1 OVERVIEW

In recent years, Ohio, like the rest of the United States, has experienced significant demographic changes and substantial economic restructuring. These changes will greatly affect the need and demand for transit in the state in the near and long-term. The purpose of this demographic trend analysis is to understand the nature of these changes and the implications for transit agencies, and the communities they serve. An important aspect of this analysis is a comparison of statewide trends in Ohio with national trends. Statewide trends tell us about the story in Ohio, but the national trends are deeply important to Ohio because the state competes on a national market – against other states -- for jobs, young professionals and economic development.

This analysis looks at multiple dimensions of demographics in the state. One dimension is the overall level of population growth, as growth has driven the demand for new housing and for expanded transportation capacity for decades. A second is the source of growth, which is much more a result of immigration—does this recent immigrant population have different transportation needs that might include more public transit? Another dimension is the relative size of different age groups who may have different transportation preferences and needs over time. These generational cohorts, as defined in Table 1, are also likely to have different preferences and needs for housing and community, in addition to transportation.

At the national level the Baby Boomer generation is aging, and this will result in significant increases in the need for transportation options other than the private automobile. Younger generations, particularly Generation Y, appear to have different preferences in housing and commuting as compared to previous generations. Their behavior may affect the demand for transit if they act on their preference for a more urban and walkable lifestyle. There is also some evidence at the national level that there is now a preference for shorter commutes and more compact mixed-use development. These apparent changes in community preferences need to be considered when making decisions about future transportation investment.

In addition to these potential changes in transportation demand related to the various generational cohorts, there are other economic changes that may well have an impact on transportation needs. One is the dispersion of both population and employment, a trend that has gone on for decades, supported by significant investment in highways. Another is the shift away from manufacturing to information based industries, which may have different transportation needs and attract employees with different transportation and community preferences.
### Table 1 Generational Cohorts

<table>
<thead>
<tr>
<th>GENERATIONAL COHORT</th>
<th>D.O.B.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation Y</td>
<td>1985-2004</td>
<td>Also known as the Millennials and Echo Boomers. The children of the Baby Boomer cohort.</td>
</tr>
<tr>
<td>Generation X</td>
<td>1965-1984</td>
<td>Also known as the Baby Bust.</td>
</tr>
<tr>
<td>Silent Generation</td>
<td>1925-1944</td>
<td>Born between the Great Depression and World War II. Also known as the Lucky Few.</td>
</tr>
</tbody>
</table>

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2 DEMOGRAPHIC TRENDS

Demographics – the quantifiable characteristics of a population – by their very nature are constantly changing in society. However, the rate of change and convergence of certain demographic trends occurring right now in the United States and in Ohio that will have a greater impact than other demographic trends. The study team has identified seven key demographic trends facing Ohio, with the greatest implications for policymaking and transit investments. Secondary sources have been used to identify these statewide and national trends unless otherwise noted.

OHIO’S OVERALL GROWTH RATE HAS BEEN VERY LOW

Ohio’s population is growing slower than the rest of the nation.

Ohio ranked 45th out of the nation’s 50 states for population change from 2010 to 2013. Ohio grew by only 0.3 percent, which was considerably less than the nation, which grew by 2.87 percent during this period.²

Ohio’s population growth rate will continue to be less than the national average.

See Figure 1 for a comparison of the estimated five-year population growth rates of Ohio and the United States between 2010 and 2030.

Ohio’s metropolitan regions are experiencing low population growth rates and many are losing population.

Five of Ohio’s largest metros ranked among the bottom 16 of the nation’s largest metros based on population growth rate from 2010 to 2013.³

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² American Community Survey 2013
³ American Community Survey 2013
The majority of Ohio’s metropolitan regions have been losing population since the 1950s, and this long-term trend has accelerated in recent decades.

Every major city in Ohio except Columbus has lost significant shares of its peak population, ranging from 20 percent in Toledo to over 50 percent in Cleveland and Youngstown — and Columbus owes its singular status to large scale suburban annexation since the 1950s. Ten of Ohio’s 14 metropolitan areas have lost population between 2010 and 2013, with only Akron, Cincinnati, Columbus, and Dayton posting positive growth, as shown in Table 2, Ranking of Metropolitan Areas by Percent Change in Population.5

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5 American Community Survey 2013
Table 2  Ranking of Metropolitan Areas by Percent Change in Population, 2010-2013

<table>
<thead>
<tr>
<th>METRO AREA</th>
<th>U.S. RANKING</th>
<th>PERCENT CHANGE IN POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbus, OH</td>
<td>99</td>
<td>3.4%</td>
</tr>
<tr>
<td>Cincinnati, OH-KY-IN</td>
<td>245</td>
<td>1.1%</td>
</tr>
<tr>
<td>Dayton, OH</td>
<td>286</td>
<td>0.4%</td>
</tr>
<tr>
<td>Akron, OH</td>
<td>287</td>
<td>0.4%</td>
</tr>
<tr>
<td>Canton-Massillon, OH</td>
<td>322</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Huntington-Ashland, WV-KY-OH</td>
<td>326</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Toledo, OH</td>
<td>331</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Cleveland-Elyria, OH</td>
<td>346</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Lima, OH</td>
<td>351</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Wheeling, WV-OH</td>
<td>366</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Springfield, OH</td>
<td>368</td>
<td>-1.6%</td>
</tr>
<tr>
<td>Youngstown-Warren-Boardman, OH-PA</td>
<td>373</td>
<td>-1.8%</td>
</tr>
<tr>
<td>Weirton-Steubenville, WV-OH</td>
<td>374</td>
<td>-2.0%</td>
</tr>
<tr>
<td>Mansfield, OH</td>
<td>377</td>
<td>-2.2%</td>
</tr>
</tbody>
</table>

OHIO’S METROS HAVE SPRAWLED EVEN WITHOUT MUCH NEW POPULATION GROWTH

Ohio is experiencing a phenomenon known as “sprawl without growth.”

