

1  
2  
3  
4 **Transportation Needs of Foreign-Born Ethnic Sub-Populations in Rural and Urban**  
5 **Communities: An Environmental Justice Perspective**  
6

7  
8  
9 August 1, 2005

10  
11 7442 Words

12  
13 **AUTHORS:**

14  
15 Susanna Wilson  
16 Master of Urban and Regional Planning Candidate  
17 University of Minnesota Humphrey Institute of Public Affairs  
18 301 – 19<sup>th</sup> Avenue South  
19 Minneapolis, MN  
20 (612)-269-0212  
21 (612)-626-9833 (fax)  
22 wils0457@umn.edu  
23

24 Frank Douma\*  
25 Assistant Director  
26 State and Local Policy Program  
27 University of Minnesota Humphrey Institute of Public Affairs  
28 301 – 19<sup>th</sup> Avenue South  
29 Minneapolis, MN  
30 (612)-626-9946  
31 (612)-626-9833 (fax)  
32 fdouma@hhh.umn.edu  
33

34  
35  
36  
37  
38  
39 \*Corresponding Author  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52

**ABSTRACT**

The concept of environmental justice requires transportation planners and policy makers to address the distinctive implications of transportation projects and services for traditionally underserved or disadvantaged populations. While in past decades, ethnic and foreign-born populations have often been concentrated in large metropolitan areas, small and medium sized communities are experiencing increasing levels of inward migration of foreign-born populations. Language and cultural barriers often make it difficult for multi-modal planning to comprehend and address the distinctive values, needs and behaviors of these diverse groups. By analyzing focus groups of different ethnic populations in the Twin Cities of Minnesota in comparison to those in smaller communities, this paper addresses differences between the transportation values and needs of foreign-born ethnic populations in the rural or small town environment with those in the larger metropolitan environment. The value of examining the transportation attitudes and needs of ethnic and foreign-born populations is important to implement environmental justice principles, as it increases the role of low-income and minority populations in the public involvement and decision-making process.

## INTRODUCTION

Studies exist that identify the transportation needs of sensitive populations in non-urban or rural populations, and ethnic and foreign-born populations in large metropolitan areas and throughout the US (1, 2, 3, 4). To date there has not been a comprehensive study examining differences between the transportation needs, attitudes and values of foreign-born ethnic populations in small and medium sized communities as compared to larger metropolitan areas. The value of examining the transportation attitudes and needs of ethnic and foreign-born populations is important to implement environmental justice principles, as it increases the role of low-income and minority populations in the public involvement and decision-making process. As the foreign-born and immigrant populations continue to increase, addressing the transportation needs of ethnic communities is increasingly significant to apply measures consistent with environmental justice principles. This study examines the differences between transportation needs, values and behaviors of foreign-born immigrant subgroup populations in rural, small and medium sized communities compared to the urban metropolitan environment of the Twin Cities in Minnesota. Knowing these differences can improve the transportation planning process by identifying the transportation needs, values and behaviors of the foreign-born subpopulations and designing transportation plans and policies that address those needs.

## OBJECTIVE AND SCOPE

This study compares the transportation needs, values and behaviors of three foreign-born ethnic populations in rural Minnesota communities with those in the Twin Cities metropolitan area. The objective is to identify ways in which the needs, values and behaviors of these populations differ between metropolitan and smaller town environments. It is hoped the findings will provide a basis to engender future inclusion of these groups in the transportation planning process in ways consistent with environmental justice principles.

## BACKGROUND AND LITERATURE REVIEW

### Environmental Justice

#### *Environmental Justice Overview*

In 1998, President Clinton signed Executive Order 12989, which confronts environmental justice in low-income and minority persons (5). All federally funded US agencies are required to determine and mitigate the health and environmental effects of projects on low-income and minority individuals (6). The Environmental Justice Executive Order incorporates established civil rights and environmental laws, for example the 1969 National Environmental Policy Act (NEPA), but expands to include low-income and minority populations (7). The US Department of Transportation, and all other Federal agencies that receive funding, adhere to the Title VI of the Civil Rights Act of 1964, which prevents discrimination of policy and planning in terms of race, national origin or color (7). The Intermodal Surface Transportation Act of 1991 (ISTEA) also requires state and metropolitan planning agencies that receive federal funds to incorporate public involvement in transportation planning and development (7).

The key provisions of the Environmental Justice Executive Order and Title VI of the Civil Rights Act address the needs of low-income and minority groups within Federal planning, policy and project implementation to prevent discrimination and unduly burdensome environmental health impacts. The transportation issues and needs of low-income and minority

populations are identified and addressed through environmental justice principles, including increasing public involvement in planning and decision making (8).

### *Environmental Justice Principles*

The Environmental Justice Executive Order is based on three essential principles, including:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations (8).

Federal transportation agencies, such as the Federal Transit Administration (FTA) and Federal Highway Administration (FHWA), incorporate environmental justice principles to enhance, improve and increase opportunities for valuable decision-making in all levels of federal transportation decisions and projects (8). Successful decision-making is achieved by identifying and managing the needs of the public, including low-income and minority populations (9). Addressing the needs of the public throughout the decision-making process also ensures transportation projects suit the physical requirements and character of the community (6). Incorporating environmental justice in transportation decision-making enhances the role of the public in creating transportation projects and plans (8).

### *Environmental Justice and Public Involvement*

Copeland provides a review of *Just Transportation: Dismantling Race and Class Barriers to Mobility*, in which Bullard et al. states discrimination in “transportation decision-making, whether at the federal, region, state or local level, often mirrors the power arrangements of the dominant society and its institutions.” (10). While transportation discrimination begins at the decision-making stage, environmental justice and transportation decision-making is not limited to project development, but is included in project policy, planning, design, engineering, right-of-way, construction and maintenance (8).

