2007

Exploring micropolitan areas as a source of population growth in Iowa

David G. Inbody
Iowa State University

Follow this and additional works at: https://lib.dr.iastate.edu/rtd

Part of the Demography, Population, and Ecology Commons, Geography Commons, Other Political Science Commons, Urban, Community and Regional Planning Commons, Urban Studies Commons, and the Urban Studies and Planning Commons

Recommended Citation
https://lib.dr.iastate.edu/rtd/15095

This Thesis is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Retrospective Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
Exploring micropolitan areas as a source of population growth in Iowa

by

David G. Inbody

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF COMMUNITY AND REGIONAL PLANNING
MASTER OF PUBLIC ADMINISTRATION

Co-majors: Community and Regional Planning; Public Administration

Program of Study Committee:
Mônica A. Haddad, Co-Major Professor
Paul Coates, Co-Major Professor
Dave Swenson

Iowa State University
Ames, Iowa
2007
To my wife,

JULIA DREY

For your inexhaustible spirit,

amazing insights and unwavering support
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ......................................................................................................................... IV

ABSTRACT .................................................................................................................................................. V

I. INTRODUCTION ................................................................................................................................. 1
   A. Potential Alternative Approach ........................................................................................................ 4
   B. Objectives and Research Questions ............................................................................................... 7
   C. Hypotheses ....................................................................................................................................... 8
   D. Research Framework ....................................................................................................................... 8
   E. Definition of Terms .......................................................................................................................... 9
   F. Limitations of the Study .................................................................................................................. 12
   G. Organization of the Study .............................................................................................................. 13

II. LITERATURE REVIEW ....................................................................................................................... 14
   A. Micropolitan Areas .......................................................................................................................... 14
   B. Regional Variances – Population Dispersion vs. Concentration ..................................................... 19
   C. Current Policies in Iowa .................................................................................................................. 23
   D. Theoretical Perspective .................................................................................................................. 30

III. RESEARCH METHODOLOGY ........................................................................................................ 34
   A. Data ................................................................................................................................................ 34
   B. Research Design ............................................................................................................................. 43

IV. RESULTS ........................................................................................................................................... 47
   A. Objective #1 –Understand Factors Driving Population Growth ..................................................... 47
   B. Objective #2 - Compare Micropolitan Areas in Iowa to other Regions ......................................... 62

V. CONCLUSIONS .................................................................................................................................. 76

REFERENCES .......................................................................................................................................... 85
ACKNOWLEDGEMENTS

This thesis would not have been completed without the motivation, support and inspiration of a number of people.

First, I would like to thank my thesis committee. Dr. Monica Haddad’s insistence on quality and organization taught me what it means to be a true researcher. Dr. Paul Coates supplied valuable public policy considerations and a clear focus on the big picture. Dave Swenson provided an unparalleled grasp of demographic and population trends. Together they challenged me and illuminated a path for me. I would also like to thank the students, faculty and staff of the Community and Regional Planning and Public Administration departments. Specifically, I want to thank Dr. Susan Bradbury for providing the framework that facilitated the completion of this thesis.

Mike Lipsman and the Tax Research and Policy Analysis Section of the Iowa Department of Revenue were a barrage of economic, statistical and policy experience operating in the realities of my research. They provided the ideal work environment to fully explore the topics of this thesis.

State Representative Mike Reasoner was my inspiration for moving to Iowa and continues to be an ideal example of public service. The Johnston Planning and Zoning Committee, City Council and Community Development Department continuously reminded me that the work they do at the local level impacts how we live.

Clint Brown, by opening his door to me, introduced me to the true essence of Iowa. He showed me the humanity that stands just beyond the data I analyzed.

Finally, I would like to thank my family for their support, patience and inspiration. They never cease to show me why all this matters in the first place.
ABSTRACT

As sluggish growth persists in the state of Iowa, micropolitan areas may provide a viable source for expanding development. This thesis has two primary objectives: to better understand those factors driving population growth among micropolitan areas and to explore micropolitan areas in the state of Iowa as compared to micropolitan areas in other parts of the country. The analyses show a relationship between four of the five growth factors (agglomeration, recreation, immigration, education and diversification) and effective growth rate, the difference between micropolitan population growth and statewide population growth. As the number of qualifying categories increase for a micropolitan area, effective growth rates also increase. Recreation-related factors had the strongest relationship to growth both in Iowa and nationwide. Agglomeration factors performed better in Iowa than nationally, but education factors performed worse. Many Iowa micropolitan areas can capitalize on existing resources in an effort to stimulate population growth.
I. INTRODUCTION

“We need more people if our state is to thrive and prosper.”

-- Iowa Governor Tom Vilsack
As quoted in The Economist, August 18, 2001

During the 20th century, no American state experienced slower population growth than Iowa. Between 1900 and 2000, Iowa’s population grew at 31 percent, while the national growth rate was 270 percent (U.S. Census Bureau, 2000). In 1900, nearly three percent of the U.S. population lived in Iowa. As of the 2000 Census, it was just above one percent. Not only does Iowa have a slow growth rate, large portions of the state have experienced a steady decline in population. The population in 70 of Iowa’s 99 counties peaked more than 40 years ago. In 2000, only 14 Iowa counties recorded new highs in population (U.S. Census Bureau 2002a).

Within the state, growth has primarily been isolated to metropolitan areas. Since 1950, Iowa’s 20 metropolitan counties grew by nearly 50 percent. Yet during the same period, 55 of Iowa’s 62 non-core counties lost residents (U.S. Census Bureau 2002a). The struggle to attract and retain residents to the state of Iowa has perplexed public officials, business people and Iowa residents. Furthermore, if these trends continue, serious consequences could be in store for Iowa in the future.

Iowa is not just growing at a rate slower than most of the country, but it is getting older at a more rapid pace. Iowa’s birth rate is at an all-time low (Iowa Business Council, 2001) and the number of elderly Iowans continues to increase. Only two states have a higher percentage of their population over the age of 75 and no other state has a higher percentage of their population over the age of 85. This is
compounded by an increasing dependence on income transfer payments. In 1998, Iowans received $10 billion in government support, including social security, disability, workers compensation, Medicare and unemployment (Iowa Business Council, 2001). These payments represent 13.8 percent of total personal income in 1998, a 26 percent increase from 1988 (Iowa Business Council). Payments grew at five times the rate of population growth during the same period. Conversely, Iowa has fewer residents of working age to pay for this increase. In fact, only five states have a smaller portion of their population between ages 25 and 64 (U.S. Census Bureau, 2002a). This adds up to a smaller segment of working Iowans being responsible for a growing proportion of public service costs. Without a new influx of working-age residents, Iowa may face a serious fiscal crisis and an inability to provide vital public services in the future.

In 1999, Gov. Tom Vilsack established a Strategic Planning Council to examine these and other challenges facing Iowa over the next decade. This work resulted in the publication of *Iowa 2010: The New Face of Iowa*. One of the most alarming projections to come from this study related to the broadening gap between employment demands and available workers. It was estimated that by 2008, Iowa would need 310,000 new workers just to replace those leaving the workforce. Also, 260,000 additional workers would be required to fill newly created jobs (Strategic Planning Council, 2000). To meet this increased demand, Iowa would need a net increase in workers of 16.2 percent in eight years. Putting this very ambitious goal in perspective, Iowa’s total population grew by only 5.4 percent during the 1990’s.
The latest labor force estimates do not indicate these targets are being achieved. Between 2000 and 2005, Iowa’s labor force grew at only 2.4 percent. The national labor force grew at nearly twice that rate in Iowa during the same time period (Iowa Workforce Development, 2006).

The quantity of jobs is not the only consideration, but also the quality of jobs. A low unemployment rate would be expected to cause wage rates to rise. Although Iowa’s unemployment rate is well below the national rate (Bureau of Labor Statistics, 2007a), it has not led to higher salaries. Iowa’s wages remain below the national average (Bureau of Labor Statistics, 2007b). The number of low-wage jobs in Iowa is becoming a greater portion of total jobs in Iowa. This expansion of low-wage jobs is reflected by persistent poverty rates among working Iowans. One in four workers in Iowa now has wages below the poverty level for a family of four. Additionally, family income among low-wage workers has actually declined over the last 20 years when adjusted for inflation (Fisher and Gordon, 2001). Though Iowa has been able to create some good jobs, the wages have not been commensurate with similar positions across the country. For example, Iowa is ranked 27th among U.S. states in the number of high tech jobs, but the state ranks 44th in high-tech wages, paying only 62 percent of the national rate for these positions (Iowa Coalition for Innovation and Growth, 2003).

Vilsack identified three strategies to stimulate population growth in Iowa. First, it was necessary to keep young, educated people from moving away upon graduation from Iowa’s colleges and universities. Secondly, former Iowans were encouraged to return to the state. Nearly 215,000 direct mail solicitations were sent highlighting the quality jobs available in Iowa. Finally, the third strategy was to bring skilled foreign
immigrants to Iowa. Three Iowa cities were targeted to pilot this program: Fort Dodge, Marshalltown and Mason City. These communities were provided grants to lure foreign immigrants to their communities. Unfortunately, these initiatives failed to achieve their goal.

Nearly 60 percent of university graduates in Iowa leave the state upon graduation. One year after the direct mailings were sent to former Iowans only 675 individuals and families had been persuaded to return. Moreover, petitions were circulated in Fort Dodge and Mason City requesting that local officials oppose the state initiative to attract foreign immigrants (Economist, 2001). Ultimately, attention was averted to other programs and, in the face of strong political opposition Vilsack abandoned the strategy (Hicks, 2006). Although the general premise of the strategy is sound – maintain residents, encourage former residents to return and reach out to foreign immigrants, Iowa continues to struggle to make these objectives a reality. Though attempts have been made to stimulate population growth in Iowa, they have failed. Perhaps an alternative approach is needed. One potential approach may be found in micropolitan areas.

**A. Potential Alternative Approach**

There are several reasons why a program targeting micropolitan areas may serve as a key component for stimulating growth. First, according to Vias, et. al. (2002), micropolitan living is becoming a viable alternative to metropolitan and suburban living.
Micropolitan areas…today seem to embody what many Americans are looking for in terms of a high quality life style. More precisely, micropolitan areas are an outlet for people tired not only of large cities, but also disenchanted with the increasing congestion and problems found in nearby suburban areas as well. For many Americans, micropolitan areas represent a nice compromise between urban and rural living. (Vias, Mulligan and Molin, 2002).

Secondly, people are leaving metropolitan areas. Between 1995 and 2000, there was a net domestic migration of 510,488 residents from metropolitan areas to non-metropolitan areas (Schrachter, Franklin and Perry, 2003). This metropolitan exodus has been occurring for the last 30 years (Gottlieb, 2006). In fact, interstate migrants that previously would only have considered relocating to a major metropolitan area are considering micropolitan areas as well (Vias, Mulligan and Molin, 2002). Additionally, Glavac, et. al. (1998) noted, “Over the past 30 years, [micropolitan] areas as a whole have experienced some of the most significant population changes of any county type in the nation.” With non-core areas in decline, micropolitan areas could be an attractive alternative for these migrants. Residents, however, are not the only ones taking a closer look at micropolitan areas. These areas have also gained the attention of business interests.

