Who is Ready for Change?
Ohio’s Population and Land Use in Transition

Jeff Sharp
Assistant Professor
Dept of Human & Community Resource Development

Elena Irwin
Assistant Professor
Dept. of Agricultural, Environmental and Development Economics

Prepared for the 2003 Ohio County Commissioners’ Days
Outline of Presentation

► Introduction
► Ohio population change
► Factors underlying exurban growth
► Exurban township types
► Impacts and community challenges
► Exurban Change Project resources
The Exurban Change Project focuses on:
- Connection between rural and urban areas
- Change in rural and exurban areas
- Focus on townships and other small places
The Rural-Urban Interface...

**Exurban**: Areas outside the outer-belt of a major metro area, but within its commutershed.

General Characteristics
- 10 to 50 miles from urban centers of approximately 500,000; or
- 5-30 miles from a city of at least 50,000
- Commuters travel 25+ minutes each way to work
- Communities contain mix of long-term and newer residents
- Low density development
- A mix of urban and rural land uses

*Adapted from: Daniels, 1999.*
The Redistribution of Ohio’s Population and Land Use
# Ohio 2000 Population by Township, Village, and Cities

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Population</th>
<th>% of Ohio population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Townships</td>
<td>1,309</td>
<td>3,860,763</td>
<td>34.0%</td>
</tr>
<tr>
<td>Villages*</td>
<td>698</td>
<td>862,080</td>
<td>7.6%</td>
</tr>
<tr>
<td>Small Cities**</td>
<td>226</td>
<td>3,642,579</td>
<td>32.1%</td>
</tr>
<tr>
<td>Large Cities***</td>
<td>19</td>
<td>2,987,918</td>
<td>26.3%</td>
</tr>
<tr>
<td><strong>Total Ohio Population</strong></td>
<td>11,353,140</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

*Villages are incorporated places of 0 to 4,999 residents  
**Small cities are incorporated places of 5,000 to 49,999 residents  
***Large Cities are incorporated places of 50,000 or more residents

Source: US Census Bureau

<table>
<thead>
<tr>
<th>Year</th>
<th>Village</th>
<th>Small Cities*</th>
<th>Large Cities*</th>
<th>Townships</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>0.50</td>
<td>2.50</td>
<td>3.00</td>
<td>2.00</td>
</tr>
<tr>
<td>1970</td>
<td>0.50</td>
<td>3.00</td>
<td>3.50</td>
<td>2.50</td>
</tr>
<tr>
<td>1980</td>
<td>0.50</td>
<td>3.50</td>
<td>4.00</td>
<td>3.00</td>
</tr>
<tr>
<td>1990</td>
<td>0.50</td>
<td>4.00</td>
<td>4.50</td>
<td>3.50</td>
</tr>
<tr>
<td>2000</td>
<td>0.50</td>
<td>4.50</td>
<td>5.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>

- **Village**: Change 1960-2000: +11.4%
- **Small Cities***: Change 1960-2000: +27.9%
- **Large Cities***: Change 1960-2000: -15.2%
- **Townships**: Change 1960-2000: +33.2%
Township Population Density

- Less than 50 persons/sq. mile
- 50 - 100 persons/sq. mile
- 100 - 500 persons/sq. mile
- 500 or more persons/sq. mile

Source: US Census Bureau
Figure 1: Land Cover/Land Use Change by Type: State of Ohio 1982 to 1997

- Forest Land: 1982 - 6,658, 1987 - 6,891, 1992 - 6,921, 1997 - 7,081

Source: National Resource Inventory
*Farm Land equals sum of all Pasture and Crop Land

Map 1: Absolute Change in Urban Land 1982-1997

Legend:
- Change in Urban Land (Acres)
  - 0 to 3,900
  - 4,100 to 6,300
  - 6,400 to 12,400
  - 13,000 to 40,100

Source: National Resource Inventory

Prepared by:
Jason W. Reece
Dept. of AEDE
Ohio State University
1.3.102
Changes in Ohio Population vs. Urban Land

Conversion of urban land in Ohio has occurred at a relatively rapid rate despite modest population growth.