The principles of environmental justice are also incorporated in multi-modal transportation projects that address the needs of pedestrians, bicyclists, transit riders and single- and multi-occupant vehicle users. Incorporating public involvement in transportation decision-making responds to the multi-modal transportation needs of residents, in particular low-income and minority populations. Identifying and working with community groups that represent those affected by transportation projects to identify and address their needs is one way to implement effective decision-making and environmental justice principles (11). The needs of the community change over time, however, and transportation policy and planning recognizes the role of how the changing demographics of a community affect transportation systems and policy (11).

## **Ethnic Populations**

### *Demographics of Ethnic and Foreign-Born Populations in Minnesota*

The population of foreign-born Minnesotans has increased from 113,039 to 260,463 from 1990 to 2000, with the largest increase in rural or non-urban areas of Minnesota (12). The increasing

foreign-born population is attributed to the Black or African American, Asian or Pacific Islander and Hispanic or Latino racial and ethnic groups. These racial and ethnic groups will continue to grow in Minnesota, both through immigration and through native births. Black or African Americans are predicted to grow in Minnesota by 113 percent by 2025, while Asians or Pacific Islander will increase in population by 104 percent, and Hispanic or Latinos will experience a 248 percent growth (12).

The 2000 US Census Data states the Hmong grew the fastest of the Asian or Pacific Islander race groups. Minnesota Hmong population in 2000 was 45,443, of which 26,234 Hmong are foreign-born (13, 14). The largest concentration of Hmong in the United States is in St. Paul, Minnesota. The largest population of Hmong outside the Twin Cities Metropolitan Area is in Lyon County and Olmstead County located in southwest and southeast Minnesota, respectively (13).

In 2000, the Somali population, which is the largest of the Black or African American race groups, was 11,164 of which 9,338 were foreign born (14, 15). The largest numbers of Black or African Americans in Minnesota live in Hennepin and Ramsey County, while large populations live in rural counties of Olmstead, Rice, St. Louis and Stearns located in rural regional trade centers in Minnesota (16).

The number of foreign-born Hispanic or Latinos in 2000 was 57,573 (14). The largest numbers of Hispanic or Latinos in Minnesota live in Hennepin and Ramsey County, while large populations also live in Faribault, in Rice County, as well as Olmstead, Nobles, Freeborn and Kandiyohi County located in southeast, southwest and central Minnesota (16).

Minnesota will continue to experience an increasing racial and ethnically diverse population. The Black or African American, Asian or Pacific Islander and Hispanic or Latino populations will continue to grow in both urban and rural areas in Minnesota. From 1990 to 2000, foreign-born and non-white populations increased the fastest in rural counties outside of the Twin Cities Metropolitan Area (12). The increasing numbers of foreign-born and immigrant population's present opportunities to meet the diverse transportation needs of these dynamic and distinct cultural groups.

### *Travel Trends and Behaviors of Ethnic and Foreign Born Populations*

A number of studies examine travel behavior issues, mode preference, and travel patterns of people of color (17). Guiliano found Blacks "spend the most time traveling," but found location patterns influenced Black and Hispanic travel behavior, while "travel choice" influenced Asian travel patterns (17). A study by Wilson and Johnston-Anumonwo also found that gender, race and ethnicity contributed to high transit use and commute times compared to non-white populations in Detroit, Kansas City and Miami (18).

Purvis provides a review of "Changes Over Time in Transportation Mode for Journey to Work: Effects of Aging and Immigration" in which Myers reports that recent immigrants in San Francisco, California carpooled more often, relied on transit for work trips and were less likely to own a car than native born residents (19). Myers also found that immigrants travel patterns, such as commute times, matched native born patterns over time as they purchased vehicles (19).

Sen also found the use of walking and transit for trips among Black and Hispanic women may reflect "differences in car and license ownership and cultural differences reinforced by land use patterns and transit availability" in specific neighborhoods (20).

One study reported by Sen states that many elderly Asian (Indian and Chinese) and Hispanic women do not drive or have drivers licenses (20). Language barriers prevent these

elderly groups from accessing public transportation. Relatives provide financial means for owning a car and many women rely on male household members for transportation (20).

Sen also stated that the “transport experience” in their native country may influence travel patterns and behaviors of current foreign-born US women (20). Immigrants from rural areas with language barriers and low-income immigrants, combined with marital status, are less likely to adapt to US cultural norms and automobile use patterns and will continue to rely on walking, biking and transit (20).

### *Ethnic and Foreign-Born Populations and Transportation Planning*

A number of studies examine cultural issues of minority and ethnic populations in relation to transportation planning, including increasing transit subsidies, creating transportation plans, understanding cultural differences in populations, evaluating transportation projects and public participation in the transportation planning process.

The 2001 National Household Travel Survey states that increasing transit subsidies for minority residents would assist those populations, and therefore increase their mobility (21). Transit and transportation subsidies are an environmental justice issue, as well as a transport issue. Other options to increase transport mobility include increasing automobile ownership and providing programs to maintain vehicles for minority and ethnic populations (17).

The National Highway Traffic Safety Administration states transportation program planning should consider the “differences in country of origin, length of time in the United States, and reasons for immigrating to the United States” of minority and ethnic populations (22). Sen also states knowing the “age, stage in life cycle, location, trip needs, mode choice, life style based on previous experiences and cultural background” will also determine the transportation characteristics and needs of foreign-born populations (20).

The National Highway Traffic Safety Administration also conducted focus groups with members of the Hispanic community to determine their highway safety needs (22). They found involving community cultural leaders, cultural based community groups and using language appropriate bilingual print materials in transportation and transit planning are important ways to reflect the transportation needs of cultural groups in urban and rural areas (22).

### *Sensitive Populations Studies in Small and Medium Sized Communities*

Few studies exist that examine the transportation needs and values of foreign-born and ethnic populations in rural areas, or small and medium sized communities. While studies have been conducted regarding the transportation needs of urban minority or immigrant populations, investigation of rural areas are limited to sensitive populations, such as welfare recipients and low-income and minority neighborhoods.

The Charlotte Punta-Gorda Metropolitan Planning Organization (MPO) conducted a Community Impact Assessment (CIA) of the residents in Charlotte County, Florida (1). The MPO staff interviewed representatives from the low-income and minority neighborhoods to determine environmental justice needs of the community. The process incorporated public involvement in decision-making that addressed environmental justice transportation issues and needs (1).