Most metropolitan areas in Ohio have increased in land area often growing across municipal and county boundaries, despite stable or declining populations. The result has been legacy costs, social and economic disparities, underutilized infrastructure, and inability for the state to realize a return on investment from former infrastructure expenditures, including freeway development. Furthermore, a declining and ever dispersing tax base incentivizes unhealthy competition within and among metropolitan areas, which, in turn, undercuts overall economic competitiveness.

Most population growth in Ohio’s metropolitan regions has occurred in the suburbs, while the primary cities have continued to shed population.

Figure 2 shows that six of Ohio’s seven largest metropolitan areas lost population in the central city between 2000 and 2010. By virtue of annexation, Columbus was the only metropolitan area with a primary city that did not experience a decrease in population during this time.

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6 American Community Survey 2013

Suburban sprawl continues to typify the distribution of Ohio’s population.

Residents of the central cities have migrated to lower density suburbs on the metropolitan fringe and people from more rural areas moved into the metro region. Central cities posted a negative growth rate of -2.3 percent, combining to lose more than 50,000 residents overall between 2000 and 2010. As in Ohio, suburban sprawl represents the primary growth pattern nationally; however it is more typically associated with a need to accommodate significant population growth, which is not the case here.\(^8\)

Employment has also shifted away from center cities to suburban locations.

As with population, jobs have also moved to suburban locations, with much of the growth in outer suburbs. Figure 3 documents this shift in Ohio over the past decade.

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\(^8\) Ibid.
Figure 3  Change in Geographic Distribution of Jobs in Ohio's Largest Metro Areas, 2000-2010

Ohio’s metropolitan areas are among the most spread out in the nation.

Smart Growth America’s Measuring Sprawl 2014 report ranks the most sprawling and most compact metropolitan areas of the nation. The ranking for the report is based on an evaluation of the development patterns in the 221 largest metropolitan areas in the U.S. Each metro area is given a score on four factors: density, land use mix, street connectivity and activity centering. Smart Growth America combines the scores on the four factors to create a Sprawl Index. A metro area with a Sprawl Index score greater than 100 is considered more compact. A metro area with a Sprawl Index score less than 100 is considered more sprawled out. All of Ohio’s metropolitan areas except for Canton-Massillon ranked in the bottom half of the Sprawl Index rankings, out of 221 metro areas, and four of Ohio’s metropolitan areas had Sprawl Index scores less than 100 and were among the most sprawled out in the nation. See Table 3 for national rankings of Ohio’s metropolitan areas by Sprawl Index.\(^\text{10}\)

**Table 3 Ohio Metropolitan Areas Ranked by Sprawl Index (Smart Growth America)**

<table>
<thead>
<tr>
<th>MSA</th>
<th>NATIONAL RANKING</th>
<th>SPRAWL INDEX SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canton-Massillon, OH</td>
<td>93</td>
<td>106.99</td>
</tr>
<tr>
<td>Akron, OH</td>
<td>111</td>
<td>103.15</td>
</tr>
<tr>
<td>Dayton, OH</td>
<td>116</td>
<td>101.48</td>
</tr>
<tr>
<td>Toledo, OH</td>
<td>117</td>
<td>100.9</td>
</tr>
<tr>
<td>Columbus, OH</td>
<td>138</td>
<td>93</td>
</tr>
<tr>
<td>Cleveland-Elyria-Mentor, OH</td>
<td>153</td>
<td>85.62</td>
</tr>
<tr>
<td>Cincinnati-Middletown, OH-KY-IN</td>
<td>166</td>
<td>80.75</td>
</tr>
<tr>
<td>Youngstown-Warren-Boardman, OH-PA</td>
<td>175</td>
<td>78.08</td>
</tr>
</tbody>
</table>

**OHIO’S POPULATION IS AGING**

Ohio’s population is growing significantly older overall as the Baby Boomer generation ages.

Between 2010 and 2030, the state’s population is estimated to grow only 2 percent. During this same time period, the state’s senior population (persons aged 65 or older) is expected to increase by 66 percent as the Baby Boomer generation ages. By 2015, a third of all seniors will be Baby Boomers, and that percentage jumps to nearly 9 in 10 by 2030.\(^\text{11}\)

---


Ohio’s population is aging rapidly, but at a rate comparable to the rest of the nation.

Between 2010 and 2030, the nation’s population is estimated to grow by over 20 percent. During this same time period, the nation’s senior population is expected to increase by 79 percent.12

Ohio’s population will be significantly older than the rest of the nation in the future.

In 2010, one in seven Ohioans was a senior, compared to one in eight Americans. In 2030, one in four Ohioans are estimated to be a senior, compared to one in five Americans.13

Ohio’s population over the age of 85 will increase significantly in the future.

The number of Ohioans aged 85 and older is expected to surpass 336,000 by 2030, a 46 percent increase from 2010. Despite this increase, this age group will only account for three percent of all Ohioans in 2030. This statewide trend mirrors the nationwide trend.14

OHIO’S RURAL COUNTIES ARE GROWING OLDER

The increase in the percentage of people over the age of 60 in Ohio will be greatest in the most rural counties of the state.

As seen in Figure 4, every county in Ohio is estimated to have more people over the age of 60 as a percentage of its population through 2050. Counties in eastern Ohio -- Noble, Monroe, and Columbiana – have some of the greatest percentages of people over the age of 60. Over a third of all residents in 2050 will be over the age of 60 in these three counties as seen in Figure 4.15

The increase in the percentage of people over the age of 85 in Ohio will be greatest in the most rural counties of the state.