- Ohio added urban land at four times the rate it added population in the 90’s
  - 1992-97: Average annual growth rate in urban land of 2.2%
  - 1990-2000: Average annual population growth rate of 0.5%
Exurban Land Use Trends

- The fastest rates of urban land conversion are in areas located at the rural-urban interface of Ohio.
- New, lower density development has led to an increasing pattern of low-density urban land areas at the rural-urban interface.
- Urban development has caused substantial farmland loss in exurban areas
  - Ohio ranked 2nd in the nation in acres of prime farmland lost to urban development between 1992-1997.
Factors Associated with Exurban Growth
The Transportation Connection

► Urbanization has always followed transportation routes (and vice versa).
  ▪ The first suburbanization occurred in the mid-1800’s as railroads and streetcar lines were built from central city to outskirts of city.

► Road building increases accessibility to outer areas
  ▪ The largest increase in Medina County population (39%) and the largest decrease in Cuyahoga County’s population (13%) occurred in the 10-year period after the opening of I-71.  

(ODOT)
73% of all urban land cover in Ohio is located within 5 miles of a highway.
(Reece and Irwin, 2002)
But it’s not just people who follow the roads...

- Road building also spurs firms to move outward and leads to the development of “edge cities” around the central city.
- This allows people to move even further out and maintain the same commute time.
Map 13: Buffer Zones from Major Cities

Buffer Distance from Major City
- 10 - 20
- 20 - 40
- 40 - 100
- Major Cities
- Other Cities and Villages

Prepared by:
Jill K. B. Clark
Dept. of AEDE
The Ohio State University
02.03.03

Source: US Census Bureau
Commuting Distance to Columbus and Edge Cities

- Edge Cities Driving Distance
  - < 50 Miles to Edge Cities
  - < 50 Miles to Downtown Columbus

Map showing areas within 50 miles of Columbus.
Roads are not the only reason growth is occurring in rural-urban areas...

► Quality of public services and schools
  ► Better services *pull* population outward
  ► Perception of “urban ills” *pushes* population outward.

► Desire for bigger house, bigger yard
  ► Land is cheaper in outer areas

► The rural ideal
  ▪ Open space, more privacy, better community, “sense of place,” less government.
Township Typology: Analyzing Differences among Ohio Exurban Communities
Identifying Township Types

Research Questions:

► What are the “stages of exurbanization” through which formerly rural communities progress?
► What are some of the characteristics of exurban townships at the various stages of exurbanization (economic, sociodemographic, rural attributes)?
► What do these findings imply for policy, management and community development?
## Stages of Exurbanization

<table>
<thead>
<tr>
<th>Exurbanization Stage</th>
<th>Percent of Townships</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1: Low urban, slow growth</td>
<td>34.2%</td>
<td>943,831</td>
</tr>
<tr>
<td>Stage 2: Low urban, above average growth</td>
<td>19.3%</td>
<td>502,407</td>
</tr>
<tr>
<td>Stage 3: Low urban, fast growth</td>
<td>12.7%</td>
<td>399,312</td>
</tr>
<tr>
<td>Stage 4: Medium urban, above average growth</td>
<td>9.8%</td>
<td>877,335</td>
</tr>
<tr>
<td>Stage 5: Med-high urban, below average growth</td>
<td>19.6%</td>
<td>522,866</td>
</tr>
<tr>
<td>Stage 6: High urban, average growth</td>
<td>4.3%</td>
<td>301,504</td>
</tr>
</tbody>
</table>
Pattern of Exurbanization in Ohio

- Location of exurban townships relative to metro areas
  - Early stage townships are located further from metro areas; mid and late stage townships tend to be concentrated closer to metro areas, but this isn’t always the case.
  - Greater proportion of late stage townships around small metro areas (vs. large metro areas).