El Nasser (2004) stated that micropolitan areas are increasingly targeted for new business facilities due to lower wages, lower rents and lower property taxes than metropolitan areas. Additionally, he noted advances in technology and communication, coupled with ready access to interstate highways, have made the need for businesses to be in metropolitan area less critical. As one can see, businesses are also considering micropolitan areas more seriously.
Although micropolitan areas are appealing, this fact alone does not justify developing a population growth strategy around them, especially in a slow growth state like Iowa. Interestingly, there are a number of slow growth states in which micropolitan areas are growing faster than metropolitan areas, like Wisconsin, Michigan and Pennsylvania. Table 1 provides a few examples of micropolitan areas experiencing robust growth despite being located in slow growth states.

<table>
<thead>
<tr>
<th>Micropolitan Area</th>
<th>Micro Pop. Growth</th>
<th>State Pop. Growth</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Stroudsburg, PA</td>
<td>44.9%</td>
<td>3.4%</td>
<td>41.5%</td>
</tr>
<tr>
<td>Whitewater, WI</td>
<td>25.0%</td>
<td>9.6%</td>
<td>15.4%</td>
</tr>
<tr>
<td>Traverse City, MI</td>
<td>23.3%</td>
<td>6.9%</td>
<td>16.4%</td>
</tr>
<tr>
<td>Garden City, KS</td>
<td>22.5%</td>
<td>8.5%</td>
<td>14.0%</td>
</tr>
<tr>
<td>Kendallville, IN</td>
<td>22.2%</td>
<td>9.7%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Lexington, NE</td>
<td>21.2%</td>
<td>8.4%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Mount Vernon, OH</td>
<td>14.8%</td>
<td>4.7%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Watertown, SD</td>
<td>13.6%</td>
<td>8.5%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

What’s more, Iowa has more micropolitan areas than most other states. Provided Iowa could tap into the success experienced by other slow growth states, micropolitan areas may offer a viable approach to attract new residents. Iowa micropolitan areas grew at only 1.9 percent from 1990 to 2000 (Census Bureau, 2002a). If Iowa’s micropolitan areas had grown at the same rate as Wisconsin micropolitan areas, more than 50,000 additional residents would have moved into the state. The combination of a significant numbers of residents leaving metropolitan areas, the ability of micropolitan areas to grow despite being located in slow growth states and the opportunity afforded by the prevalence of micropolitan areas in Iowa encourages greater consideration of a micropolitan-focused growth strategy.

Iowa is more rural than most other states. Although Iowa has nearly 1,000 incorporated places, only nine are metropolitan areas and 15 are micropolitan areas.
This magnifies the significance of each micropolitan area in Iowa because they have the potential to cluster other firms and people. These micropolitan areas are in a stronger position to sustain and expand their economies and their population than non-core communities because of agglomeration economies. Businesses benefit from being closer to suppliers and end customers, consumers benefit from greater competition and broader selections and communities are more stable due to a larger tax base and more diversified economy (Krugman, 1991).

In order to successfully implement such a strategy, it is necessary to better understand what causes micropolitan areas to grow and how this may be applied to Iowa’s micropolitan areas. Therefore, this paper seeks to better understand some of the factors driving growth in micropolitan areas through qualification of these communities in five categories examining potential growth factors. By comparing Iowa micropolitan areas to similarly categorized micropolitan communities in other parts of the country this study attempts to identify recommendations that may be used to stimulate population growth in Iowa.

**B. Objectives and Research Questions**

This thesis has two primary objectives: to better understand those factors driving population growth in micropolitan areas and to identify differences between Iowa’s micropolitan areas and micropolitan areas in other parts of the country. First, this study will examine the effective growth rate among the 577 micropolitan areas in the United States, as recognized by the Office of Management and Budget (OMB, 2005). Micropolitan areas will be categorized based on five factors: agglomeration,
recreation, immigration, education and diversification. The effective growth rate and the five categories will be explained more fully in Section IIIA. Next, Iowa’s micropolitan areas will be compared to those in other states as a group, as well as individually.

This research will seek to answer the following questions:

1. What factors influence population growth among micropolitan areas?
2. How do micropolitan areas in Iowa compare to micropolitan areas in other parts of the country?

C. Hypotheses

Through this analysis, the following hypotheses will be tested:

1. If a micropolitan area qualifies in one of the five micro categories, then it is more likely to experience a greater effective growth rate.
2. If a micropolitan area qualifies in multiple categories, then it is more likely to experience a greater effective growth rate than those in only one category.
3. If micropolitan areas are included in the same micro categories, then they will experience a similar effective growth rate regardless of their location.

D. Research Framework

A visual representation of the research framework adopted for the testing of the hypotheses is depicted in Figure 1. The process begins with the categorization of all micropolitan statistical areas in the United States based on five categories. Based on the effective growth rate, micropolitan areas will be compared utilizing geographic
divisions. Comparisons will be made between regions of the country and individual states. Additionally, the 15 individual micropolitan areas in Iowa will be compared to similarly categorized micropolitan areas in other parts of the country.

E. Definition of Terms

To fully understand a micropolitan area and its relationship to other geographic terminology, the definitions of several important terms used in this thesis are provided below. Most of these definitions have been provided by the Office of Management and Budget (Federal Register, 2000).

Central County – The county or counties of a Core Based Statistical Area containing a substantial portion of an urbanized area or urban cluster or both, and to and from which commuting is measured to determine qualification of outlying counties.

Combined Statistical Areas (CSA) – A geographic entity consisting of two or more adjacent Core Based Statistical Areas with employment interchange measures of at least 15. Pairs of Core Based Statistical Areas with employment interchange measures
of at least 25 combine automatically. Pairs of Core Based Statistical Areas with employment interchange measure of at least 15, but less than 25, may combine if local opinion in both areas favors combination.

**Core** – A densely settled concentration of population, comprising either an urbanized area (of 50,000 or more population) or an urban cluster (of 10,000 to 49,999 population) defined by the Census Bureau around which a Core Based Statistical Area is defined.

**Core Based Statistical Area (CBSA)** – A statistical geographic entity consisting of the county or counties associated with at least one core of at least 10,000 population, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting tie with the counties containing the core.

**Domestic Migration** – It is the movement of people within national boundaries. It is typically used to identify changes in population excluding the impact of natural increase, or decrease, and foreign immigration.

**Effective Growth Rate** – It is the difference between the percentage change in population for a micropolitan statistical area and the percentage change in population for the state in which the micropolitan statistical area is located. If a micropolitan statistical area is located in multiple states, the mean percentage change in population for the states will be used.

**Employment Interchange Measure** – Used as a measure of interconnectedness between two adjacent entities, it is a sum of the percentage of employed residents of the smaller entity who work in the larger entity and the percentage of employment in the smaller entity that is accounted for by workers who reside in the larger entity.
**Metropolitan Statistical Area** – A Core Based Statistical Area associated with at least one urbanized area that has a population of at least 50,000. It is comprised of a central county or counties containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county as measured through commuting.

**Micropolitan Statistical Area** – A Core Based Statistical Area associated with at least one urban cluster that has a population of at least 10,000, but less than 50,000. It is comprised of a central county or counties containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county as measured through commuting.

**NonCore Area** – Counties that do not qualify for inclusion in a Core Based Statistical Area.

**Outlying County** – A county that qualifies for inclusion in a Core Based Statistical Area on the basis of commuting ties with the Core Based Statistical Area’s central county or counties.

**Principal City** – This is the largest city of a Core Based Statistical Area, as well as all other cities that meet specific statistical criteria.

**Urban Cluster** – A statistical geographic entity, defined by the Census Bureau, consisting of a central place and adjacent densely settled territory that together contain at least 2,500 people, generally with an overall population density of at least 1,000 people per square mile.

**Urbanized Area** – A statistical geographic entity, defined by the Census Bureau, consisting of a central place and adjacent densely settled territory that together contain
at least 50,000 people, generally with an overall population density of at least 1,000 people per square mile.

**F. Limitations of the Study**

Population growth relies on a complex series of events, conditions and circumstances. Although this study attempts to control for many of these factors, changes in growth due exclusively to the five categories being explored can not be claimed. Many communities are similar in character, design and economic condition, but no two communities are identical. The classifications developed in this study are efforts to group similar communities for the purpose of examination. Due to a small sample size in some categories, reliable conclusions could not be achieved.

Only population data from the U.S. Census Bureau in 1990 and 2000 were examined in detail for this study. Although some trends could be identified, a full longitudinal analysis may be necessary to determine whether these trends were persistent over the long term. Since seven years have passed since the last U.S. Census, some population changes not identified through this study are likely. Conversely, some population changes identified in this study may no longer be present.

Although this thesis will examine population growth among all 577 micropolitan areas, the study is designed to address issues specific to the state of Iowa and its 15 micropolitan areas. Whereas some of the results drawn from this research may be applied to other areas of the country, that is not the purpose of this study.
The reliance on third-party data limits the ability to ensure data collection accuracy by the primary source. Only respected federal and state sources were used to supply data for this study.

**G. Organization of the Study**

This thesis is organized into five chapters. This chapter has provided an overview of the challenges facing Iowa, micropolitan areas and the focus of this study. The second chapter is a review of research that has been done regarding micropolitan areas and population growth. This research explores micropolitan areas in four sections: micropolitan areas as a concept, regional considerations and population concentration and dispersion in micropolitan areas, public policies relating to micropolitan areas in Iowa and categorization of micropolitan areas. The third chapter focuses on research methodology through an explanation of the data being utilized and the research design that will be followed. The fourth chapter provides the results of the study by addressing each of the two objectives, three research questions and three hypotheses. The final chapter presents the conclusions drawn from this research and suggestions for future research.
II. LITERATURE REVIEW

This chapter is separated into four sections each examining a critical area of research pertinent to this study. In Section A, the development of micropolitan areas as a concept will be explored, as well as how micropolitan areas relate to current trends in U.S. population growth. In Section B, the role of population concentration and dispersion are examined in relation to population growth among micropolitan areas. Section C outlines current public policies and initiatives in Iowa intended to attract and retain residents. Finally in Section D, research relating to the five micro categories is discussed.

A. Micropolitan Areas

In order to understand the micropolitan area, it is important to first recognize the evolution of the metropolitan area concept, which dates back more than 150 years. “Metropolitan area” arose from the recognition that the expanse of concentrated urban areas tended to exceed the confines of one particular city, especially as city populations continued to increase. Recognition of the economic and social relationship between Boston and neighboring communities were highlighted in an article appearing in the *New England Gazetteer* in 1846. The article pointed out that suburban cities of Boston were “associated with it in all its commercial, manufacturing, literary and social relations” (Hayward, 1846).

The first official attempt by the U.S. Census Bureau to define a geographic area based on the concept of a metropolitan area was the identification of four “industrial districts” (New York, Chicago, Boston and St. Louis) for the Census of
Manufacturers in 1905. The 13th Federal Census in 1910 marked the first time “metropolitan districts” were recognized during a decennial census. Such districts were defined as cities with a population of 100,000 or more. At that time, 50 cities qualified for the classification. In 1930, the qualification threshold was reduced to a population of 50,000 allowing a total of 96 cities to be recognized (FCSMSA, 1979).