As seen in Figure 5, every county in Ohio is estimated to have significantly more people over the age of 85 as a percentage of its population through 2050. Counties with the greatest percentage of people 85 or older include Noble, Crawford, Geauga, and Wyandot.16

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12 Ibid.
13 Ibid.
16 Ibid.
Figure 4  Ohio's 60+ Population by County, 2010-2050

Ohio's 60+ Population by County

- 2010
- 2050

% 60+Population

- 11.6% - 20%
- 20.1% - 25%
- 25.1% - 30%
- 30.1% - 35%

* N=188 counties

Go to: http://scirpus.miami.edu/content/maps-ohio-60-population-county-1990-2050 to download individual maps (PDF, JPEG, TIFF formats available).
Note: Categories are based on the quintile points with adjustment. Color scheme based on Brewer (2005), www.colorbrewer2.org.
Data Sources: U.S. Census Bureau (2012). U.S. Census 2010 data.
Figure 5  Ohio’s 85+ Population as Percentage of 60+ Population by County, 2010-2050

Ohio’s 85+ Population as % of 60+ Population

2010

<table>
<thead>
<tr>
<th>County</th>
<th>% 85+ Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio</td>
<td>5.2% - 10.0%</td>
</tr>
<tr>
<td>n = 57</td>
<td></td>
</tr>
<tr>
<td>n = 60</td>
<td>10.1% - 15.0%</td>
</tr>
<tr>
<td>n = 67</td>
<td>15.1% - 20.0%</td>
</tr>
<tr>
<td>n = 80</td>
<td>20.1% - 25.0%</td>
</tr>
<tr>
<td>n = 90</td>
<td>25.1% - 29.8%</td>
</tr>
</tbody>
</table>

Ohio’s 85+ Projected Population as % of 60+ Projected Population

2050

<table>
<thead>
<tr>
<th>County</th>
<th>% 85+ Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio</td>
<td>5.2% - 10.0%</td>
</tr>
<tr>
<td>n = 60</td>
<td>10.1% - 15.0%</td>
</tr>
<tr>
<td>n = 67</td>
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<td>n = 80</td>
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</tr>
<tr>
<td>n = 90</td>
<td>25.1% - 29.8%</td>
</tr>
</tbody>
</table>

*Note: % categories are based on the equal interval points with minor adjustments; color scheme based on Brewer (2005). Go to www.ohio-population.org to download individual maps (PDF & JPEG formats available).

Citation: Yamashita, T. (2013). Maps of Ohio’s 85+ Population as % of 60+ Population by County, 1990-2050. Scripps Gerontology Center, Miami University, Oxford, OH.

*Department of Sociology, University of Nevada, Las Vegas, NV.

OHIO STRUGGLES TO ATTRACT AND RETAIN
GENERATION Y AND YOUTH POPULATION

The growth of Ohio’s younger population is significantly less than the nation.

From 2000 to 2010, the nation posted a modest increase in its population aged 0-14, while this age cohort declined by 6.5 percent in Ohio. Similarly, the percent of population aged 15-24 grew by 2.7 percent in Ohio, significantly less than the national average of 11.3 percent. Thus, Ohio is faced with both a rapidly aging population and a decline in its younger “replacement” population.\(^{17}\)

In the future young people will be a smaller share of Ohio’s population compared to the nation as a whole.

As shown in Figure 6, Ohio’s population aged 0-14 is expected to decrease by 6 percent between 2010 and 2030, while the nation’s population aged 0-14 will increase by 17 percent. Similarly, Ohio’s population aged 15-24 is expected to decrease by 8 percent by 2030, while the nation’s population aged 15-24 will increase by 12 percent.\(^{18}\)

Generation Y, those born between 1985 and 2004, will make up a smaller portion of Ohio’s population in the future compared to the nation.

Between 2010 and 2030, the Generation Y population is estimated to shrink from 27 percent to 24 percent of the state’s population, whereas the national trend is to shrink from 27 percent to 26 percent.\(^{19}\)

OHIO’S HOUSEHOLDS ARE CHANGING IN COMPOSITION AND SIZE

Single person households are the most common household composition in Ohio.

These households account for nearly 30 percent of all of the households. Married couples without children (29.0%) and married couples with children (19.3%) were the other most common types of households in the state.\(^{20}\)

\(^{17}\) US Census Bureau 2010


\(^{19}\) Ibid.

Ohio's metros had a high percent of households made up of individuals living alone.

Four metros (Akron, Cleveland, Toledo, and Youngstown) ranked in the top 20 of the 100 largest metros for the largest percent of households consisting of a person living alone; Cleveland ranked first in the nation on this measure. 21

Households consisting of married couples with children make up a smaller portion of the total households in Ohio’s metros than the 100 metro national average.

Akron, Cleveland, Dayton, Toledo, and Youngstown ranked in the bottom 20 metros on this measure. As a whole, the average household size of Ohio metros was much smaller than the 100 metro average with 5 metros (Akron, Cleveland, Dayton, Toledo, and Youngstown) ranking in the bottom quartile of the 100 largest metros. 22

Nationwide, growth in households will come from those without children, including single-person households.

More than 80 percent of growth in households will be households without children, including the 40 percent of growth in single-person households. This is explained, in part, by the fact that baby

21 Ibid.
22 Ibid.
boomers, the largest generation in American history, are now empty nesters. In addition, people are living longer; and the millennial generation, for the most part, is delaying childbirth.\textsuperscript{23}

**Nationwide, the share of household growth claimed by ages 35-64 (the bracket traditionally seeking the most housing pace) will almost be halved.**

From 1990 to 2010, 65 percent of household growth consisted of persons aged 35 to 65. Between 2010 and 2040, only 35 percent of household growth will comprise persons in that age bracket.\textsuperscript{24}

### OHIO'S FOREIGN-BORN POPULATION IS GROWING

The growth in the number of foreign-born residents in Ohio will continue to outpace the growth in the number of U.S. born residents in the state.