The Mineta Transportation Institute, College of Business, conducted a study in 2001 of the transportation needs of welfare recipients in Fresno County, California. Researchers identified rural areas in Fresno, County and conducted focus groups and surveys with welfare recipients (2). The purpose of the study was to understand the travel behavior and identify the

1  
2  
3 transportation needs of welfare recipients to mitigate transportation barriers. Respondents  
4 reported infrequent bus service and schedules with long wait times, long bus rides and unreliable  
5 service. Transit service to rural areas is limited and rural respondents had greater transportation  
6 difficulty and issues compared with others who lived in larger communities (2). While this study  
7 addresses the gap in literature examining the transportation needs of rural welfare recipients, it  
8 provides a foundation, in addition to the studies on ethnic populations in urban areas, and to  
9 conduct an analysis of foreign born and ethnic transportation needs of rural and urban areas  
10 using focus groups.  
11

### *Ethnic and Foreign-Born Populations Studies in Large Metropolitan Communities*

12  
13 A number of studies exist that examine the transportation needs and values of foreign-born and  
14 ethnic or immigrant populations in urban areas. However, these studies did not consider the  
15 relationship between the needs of ethnic communities in rural and urban areas. Researchers at  
16 the University of Arizona, Tucson, Drachman Institute examined the transportation needs of  
17 women in the US in terms of their cultural background. Previous studies researched modal  
18 preferences of women, however, failed to include culture and first generation immigrant status as  
19 a contributing factor to travel behavior and patterns (3). Further needed research also includes  
20 the influence of birth country, length of residence in the US and age of immigration on modal  
21 preference and current mode use (3).  
22

23 In 2001 the Arizona Department of Transportation investigated the role of transportation  
24 agencies in addressing environmental justice issues by administering surveys to state  
25 Departments of Transportation and interviewing members of the Arizona community to  
26 determine environmental justice issues among low-income and minority residents. Community  
27 stakeholders identified a variety of environmental issues, however “lack of available  
28 transportation” was identified as a key environmental justice concern affecting low-income and  
29 minority residents. Other transportation concerns include lack of mass transit connecting rural  
30 areas, lack of transit options, traffic congestion, widening and expansion of roads and increased  
31 transit options (4).  
32

## **METHODOLOGY**

### **Study Methodology and Organization**

34  
35 In the spring of 2004 the State and Local Policy Program (SLPP) at the University of Minnesota  
36 Humphrey Institute organized focus groups to analyze the transportation needs of the foreign-  
37 born and immigrant Minnesota subgroup populations. As African American, Asians or Pacific  
38 Islanders, and Hispanic/Latino groups are the principal racial and ethnic groups contributing to  
39 population growth in Minnesota, the researchers looked to 2000 Census Data and Minnesota  
40 State Demographic Center information that identified Somali, Hmong and Latino populations as  
41 the largest African American, Asian or Pacific Islander and Hispanic/Latino subgroups in  
42 Minnesota (12, 13, 14).  
43

44 SLPP conducted focus groups in rural and urban locations in Minnesota that contain  
45 significant numbers of these immigrant subgroup populations. SLPP held seven focus groups  
46 from February to June 2004: four in the Twin Cities and three in outstate or rural Minnesota  
47 (TABLE 1). TABLE 1 provides the location, date and language spoken of the rural and urban  
48 focus groups, as well as the social service organizations contacted to gather participants. SLPP  
49 contacted and worked with rural and urban social service organizations located in Minnesota that  
50  
51  
52

1  
2  
3 provide services to immigrant populations. The organizations assembled focus group  
4 participants and provided a location to hold the group. SLPP staff acted as focus group  
5 moderators, and contracted with interpreters who provided appropriate language translation  
6 services during all of the focus groups and transcription of the focus group discussions.

7  
8 The value of using the focus group methodology in research is it provides information  
9 about the perceptions and opinions of groups of people, and provides data quickly at a low cost.  
10 Direct interaction with the participants allows moderators to ask open ended questions, clarify  
11 information immediately and probe for further questions (23). The group discussion format  
12 allows and encourages different view points and provides clear, direct responses (24).  
13 Communication is a significant focus group issue to allow the researcher and respondents to  
14 interact. SLPP segmented the focus groups into three language groups, Hmong, Spanish and  
15 Somali, and conducted the groups in the appropriate language to provide a coherent and  
16 consistent focus group discussion and to allow non-English speakers to interact and participate.

### 17 **Focus Group Participants**

18 The rural and urban focus groups were matched based on subgroup immigrant populations, and  
19 conducted in their native language, as also noted in TABLE 1. SLPP identified two rural  
20 counties and communities with large numbers of Somali, Hmong and Spanish speaking  
21 populations. Spanish and Somali speaking focus groups were conducted in Faribault in Rice  
22 County. A focus group with Hmong residents was held in Tracy in Lyon County, Minnesota  
23 (FIGURE 1).

24 Spanish and two Somali speaking focus groups were conducted in Minneapolis in  
25 Hennepin County, while one focus group with Hmong residents was held in St. Paul in Ramsey  
26 County, Minnesota. The two Somali speaking focus groups were held in Minneapolis, one with  
27 women and one with men, at the recommendation of the social service organization there, which  
28 informed us that the Somali women often defer to their male counterpart viewpoint in group  
29 discussions. In developing the Somali speaking focus group in Faribault, however, the social  
30 service agency indicated the volunteers are very comfortable participating in mixed gender ESL  
31 classes. It is unclear to these researchers as to why the difference in perceived gender roles exist,  
32 this is possibly a point for further research. The remaining focus groups had a combination of  
33 male and female participants.