During that time, metropolitan districts were defined geographically based on minor civil divisions (MCDs), which are typically represented by county subdivisions such as townships or election districts. Population density was also used to delineate the boundaries of metropolitan districts. However, these designations were discovered to be of little use to federal, state and local agencies for socioeconomic data. This socioeconomic analysis typically used counties as the geographic element of data collection instead of MCDs. In order to coordinate their data collection to metropolitan areas, these agencies began using alternative metropolitan boundaries based on entire counties. In an effort to remedy this inconsistency, the Census Bureau implemented two new terms for the 1950 census – the standard metropolitan area (SMA) and the urbanized area (UA). A standard metropolitan area was composed of entire counties while an urbanized area referred to the central city and the densely populated area surrounding it (FCSMSA, 1980). Today, the population located in a UA is used to qualify a community as a metropolitan area, but the entire county is used to define the boundaries of a metropolitan area.

Excluding minor adjustments, the general definitions of these geographic classifications remained relatively consistent until the 2000 census. It was at that time that the “micropolitan statistical area” was established. Whereas a metropolitan
statistical area (MSA) is defined by the county, or counties containing an urban concentration (referred to as an urbanized area) with a population of 50,000 or more, the micropolitan statistical area is represented by the county or counties containing a smaller urban concentration (referred to as an urban cluster) of 10,000 to 50,000 residents. Figure 2 identifies all U.S. counties and other county equivalents, such as boroughs, parishes and census areas, into one of the three statistical areas established by the OMB after the 2000 U.S. Census, metropolitan, micropolitan or non-core. All communities that qualify as a metropolitan and micropolitan statistical area are referred to as core-based statistical areas (CBSA) with all other counties being referenced as non-core areas (Office of Management and Budget, 2005).

Figure 2. Core Based Statistical Areas in the United States

Although 2000 was the first time the U.S. Census delineated micropolitan statistical areas, the U.S. Department of Agriculture (USDA) had been disaggregating
non-metropolitan counties based on their degree of urbanization for more than 25 years. In 1974, the USDA developed an urban-rural continuum containing nine county codes. The continuum separated metropolitan counties into three categories based on population and non-metropolitan counties into six categories based on degree of urbanization and proximity to metropolitan areas (Hines, Brown and Zimmer, 1975).

It was not until 1990 that a more extensive examination of the metropolitan concept was undertaken by the Office of Management and Budget. The Metropolitan Concepts and Statistics Project was established to address three growing concerns with the geographic definitions used by the U.S. Census Bureau in 1990. First, many researchers believed the criteria being used for metropolitan areas was overly complex and somewhat arbitrary. Secondly, advances in computer-based data collection, storage and analysis reopened consideration of more accurate sub-county geographic building blocks for metropolitan areas. Third, the practice of only identifying metropolitan areas and thus relegating 80 percent of the country’s territory into a non-metropolitan classification was considered to be no longer acceptable. The project quickly evolved into a prolonged process to develop a new system for recognizing both metropolitan and non-metropolitan in a more inclusive way (Brown, Cromartie & Kulcsar, 2004).

Although the importance of identifying micropolitan areas for socioeconomic analysis may be clear, the significance they may play in future patterns of population growth are still unknown. According to the 2000 U.S. Census, micropolitan areas represent just over 10 percent of American residents. In contrast, metropolitan areas represent more than 80 percent of American residents (U.S. Census Bureau, 2002a).
However, the current population distribution may not fully express the significance of micropolitan areas today and in the future.

For example, an examination of the 50 counties with the greatest rate of population growth between 1950 and 2000 would indicate 40 are in metropolitan areas. However, of these 50 counties only seven were classified as metropolitan areas in 1950. Another 22 were incorporated into existing metropolitan areas during the 50 year period, such as Atlanta, Dallas and Denver, due to suburban expansion. The remaining 21 counties are new metropolitan areas, micropolitan areas or non-core areas. More specifically, 21 of the 50 fastest growing counties in the United States represent former micropolitan areas (Las Vegas, NV), current micropolitan areas (Lake Havasu, AZ), and future micropolitan areas (Aspen, CO). In other words, many of today’s rapidly expanding counties are past, present and future micropolitan areas.

This phenomenon is not limited to rapidly expanding regions. In fact, the impact of micropolitan counties is even more pronounced in slower growing states.

Examining five Midwestern states that have struggled to attract and retain residents, micropolitan areas have played a significant role in the population growth that these states experienced. For example, in Nebraska 10 of the state’s 20 fastest growing counties are in micropolitan areas. In Kansas, eight of the top 20 counties are micropolitan. South Dakota micropolitan areas represent eight of the 20 fastest growing counties in the state with the Rapid City metropolitan area representing two of the three fastest growing counties. North Dakota had no counties qualified as metropolitan in 1950 and experienced the slowest population growth between 1950 and 2000 of any state. Only nine North Dakota counties saw their population increase
in that time period. Of those nine counties, three are micropolitan areas (U.S. Census Bureau, 2002a). Iowa exhibits similar growth patterns. Six of Iowa’s 20 fastest growing counties are micropolitan.

### B. Regional Variances – Population Dispersion vs. Concentration

To better understand growth among micropolitan areas, it is important to examine the impact of larger regional growth patterns. It would appear that micropolitan areas tend to grow more rapidly in the areas of the country experiencing the greatest overall growth. Mulligan and Vias (2006), in locating the spatial mean for the micropolitan population between 1980 and 2000, determined that like the U.S. population the micropolitan population is generally moving south and west. Yet, this does not address the factors driving this movement.

Historically, population concentration was used to explain the growth and movement of people within and among cities. In 1933, Walter Christaller, a German geographer, proposed the Central Place Theory. Christaller surmised that if centralization of mass around a nucleus is the elementary form of order in nature, the same might explain the settlements of urban areas. He outlined a theory based on the hierarchical arrangement of settlements relying on the concepts of centrality, threshold and range. According to Christaller’s theory, centrality is the draw people have to a certain place. Threshold is the minimum market required to create new providers of goods or services and keep it operating. Range is the average minimum distance people will travel to buy goods and services (Christaller, 1933). This population concentration perspective on growth and migration has been accepted by a number of
researchers to explain growth patterns in the United States for decades. Furthermore, more recent theories in economic agglomeration also rely on similar assumptions (Krugman 1991; Fugita and Thisse, 2005; Johannson and Quigley, 2004).

Christaller’s concept of an urban hierarchy - smaller places embedded within larger geographic areas - provide a structure to explain the flow of goods as well as the migration of residents. Traditionally, the flow of residents tended to go from smaller areas to larger areas or “up the urban hierarchy” (Frey and Speare, 1988). Similarly, central-place theory claims that larger urban areas dominate larger regional markets, thus pulling new residents from greater and greater distances (Elliott and Perry, 1996).

Interestingly, this concentration of population perspective faced significant opposition after the 1980 census. For the first time in modern American history, a larger proportion of people were moving away from metropolitan areas. Between 1975 and 1980, a net domestic migration of 996,072 people left metro areas for non-metro areas (Schrachter, Franklin and Perry, 2003). John Wardwell (1980) coined this phenomenon as the “migration turnaround” indicating that technology and growing affluence were making social organization less reliant upon spatial relationships. People and firms were better able to move to less concentrated areas without increasing production costs, losing market share or sacrificing lifestyle amenities. Although the 1980’s saw a much smaller net domestic migration of 51,414, it was still a migration away from metropolitan areas. The early 1990’s saw the trend ramp up again leading some researchers to conclude the long-term trend was toward dispersion and that metro and non-metro areas were entering a period of equilibrium (Johnson and Beale, 1994).
A growing number of researchers began to support Wardwell’s “migration turnaround” concept, but some identified different reasons for it. One interpretation was referred to as “regional restructuring.” Although it recognized the dispersion of population as preeminent, it did not conclude that spatial relationships had lost relevance. Instead, this movement was the result of a changing, post-industrial economy. People and firms were moving from older, industrial centers to new, service-based economies (Frey, 1987).

One possible explanation for this migration away from metropolitan areas may be the desire to escape the growing problems associated with metro and suburban living. In a national survey by the Pew Center for Civic Journalism, respondents were asked to identify the most important problem facing their community. Issues relating to sprawl and crime were the issues most identified by respondents as the biggest problem in their community (Pew Center, 2000).

Further examination of the survey results reveals that more than one in four suburban residents identified sprawl-related issues as their biggest problem. This was nearly twice the rate among rural areas, which included micropolitan areas. Rapidly expanding communities identified it as an even bigger issue. In fact, 60 percent of respondents in the Denver area chose sprawl-related issues as their biggest problem. When all respondents were asked more specific questions relating to sprawl, 35 percent indicated traffic congestion is a big problem.

Not only is sprawl a problem, but commute time is an issue as well. As metropolitan areas continue to expand geographically, transportation issues become a greater problem. Thirty-two percent of respondents to the Pew Center survey indicated
that they drive more than 30 minutes to work one way. In a similar 1993 Pew Study, only 25 percent indicated they commuted more than 30 minutes one way (Pew Center, 2000). Not surprisingly, these issues were of greater concern among metro and suburban residents, with 51 percent and 46 percent respectively indicating that traffic congestion was a big problem in their community. Conversely, only 18 percent cited the issue as a problem in rural and micropolitan areas (Pew Center, 2000). These results may not fully explain domestic migration patterns, but they do provide some of the perceived drawbacks related to urban and suburban living.

Another possible driver for this migration from metro to non-metro areas could be changes in American demographics. Isserman (2001), in examining population growth in rural areas, identifies the growing elderly population as one possible factor for a movement toward dispersion. Traditionally, non-metropolitan areas have had a larger proportion of older residents. Older residents in non-metro areas generally have less income, are less educated, have a higher reliance on social security income and have a greater demand for medical, social and financial assistance (Beale, Cromartie and Kandel, 2007). However, a new dynamic has begun to emerge among this age cohort.

With the elderly population expected to nearly doubling between 2000 and 2025, an increase of 28 million (U.S. Census Bureau, 2000), the residential decisions of this segment of the population will significantly impact communities throughout the United States. A propensity to migrate to non-metro areas increases as Americans retire (Beale, Cromartie and Kandel, 2007). Those reaching retirement age in the next decade have shown a consistent pattern of moving to non-metro areas than their
predecessors before retirement (Beale, Cromartie and Kandel, 2007). As a result, it is worth considering the potential impact that a growing elderly population, with a greater tendency toward non-metro areas, may have on slow growth states. Although the growing elderly population in Iowa has been raised as a potential problem due to a lack of adequate working age residents, the elderly may also represent a potential boon for Iowa.

Isserman (2001) points out that today’s elderly are perhaps the wealthiest retired generation in the nation’s history. They are living longer and many are expected to seek retirement homes in desirable settings outside metropolitan areas. This demographic group is beginning to attract the attention of smaller communities as a potential source of economic development (Isserman, 2001). Micropolitan areas with desired amenities may be well positioned to attract the elderly. Accordingly, Iowa may be able to leverage their experience with the needs of the elderly to appeal to this growing segment of the population.