The number of foreign-born residents in Ohio has increased from 2.4% of the state’s total population in 1990 to 3.9% of the state’s total population in 2012. Overall, the foreign-born population in Ohio grew by 74% between 1990 and 2012.\textsuperscript{25}

**Comparatively, the percentage of foreign-born residents in Ohio was significantly less than that of the U.S.** Nationwide, 13.0% of all residents were foreign-born, compared to just 3.9% in Ohio, as of 2012.

And while the foreign-born population in Ohio grew by 74% between 1990 and 2012, there was a 107% increase in the U.S. during this time.\textsuperscript{26}

The majority of foreign-born residents are from Asia and Latin America. In 2012, almost 40% of foreign-born residents in Ohio came from Asia, the most of any region or continent.

The second most common place of origin was Latin America, where almost 20% of foreign-born residents came from. In 2012, the top three countries of birth for foreign-born residents in Ohio were India (10.4%), Mexico (9.6%) and China, excluding Taiwan, (6.9%).\textsuperscript{27}

**In Ohio, like the rest of the country, the difference between female fertility differs greatly between the foreign-born and US born populations.**

In 2012, 85.1% of foreign-born women had given birth, compared to only 55.5% of U.S.-born women.\textsuperscript{28}

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\textsuperscript{24} Ibid.


\textsuperscript{26} Ibid.

\textsuperscript{27} Ibid.

\textsuperscript{28} Ibid.
In Ohio, foreign-born women are much less likely to be unmarried than U.S. born women.

Close to 15% of foreign-born women are unmarried, while 44.5% of U.S.-born women are unmarried.\textsuperscript{29}

**Household and family sizes are also much larger for foreign-born residents of Ohio compared to U.S. born residents.**

Average household size for foreign-born residents was 2.83, and for U.S. born residents it was 2.45. Average family size for 3.48 for foreign born residents, and for U.S. born residents it was 3.06. This is comparable to the nationwide trend.\textsuperscript{30}

\textsuperscript{29} Ibid.
\textsuperscript{30} Ibid.
3 ECONOMIC TRENDS

While there are many aspects of Ohio’s economy and of general trends that could affect the need and demand for transit, two very different effects stand out. An increase in poverty statewide as a lingering effect of the 2008 recession potentially increases the population that has the most difficulty affording a personal vehicle and is most in need of access to jobs and to other services. The other development is the development of a shared economy that uses technology to make the sharing of assets and services possible and convenient—including transportation services. Both of these are linked to other demographic trends as well.

IMPACTS OF THE ECONOMIC RECESSION AND RECOVERY: OHIO’S POVERTY RATE IS INCREASING

The poverty rate in Ohio has increased in recent years. In 2012, the statewide poverty rate was 16.2 percent compared to a poverty rate of 9.8 percent in 2000.31

The poverty rate in Ohio has eclipsed the poverty rate of the U.S. Since 2007, Ohio’s poverty rate has been higher than the national average. As of 2012, the national poverty rate is 15.9 percent compared to 16.2 percent for Ohio.32

The poverty rate in urban areas (densely populated areas of 2,500 or more) was greater than in rural areas. Almost 17 percent of people in urban areas were poor compared to 11 percent of people in rural areas.33

The poverty rate in metropolitan areas is higher in the central city than outside the central city and in the suburbs. Nearly 27 percent of those living in the central or principal cities of metropolitan areas were poor. By contrast, just over 10 percent of metropolitan area residents living outside of the principal and central cities were poor.34

The poverty rate is highest in rural Appalachian Ohio.

32 Ibid.
33 Ibid.
34 Ibid.
Over 17 percent of people in the band of 32 counties in the south and eastern part of the state were poor. This is compared to the statewide poverty rate of 15 percent in 2012 as shown in Figure 7, Poverty in Ohio by County.  

Figure 7  Poverty in Ohio by County

THE NEW ECONOMY (SHARED, DIGITAL, ETC.)

The Shared Economy is growing, particularly among young adults.

The Shared Economy is defined as an increase in the use of sharing mechanisms to access tangible assets, services, information, technology and even decision-making arrangements—as opposed to an “ownership economy” model in which individuals have permanent control vested in titles, contracts, etc. Most people have experienced the basic elements of the shared economy when they have rented tools or rug cleaners for the occasional short term use. The “shared economy” model expands that concept to a much broader range of assets (and services and information).

A traditional transportation example is the car- or van-pool, but the sharing economy has expanded that to include bike-sharing, short term car rental (from companies), peer-to-peer car-sharing, peer-to-peer ridesharing services, and transportation providers that use mobile application software (apps) to link potential passengers with vehicles for hire. An example of this

35 Ibid.
type of technology application is Uber, which is a transportation network that makes and uses mobile application software that connects potential passengers with drivers of vehicles for hire and ridesharing services. Uber services are available in Cincinnati, Columbus, and Cleveland. Another Ohio example of shared transportation is the CoGo bike-sharing program in Columbus (30 stations). Growth in the development and use of such services is particularly prevalent among Generation Y.

**Technology facilitates sharing of assets among peers.**

Technology, particularly the smartphone and apps, have enabled the creation of many of these sharing systems, and the same technology provides the information gateway that can link potential users with available services or resources. Sharing of assets or services among peer users is now much more feasible, enabling a person desiring a ride to connect with another individual who is willing to provide the desired ride (for payment). Lyft and Sidecar are the names of two such services. Other peer-to-peer services enable one car owner to rent their vehicle to someone else, or a visitor to rent a spare room or apartment from another individual. The technology facilitates payment as well. Again, usage is much more prevalent among younger adults who are more adept at using the technology and less able to shoulder the costs of ownership (of cars, houses, etc.).