### 34 *Urban and Rural Definitions*

35 For the purpose of this study, rural and urban communities are defined based on US Department  
36 of Transportation, Federal Highway Administration descriptions (25). The US DOT defines  
37 three types of rural communities: “basic rural,” “developed rural,” and “urban boundary rural.”  
38 Lyon County, Minnesota fits the description of “developed rural” as it is a “dispersed county  
39 with one or more population centers of 5,000 or more.”(25). Lyon County is located in  
40 southwestern Minnesota and is over 100 miles from the Twin Cities metro area. The county has  
41 one community with over 5,000 citizens. Marshall has 12,828 citizens, while Tracy has the  
42 second highest county population of 2,260 citizens (26).

43 Rice County, Minnesota is located 50 miles south of the Twin Cities. The county has two  
44 communities with populations over 5,000. Faribault has 20,818 residents (27) and Northfield has  
45 18,256 residents (28). Rice County is experiencing increased development in communities such  
46 as Faribault and Northfield due to its proximity to the southern Twin Cities metro area. Rice  
47 County is therefore considered an “urban boundary rural” area because of its location in the “ex-  
48  
49  
50  
51  
52

urban” or urban fringe outside a major metropolitan area and “has population and economic growth, and transportation infrastructure” connected to the Twin Cities (25). Ramsey and Hennepin County, Minnesota located in the Twin Cities metro area are “designated urban areas with a population of 50,000 or more.” Ramsey County has 511,035 residents and Hennepin County has 1,116,200 citizens (29, 30).

### **Urban and Rural Focus Group Results**

The focus group discussion guide contained a series of questions appropriate to identifying the transportation needs of the rural and urban immigrant subgroup populations, including questions about their travel behavior (trips and activities) and questions about mode preferences and other factors that may affect their travel behavior.

The following is a descriptive analysis of the raw focus group data translated by the contract interpreters (23). These results help define the travel needs of the participants, which, in turn, provide a basis to include these groups in the transportation planning process in ways consistent with environmental justice principles, and may suit the requirements of the growing immigrant populations in Minnesota.

#### *Hmong Speaking Focus Group Results*

**Travel Behavior** Hmong speaking participants in Tracy and St. Paul, Minnesota travel primarily outside their neighborhood or community for work, school, shopping and visiting relatives. Tracy participants prefer to travel in their community but have to travel to Mankato and Marshall for work, health care and daily supplies. All participants noted that work was an important daily activity, while attending school, household chores and taking care of family were more important to Hmong in the St. Paul group. Participants in Tracy reported that visiting relatives, going to the doctor and social activities were important for them.

As for modal preferences, participants in Tracy had mixed feelings towards riding the bus. Most owned cars and were willing to ride share if necessary. St. Paul participants were not comfortable using transit as they were afraid of getting lost, hurt or attacked if they used it. Above all, participants in both groups preferred direct and readily available transportation.

**Safety Issues** Urban and rural Hmong participants have safety concerns when walking, however, Hmong in St. Paul are primarily concerned about getting lost when walking as they did not speak or read English, while the Hmong in Tracy have physical safety concerns. Car accidents are not a concern for Hmong participants in St. Paul as they primarily rely on their children for transportation, walk or take the bus, however, they are concerned of car accidents when walking and riding in taxis. Car accidents are a concern for Hmong respondents when traveling, especially to Marshall for work in the winter.

**Cultural Factors** Participants in St. Paul and Tracy also prefer to travel with friends and relatives they know. Hmong participants also report Hmong men will not travel in a car with Hmong women who are married. Hmong women also do not invite other Hmong men to travel with them, but they will travel with other Hmong women.

Additional transportation characteristics that appeared to be particular to cultural practices were noted in the St. Paul group, who reported that they rely primarily on their adult children for transportation. Most of the participants in the St. Paul focus group were older,

elderly immigrants, however, and as they may not have a driver's license or feel comfortable taking transit, this may influence their reliance on children for transportation. Participants in this group were also concerned about getting lost when walking as they cannot speak or read English.

**Comparison of Urban and Rural Hmong Speaking Focus Groups** Primary similarities of the transportation needs of Hmong speaking rural and urban Minnesotans include: traveling outside their neighborhood for work, school, shopping and visiting relatives; work as an important daily activity; safety as a concern when walking; preference for direct and readily available transportation; and a preference to travel with friends and relatives they know. Limited English skills also represented a common challenge.

Differences in the transportation needs of urban and rural participants included Tracy participants reporting a lower concern for car accidents, and a higher comfort level when riding the bus. These focus group participants were also more mobile compared to St. Paul participants, as they had higher levels of vehicle ownership, and rely less on their children for transportation. St. Paul participants reported greater safety and security concerns when traveling.

### *Somali Speaking Focus Group Results*

**Travel Behavior** Somali speaking participants in Faribault and women in Minneapolis reported that they travel primarily inside their neighborhood for work, attending school and for basic needs, but travel outside their community to visit friends and relatives. Participants from the focus group with male participants, however, stated that they travel primarily outside their neighborhood for work, health care services and to also visit friends and relatives. Respondents in each of the focus groups report different important daily activities. In Faribault, important daily activities include working, attending school and visiting friends, while Minneapolis participants report cooking, going to school, health care, and working as important.

Participants in the Minneapolis women's group had a preference for using transit, but missing appointments or arriving late for work could be an issue. When punctuality was a concern, the participants stated that taxi service or ride sharing were viable options. These respondents felt that the bus could take them to most of their destinations, but their male counterparts prefer a bus transportation system with direct connections that would otherwise shorten trip length. Faribault participants are comfortable using the bus system, but they felt they lacked transportation choices, as there is only one bus route and unreliable taxi service.