**C. Current Policies in Iowa**

Although there have been few public policy initiatives designed exclusively to attract and retain residents in Iowa, a large number of projects been developed to stimulate local economies and create jobs. Numerous studies have been done regarding the relationship between employment and population growth nationwide (Boarnet, 1994; Duffy-Deno, 1998; Vias, 1999; Henry, Barkley and Bao, 1997; Carlino and Mills, 1987; Clark and Murphy, 1996), and nearly all of these studies struggled with the question of whether employment leads to population growth or visa
versa. The Mulligan and Vias (2006) study considered this issue specific to micropolitan areas. Examining employment and population changes between 1980 and 2000, they found that the relationship was not bi-directional. “During both decades population features fueled further population and employment growth, but employment features (especially in the 1980s) did not exhibit the same strong and unambiguous effect on either population or employment growth” (Mulligan and Vias, 2006). This conclusion may put into question the current approaches used in Iowa to address economic development. While the success of Iowa programs are often gauged by the ability to create new jobs or increase local investment, rarely is reference made to population growth. Considering the projected job gap and the slower-than-average growth rate in Iowa, this may be a significant - and potentially costly - oversight.

In 2005, Iowa spent $437 million in economic development incentives to businesses. There are several statewide programs in Iowa to address these issues however none of them specifically focuses on population growth. These programs generally fall into one of three categories: tax credit programs, tax increment financing programs or economic development programs.

**Tax Credit Programs**

Tax credit programs utilize changes in the tax code rather than direct expenditures to stimulate economic growth. There are basically two types of tax credit programs, automatic and awarded. An automatic tax credit is not capped and may be claimed by any eligible taxpayer. An awarded tax credit requires an application and may be capped or uncapped. These programs have grown in popularity in Iowa over the last several years. Since 2001, the total number of tax credits claims has increased
substantially with the amount of total credit awards nearly doubling. In the last two years alone, Iowa has created ten new tax credit programs (Iowa Department of Revenue, 2006). Theses programs have an estimated annual cost of about $155 million (Iowa Policy Project, 2007). This value is projected to nearly double in the next five years (Iowa Department of Revenue, 2006). Here are some of the largest tax credit programs in Iowa.

**Enterprise Zone Program** – This program, administered by the Iowa Department of Economic Development, is intended to promote new economic development in economically distressed areas. Businesses locating in distressed areas can be eligible for tax incentives and assistance. This is the largest program representing nearly 90 percent of all tax credit awards. Since 1998, the program claims the creation of 7,772 jobs and a capital investment of $1.6 billion at a cost of $348 million in tax credits. During this period, 178 enterprise zone tax credits were awarded for businesses, 25 in micropolitan areas. Although this represents 14 percent of projects, they are projected to create only 9 percent of jobs. Among jobs already created, only 3.3 percent are in micropolitan areas. Only seven of Iowa’s 15 micropolitan areas have been awarded an enterprise zone tax credit. There are also 313 awards for housing enterprise zones with 38 going to micropolitan areas (Iowa Department of Economic Development, 2007a). Tax credit awards for enterprise zones have grown fourfold from 2004 to 2006, from $20.7 million to $82.5 million (Iowa Policy Project, 2007).

There are some researchers who question the cost effectiveness of enterprise zones. Peters and Fisher’s (2002) research indicated that enterprise zones, while
encouraging new investment and new employment, may still not be fiscally cost effective for the government. Their study estimated each induced job, a job that would not have been created without the program, would generate $7,200 in net additional revenue to the state government and $11,000 to the local government over 20 years. Conversely, every non-induced job, a job not created by the program but funded through the program, would cost the state government $4,600 and the local government $3,200. According to these figures, if at least 30 percent of total jobs are induced the program would be cost effective. However, current research consensus suggests that figure is closer to 9 percent (Peters and Fisher, 2002). This translates into a loss of $7,130 per job to state and local governments.

**High Quality Job Creation Program** – This program, also administered by the Iowa Department of Economic Development, provides tax benefits to companies that create high-paying jobs and make capital investments. The program was created in 2005 and replaced the New Jobs and Income Program and the New Capital Investment Program. This program places greater emphasis on creating high-paying jobs and providing capital investment to Iowa’s communities. The total value of tax credits declined with this program compared to the two programs it replaced from a combined $63.9 million in 2005 to $44.7 million in 2006 (Iowa Policy Project, 2007).

**Endow Iowa Tax Credit** – This program provides tax credits to businesses and individuals to encourage donations to non-profit organizations. This tax credit, which began in 2004, is equal to 20 percent of a taxpayer’s gift to a qualified community foundation (Iowa Department of Revenue, 2006). Table 2 lists the state budget allocation for each program between 2002 and 2006.
Table 2. Tax Credit Awards for Iowa Department of Economic Development Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise Zones</td>
<td>$68.9M</td>
<td>$13.3M</td>
<td>$20.7M</td>
<td>$45.0M</td>
<td>$82.5M</td>
</tr>
<tr>
<td>High Quality Job Creation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$44.7M</td>
</tr>
<tr>
<td>New Capital and Income</td>
<td>$20.1M</td>
<td></td>
<td></td>
<td></td>
<td>$18.4M</td>
</tr>
<tr>
<td>New Jobs and Income</td>
<td>$25.0M</td>
<td>$47.5M</td>
<td>$40.4M</td>
<td>$45.5M</td>
<td></td>
</tr>
<tr>
<td>Enterprise Zones – Housing</td>
<td>$9.9M</td>
<td>$4.7M</td>
<td>$16.5M</td>
<td>$16.5M</td>
<td>$25.4M</td>
</tr>
<tr>
<td>Endow Iowa</td>
<td>$1.0M</td>
<td></td>
<td>$2.0M</td>
<td></td>
<td>$2.0M</td>
</tr>
<tr>
<td>TOTAL FOR ALL PROGRAMS</td>
<td>$103.7M</td>
<td>$65.6M</td>
<td>$98.8M</td>
<td>$127.4M</td>
<td>$154.6M</td>
</tr>
</tbody>
</table>

Source: Iowa Policy Project (2007)

Tax Increment Financing

Tax Increment Financing (TIFs), established in 1979, allow cities and counties to use the property taxes resulting from an increase in taxable valuation caused by new construction to provide economic development incentives to a business. In other words, a community “rewards” a business for locating in a TIF district with a tax credit. This tax credit is funded by future revenues the community generates due to rising assessed valuation on the property. This program has been controversial because some people believe it is not delivering the intended results. TIFs are intended to encourage businesses to develop in blighted areas where they might not ordinarily build. Also, they are intended to improve the conditions for those currently living in blighted areas. Some argue that many of the projects currently using TIFs would have been developed even without the incentive. Additionally, some projects that are being supported actually displace the residents it is intended to help. Currently, $181 million in increased property tax valuation is being diverted by cities and counties through TIFs (Iowa Policy Project, 2007).

Swenson and Eathington (2006), in examining the impact of TIFs on Iowa communities concluded that metropolitan areas received the vast majority of the
program’s benefits. Seventy-five percent of TIF growth in Iowa occurred in the 20 metropolitan counties. They question whether the program is benefiting Iowa in a uniform manner. “Many of Iowa’s small to medium sized cities…have aggressively deployed TIF authority, yet the return on their efforts is small compared to the much more lucrative use of TIP authority in metropolitan areas” (Swenson and Eathington, 2006).

**Economic Development Programs**

Economic development programs can be in the form of direct cash assistance, grants, loans or forgivable loans. Iowa currently spends about $101 million annually on these programs. Here are a few examples of Iowa economic development programs.

**Grow Iowa Value Funds** – This program was created in 2003 to provide direct financial assistance to companies in order to create jobs, grow the economy and help generate wealth. This program receives $50 million annually to support business development and assistance, university research, regional economic development, historic preservation and cultural entertainment. There were a total of 384 projects in this program by 2007 pledging to create more than 30,000 jobs and capital investment of $7.3 billion (Iowa Department of Economic Development, 2006). Among the 224 projects currently under contract 26 are in micropolitan areas. Interestingly, many of the projects receiving Grow Iowa Value Fund money had also received enterprise zone tax credits.

**Community Economic Betterment Account (CEBA)** – This program provides loans and forgivable loans to companies to create jobs and retain existing jobs that are in jeopardy of leaving the state. This program receives $5.3 million annually.
Community Development Block Grants (CDBG) – This program provides grants to cities and counties for public facilities, housing rehabilitation, neighborhood revitalization and economic development. This program receives $3.5 million annually.

Revitalize Iowa’s Sound Economy Project (RISE) – This program is intended to promote economic development through the construction or improvement of Iowa roads. The program receives $20.5 million annually.

Physical Infrastructure Assistance Program (PIAP) – This program provides financial assistance for physical infrastructure necessary for business development, redevelopment projects and job creation. This program receives $5.2 million annually.

Value-Added Agricultural Products and Processes Financial Assistance Program – This program provides financial assistance to new and innovative value-added agricultural businesses and to renewable fuel facilities. The program receives $3.7 million annually.

Wage subsidy program as part of 260E program – This program receives $13.0 million annually.

Other Programs

Vision Iowa Program – This program, established in 2000, is a financial assistance program to provide funding to communities for construction projects relating to recreation, education, entertainment and cultural activities. The stated goal of the program is to enhance the quality of life in Iowa. Assistance is provided for construction on major attractions with a total cost of $20 million or more. Eighteen applications have been received since the creation of the program with 12 being funded $218 million in grants and loans. Among the 12 programs receiving funds, four
are located in micropolitan areas (Burlington, Clinton, Ottumwa and Storm Lake) with funding that totals $24 million (Iowa Department of Economic Development, 2007b). Although job creation is one consideration for funding, applicants may identify other economic impacts provided they are adequately substantiated. The program has $9 million still available to award.

**Community Attraction and Tourism (CAT) Program** – This program is part of the Vision Iowa Program, but it targets projects costing less than $20 million. Similarly focused, this program provides financial assistance for community attraction and tourism projects. The program is currently funded at $12 million a year through 2010. Through 2006, this program has given awards to 215 projects totaling $70 million. Of those awards, 35 went to micropolitan areas totaling $14.7 million (Iowa Department of Economic Development, 2007b).

**Iowa Power Fund** - During the 2007 legislative session, the Iowa General Assembly created another new program entitled the Iowa Power Fund. This fund will create an office of Energy Independence and receive $100 million over the next four years to promote the development of alternative energy technologies.

**D. Theoretical Perspective**

Although micropolitan areas are a new classification, some researchers have been studying these intermediate-sized communities for many years. All of the growth factors included in this study have been used by other researchers to examine micropolitan areas. However, an combined analysis of all five factors has not been discovered in the literature. Mulligan and Vias (2006) provided some initial analysis of
agglomeration on micropolitan growth. Having examined the contrasting character of micropolitan areas in relation to other non-metropolitan areas, they concluded that micropolitan areas were actually more closely associated with smaller metropolitan areas than other non-metropolitan areas (Vias, Mulligan and Molin, 2002). Although these studies provided an initial glimpse of micropolitan areas, the agglomerated focus was from a regional perspective.

Paul Gottlieb, although not specifically focused on micropolitan areas, provides a basis to better understand population growth in micropolitan areas through his analysis of decentralization (Gottlieb, 2006). Gottlieb saw the benefits of agglomeration, viewed by many as the driving force behind a continuing movement toward greater urban concentration. (Krugman, 1991; Fugita and Thisse, 2005) However, he also saw there benefits becoming offset by the increasing strains associated with congestion. He identified large, densely populated metropolitan areas experiencing an out-migration toward smaller communities.