**Sharing of information makes transit more convenient and attractive.**

Another transportation impact of the spread of the smartphone and the development of apps is that transit can be much more user friendly as a result of greatly improved real-time information. If transit vehicles are equipped with GPS, transit providers (or others if the data is shared) can let users know when a particular vehicle will be at a particular stop. One of the major impediments to transit use has been the difficulty in knowing where bus routes go, when they go, where the stops are located, how long it will take, and what the fare will be—information that can be provided by the transit system, or by many independent apps if the transit system shares the data. The sharing economy includes information as well as access to goods and services.
4 CHANGES IN TRANSPORTATION AND COMMUNITY PREFERENCES

In addition to the demographic and economic trends, there are also related changes in preferences for the types of housing and communities that are desired, and in transportation preferences and behavior. These changes in preference and behavior are linked to the demographic trends and are also affected by the economy. Together they suggest that over the coming decades there will be a decrease in the size of individual housing units; that much of the new construction will be at higher densities; and that it will be in communities that offer shorter commutes, offer multiple uses, and are more walkable. Combined with preferences (and economics) that dampen the demand for driving, these will create conditions that are much more supportive of increased transit use—if the services are available.

CHANGES IN TRANSPORTATION PREFERENCES

Demographic trends will shape the future of Ohio through changes in preferences for transportation that exist among different segments and generations of Ohioans. *America in 2013*, a stated preference survey by the Urban Land Institute, is an important source for how these preferences impact transportation, communities, and housing. The following describes some important changes in transportation and community preferences for the generations that will have the greatest impact in Ohio during the near future.

**Generation Y**

*Generation Y prefers to live in communities with public transportation option — more than any other generation.*

A majority (55 percent) of people in Generation Y prefer to live communities with public transportation, the most of any generation. About 86 percent of Generation Y-ers commute to work or school three or more days a week. Among Generation Y-ers who commute to work, roughly 81 percent reports having access to public transportation, a higher percentage than for the US population as a whole, of which 69 percent said they had access to transit.36

*Generation Y is also the least likely to commute by automobile compared to the US population overall.*

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And 57 percent of people in Generation Y rank the convenience of public transportation as an important characteristic of a community, compared to 52 percent of all adults.37

The greatest decrease in average annual vehicle miles traveled (VMT) per capita between 2001 and 2009 was among young people (16 to 34-year olds), most of whom are Generation Y-ers.

During this time period, VMT per capita decreased from 10,300 miles to 7,900 miles per capita, a drop of 23 percent.38

The decrease in VMT among young people and Generation Y is also occurring among young people who are employed and/or are doing well financially.

Some research suggests that the reason why young people and Generation Y are driving less is because of the recession. As the United States Public Interest Research Group (USPIRG) puts it, “People who are unemployed and underemployed have difficulty affording cars, commute to work less frequently if not at all, and have less disposable income to spend on traveling for vacation and other entertainment.” The average young person (age 16-34) with a job drove 10,700 miles in 2009, compared with 12,800 miles in 2001. During this same time period, young people (age 16-34) who lived in households with annual incomes of $70,000 increased their use of public transit by 100 percent, biking by 122 percent, and walking by 37 percent.39

Not only are young people and Generation Y-ers decreasing the amount they drive, they are increasing their use of transportation alternatives.

USPIRG reports that 16 to 34-year-olds took 24 percent more bike trips by bike and walked to destinations 16 percent more frequently than they did in 2001. From 2001 to 2009, the number of public transit passenger-miles traveled by this age cohort increased by 40 percent. These trends have corresponded with a significant increase in the percent of 16 to 34-year-olds without a driver’s license. What makes these statistics more impressive is that the number of people in the 16 to 34-year-old age group shrank in size by 2 percent.40

The trend toward reduced driving among young people is likely to persist as a result of technological changes.

Communications technology, which provides young people with new social networking and recreational possibilities, has become a substitute for some trips, including those by car. At the same time, these technological improvements have made transportation alternatives, such as public transit, car-sharing, ride-sharing and bike-sharing, more convenient and easier to use. For public transit, websites and smart phone apps that provide real-time transit data make the system more attractive to infrequent users.41

Baby Boomers

Baby boomers have a slight preference to live in communities with public transportation options.

37 Ibid.
39 Ibid.
40 Ibid.
41 Ibid.
Roughly 53 percent of Baby Boomers prefer to live in such communities. This is more so than the overall adult population in the United States. And 72 percent of Baby Boomers would prefer to live in a community with shorter commute, but a smaller home.42

Silent Generation

The Silent Generation is the generation that is most likely to become less mobile and more transit dependent in the near-future.

The Silent Generation for the most part has retired from formal work; consequently only 8 percent of reported commuting to work or school regularly. Among those who still commute, nearly all travel by car (91 percent). About 69 percent of this generation reports that they live in a community where public transit is available.43

Overall Trends

The decrease in VMT reflects fundamental, non-economic changes in society.

A telltale sign in changes to transportation preference has been the notable decrease in the vehicle miles traveled (VMT) per capita since 2004. This is represents a dramatic departure from previous trends, which has largely been on a steadily upward trend since the age of widespread of automobile ownership. Per capita VMT peaked in 2004 and has declined each year since then for a total decline of 7.5 percent. At 9,363 miles, VMT per capita in 2012 reached its lowest level since 1996. (FHWA 2013) From 2001 to 2009, VMT per capita decreased from 10,300 miles to 7,900 miles per capita, a drop of 23 percent. Nationwide, transit ridership has increased, as has the use of other alternatives to private auto use.44

According to Has Motorization in the U.S. Peaked? the downward trend of VMT, has been accompanied by reductions in the rates of registered light-duty vehicles and fuel consumed per person, per driver, per household, and (where appropriate) per vehicle. Since the onsets of the reductions in these rates preceded the onset of the recession (in 2008) these trends reflect broader changes in society.45

CHANGES IN COMMUNITY PREFERENCES

Another effect of demographic changes in Ohio is a shift in community preferences – where people decide to live, form households, and work. Again, America in 2013 provides a comprehensive source of how these community preferences differ by generation.