Few participants in Minneapolis and Faribault own vehicles, however, Minneapolis respondents have financial barriers to vehicle ownership. Faribault and Minneapolis women participants prefer to own a car. Faribault participants stated direct and readily transportation is achieved through vehicle ownership, while male Minneapolis respondents suggested increasing bus service and shortening wait time to provide readily available transportation

**Safety Issues** Faribault participants stated that they feel safe on a bus or taxi, but not as safe traveling in a car. Accidents are only a concern for Minneapolis women participants when walking. Participants in the men's group, however, had more concerns when driving on the freeway, taking the taxi or bus and preferred to travel in groups. Privacy is not an issue for Minneapolis participants; however, Faribault respondents prefer to travel by car with those they know. Physical security when riding the bus, waiting for the bus, or walking alone is an issue for

1  
2  
3 Minneapolis respondents, while concerns of the Faribault participants were limited to waiting at  
4 the bus stop or traveling in winter.  
5

6 **Cultural Factors** Faribault and Minneapolis respondents have language barrier issues when  
7 traveling and communicating. In particular, Minneapolis men stated they have difficulty  
8 communicating with taxi and bus drivers, and all Minneapolis participants reported that they had  
9 had problems with discrimination.  
10

11 **Comparison of Somali Speaking Focus Groups** Primary similarities in the transportation needs  
12 of Somali speaking rural and urban Minnesotans include the strong comfort level of using transit  
13 and desire to own vehicles, concerns for physical security when waiting for the bus, attending  
14 school as an important daily activity and language barriers when traveling. Differences in the  
15 transportation needs of urban and rural respondents include preference to travel in or outside  
16 their local community, reporting many different types of important daily activities, the  
17 importance of missing appointments and work, access to transportation, financial barriers to  
18 vehicle ownership, concerns for privacy when traveling, language barriers beyond traveling,  
19 concerns regarding bus routes and characteristics of direct and readily available transportation,  
20 computer use, and multi-modal transportation safety concerns.  
21

22 Urban male focus group participants in Minneapolis are more mobile, have greater access  
23 to transportation choices, and are more computer literate than Faribault and Minneapolis women  
24 respondents. They travel more often outside of the community for work and other activities, yet  
25 heavily rely on ride sharing, the bus and taxi service, which is similar to other participants in  
26 Minneapolis and Faribault. Faribault and Minneapolis women respondents have less  
27 transportation choices as they rely primarily on the bus system, which in Faribault has only one  
28 route. Minneapolis women and men have financial barriers to vehicle ownership and greater  
29 safety and physical security concerns when traveling compared to Faribault respondents.  
30 Preference to own vehicles and language barriers when traveling is common to rural and urban  
31 Somali speaking participants.  
32

### 33 *Spanish Speaking Focus Group Results*

34 **Travel Behavior** Spanish speaking participants in both the Faribault and Minneapolis groups  
35 reported a willingness to travel often in and outside their communities for basic needs, work or  
36 school. Interestingly, Minneapolis participants preferred to travel outside their local community,  
37 while participants in Faribault preferred to stay within their community for these trips. Important  
38 daily activities for Minneapolis participants included attending school and working, while  
39 Faribault participants prefer to dedicate time to children and spouses.  
40

41 Participants in Faribault and Minneapolis are comfortable using transit and have several  
42 financial barriers to owning a vehicle, including costs to maintain a vehicle. Minneapolis  
43 respondents however prefer to take the bus rather than walk, yet both Minneapolis and Faribault  
44 respondents will walk, ride share, bike or take a taxi if the bus is not an option.  
45

46 Despite this preference for using transit, however, participants noted that slow bus  
47 schedules and long bus wait times detracted from this being an effective mode. Faribault  
48 participants are more concerned of a lack of a connected bus system and difficulty  
49 communicating with bus and cab drivers, while missed transfers and racism from bus drivers  
50 were the primary challenges for participants in Minneapolis. Missing appointments was an issue  
51  
52

for both urban and rural participants, and they stated that a lack of readily available alternatives to the existing bus service negatively affected their ability to arrive to work on time or have access to transportation during emergencies.

**Safety Issues** Safety when traveling is more of a concern for Minneapolis respondents when they wait for or walk to the bus, however, Faribault participants only noted safety issues when they travel outside of the community.

**Cultural Factors** Minneapolis respondents report unique cultural issues such as racism from bus drivers, including rude comments and stranding riders running to catch the bus.

**Comparison of Spanish Speaking Focus Groups** Primary similarities in the transportation needs of Spanish speaking rural and urban Minnesotans include the awareness of concerns of safety when traveling, especially by bus; the strong comfort level of using transit and financial barriers to vehicle ownership; missing appointments, slow bus schedules and long wait times also concern participants from both communities. Differences in the transportation needs of urban and rural respondents include preference of travel in or outside their local community, the types of important daily activities, computer use and concerns regarding bus routes.

Rural focus group participants in Faribault have more transportation disadvantages from the lack of transit access compared to Minneapolis participants. Their reliance on other types of transportation and computers may reflect this disadvantage. Minneapolis participants experience increased racism and delay when traveling by bus in comparison to Faribault participants however they prefer to travel outside their neighborhood, which may reflect the necessity to travel to work, school and other locations in the Twin Cities metropolitan area. Financial barriers to vehicle ownership and reliance on other modes of transportation are common to rural and urban Spanish speaking participants.

## CONCLUSIONS

Identifying the transportation values and behaviors of rural and urban foreign-born immigrant subgroup populations is one step to involve minority populations in the environmental justice decision-making process. Results from the focus groups with foreign-born ethnic subgroup populations in urban and rural Minnesota indicate differences in transportation values, behaviors and needs not only among geographic location, but also within and between the subgroup populations. While all focus group participants reported that language barriers affected their transportation needs in various ways, their cultural background and geographic location presented a more significant barrier to meeting their mobility needs.

Differences in travel behaviors were noted between the urban and rural groups across all three ethnic populations. These differences were more noticeable, however, between urban and rural Hmong and Somali speaking groups than between the urban and rural Spanish speaking participants, who stated similarities regarding financial barriers to vehicle ownership, reliance on multi-modal transportation, awareness of safety concerns when traveling, and a strong comfort level using transit, although they also stated a number of concerns regarding the quality of transit service.