With literature pointing to agglomeration as a factor in population growth among micropolitan areas, this study will seek to identify the significance of proximity to metropolitan areas on population growth in micropolitan areas. All micropolitan areas identified as part of a combined statistical area (CSA) by the U.S. Census Bureau that also contains a metropolitan statistical area will be identified as “Agglomerated Micros” for the purpose of this study.

The second growth factor to be explored is recreation. According to an economic research report conducted by Reeder and Brown (2005) for the U.S. Department of Agriculture, rural tourism generally leads to improved socioeconomic
conditions for a community. This study identified 311 non-metro recreation counties in the contiguous 48 states, many of which were micropolitan areas. Population growth was one of the significant factors setting non-metro recreation counties apart from other non-metro counties. Between 1990 and 2000, population growth among non-metro recreation counties was 20.2 percent compared to 6.9 percent among other non-metro counties (Reeder & Brown, 2005). All micropolitan areas meeting the qualifications used for recreation counties, as identified by Reeder and Brown, will be identified as “Recreation Micros” for the purpose of this study.

Immigration is the third growth factor that will be examined. According to the U.S. Census Bureau, there were 31 million foreign-born residents in the U.S. in 2000 (U.S. Census Bureau, 2002). It is also estimated that an additional 1 million new immigrants arrive each year (Deardorff, 2003). More than half of all foreign-born residents are from Latin America. Although Latinos traditionally settled in large metropolitan areas, a growing number have chosen smaller towns in which to live (Gonzalez Wahl, Breckenridge and Gunkel, 2006). Drawn by industrial and agricultural jobs, many new immigrants are choosing micropolitan communities. In an effort to examine those micropolitan areas with a substantial foreign-born population, all micropolitan areas with a foreign-born population of at least 5.3 percent, or 150 percent of the mean among micropolitan areas, will be identified as “Immigration Micros” for the purpose of this study.

Education will be examined as the fourth growth factor. Sander (2006), in analyzing the relationship between residential location and educational attainment, discovered that central cities and suburban areas have significantly higher levels of
educational attainment than more rural communities. He attributed this to both the greater tendency of residents in urban areas to pursue higher education and the migration of those attaining a higher education to more populated areas. Yet, through his research he also discovered that this disparity has declined over time (Sander, 2006). Frey (2004) points out that an increasing demand for more educated workers has created a competition among communities. He found a strong correlation between increases in population growth and increases in educational attainment among its residents. Although both Sander and Frey were primarily focused on metropolitan areas, both highlighted the reciprocal relationship between migration and educational attainment. All micropolitan areas with more residents attaining a college degree than not attaining a high school diploma will be identified as “Education Micros” for the purpose of this study.

Diversification will be the fifth growth factor examined. Many micropolitan economies traditionally relied on a limited number of industries, such as mining, farming and manufacturing. Mulligan and Vias (2006) explored the role of industrial specialization on micropolitan growth. They found that micropolitan areas that were less specialized, or more diversified, tended to experience greater population growth. All micropolitan areas identified by the Economic Research Service of the U.S. Department of Agriculture categorized as having a “non-specialized” economic dependence will be identified as “Diversified Micros” for the purpose of this study.
III. RESEARCH METHODOLOGY

This thesis is intended to better understand why certain micropolitan areas in the United States attract and retain residents while others do not. Further, this study will focus on the 15 micropolitan areas located in Iowa. By discerning the relative importance of specific growth factors among all 577 micropolitan areas in the United States, and through relative assessment of Iowa’s micropolitan areas, possible public policy recommendations will be identified for Iowa’s micropolitan areas. This chapter provides a detailed explanation of the variables that were utilized in this study and the research design used to analyze the data.

A. Data

This section explains each of the five growth factors and the specific variables that will be used to qualify micropolitan areas in each category. Table 3 provides a brief explanation of each variable, the time period being used and the source of the data. Each of the five categories relies on at least one statistical value to determine a micropolitan area’s qualification in the category. Table 4 highlights statistical characteristics for each category from the analysis of this data relative to the effective growth rate.

Independent Variable #1: Agglomerated Micros - Along with the creation of the micropolitan statistical areas in 2003, the Office of Management and Budget also established the combined statistical area (CSA). These new areas are created when any two core-based statistical areas (CBSA) are adjacent to one another with an employment interchange measure between the two areas of at least 25 percent (Office
Table 3. Independent Variable Explanations for Objective One

<table>
<thead>
<tr>
<th>Variable</th>
<th>Explanation</th>
<th>Time Period</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variable #1: Agglomerated</td>
<td>Included as part of a Combined Statistical Area (CSA) that contains a Metropolitan Statistical Area (MSA)</td>
<td>Based on U.S. Census Bureau population estimates through 2004</td>
<td>Office of Management and Budget Bulletin No. 06-01</td>
</tr>
<tr>
<td>Independent Variable #2: Recreation</td>
<td>Determined by combination of reliance on recreation-related industries for employment and income, portion of seasonal housing and per capita receipts from motels and hotels</td>
<td>Based on 2004 County Typology</td>
<td>Economic Research Service, U.S. Department of Agriculture</td>
</tr>
<tr>
<td>Independent Variable #3: Immigration</td>
<td>Percentage of foreign-born population is 5.3% or greater</td>
<td>2000 U.S. Census</td>
<td>U.S. Census Bureau</td>
</tr>
<tr>
<td>Independent Variable #4: Education</td>
<td>A larger percentage of population has a Bachelor’s Degree or more than do not have a high school diploma or equivalent</td>
<td>2000 U.S. Census</td>
<td>U.S. Census Bureau</td>
</tr>
<tr>
<td>Independent Variable #5: Diversified</td>
<td>Farming, mining or federal/state government did not account for 15% of earnings, or manufacturing for 25%, or service for 45%</td>
<td>1998-2000</td>
<td>Economic Research Service, U.S. Department of Agriculture</td>
</tr>
<tr>
<td>Dependent Variable: Effective Growth Rate</td>
<td>Difference between micropolitan area population growth percentage and state population growth percentage</td>
<td>Between 1990 and 2000</td>
<td>U.S. Census Bureau</td>
</tr>
</tbody>
</table>

Table 4. Descriptive Statistics for Five Independent Variables and Dependent Variable

<table>
<thead>
<tr>
<th>Category</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Qualification Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomeration Employment Interchange Measure</td>
<td>58.7%</td>
<td>0.1%</td>
<td>7.6%</td>
<td>7.4%</td>
<td>&gt; 25.0%</td>
</tr>
<tr>
<td>Recreation Weighted Index</td>
<td>7.2220</td>
<td>-0.6923</td>
<td>0.0589</td>
<td>0.7976</td>
<td>&gt; 0.6700</td>
</tr>
<tr>
<td>Immigration Foreign-Born Population %</td>
<td>37.8%</td>
<td>0.3%</td>
<td>3.5%</td>
<td>4.6%</td>
<td>&gt; 5.3%</td>
</tr>
<tr>
<td>Education % w/ bachelor’s degree less % w/o high school diploma</td>
<td>56.8%</td>
<td>-58.4%</td>
<td>-6.8%</td>
<td>13.5%</td>
<td>&gt; 0.0%</td>
</tr>
<tr>
<td>Diversification</td>
<td>Farming 12.8%</td>
<td>0.0%</td>
<td>1.2%</td>
<td>1.6%</td>
<td>&lt; 15.0%</td>
</tr>
<tr>
<td>Mining 40.7%</td>
<td>0.0%</td>
<td>1.6%</td>
<td>5.0%</td>
<td>&lt;15.0%</td>
<td></td>
</tr>
<tr>
<td>Manufacturing 65.8%</td>
<td>0.0%</td>
<td>24.9%</td>
<td>15.1%</td>
<td>&lt;25.0%</td>
<td></td>
</tr>
<tr>
<td>Services 52.6%</td>
<td>0.0%</td>
<td>18.0%</td>
<td>6.7%</td>
<td>&lt;45.0%</td>
<td></td>
</tr>
<tr>
<td>Government 14.5%</td>
<td>0.0%</td>
<td>10.2%</td>
<td>11.7%</td>
<td>&lt;15.0%</td>
<td></td>
</tr>
<tr>
<td>Effective Growth Rate</td>
<td>52.2%</td>
<td>-39.9%</td>
<td>-3.1%</td>
<td>11.3%</td>
<td>N/A</td>
</tr>
</tbody>
</table>
of Management and Budget, 2005). The employment interchange measure is a sum of the percentage of employed residents of a smaller county who work in a larger county and the percentage of total employment in the smaller county that is accounted for by workers who reside in the larger county. Any micropolitan area included in a CSA that also includes a metropolitan area will be identified as an “agglomerated micro.” There are 139 micropolitan areas that meet this condition (Figure 3). There are also 19 micropolitan areas identified as part of a CSA that does not include a metropolitan area that will not qualify in this category.

**Figure 3. Agglomerated Micros**

![Map of Agglomerated Micros](image)

**Independent Variable #2: Recreation Micros** – In an effort to better understand the different economic and social conditions in non-metropolitan areas, the ERS of the USDA undertook extensive research based on the 2000 U.S. Census. This analysis was based on empirical measures established by Beale and Johnson (1998), which was modified in 2002 (Johnson and Beale, 2002). The ERS identified several advantages of this approach including the ability to identify not just places with
significant tourism-related activity, but also significant seasonal residents (Reeder & Brown, 2005).

This research categorized non-metro counties into seven overlapping policy-relevant categories. One of these categories was rural recreation counties. Qualification within this category was determined based on a weighted index regarding three components: recreation-related employment (RRE), recreation-related income (RRI) and seasonal housing units (SHU). ERS regarded this weighted average as advantageous since it allows for the examination of variations between communities based on the “extent of recreation” (Reeder & Brown, 2005). Recreation-related industries include entertainment and recreation (North American Industry Classification System (NAICS), code number 713), accommodations (NAICS 721), eating and drinking place (NAICS 722) and real estate (NAICS 531). For each of the
components, a z-score was established using the following formula:

\[ z\text{-score} = \frac{\text{Micro Value} - \text{Mean Value}}{\text{Standard Deviation}} \]

The three z-scores were then combined resulting in the weighted index. The index was determined using the following formula:

\[ \text{Weighted Index} = 0.3 \times \text{RRE} + 0.3 \times \text{RRI} + 0.4 \times \text{SHU} \]

Any micropolitan area with an index score of 0.67 or higher was regarded as a recreation county. This same formula was used to determine qualification as a rural recreation county by ERS. Using this formula, 71 micropolitan areas qualified as recreation micros (Figure 4).

**Independent Variable #3: Immigration Micros** – The U.S. Census Bureau defines the foreign-born population as people who were not U.S. citizens at birth (U.S. Census Bureau, 2002c). All individuals who indicated that the United States was their usual place of residence were counted as part of the census. Foreign-born population specifically includes: “immigrants (legal permanent residents), temporary migrants (e.g., students), humanitarian migrants (e.g., refugees), and unauthorized migrants (people illegally residing in the United States)” (US Census Bureau, 2002c). If the foreign-born population in a micropolitan area represents at least 5.3 percent of the population, or 150 percent of the mean among micropolitan areas, it is identified as an immigration micro. Based on this calculation, 106 micropolitan areas qualified as immigration micros (Figure 5).