Generation Y

The generation with the community preferences of greatest significance is Generation Y.


43 Ibid.


45 Ibid.
This is historically the generation that is the most likely to move and most likely to form new households in the near-future. The communities that they prefer to live in and move to will have the greatest chance of being economically prosperous.46

**Generation Y prefers to live in a medium-sized or big city.**

According to the *America in 2013* survey, 40 percent of Generation Y state that if they could live anywhere in the next five years, they would live in a medium-sized or big city, compared to only 28 percent of the US population as a whole.47

**Generation Y prefers compact neighborhoods.**

Members of this generation are more likely to express interest in compact neighborhoods than older generations.48

**Generation Y is more mobile and more likely to move in the near future.**

According to the *America in 2013 survey*, 63 percent of Generation Y states that they are likely to move in the next five years. Not surprisingly, this is the most of any age cohort.49

**Silent Generation**

Not to be left out in this discussion is the importance of medical care for the Silent Generation (people born before 1945). This generation overwhelmingly rated distance from Medical Care as an important characteristic of a community – significantly more so than any other generation.50

**Generation-Wide Trends**

Generation Y is not alone in a stated preference for these types of communities and neighborhoods. Of all adults surveyed by ULI, 62 percent of Americans planning to move in the next five years would prefer to settle in mixed-use communities. Furthermore, 59 percent of Americans planning to move in the next five years would prefer to move to a community where they had a shorter commute, but smaller home.51

**Trends in Ohio**

When strictly looking at Ohio, about 56 percent of Ohio respondents would prefer to live in a mixed-use community offering a variety of housing choices, walkable destinations, and other features. No more than one in five households has this option now. Clearly, there is a supply – demand mismatch. (Nelson)

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47 Ibid.

48 Ibid.

49 Ibid.

50 Ibid.

51 Ibid.
changes in housing preferences: growing preference for attached and smaller detached homes

Demographic changes in Ohio not only have an impact on community changes, but they also have an impact on the type of housing that people prefer – which reflects the community typology. Arthur “Chris” Nelson, Director of the Metropolitan Research Center at the University of Utah, provided an overview of the impact of these demographic changes on the housing market at the 2010 American Planning Association state conference in Utah.

Nationwide, Nelson’s research found that about 40 percent of respondents would choose to own or rent an apartment or townhouse if it had an easy walk to shops and restaurants and offered a shorter commute to work. About 60 percent of those preferring detached options would choose smaller lots if they had the same attributes. Given these parameters, respondents would seem to want the following options to 2040:

- 40 percent attached homes (townhouses, condominiums, and apartments)
- 35 percent smaller detached homes on smaller lots
- 25 percent larger detached homes on all other lots

Even if all new residential units built to 2040 were attached and small lots, there would be up to 75,000 more homes on all other lots than the market may demand. Other key points to consider:

- Half of all new housing demand will be for attached homes and the other half for small lot homes. This is another reversal from past preferences.
- Demand for large-lot homes will decline below 2011 levels.

Half of the growth in households will be renters. The home ownership rate has been declining since 2004. (Nelson)
5 IMPLICATIONS OF TRENDS ON THE NEED AND DEMAND FOR TRANSIT

These key demographic and economic trends will have significant changes in society’s transportation, community and housing preferences – the demand side. Other trends, such as “sprawl without growth” have created a situation where the supply and availability of transportation, community and housing options will not adequately meet future demand. Finally, these trends matter because they should guide Ohio’s future investments. The response to these demographic and economic trends will determine if the state and its communities can remain competitive for people and businesses. Each of the trends identified in discussion above has potential implications for transit development in Ohio.

DEMOGRAPHIC TRENDS

Sprawl Without Growth

Although Ohio’s overall population growth is low, data recorded prior to the recession show population growth in suburban and exurban counties and a decline in the population of central cities. A similar trend is evident in terms of the distribution of employment.

The implication for transit is that there is a need to invest in transit as part of center city redevelopment to attract new population and employment, particularly given changes in community, housing and transportation preferences. At the same time suburban and regional transit coverage is needed to provide access to employment and services in areas without much or any current transit service (see Appendix A for a discussion of existing transit access in Ohio’s metro areas). However, such service will be more expensive to provide and less productive than transit in higher density areas—ideally new suburban growth will be clustered in key nodes and corridors to support more productive higher quality transit options such as limited stop/high frequency services, commuter bus services or even BRT.

Aging of the Population

Like the rest of the country, Ohio will soon face the aging of the Baby Boomer generation, and this will result in increases in the percentage of the population that is over 60 across the state. However, the greatest percentage increase in the over 60 population will be in the most rural counties of Ohio, and the percentage increase of people over 85 will be the greatest in the most rural areas.

The aging population is most likely to lose mobility and become transit dependent as their ability to drive declines. As a result, older adults will need more transit coverage in urban, suburban, and rural areas—and will likely need to be a significant expansion of the coverage, hours, and
capacity of flexible transportation services such as route deviation and demand response options. Even if the percentage of the elderly using various forms of transit stays the same the increase in numbers implies a need for significant increases in the supply of service—and if usage rates increased there would likely be even more demand. New (or additional) services will likely need to include client transportation (medical transportation, specialized transportation, senior services, etc.) and service that is open to the general public—particularly in rural areas. Many rural areas have no service available at all, but will be facing a significant increase in the elderly population.

