingly settling in cities outside of traditional urban ports of entry (U.S Census Bureau, 2006); these cities should anticipate changes in the ethnic composition of their transit riders.

4.3. Assimilation to automobiles. Immigrants will continue to assimilate to automobile use. Growing automobility internationally will affect the travel mode of recent immigrants who today rely on automobiles more heavily than their predecessors (Blumenberg and Evans, 2007). Further, with time in the U.S. immigrants increasingly rely on solo driving. Automobiles can enable employment (Ong, 2002); however, they also can have negative consequences for air quality, particularly if low-income and unlicensed drivers rely on inexpensive, older cars that tend to pollute more than newer, cleaner vehicles (Lovejoy and Handy (2007). Finally, many of the new gateway cities—such as Dallas, Ft. Worth, and Las Vegas—are predominantly suburban settlements better suited to automobile travel (Singer, 2004). Singer (2004) finds that immigrants who settle in these emerging gateway metropolitan areas are more likely to live in the suburbs than in the central city. However, thus far we have no direct evidence of their travel mode behavior, a topic for further analysis.

4.4. Ethnic Neighborhoods and Alternative Modes of Travel. Immigrants remain more likely than native-born residents to live in ethnic enclaves—even in the suburbs. As immigration continues, these neighborhoods likely will expand, offering additional opportunities to frequent local jobs, retail centers, and services. Initial evidence suggests that spatial location influences the travel behavior of immigrants

(Beckman and Goulias, 2008). Residents of ethnic neighborhoods exhibit different travel behavior than residents living outside of these neighborhoods; in general they are more likely to use alternative modes of travel, even in the suburbs (Blumenberg and Smart, 2008b).

4.5. Transit ridership trends. While immigration is expected to continue (and as mentioned above will contribute substantially to population growth), population forecasts suggest that it will slow over time (Myers, Pitkin and Park, 2005; U.S. Census Bureau, 2008); the recent downturn in the economy also may detract some migrants from moving to the U.S. In the past, transit agencies have benefited greatly from the growth in immigration. Transit commuting increased by 11 percent from 1980 to 2006. However, as Figure 7 shows, without immigrants, the number of transit commuters would have declined by 16 percent over this same period. Without an increasing stream of new immigrants as well as policy changes to either slow the transportation assimilation process or attract additional transit riders, it is likely that the recent growth in transit ridership will slow.

5. CONCLUSION

In conclusion, immigration has and will continue to increase travel across all modes and alter the composition of transit riders. Over time and with time in the U.S., immigrants assimilate to driving, typically solo driving. The net effect of this assimilation process on congestion and transit ridership is unclear. Critics of immigration have attributed growing congestion and other environmental problems to immigrants.⁵ Immigration certainly contributes to population growth and, therefore, to its negative

⁵ See the following brochure from the Federation for American Immigration Reform (FAIR), <http://www.fairus.org/site/DocServer/ImmigrationBro.pdf?docID=1341>

externalities. However, immigrants remain more likely than other population groups to use alternative modes of travel; are more likely than native-born workers to travel during off-peak hours; and tend to assimilate to auto use in conjunction with residence in suburban neighborhoods where congestion tends to be less severe than in the central city.

Moreover, to determine the net effect of immigration on our cities, the costs of immigration must be weighed against its benefits. Economists widely agree that “immigrants not only help fuel the Nation's economic growth, but also have an overall positive effect on the income of native-born workers” (Council of Economic Advisers, 2007). As some scholars have argued, congestion—although annoying—is simply evidence of the economic and social vitality (Taylor, 2002) in part engendered by immigration.

Finally, the impact of immigration on transit ridership also remains uncertain, highly dependent on future immigration flows as well as the pace of immigrants’ assimilation to automobiles. Transit agencies can intervene in this relationship, and some already have, by enhancing transit services in immigrant neighborhoods. Many transit agencies have developed language service programs to ensure that immigrants have access to language appropriate transit information. However, evidence suggests that immigrants—like other transit riders—will benefit most from service improvements that reduce long travel times, increase transit service reliability, and address safety issues (Lovejoy and Handy, 2007) and from effectively targeting services to particular neighborhoods where immigrant population groups are most likely to use these services (Beckman and Goulias, 2008; Blumenberg and Smart, 2008b).