These results support some of the suggestions from previous research. Purvis reports that recent immigrants to San Francisco carpooled more often and were less likely to own a car than native born residents (19). Focus groups in rural and urban areas report similar results as urban

1  
2  
3 and rural Spanish and Somali and urban Hmong respondents report they do not own vehicles.  
4 Urban Hmong also prefer to ride with friends and relatives and rural and urban Spanish speaking  
5 participants ride share if taking the bus is not an option.  
6

7 Research by Sen also states that walking and transit trips may result from “differences in  
8 car ownership and cultural differences reinforced by land use patterns and transit availability.”  
9 (20). Financial barriers to vehicle ownership and language barriers when traveling are a  
10 common concern and theme all focus group participants in this study. Financial barriers to  
11 vehicle ownership and transit and transportation availability also affect mode preferences and  
12 mobility as reported by Sen (20). Rural Hmong, urban Spanish and urban Somali participants  
13 are more mobile, while the Spanish and Somali respondents in Minneapolis have greater access  
14 to transportation services. Urban Hmong, rural Spanish and Somali and urban Somali women  
15 have more transportation disadvantages for a variety of reasons. Urban Hmong physical safety  
16 and security transport concerns when traveling, cultural sensitivities for Hmong men to refrain  
17 from traveling with married Hmong women, and limited English skills prevent increased  
18 mobility. Rural Spanish and Somali lack of vehicle ownership, coupled with limited  
19 transportation service in Faribault decreases access to transportation.

20 Research by Wilson and Johnston-Anumonwo found that race and ethnicity contributed  
21 to high transit use compared to white populations (18). Focus group results support this research  
22 as rural and urban Spanish and Somali participants report transit or bus use. Sen also states that  
23 immigrants from rural areas with language barriers continue to rely on walking, biking and  
24 transit and are less likely to adapt to US cultural norms and automobile use patterns (20). This is  
25 a point for further research to determine why the rural Hmong speaking focus group participants  
26 report high levels of vehicle ownership while in turn the rural Spanish and Somali respondents  
27 report transit, taxi, ride sharing, walking and biking use. Geographic location of the participants,  
28 transit availability, adaptation to US cultural norms and language skills of the populations may  
29 be contributing factors to determine vehicle ownership levels and transit use.

30 Other research on sensitive and minority populations supports additional focus group  
31 findings. The Arizona Department of Transportation reported concern from minority population  
32 representatives for connecting transportation with rural areas and lack of available transportation  
33 (4). Research from Fresno County also found infrequent bus service and long bus wait times an  
34 issue for respondents (2). Spanish and Somali rural and urban focus group participants in  
35 Minnesota reported an issue with infrequent, less direct and delay from bus service. Hmong  
36 participants reported less concerns with transportation service as they primarily rely on their  
37 children for transportation, or in rural areas have high levels of vehicle ownership.

38 Research by Guiliano also supports these findings as “location patterns influenced  
39 Black/African American travel behavior” while “travel choice” influenced Asian/Pacific Islander  
40 American travel patterns (17). It appears that the urban Hmong participants choose to rely on  
41 adult children for transportation and travel with those they know from either language barrier or  
42 comfort issues or cultural sensitivity issues. Additional research is needed, however, to  
43 determine if “location patterns influence” the urban and rural Somali travel behavior.

44 Additional research may also help to determine how transportation planners can address  
45 the transportation needs of the foreign-born populations. The following section provides a  
46 review of the methods transportation planners can incorporate in transportation plans, policies  
47 and programs to confront the transportation needs of the foreign-born populations.  
48  
49  
50  
51  
52

### **Recommendations for Further Research**

Several options exist for transportation planners to increase the transportation mobility of rural and urban Hmong, Somali and Spanish speaking sub-populations in Minnesota based on the results of the focus groups. These options include understanding the transportation issues facing rural and urban communities, understanding the cultural characteristics of the ethnic and minority populations, involving community cultural leaders in transportation and transit planning, and increasing transit subsidies or vehicle ownership of ethnic and foreign-born populations.

Increased knowledge of the travel patterns, behaviors and preference of foreign-born ethnic populations assist environmental justice decision-making measures, but also provide information on potential transportation markets to transportation service practitioners. This process could be further enhanced through successful collaboration with social service community groups that interact with foreign-born ethnic populations. Transportation planners benefit from understanding the cultural characteristics of those populations by allowing them to create better transportation plans and projects that meet their needs. Allowing foreign-born populations to contribute to transportation decision-making is an important component to ensure compliance with the Environmental Justice Executive Order to suit not only the needs of the foreign-born populations, but of the greater community's economy and environment.

### **ACKNOWLEDGEMENT**

The authors would like to recognize the financial assistance from of the Minnesota Department of Transportation, whose contribution made this research possible. The authors would also like to acknowledge Jon Osmond and Chandler Duncan, research assistants with the State and Local Policy Program, for their contributions to setting the foundation of our research. The authors would also like to thank the social service organizations, including, Centro, Hmong American Partnership, Sallah Warsame from the Roselle Apartments, Brian Coyle Community Center, Faribault ECFE, Faribault Adult Learning Center and the Tracy ESL, whose effort contributed to the occurrence and success of the focus groups.