**Attracting and Retaining Generation Y and the Youth Population**

The projected growth of the young population cohorts in Ohio is less than the U.S. as a whole, and the percentage of young adults in the population will be lower than the country overall. Ohio will have an older population distribution as compared to U.S. as a whole—but the state will need to retain its young population and attract newcomers to maintain its economic and cultural vitality.

The younger population groups will be the primary group forming households. Data presented says they prefer smaller houses, larger cities, shorter commutes, alternatives to transportation (technological communication) and alternative transportation (as compared to the private auto). They are users of technology for information sharing. Their role in driving new development, combined with their preferences and changes in travel behavior call for improved transit services—to support redevelopment and higher density development. Transit-supportive communities would be more attractive to these generational cohorts and their changes in travel behavior should result in greater ridership.

**Changes in Household Composition and Size**

Ohio’s most common household type is the single person household, and the percentage of married couples with children is lower in Ohio metropolitan areas than in the U.S. as a whole. The single person household represents a larger share of metropolitan population in Ohio as well. The share of household growth by the 35-64 age group, i.e., usually the age group that is married with children, will be half as great over the next 30 years as compared to past 20.

Smaller households, particularly single person households could support increased transit use because smaller housing units will be found at higher densities which increases transit feasibility. Persons in the smaller households are more likely to use transit because the cost and convenience advantage of the private vehicle is reduced (particularly if higher quality transit is available—which is more likely in the metropolitan areas).

**Increase in the Foreign-Born Population**

In Ohio the foreign-born population is growing faster than the U.S. born population, and the foreign-born population includes more families with children and larger household sizes.

The implications for transit of the growth of this demographic group are mixed. Among initial immigrants the need for transit options may be higher, and usage may well be greater as well. The advantages of a private vehicle for transporting larger families and reaching jobs with non-standard schedules will lead to an interest in getting vehicles, but even with that areas with substantial immigrant populations may have increased transit use due to lower auto access, multiple job-holders in households, and higher overall population density due to larger families.


**ECONOMIC TRENDS**

**Increase in Poverty**

The aftermath of the recession has been an increase in the poverty rate in Ohio across the state. The poverty rate is greater in the center cities of the urban areas, but this is also a rural phenomenon and the highest poverty rates are in rural Appalachian Ohio.

Poverty increases the need for transit as persons are unable to afford a vehicle (or multiple vehicles), for access to jobs and services. The needs for access are high in urban areas, but also in rural areas. Affordable transit is needed, particularly services that offer service levels substantial enough so that people could reach and hold jobs. This may require substantial additional coverage, and the development of regional transit to reach jobs in different counties.

**The New Shared Economy**

The sharing of assets, services, and information through technology is growing—technology allows it, the economy and changes in attitudes (among young adults) are driving it.

The shared economy relates to transit by reinforcing the behavior of sharing rides, by providing opportunity to share resources one already owns, and by providing cost savings. Shared economy participation can increase transit use when other shared transportation options are combined with public transit by persons who use the combined services as an alternative to a private auto.

**CHANGES IN TRANSPORTATION, COMMUNITY AND HOUSING PREFERENCES**

Along with the demographic and economic changes, trends in preferences communities, housing and transportation will affect the need for transit over the next decades.

Combined with the changes in household composition, these suggest that the demand in future years will be for communities that offer mixed-uses, are walkable, have smaller unit sizes, and have public transit access. This new development may be in suburban areas, or it may be redevelopment of center city and older suburban areas. All of these characteristics are supportive of increased and improved transit.

In addition there are changes in transportation behavior which also favor increased transit use. Teenagers are not getting driver’s licenses at rates previously seen, apparently focusing on alternatives including both telephone and computer communication and other modes. There are longer term significant declines in the overall vehicle miles traveled, beginning even before the recession and continuing today.

The changes in preferences and behavior are strongest among the younger population groups, who are those most likely to be driving housing demand as they move more often and are forming households. Density, walkability, and urban scale all increase transit usage, and transit supports this type of development. Future development and redevelopment will need to respond to these changes in demand, and transit improvements will need to support these changes.
CONCLUSIONS: TRANSIT AFFECTS OHIO'S FUTURE ECONOMIC COMPETITIVENESS AND DESIRABILITY AS A PLACE TO LIVE.

The context provided by these trends suggests that Ohio will need to invest in public transportation in its urban, suburban and rural areas:

- The need to make the state and its cities more attractive to younger Ohioans, to plan for an aging population, and to stem the “sprawl without growth” phenomenon all underscore the need for concerted place-making efforts in existing Ohio neighborhoods.

- Changing demographics and the demand for walkable neighborhoods from both senior and younger demographics suggest that investments need to be targeted to make neighborhoods healthier and more attractive to these populations. Incentives need to encourage fully integrating housing, transportation, safety, and school construction.

- Re-creating vibrant neighborhoods within the core of the metro region is a critical component to helping attract new populations and to reverse sprawling growth patterns.

- Strategies for addressing the projected increases in Ohio’s senior population need to be studied and considered, particularly in the areas of mobility and services. (Greater Ohio)

Although Ohio’s center cities currently have the best transit access, investment to provide high-quality transit will be part of the strategy to redevelop these areas and accommodate the housing demand for smaller units in walkable communities.

In suburban areas greater regional transit coverage will be needed to provide mobility for residents and access to suburban employment, calling for increased coverage and regional linkages. New development in suburban areas will need to be at higher densities to meet housing demand from smaller households, and transit may be a place-shaping tool linking concentrated nodes of mixed-use and higher density development. In addition, transit demand from new immigrant populations and the aging population of older suburbs will call for suburban improvements.