**Independent Variable #4: Education Micros** – The U.S. Census Bureau also recorded educational attainment for all residents age 25 and older (U.S. Census Bureau,
2002b). This table splits the results between men and women. For the purpose of this study, a comparison was made between the number of micropolitan residents who achieved at least a bachelor’s degree and the number of residents who did not graduate from high school. All micropolitan areas in which the total population achieving at least a bachelor’s degree was greater than the total not graduating from high school are identified as education micros. A total of 155 micropolitan areas qualified in this category (Figure 6).

**Independent Variable #5: Diversified Micros** – A central focus of the research being conducted by the ERS was to identify the industries driving the economy in non-metro counties. This was highlighted through the establishment of six non-overlapping economic dependence categories. The six categories are farming-dependent, mining-dependent, manufacturing-dependent, federal/state government-dependent, services-dependent and non-specialized. Economic dependence is determined by labor and proprietors’ earnings by place of work. The earnings from each industry were
calculated as a percentage of total earnings for each county in the years 1998, 1999 and 2000. These percentages were added together and divided by three in an effort to minimize any one year anomalies. All earnings estimates were derived from the Bureau of Economic Analysis’ (BEA) Regional Economic Information System (REIS). The ERS conducted their analysis on basic industries only, those which tend to produce products for export.

A threshold was established by the ERS for inclusion in each dependence category. Selection of these particular industries, farming, mining, manufacturing, federal/state government was determined because they produce goods and services that are exported outside the community. These exporting industries, termed basic industries in regional economics, are often shown to be larger sources of growth in local economies (USDA, 2005).
The threshold for farming dependence was established when farm earnings or
total employment met or exceeded 15 percent of the county total. Unlike other
industries, employment was also included to ensure inclusion of farming communities
even during periods of poor crop yields, which would disproportionately alter the
impact if only earnings were considered. Mining dependence was achieved if earnings
from mining met or exceeded 15 percent of total earnings. The threshold for
federal/state government dependence was also 15 percent. To qualify as manufacturing
dependent a county needed at least 25 percent of earnings to come from the industry.
Since the service industry can be a basic or non-basic industry, a threshold of 45
percent was set to qualify as service-dependent. If a county qualified for more than one
category, it was assigned to that category in which it had the largest percentage over
the threshold, but there were two exceptions. Any county qualifying for farming-
dependence was automatically assigned to that category regardless of other
qualifications. Service-dependence was never given precedence over another
qualifying category regardless of total percentage. All counties not qualifying in any of
the five categories were termed non-specialized. For the purpose of this study, all
micropolitan areas meeting the qualifications as non-specialized will be identified as
diversified micros. Additionally, any micropolitan areas that also qualified as a
recreation micro will be excluded from this category. A total of 138 micropolitan areas
qualified in this category (Table 7).

Dependent Variable: Effective Growth Rate – The time period to be analyzed
concerning population growth will be 1990 – 2000. More specifically, the effective
growth rate will be examined for each micropolitan area using the 1990 U.S. Census
and the 2000 U.S. Census. These are the two most recent decennial censuses conducted by the U.S. Census Bureau. The effective growth rate is the difference between the percentage change in population for a given micropolitan area and the percentage change in population for the state in which the micropolitan area is located, as represented in this formula:

\[
\text{Effective Growth Rate} = (\text{Micro Population Growth}) - (\text{Statewide Population Growth})
\]

For example, the population in Silverthorne, Colorado grew at 82.8 percent from 1990 to 2000. During the same period, the population growth for the state of Colorado was 30.6 percent. Therefore, the effective growth rate in Silverthorne would be 52.2 percent. By contrast, the population in East Stroudsburg, Pennsylvania grew at 44.9 percent, while the population in the state of Pennsylvania grew at 3.4 percent. In this example, East Stroudsburg’s effective growth rate is 41.5 percent. In the event a
micropolitan area is located in multiple states, the effective growth rate will be determined by the mean percentage growth in population for the all included states.

**B. Research Design**

The research design for this study consists of two objectives and four related steps:

**Objective #1** – Understand factors driving population growth in micropolitan areas

- Step #1 – Qualify micropolitan areas within five categories
- Step #2 – Classify micropolitan areas based on qualifying categories

**Objective #2** – Identify differences between Iowa micropolitan areas and micropolitan areas in other parts of the country

- Step #3 – Compare micropolitan areas in Iowa as a group to other states
- Step #4 – Compare individual micropolitan areas in Iowa to similarly categorized micropolitan areas in other states

**Step #1: Qualifying micropolitan areas within five categories** – The 577 micropolitan areas located in the United States will be analyzed to determine whether they belong in one or more of the following five categories: agglomerated micro, recreation micro, immigration micro, education micro or diversified micro (Figure 8).

![Figure 8. Qualifying Micropolitan Areas within Five Categories](image-url)
Step #2: Classify Micropolitan Areas based on Qualifying Categories - Based on the results from step one, micropolitan areas will be classified according to their qualification within the five categories. Each micropolitan area can qualify for as many as four categories or may fail to qualify in any category. This will establish categories for comparison to determine whether micropolitan areas in each classification are more likely to experience population growth than those not qualifying for each classification. The 24 possible categories are identified in Figure 9.

Figure 9. Classify Micropolitan Areas based on Qualifying Categories

Step #3: Compare Micropolitan Areas in Iowa as a Group to Other States – The characteristics of Iowa micropolitan areas as a group will be compared to micropolitan areas in other states (Figure 10). These comparisons will explore the following areas:

- Population distribution between micropolitan, metropolitan and non-core areas
- Population growth in micropolitan areas compared to population growth statewide
• Population growth in micropolitan areas compared to population growth in metropolitan and non-core areas

• Regional comparisons among the U.S. Census Bureau’s nine regional districts

Figure 10. Compare Micropolitan Areas in Iowa as a Group to Other States

Step #4: Compare Individual Micropolitan Areas in Iowa to Similarly Categorized Micropolitan Areas in Other States—Within each class Iowa’s micropolitan areas will be compared to other micropolitan areas that are similarly categorized. Iowa’s micropolitan areas are classified as follows:

• Agglomerated Micros – Boone, Newton and Pella

• Recreation Micro – Spirit Lake

• Immigration Micros – Marshalltown, Muscatine and Storm Lake

• Education Micros – Boone, Burlington, Fort Dodge, Mason City, Newton, Pella and Spencer

• Diversified Micros – Boone, Fort Dodge, Oskaloosa, Ottumwa and Spencer

• Unclassified Micros – Clinton and Fort Madison-Keokuk
Each micropolitan area will be compared with similarly categorized micropolitan areas from other states through the examination of qualitative characteristics specifically related to the category (Figure 11).

Figure 11. Comparison Individual Micropolitan Areas in Iowa to Similarly Categorized Micropolitan Areas in Other States
IV. RESULTS

The results of this study are organized into two sections corresponding to the two objectives: the factors driving population growth in micropolitan areas and the comparisons made between Iowa’s micropolitan areas and micropolitan areas in other states. Specific methodological steps, research questions and hypotheses addressed by each section are highlighted.

A. Objective #1 – Understand Factors Driving Population Growth

<table>
<thead>
<tr>
<th>Methodological Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step #1 – Qualify micropolitan areas within five categories</td>
</tr>
<tr>
<td>Step #2 – Classify micropolitan areas based on qualifying categories</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What factors influence population growth among micropolitan areas in the United States?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If a micropolitan area qualifies in one of five micro categories, then it is more likely to experience a greater effective growth rate.</td>
</tr>
<tr>
<td>2. If a micropolitan area qualifies in multiple categories, then it is more likely to experience a greater effective growth rate than those in only one category</td>
</tr>
</tbody>
</table>

The first research question asked, “What factors influence population growth among micropolitan areas in the United States?” In an effort to address this issue, the first step of this analysis was to qualify micropolitan areas into the five micro categories: agglomerated micros, recreation micros, immigration micros, education micros and diversified micros. The second step was to assign micropolitan areas to one of 24 classes based on the combination of categories into which the micropolitan area
was qualified. This classification provided the basis from which to better understand differences between micropolitan areas and how these differences may affect a community’s ability to attract and retain residents.

The results, based on step one, showed that micropolitan areas in four of the five categories had a higher effective growth rate when compared to micropolitan areas that did not qualify in the category (Table 5). Positive effective growth rates were recorded for recreation micros and education micros. Nearly three of every four micropolitan areas qualified in at least one category. Micropolitan areas qualifying in at least one category had an effective growth rate of -2.3 percent while unclassified micros had a -5.2% percent rate. The category that micropolitan areas most frequently qualified for was education micro (27.0 percent). Recreation micro was the least frequently qualified for category (12.3 percent).

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Frequency %</th>
<th>Effective Growth Rate</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomerated Micros</td>
<td>139</td>
<td>24.1%</td>
<td>-0.8%</td>
<td>+3.0%</td>
</tr>
<tr>
<td>Non-Agglomerated Micros</td>
<td>438</td>
<td>75.9%</td>
<td>-3.8%</td>
<td></td>
</tr>
<tr>
<td>Recreation Micros</td>
<td>71</td>
<td>12.3%</td>
<td>4.5%</td>
<td>+8.7%</td>
</tr>
<tr>
<td>Non-Recreation Micros</td>
<td>506</td>
<td>87.7%</td>
<td>-4.2%</td>
<td></td>
</tr>
<tr>
<td>Immigrant Micros</td>
<td>106</td>
<td>18.4%</td>
<td>-1.7%</td>
<td>+1.7%</td>
</tr>
<tr>
<td>Non-Immigrant Micros</td>
<td>471</td>
<td>81.6%</td>
<td>-3.4%</td>
<td></td>
</tr>
<tr>
<td>Education Micros</td>
<td>156</td>
<td>27.0%</td>
<td>0.3%</td>
<td>+4.1%</td>
</tr>
<tr>
<td>Non-Education Micros</td>
<td>421</td>
<td>73.0%</td>
<td>-4.4%</td>
<td></td>
</tr>
<tr>
<td>Diversified Micros</td>
<td>150</td>
<td>26.0%</td>
<td>-5.5%</td>
<td>-4.4%</td>
</tr>
<tr>
<td>Non-Diversified Micros</td>
<td>427</td>
<td>74.0%</td>
<td>-1.1%</td>
<td></td>
</tr>
<tr>
<td>All Qualifying Micros</td>
<td>414</td>
<td>71.8%</td>
<td>-2.3%</td>
<td>+2.9%</td>
</tr>
<tr>
<td>Non-Qualifying Micros</td>
<td>163</td>
<td>28.2%</td>
<td>-5.2%</td>
<td></td>
</tr>
<tr>
<td>All Micropolitan Areas</td>
<td>577</td>
<td>100.0%</td>
<td>-3.1%</td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis #1 – If a micropolitan area qualifies in one of five micro categories, then it is more likely to experience a greater effective growth rate. The hypothesis was sustained in four of the five categories. Diversified micros had an effective growth rate that was worse than non-diversified micros, but the other four categories recorded a positive variance between qualified and unqualified micropolitan areas. Recreation micros had the greatest variance in effective growth rate from non-qualifying micros at 8.7 percent.