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Figure Captions

Figure 14. Commute Mode by Nativity, American Community Survey

Figure 22. Travel Mode by Nativity, National Household Travel Survey

Figure 33. Commute Mode of Foreign Born by Years in U.S. (PUMS, 2000)

Figure 44. Drive Alone—Immigrants by Race, Ethnicity, and Years in the U.S.

Figure 55. Drive Alone by Nativity, Sex, and Years in the U.S.

Figure 6. Determinants of Commute Mode among Immigrants

Figure 7. Transit Commuters by Nativity, 1980-2006

Figure 1. Commute Mode by Nativity, American Community Survey

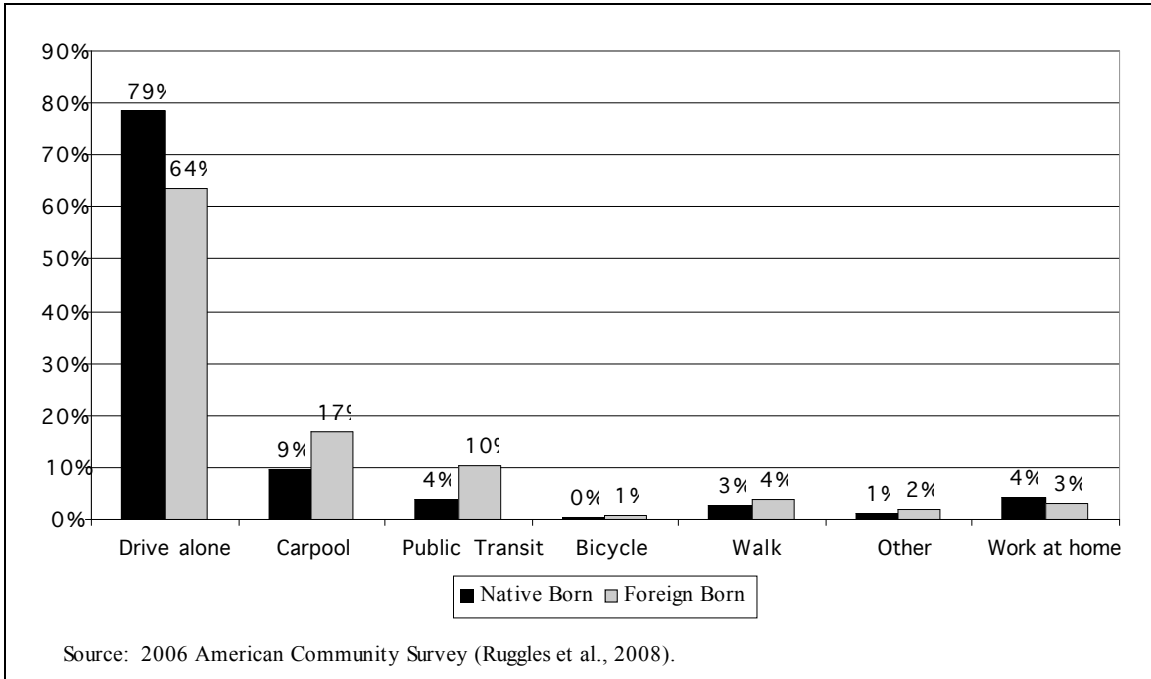


Figure 2. Travel Mode by Nativity, National Household Travel Survey

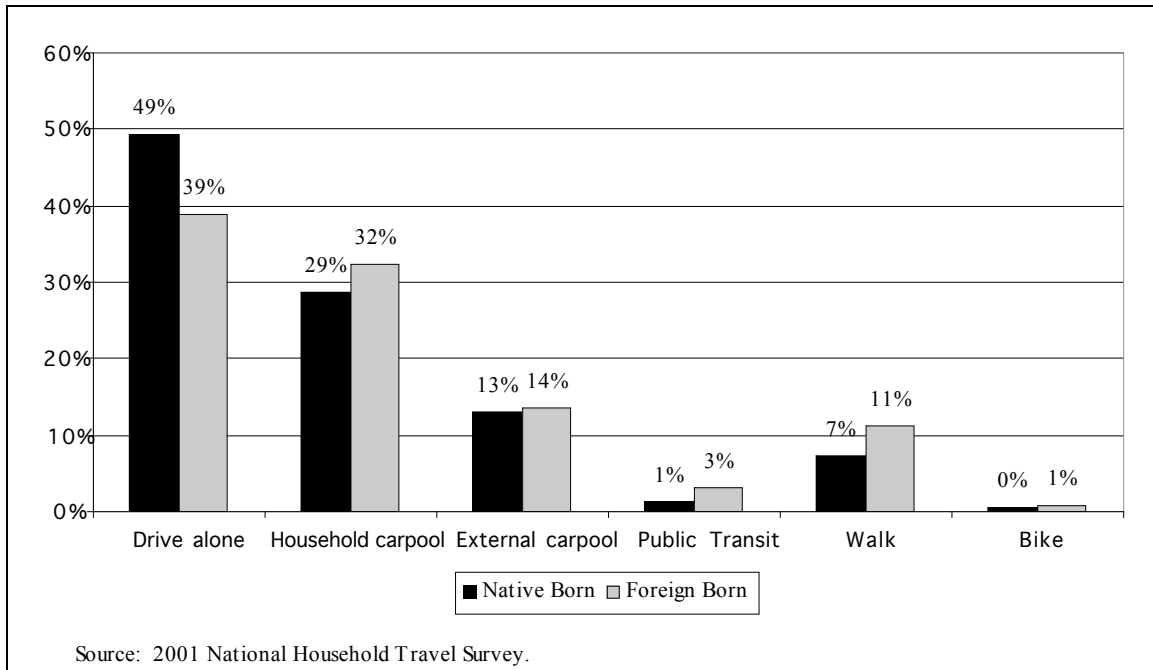


Figure 3. Commute Mode of Foreign Born by Years in U.S. (PUMS, 2000)

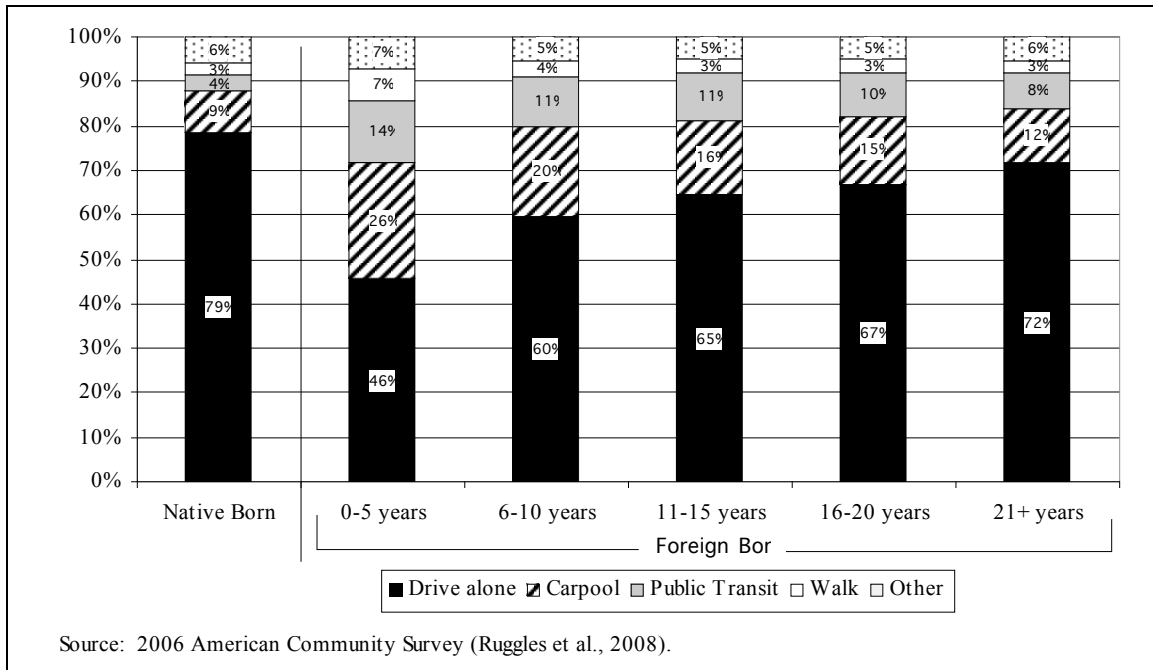


Figure 4. Drive Alone—Immigrants by Race, Ethnicity, and Years in the U.S.