**REFERENCES**

1. Beaver, L.B. Addressing Environmental Justice (EJ) Through Community Impact Assessment (CIA). Presented at the Eighth TRB Conference on the Application of Transportation Planning Methods, Corpus Christi, Texas, 2001.
2. Blumenberg, E., and P. Hass. The Travel Behavior and Needs of the Poor: A Study of Welfare Recipients in Fresno County, California. Publication FHWA/CA/OR-2001-23, Mineta Transportation Institute College of Business, San Jose State University, FHWA, U.S. Department of Transportation, December 2001.  
<http://transweb.sjsu.edu/publications/fresno/FresnoWelfare.htm>. Accessed July 16, 2004.
3. Sen, L. The Transportation Needs of American Women in a Cross-Cultural Context. Presented at Women's Travel Issues Second National Conference, Baltimore, Maryland, 1996.
4. Jerome, A., and J. Donahue. What Is the Best Way to Address Environmental Justice Issues? Publication FHWA-AZ-02-506, Arizona Department of Transportation, FHWA, U.S. Department of Transportation, 2002.  
<http://www.dot.state.az.us/ABOUT/atrc/Publications/SPR/AZ506.pdf>. Accessed July 2004.
5. Community Planning and Development, Energy and Environment Homepage. U.S. Department of Housing and Urban Development.  
<http://www.hud.gov/offices/cpd/energyenviron/environment/lawsandregs/laws/lawsauthorities/eo/12898.cfm>. Accessed July 14, 2004.
6. Transportation and Environmental Justice Case Studies. Publication No. FHWA-EP-01-010, FHWA, FTA, U.S. Department of Transportation, 2000.  
<http://www.fhwa.dot.gov/environment/ejustice/case/ejbooklt.pdf>. Accessed July 2004.
7. Burrington, S., and B. Heart. City Routes, City Rights: Building Livable Neighborhoods and Environmental Justice by Fixing Transportation. *Conservation Law Foundation*, June 1998,  
[http://www.clf.org/pubs/city\\_routes\\_appendix.htm](http://www.clf.org/pubs/city_routes_appendix.htm). Accessed July 16, 2004.
8. An Overview of Transportation and Environmental Justice. Publication No. FHWA-EP-00-013, FHWA, FTA, U.S. Department of Transportation, May 2000.  
<http://www.fhwa.dot.gov/environment/ej2000.htm>. Accessed July 16, 2004.
9. Shepherd, G., R. Wheeler, D. Diggs, D. Aimen, S. Fitzroy. Transportation & Environmental Justice: Effective Practices. Publication No. FHWA-EP-02-016, FHWA, FTA, U.S. Department of Transportation, 2002. [http://ntl.bts.gov/card\\_view.cfm?docid=12173](http://ntl.bts.gov/card_view.cfm?docid=12173). Accessed July 16, 2004.
10. Copeland, K. On the Road to Equality. *Peace and Environment News*, May-June 1998.  
<http://perc.ca/PEN/1998-05-06/review1.html>. Accessed July 16, 2004.

11. Cairns, S., J. Greig, and M. Wachs. Environmental Justice & Transportation: A Citizen's Handbook. Institute of Transportation Studies, University of California Berkeley, 2003.  
<http://www.its.berkeley.edu/publications/ejhandbook/ejhandbook.pdf>. Accessed July 2004.
12. Douma, F., D. McCabe, and J. Osmond. *Using ITS to Better Serve Diverse Populations*. CD-ROM. ITS America 2004, 14<sup>th</sup> Annual Meeting & Exposition, San Antonio, Texas, 2004, pp. 56.
13. Carlson, G. Asians in Minnesota, 2000. Publication OSD-02-94, Minnesota Planning Population Notes, Minnesota State Demographic Center, March 2002.  
<http://www.demography.state.mn.us/DownloadFiles/pdf/AsiansMN2000.pdf>. Accessed April 2004.
14. Ronnigen, B. J. Estimates of Selected Immigrant Populations in Minnesota: 2004. Minnesota Planning Population Notes, Minnesota State Demographic Center, 2004.  
<http://www.demography.state.mn.us/PopNotes/EvaluatingEstimates.pdf>. Accessed July 2004.
15. McMurry, M. 2000 Census Shows a More Racially and Ethnically Diverse Minnesota. Minnesota Planning Population Notes, Minnesota State Demographic Center, 2001.  
<http://www.demography.state.mn.us/DownloadFiles/pdf/Census2000Race.pdf>. Accessed July 2004.
16. Census 2000: Race Population by County. Department of Administration, State and Community Services, State Demographic Center.  
<http://www.demography.state.mn.us/Cen2000redistricting/Cen00ctyracer.html>. Accessed September 2003.
17. Battelle. Travel Patterns of People of Color. FHWA, U.S. Department of Transportation, June 2000. <http://www.fhwa.dot.gov/ohim/trvpatns.pdf>. Accessed July 2004.
18. Taylor, B., and M. Mauch. Gender, Race, and Travel Behavior: An Analysis of Household-Serving Travel and Commuting in the San Francisco Bay Area. *Transportation Research Record*. No. 1607, 1997.
19. Purvis, D. Commuting Patterns of Immigrants. CTPP 2000 Status Report, August 2003.  
<http://www.fhwa.dot.gov/ctpp/sr0803.htm>. Accessed March 31, 2005.
20. Sen, L. The Transportation Needs of American Women in a Cross-Cultural Context. Presented at Women's Travel Issues Second National Conference, Baltimore, Maryland, 1996.
21. Pucher, J., JL Renne. Socioeconomics of Urban Travel: Evidence from the 2001 NHTS. *Transportation Quarterly*, Vol. 57, No. 3, Summer 2003.
22. Highway Safety Needs of U.S. Hispanic Communities: Issues and Strategies. Publication DOT HS 808 373, National Highway Traffic Safety Administration, FHWA, U.S. Department of Transportation, September 1995.

1  
2  
3 [http://www.nhtsa.dot.gov/PEOPLE/INJURY/Safe\\_Communities/ServiceCenter/scnews/documen](http://www.nhtsa.dot.gov/PEOPLE/INJURY/Safe_Communities/ServiceCenter/scnews/documents/hispanic.pdf)  
4 [ts/hispanic.pdf](http://www.nhtsa.dot.gov/PEOPLE/INJURY/Safe_Communities/ServiceCenter/scnews/documents/hispanic.pdf). Accessed March 2005.  
5

6  
7 23. Marczak, M., and M. Sewell. Using Focus Groups For Evaluation. The University of  
8 Arizona, 1998. <http://ag.arizona.edu/fcs/cyfernet/cyfar/focus.htm>. Accessed September 2003.

9  
10 24. Douma, F., E. Kuhn, and L. Olson. *Investigation of GPS and Wireless Technology:*  
11 *Utilizing Transportation Technology to Support Strategic Management Initiatives*. Publication  
12 MN/RC – 2002-26, Minnesota Department of Transportation, 2002.