- Patterns of exurbanization vary across regions of Ohio
  - **Northwest Ohio**: Dominated by early stage townships; Toledo contains a mix of townships at different stages; some rural areas.
  - **Southwest Ohio**: Dayton-Springfield area dominated by late stage townships; mid-stage townships located predominantly to east of Cincinnati; early stage townships located near western border.
  - **Central Ohio**: Dominated by mid-stage townships, concentrated to north of Columbus, but also to east and south; early stage townships are concentrated to west of Columbus; relatively few late stage townships.
  - **Northeast Ohio**: Dominated by late-stage townships; some early stage townships located further out; no rural townships.
  - **Southeast Ohio**: Dominated by early stage townships; retains large rural regions; a few mid and late stage townships around metro areas.
Characteristics of Stages

- Social and economic differences exist within and among townships at various stages of exurbanization
  - **Early stage townships**
    - Most are racially homogeneous
    - Differ in terms of average income levels, degree of economic dependence, and strength of local ag sector
  - **Mid-stage townships**
    - Most are economically dependent
    - Differ in terms of the strength of the local ag sector and the mix of jobs in which residents are employed.
  - **Late stage townships**
    - Most are economically independent, have a weak ag sector, and a higher than average % of residents employed in professional, public sector, and wholesale jobs
    - Differ in terms of average income level of residents
Implications

► Townships do not necessarily fully progress from stage 1 through 6 nor do they necessarily undergo the same progression.
  - Stage 5 may be final exurban stage and only in some circumstances (such as adjacency to large cities) would a stage 5 township evolve to stage 6.
  - Need to understand the factors that determine a township’s progression and how managing change at earlier stages influences a community’s quality of life at later stages.

► A township’s stage of exurbanization influences economic and social characteristics of townships (such as income levels, mix of jobs, and strength of ag sector) but does not fully determine them.
  - Need to understand what the other factors are that influence social and economic characteristics of townships, such as average income levels.

► Some regions can learn from other regions
  - For example, Columbus, Dayton, and Toledo areas might learn from later stage exurban areas in Northeast Ohio and Cincinnati.
Impacts of Growth

► Economic
  ▪ Increased economic activity, job growth, land values; decentralized regional growth

► Fiscal
  ▪ Increased public service needs that may not be met by the increase in tax revenues; increased transportation costs and congestion

► Agricultural
  ▪ Decline in traditional ag sector; increased land rental rates; more opportunities for off-farm employment; increased conflicts between farmers and non-farm residents

► Environmental
  ▪ Loss of open space; increased traffic congestion, air pollution

► Social
  ▪ Conflicts between new and old residents; loss of rural character; increased segregation of urban poor
Challenges for Exurban Communities

- Do Ohio communities and governments have the capacity to manage changes associated with exurbanization?
  
  ▪ Social capacity — does the “social capital” exist within and among Ohio exurban communities to collectively respond to the changes?
  
  ▪ Do local governments have the professional and technical capacity to manage changes?
Challenges for Exurban Communities

- Do local governments have the fiscal capacity?

  - One inference from our typological analysis is that variation in patterns of development will differentially impact fiscal capacity (such as location of business starts and differences in socioeconomic status of new residents).
Exurban Change Project--Resources for Communities

➢ To improve understanding of changes in Ohio occurring at the Rural-Urban Interface, we have compiled a variety of resources
  ▪ Data on population, land use, and other trends for Ohio townships
  ▪ Statewide reports that analyze growth and change in Ohio
  ▪ Customize data, analysis and consultation

➢ Personnel
  ▪ Jill Clark, Program Manager
  ▪ Jeff Sharp, Program Co-Leader
  ▪ Elena Irwin, Program Co-Leader
Possible Applications

► Public education on local and regional growth and change

► Community visioning

► Comprehensive planning
  ▪ Infrastructure, transportation

► Land protection

► Development decision
  ▪ Zoning and subdivision decisions
Exurban Change Website

http://aede.osu.edu/programs/exurbs/