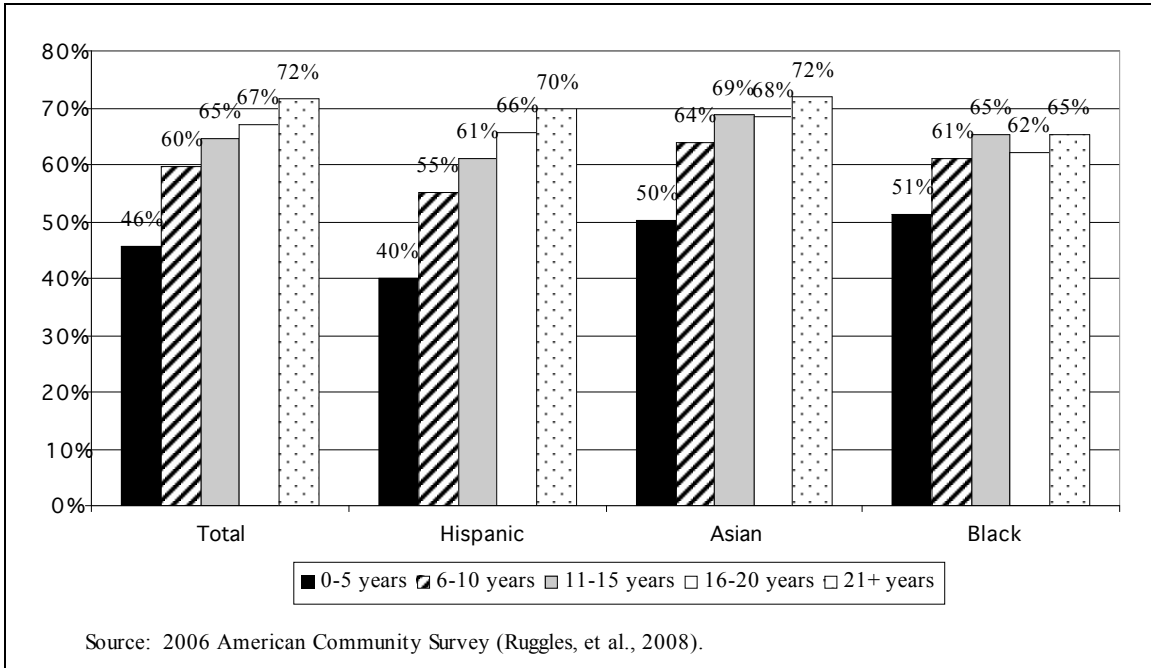


Figure 5. Drive Alone by Nativity, Sex, and Years in the U.S.