Regarding the second hypothesis, qualification in multiple categories was examined in relation to effective growth rates. Inclusion in multiple categories tended to increase growth rates (Table 6). While micros qualifying in only one category had an effective growth rate of -3.8 percent, those qualifying in two categories had a rate of -2.0 percent, and those in three categories were at 7.0 percent. When the diversified category was not included, the improvement for qualifying in a greater number of categories was even more pronounced with three category qualifiers recording an effective growth rate of +12.9 percent.

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity*</th>
<th>Effective Growth Rate</th>
<th>Quantity*</th>
<th>Effective Growth Rate (excluding Diversified Micros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualified in 0 Categories</td>
<td>163</td>
<td>-5.2%</td>
<td>234</td>
<td>-5.7%</td>
</tr>
<tr>
<td>Qualified in 1 Category</td>
<td>244</td>
<td>-3.8%</td>
<td>241</td>
<td>-3.0%</td>
</tr>
<tr>
<td>Qualified in 2 Categories</td>
<td>133</td>
<td>-2.0%</td>
<td>76</td>
<td>-0.7%</td>
</tr>
<tr>
<td>Qualified in 3 Categories</td>
<td>36</td>
<td>+7.0%</td>
<td>25</td>
<td>+12.9%</td>
</tr>
</tbody>
</table>

* Gardnerville Ranchos, Nevada qualified in 4 categories and had an effective growth rate of -17.0%.

When micropolitan areas qualifying in multiple categories were examined more closely, some interesting results emerged. The 170 micropolitan areas that qualified in multiple categories were examined. Figure 12 shows the effective growth
rate for micropolitan areas that qualified in two particular categories. Those qualifying for more than two categories were included in all the combinations that apply. For example, Palm Coast, Florida qualified as an agglomerated, immigration and education micro, therefore it was included in three combinations: agglomerated-immigration, immigration-education and agglomerated-education. The results suggest that qualification as a recreation or education micro had a positive impact on effective growth rates while qualifying as a diversified micro had a negative impact. The results for immigration and agglomeration micros were mixed.

Figure 12. Effective Growth Rate for Micros qualifying in Multiple Categories

This analysis was then explored at the specific classification level. A micropolitan area was assigned to a class based on the specific categories in which they qualified. Unlike the analyses discussed thus far, a micropolitan area may be assigned to only one class. Among the 24 possible micro classifications identified in
step two, at least one micropolitan area qualified in 23 of them. Similarly to the previous analysis, classes that included recreation micros or education micros tended to perform best while those including diversified micros or immigration micros tended to perform worse (Figure 13). The class including agglomerated, immigration and education micros performed the best with an effective growth rate of 16.3 percent, but only two micropolitan areas qualified in that class. Among the 18 classes that contained at least four micropolitan areas, the class that contained recreation, immigration and education performed the best with an effective growth rate of 16.0 percent. Eight of the classes had positive effective growth rates. Among the eight classes, agglomerated, recreation and education micros were included in five of them, immigration micros appeared in three and diversified micros doesn’t appear at all.

*Subcategories with fewer than four qualifying micropolitan areas are not included in the graph: Agg, Rec, Imm (-18.8%), 1 member; Agg, Rec, Imm, Educ (-17.0%), 1 member; Imm, Educ, Div (-7.2%), 1 member; Agg, Rec (6.6%), 2 members; Agg, Imm, Educ (16.3%), 3 members; Agg, Imm, Educ, Div, 0 members.
Hypothesis #2 – If a micropolitan area qualifies in multiple categories, then it is more likely to experience a greater effective growth rate than those in only one category. This hypothesis was sustained. The effective growth rates for micropolitan areas increased as the quantity of categories a micropolitan qualified for increased. Some particular combinations appear to have a more significant impact, such as recreation and education.

Following is an analysis of each individual category in greater detail.

**Agglomerated Micros**

The critical component in determining agglomeration for this study is a micropolitan area’s inclusion in a CSA containing a metropolitan area. Qualifying under these conditions was determined by examining the employment interchange measure (EIM) of a micropolitan area in relation to a nearby metropolitan area. Utilizing this measure as an indication of micropolitan-metropolitan interconnectedness, the correlation coefficient between a micropolitan area EIM and its effective growth rate was examined. The results indicated a relatively weak correlation between EIM and effective growth rate (0.1597). The correlation coefficient was slightly greater if only the 139 agglomerated micros are included (0.1744) however it was still weak. The correlation coefficients for agglomeration, recreation, immigration and education micros appear in Table 7.

<table>
<thead>
<tr>
<th>Qualifying Factor</th>
<th>EGR for All Micros</th>
<th>EGR within Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomerated – Employment Interchange Measure</td>
<td>0.1597</td>
<td>0.1744</td>
</tr>
<tr>
<td>Recreation – Weighted Index</td>
<td>0.4241</td>
<td>0.4664</td>
</tr>
<tr>
<td>Immigration - % Foreign Population</td>
<td>0.1070</td>
<td>0.1528</td>
</tr>
<tr>
<td>Education – College graduates less H.S. dropouts</td>
<td>0.2122</td>
<td>0.1501</td>
</tr>
</tbody>
</table>
Agglomerated micros also tend to be larger than non-agglomerated micros in terms of population. The mean population for agglomerated micros in 2000 was 54,491, while 49,975 for non-agglomerated. However, like effective growth rate, the correlation between EIM and 2000 population (0.1243) is not a strong one. Another characteristic of agglomerated micros is that they are less likely to qualify in the other four micro categories. Only 65 of the 139 micropolitan areas qualifying as an agglomerated micro, or 47.0 percent, qualified in at least one other category. Since inclusion in multiple categories tends to improve effective growth rates, this could be a limiting factor for agglomerated micros. Conversely, 275 of the 438 non-agglomerated micros, or 62.8 percent, qualified in at least one other micro category.

An examination of the prevalence of agglomerated micros among the fastest growing micropolitan areas indicates that only three of the ten micropolitan areas with the greatest effective growth rate, and eight of the top 25, qualified as agglomerated micros. Only diversified micros had fewer entries in the top 25. The top 25 micropolitan areas based on effective growth rate are listed in Table 8.

The impact of qualifying as an agglomerated micro was mixed for micropolitan areas qualifying in multiple categories. Among all micropolitan areas qualifying as an education micro, those also qualifying as an agglomerated micro performed better than the average. This was also the case for diversified micros. However, recreation micros that also qualified as agglomerated micros had an effective growth rate below the average. Immigration micros had a marginal improvement when also qualifying as an agglomerated micro (Table 9).
Although a relationship between qualification as an agglomerated micro and improved effective growth rates was identified, the relative employment interchange

Table 8. Top 25 Micropolitan Areas based on Effective Growth Rate

<table>
<thead>
<tr>
<th>Micropolitan Area</th>
<th>Micro Pop. Growth</th>
<th>State Pop. Growth</th>
<th>Effective Growth Rate</th>
<th>Qualified Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silverthorne, CO</td>
<td>82.8%</td>
<td>30.6%</td>
<td>52.2%</td>
<td>Rec, Imm, Educ</td>
</tr>
<tr>
<td>Palm Coast, FL</td>
<td>73.6%</td>
<td>23.5%</td>
<td>50.1%</td>
<td>Agg, Imm, Educ</td>
</tr>
<tr>
<td>Jackson, WY-ID</td>
<td>66.0%</td>
<td>18.7%</td>
<td>47.3%</td>
<td>Rec, Imm, Educ</td>
</tr>
<tr>
<td>Edwards, CO</td>
<td>77.1%</td>
<td>30.6%</td>
<td>46.5%</td>
<td>Rec, Imm, Educ</td>
</tr>
<tr>
<td>The Villages, FL</td>
<td>68.9%</td>
<td>23.5%</td>
<td>45.4%</td>
<td>Agg, Imm</td>
</tr>
<tr>
<td>Branson, MO</td>
<td>53.1%</td>
<td>9.3%</td>
<td>43.8%</td>
<td>Rec</td>
</tr>
<tr>
<td>East Stroudsburg, PA</td>
<td>44.9%</td>
<td>3.4%</td>
<td>41.5%</td>
<td>Rec, Imm, Educ</td>
</tr>
<tr>
<td>Ruidoso, NM</td>
<td>58.9%</td>
<td>20.1%</td>
<td>38.8%</td>
<td>Rec, Imm, Educ</td>
</tr>
<tr>
<td>Cedar City, UT</td>
<td>62.5%</td>
<td>29.6%</td>
<td>32.9%</td>
<td>Rec, Educ</td>
</tr>
<tr>
<td>Daphne-Fairhope, AL</td>
<td>42.9%</td>
<td>10.1%</td>
<td>32.8%</td>
<td>Agg, Educ</td>
</tr>
<tr>
<td>Lake Havasu City-Kingman, AZ</td>
<td>64.8%</td>
<td>40.0%</td>
<td>25.8%</td>
<td>Imm</td>
</tr>
<tr>
<td>Hilton Head Island-Beaufort, SC</td>
<td>39.0%</td>
<td>15.1%</td>
<td>23.9%</td>
<td>Rec, Imm, Educ</td>
</tr>
<tr>
<td>Sevierville, TN</td>
<td>39.4%</td>
<td>16.7%</td>
<td>22.8%</td>
<td>Agg</td>
</tr>
<tr>
<td>Ocean Pines, MD</td>
<td>32.9%</td>
<td>10.8%</td>
<td>22.1%</td>
<td>Agg, Rec, Educ</td>
</tr>
<tr>
<td>Bozeman, MT</td>
<td>34.4%</td>
<td>12.9%</td>
<td>21.5%</td>
<td>Rec, Educ</td>
</tr>
<tr>
<td>Heber, UT</td>
<td>50.8%</td>
<td>29.6%</td>
<td>21.2%</td>
<td>Agg, Rec, Educ</td>
</tr>
<tr>
<td>Seaford, DE</td>
<td>38.3%</td>
<td>17.6%</td>
<td>20.7%</td>
<td>Rec</td>
</tr>
<tr>
<td>St. Marys, GA</td>
<td>44.7%</td>
<td>26.4%</td>
<td>18.4%</td>
<td>None</td>
</tr>
<tr>
<td>Kahului-Wailuku, HI</td>
<td>27.6%</td>
<td>9.3%</td>
<td>18.3%</td>
<td>Rec, Imm, Educ</td>
</tr>
<tr>
<td>Crossville, TN</td>
<td>34.7%</td>
<td>16.7%</td>
<td>18.1%</td>
<td>None</td>
</tr>
<tr>
<td>Deming, NM</td>
<td>38.1%</td>
<td>20.1%</td>
<td>18.1%</td>
<td>Imm, Div</td>
</tr>
<tr>
<td>Clewiston, FL</td>
<td>40.5%</td>
<td>23.5%</td>
<td>17.0%</td>
<td>Imm</td>
</tr>
<tr>
<td>Granbury, TX</td>
<td>39.5%</td>
<td>22.8%</td>
<td>16.8%</td>
<td>Agg, Educ</td>
</tr>
<tr>
<td>Pahrump, NV</td>
<td>82.7%</td>
<td>66.3%</td>
<td>16.4%</td>
<td>Agg</td>
</tr>
<tr>
<td>Traverse City, MI</td>
<td>23.3%</td>
<td>6.9%</td>
<td>16.4%</td>
<td>Rec, Educ</td>
</tr>
</tbody>
</table>

Table 9. Impact of Qualifying as an Agglomerated Micro by Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Qualified in Category</th>
<th>EGR for Total</th>
<th>Qualified as Agglomerated</th>
<th>EGR for Agglomerated &amp; Category</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversified</td>
<td>150</td>
<td>-5.5%</td>
<td>31</td>
<td>-2.8%</td>
<td>+2.7%</td>
</tr>
<tr>
<td>Education</td>
<td>156</td>
<td>+0.3%</td>
<td>32</td>
<td>+2.5%</td>
<td>+2.2%</td>
</tr>
<tr>
<td>Immigration</td>
<td>106</td>
<td>-1.7%</td>
<td>14</td>
<td>-1.1%</td>
<td>+0.6%</td>
</tr>
<tr>
<td>Recreation</td>
<td>71</td>
<td>+4.5%</td>
<td>10</td>
<td>+2.9%</td>
<td>-1.6%</td>
</tr>
</tbody>
</table>

measures among micropolitan areas was not apparent. With the infrequent appearances of agglomerated micros among the fastest growing micropolitan areas, it raises questions regarding contentions by Vias, Mulligan and Molin (2002) that many micropolitan areas are attractive due to their relative proximity to major cities. This
category requires additional analysis to better understand the potential growth factors more fully.