Rural Ohio, facing the increased demands from the aging population and increased poverty, will also need significant transit development. Many areas have no services at all and in others the service coverage, hours, and capacity is severely limited. Basic transportation to medical and social services for those unable to drive is critical to maintaining people in their communities, and improved services are needed to provide access to employment.

This paper has provided an overview of the larger trends that will affect the need for transit in Ohio. How much transit service, what kinds, and where will be addressed in market analyses examining all of Ohio’s counties—and what it will cost and how it can be funded are significant topics will also clearly need to be a major element of the overall transit needs study.
REFERENCES

— American Community Survey 2013


— US Census Bureau 2010
APPENDIX A: TRANSIT ACCESS TO EMPLOYMENT IN OHIO

SPRAWL WITHOUT GROWTH

One of the key demographic trends of note in Ohio is the phenomenon of “sprawl without growth”. Most metropolitan areas in Ohio have increased in land area, despite stable or declining populations. The result has been legacy costs, social and economic disparities, underutilized infrastructure, and inability for the state to realize a return on investment from former infrastructure expenditures. Furthermore, a declining and ever dispersing tax base incentivizes unhealthy competition within and among metropolitan areas, which, in turn, undercuts overall economic competitiveness. (Greater Ohio)

LACK OF REGIONAL COORDINATION

Metropolitan populations are spreading from central cities to suburbs and exurbs with separate jurisdictional governments. One result that the many separate jurisdictions in a given region often duplicate infrastructure, staffing, and municipal services. Many services such as fire protection, emergency management, public transportation, and police services, among others, have a range in which average costs per-capita decline as the population increases; small jurisdictions simply cannot reach those economies of scale. A lack of regional coordination means that municipalities miss out on quantity discounts from joint purchasing arrangements. These diseconomies are further sharpened by the fact that small jurisdictions tend to have correspondingly small tax bases to fund their variety of services. And jurisdictions are even further undermined by the race-to-the-bottom competition among multiple municipalities for desirable commercial, industrial, and residential tax bases. (Brookings Institution, Restoring Prosperity)

All of these factors mean that Ohio’s many municipal governments are structurally unequal to their growing challenges, particularly during a recession. As the Compact with Cities Task Force warns, “Ohio’s individual cities and townships have taken on expenses that are unsustainable, and the state’s ability to assist them is limited. Regional approaches to collaboration and coordination are necessary to preserve services to Ohioans and achieve affordability.” (Brookings Institution, Restoring Prosperity)

Another implication of the sprawl without growth is that the abundance of individual governments within Ohio’s regions—all with their own parochial interests and priorities—are simply too fractured to develop a unified vision for economic development and mobilize regional stakeholders to realize it. Ohio’s governance map ensures that in almost every region scores of archaic boundaries artificially divide regions that otherwise represent single, interrelated social, economic, and environmental communities. Such divisions will always complicate efforts to carry out cross-boundary visioning, plan cooperatively, or coordinate decision making across large areas. (Brookings Institution, Restoring Prosperity)

Given the cost and burden of sprawl, it is no wonder that the Compact with Ohio Cities Task Force recently concluded, “Future prosperity in this state hinges upon sharing municipal services, coordinating economic and transportation construction, and maximizing investments by directing them to locations in a region where they will leverage the highest payoff.” (Brookings Institution, Restoring Prosperity)
TRANSIT ACCESS TO JOBS IN OHIO

For public transit agencies, the ability to provide adequate transit service for residents in lower-density neighborhoods is much more difficult and expensive than providing the same service for residents in higher-density neighborhoods. Longer routes cost more to operate, requiring more buses and service hours to connect the same populations. This in turn requires more funding and results in lower performance. Often service frequency and coverage is reduced in lower density areas to maintain productivity, but this further reduces the attractiveness of transit to anyone with a choice. The multiple jurisdictions may result in fragmented transit services, with suburban jurisdictions either unserved or served only by their own local transit systems limiting access to regional destinations. In many cases transit systems are simply unable to expand to serve these populations, and access to economic opportunities is reduced.

The impact of the local focus of governance and service provision in Ohio along with the difficulty of providing transit services in low-density settings can be seen in the limited accessibility to jobs in Ohio’s metro areas. The Brookings Institution’s Missed Opportunity: Transit and Jobs in Metropolitan America report documents job accessibility by transit for the 100 largest metropolitan areas in the United States. None of the metropolitan areas in Ohio rank in top 20 for combined access (share of working-age residents near a transit stops and share of all jobs reachable via transit in 90 minutes). Dayton, Toledo, Cleveland and Columbus metropolitan areas rank in the top 50, while the remaining metros, Akron, Cincinnati, and Youngstown rank in the bottom 50. As Figure 4, Transit Accessibility for Metropolitan Areas in Ohio, shows, transit coverage, service frequency, and job access is significantly better for city residents than residents of the suburbs. However, it is important to note that the majority of residents in a metropolitan area live in the suburbs rather than the city. (Brookings Institution, Missed Opportunity)
Table A-1 Transit Accessibility Profile for Metropolitan Areas in Ohio

<table>
<thead>
<tr>
<th>Metropolitan Area</th>
<th>Coverage: Share (% of working-age residents near a transit stop)</th>
<th>Service Frequency: Median wait (minutes) for any rush hour transit vehicle</th>
<th>Job Access: Share (% of all jobs reachable via transit in 90 minutes)</th>
<th>Combined Access Rank: Combined ranking (out of 100 Metros) on coverage and job access</th>
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Data Source: Brookings analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data

Notes: Low Income: under 80% Area Median income (AMI); High Income: over 120% AMI

City is first named city in metro are name plus other cities in name with at least 100,000 residents; suburbs are the remaining portion of metro area