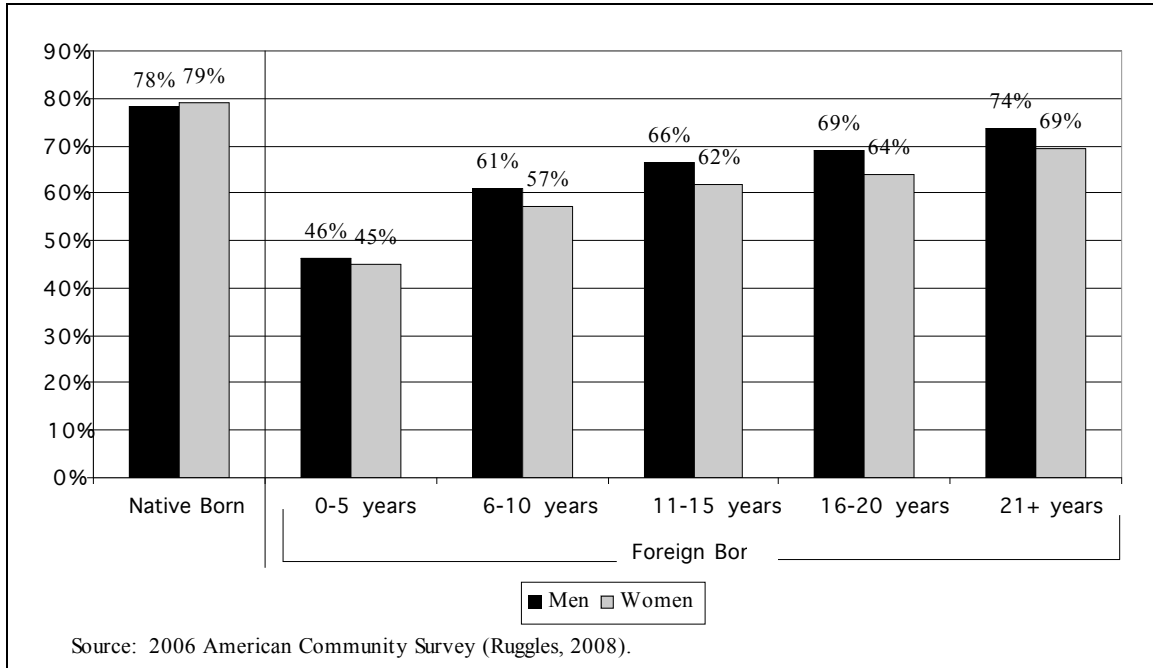


Figure 6. Determinants of Commute Mode among Immigrants

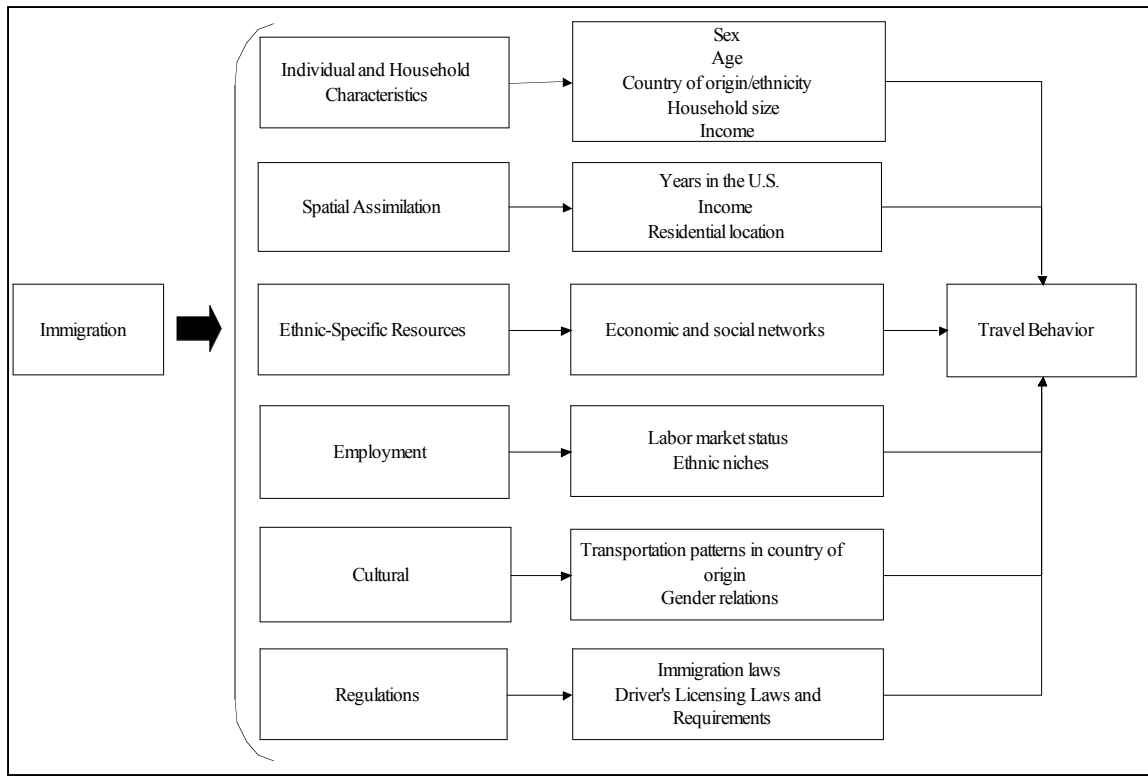


Figure 7. Transit Commuters by Nativity, 1980-2006