13  
14 25. Planning for Transportation in Rural Areas. Our Rural Transportation System. U.S.  
15 Department of Transportation, Federal Highway Administration, FHWA,  
16 <http://www.fhwa.dot.gov/planning/rural/planningfortrans/2courts.html>. Accessed April 2005.

17  
18 26. Lyon County Cities. Lyon County, Minnesota. <http://www.lyonco.org/cities.htm>. Accessed  
19 March 2005.

20  
21 27. About Faribault. City of Faribault, Minnesota.  
22 <http://www.faribault.org/aboutfaribo/welcome.htm>. Accessed March 2005.

23  
24 28. Homepage. City of Northfield, Minnesota. <http://www.ci.northfield.mn.us/>. Accessed  
25 March 2005.

26  
27 29. Twin Cities Metropolitan Area Population and Household Estimates. Metro Council  
28 Minnesota. <http://www.metrocouncil.org/metroarea/2001PopulationHouseholdEstimates.xls>.  
29 Accessed March 2005.

30  
31 30. About Highway Statistics. Office of Highway Policy Information. U.S. Department of  
32 Transportation, Federal Highway Administration, FHWA.  
33 <http://www.fhwa.dot.gov/policy/ohpi/hss/abouthss.htm>. Accessed March 2005.  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52

**TABLES AND FIGURES**

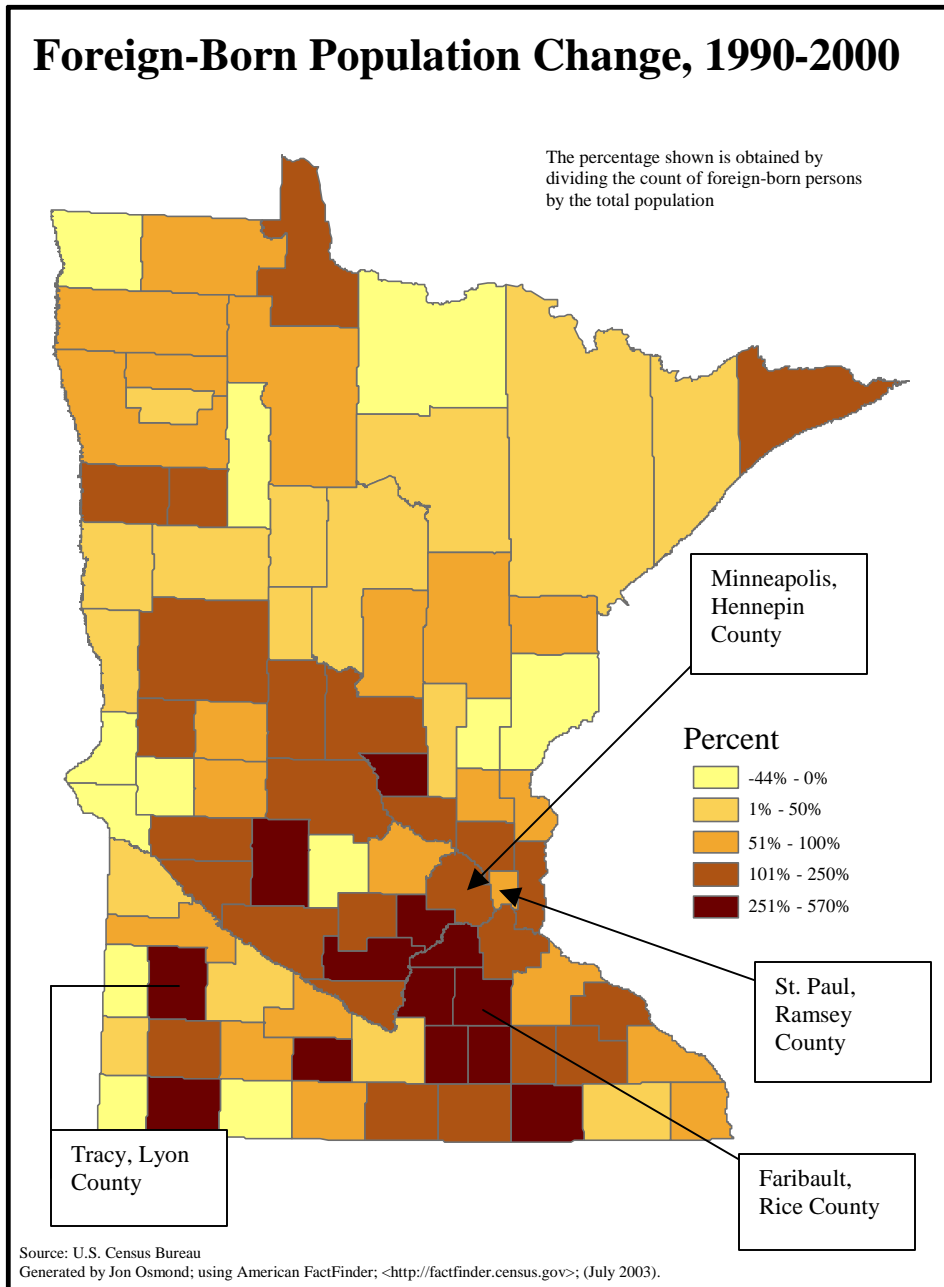
**TABLE 1 Rural and Urban Focus Groups**

**FIGURE 1 Foreign-Born Population Change 1990–2000**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52

**TABLE 1 Rural and Urban Focus Groups**

Focus Group Organizations	Location		Date	Language
	Rural	Urban		
Centro (Spanish)		Minneapolis	February 6, 2004	Spanish
Faribault ECFE (Spanish)	Faribault		February 24, 2004	Spanish
Brian Coyle Community Center (Somali)		Minneapolis	March 9, 2004	Somali
Hmong American Partnership (Hmong)		St. Paul	March 23, 2004	Hmong
Faribault Adult Learning Center (Somali)	Faribault		May 19, 2004	Somali
Roselle Apartments (Somali)		Minneapolis	June 5, 2004	Somali
Tracy ESL (Hmong)	Tracy		June 15, 2004	Hmong



**Figure 1 Foreign-Born Population Change, 1990-2000**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52