**Recreation Micros**

Qualification as a recreation micro is contingent upon a weighted index based on the proportion of jobs and earnings in recreation-related industries and the existence of seasonal housing. The correlation coefficient between the effective growth rate and the weighted index for micropolitan areas was stronger than any other category (0.4241), a result considered of medium correlation according to Cohen (1988). This correlation was slightly higher (0.4664) when only recreation micros were examined. Recreation micro was the only category to register any indication of a correlation.

Among recreation micros, 86 percent qualified in at least one other micro category. Additionally, 65 percent exceeded the average effective growth rate among all micropolitan areas. Only three recreation micros lost residents between 1990 and 2000. Seven of the top ten micropolitan areas with the greatest effective growth rate qualify as recreation micros. Qualifying as a recreation micro appears to provides a boost to population growth among micropolitan areas qualifying in multiple categories (Table 10). This was most apparent for micropolitan qualifying as education or immigration.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Qualified in Category</th>
<th>EGR for Total</th>
<th>Qualified as Recreation</th>
<th>EGR for Recreation &amp; Category</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigration</td>
<td>106</td>
<td>-1.7%</td>
<td>22</td>
<td>+7.3%</td>
<td>+9.0%</td>
</tr>
<tr>
<td>Education</td>
<td>156</td>
<td>+0.3%</td>
<td>49</td>
<td>+7.3%</td>
<td>+7.0%</td>
</tr>
<tr>
<td>Agglomeration</td>
<td>139</td>
<td>-0.8%</td>
<td>10</td>
<td>+2.9%</td>
<td>+3.7%</td>
</tr>
</tbody>
</table>

* Any micropolitan area qualifying as a recreation micro is ineligible to qualify as a diversified micro.
micros. The 16 micropolitan areas qualifying in all three categories (recreation, immigration and education) had the best effective growth rate among all three-category combinations at 14.0 percent. Seven of the top 20 micropolitan areas were in this class. Interestingly, micropolitan areas only qualifying as recreation and immigration micros had one of the worst effective growth rates, -8.9 percent. Recreation micros qualifying in at least one other category had an effective growth rate of +5.4 percent. Among all the micro categories examined, recreation micros provided the strongest relationship to population growth.

**Immigration Micros**

Micropolitan areas qualify as immigration micros due to foreign-born residents representing more than 5.3 percent of the total population. Even though immigration micros are growing at a faster effective rate than non-immigration micros, the correlation coefficient between foreign-born population rate and effective growth rate among all micropolitan areas is only 0.1070 and 0.1528 among immigration micros. This was the lowest correlation among all categories.

Seven of the top eight, and nine of the top 12, micropolitan areas with the greatest effective growth rate qualify as immigration micros. Conversely, five of the six micropolitan areas with the worst effective growth rate also qualified as immigration micros. Yet, only seven immigration micros lost residents between 1990 and 2000.

Immigration micros benefited more than any other category by qualifying in additional categories. Micropolitan areas that only qualified as an immigration micro
had an effective growth rate of -4.1 percent, which is below the rate among all micropolitan areas and worse than the performance of all non-immigration micros. However, those micropolitan areas qualifying as an immigration micro and at least one other category had an effective growth rate of 0.0 percent. In fact, immigration micros perform quite well when they also qualify as recreation and education micros (+14.0 percent EGR). However, micropolitan areas only qualify in two of these categories, recreation-immigration or immigration-education, performed very poorly. While inclusive combinations are generally positive for these categories, exclusive combinations are not. Inclusive combinations refer to micropolitan areas that qualify in two particular categories, but may also qualify in other categories. Exclusive combinations refer to micropolitan areas that only qualify in the two categories identified. Interestingly, immigration micros that also qualify as agglomerated micros experienced the opposite effect, performing much better as exclusive combination instead of inclusive. Table 11 shows the variance between exclusive and inclusive combinations for immigration micros.

Table 11. Exclusive and Inclusive Category Combinations for Immigration Micros

<table>
<thead>
<tr>
<th>Category</th>
<th>Qty Inclusive Combinations</th>
<th>Inclusive EGR</th>
<th>Qty Exclusive Combinations</th>
<th>Exclusive EGR</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigration &amp; Recreation</td>
<td>22</td>
<td>+7.3%</td>
<td>5</td>
<td>-8.9%</td>
<td>-16.2%</td>
</tr>
<tr>
<td>Immigration &amp; Education</td>
<td>30</td>
<td>+6.6%</td>
<td>10</td>
<td>-6.6%</td>
<td>-13.2%</td>
</tr>
<tr>
<td>Immigration &amp; Agglomerated</td>
<td>14</td>
<td>-1.1%</td>
<td>4</td>
<td>+4.2%</td>
<td>+5.3%</td>
</tr>
<tr>
<td>Immigration &amp; Diversified</td>
<td>28</td>
<td>-6.4%</td>
<td>22</td>
<td>-5.8%</td>
<td>+0.6%</td>
</tr>
</tbody>
</table>

**Education Micros**

To qualify as an education micro, a micropolitan area must contain a greater number of residents with at least a bachelor’s degree than those lacking a high school
diploma or its equivalent. Although the growth rate among education micros was slightly higher than non-education micros, the correlation between the educational attainment measure and the effective growth rate was only 0.2122.

Although eight of the top ten micropolitan areas with the greatest effective growth rates, and 12 of the top 16, qualified as education micros, all of them also qualified in at least one other category. For the 156 micropolitan areas qualifying as education micros the effective growth rate was second only to recreation micros at 0.3 percent. Non-education micros had an effective growth rate of -4.4 percent. Non-education micros qualifying in at least one other category also performed poorly with an effective growth at -3.8 percent. Among micropolitan areas in multiple categories that did not include education, the effective growth rate was even worse at -3.9 percent. Multiple qualifiers that include education performed much better with a rate of 1.9 percent.

Looking at multiple qualifiers more closely revealed that every category benefited by also qualified as an education micro. Figure 14 compares micropolitan

![Figure 14. Impact of Qualifying as Education Micro on Other Micro Categories](image-url)
areas qualified in a particular category to those also qualifying as education micros. Only recreation micros had a similar effect. There was a difference between education and recreation category combinations, though. Recreation micros also qualifying as agglomerated micros had a lower effective growth rate than the rate for all recreation micros, 2.9 percent and 4.5 percent respectively. Alternatively, the effective growth rate for education micros that also qualified as agglomerated micros was higher than the rate for all education micros, 2.5 percent and 0.3 percent respectively.

**Diversified Micros**

Diversified micros are those micropolitan areas which do not rely too heavily upon any one basic industry for total earnings, which include farming, mining, manufacturing, government and services. With the exception of services, micropolitan areas as a group relied on these industries for a greater portion of earnings than the total United States. In fact, micropolitan areas relied on farming (1.2 percent) at a rate three times that of the United States (0.4 percent). Mining (1.7 percent) was more than twice the U.S. rate (0.7 percent). Nearly one in four dollars earned in micropolitan areas comes from manufacturing (24.8 percent), in contrast to 17.9 percent for the U.S.

In nearly every possible combination, qualification as a diversified micro had a negative impact on effective growth rates. Only 34 of the 150 micropolitan areas qualifying as diversified micros had a positive effective growth rate. Among these 34 micropolitan areas, 11 qualified as diversified micros exclusively and had an average effective growth rate of 5.4 percent. This quantity was comparable to most of the other categories. Among the 182 micropolitan areas with positive effective growth rates, 71 qualified in only one category. Agglomeration was the most common qualifying
category (29) followed by Immigration (13), Education (12), Diversified (11) and Recreation (5). Micropolitan areas qualifying in only one category were more likely to be diversified among those with the worst effective growth rates. Among the 100 micropolitan areas with the worst effective growth rates, 40 qualified in only one category. Among these 40 micropolitan areas, 18 were diversified, 11 immigration, 8 agglomerated, 2 education and 1 recreation micros.

When the industry dependencies used to qualify, or more appropriately disqualify, diversified micros are examined individually, some appear to be more prominent in faster growing communities. For example, among the 25 micropolitan areas with the greatest effective growth rates, 10 are recreation-dependent, six are service-dependent and five are government-dependent. In contrast, only five of the top 50 are diversified micros. Examining the 50 micropolitan areas with the lowest effective growth rate, 20 of them are diversified, 12 manufacturing-dependent and 7 mining-dependent.

Looking at growth rates by industry dependence yields significant disparity. For example, the 14 micropolitan areas that are service-dependent had an effective growth rate of 8.1 percent. Conversely, the 20 mining-dependent micropolitan areas had a rate of -12.9 percent. The results for all industries are provided in Table 12.

<table>
<thead>
<tr>
<th>Industry Type</th>
<th>Quantity</th>
<th>Effective Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming-Dependent Micropolitan Areas</td>
<td>1</td>
<td>17.0%</td>
</tr>
<tr>
<td>Service-Dependent Micropolitan Areas</td>
<td>14</td>
<td>8.1%</td>
</tr>
<tr>
<td>Recreation Micros</td>
<td>71</td>
<td>4.5%</td>
</tr>
<tr>
<td>Government-Dependent Micropolitan Areas</td>
<td>103</td>
<td>-1.9%</td>
</tr>
<tr>
<td>Manufacturing-Dependent Micropolitan Areas</td>
<td>250</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Mining-Dependent Micropolitan Areas</td>
<td>20</td>
<td>-12.9%</td>
</tr>
</tbody>
</table>
**Research Question #1** – *What factors influence population growth among micropolitan areas in the United States?* The research suggests that recreation micros exhibit the strongest correlation to effective growth rates. This may indicate that micropolitan areas with economies reliant upon recreation-related industries such as entertainment, accommodations and dining establishments are more prone to attract and retain residents than micropolitan areas lacking these characteristics. Education micros areas also showed positive signs of population growth, especially if they qualify in an additional micro category. Conversely, diversified micros were less likely to experience population growth than their industry-dependent counterparts. Farming-, service- and recreation-dependent communities all had positive effective growth rates. Agglomerated micros and immigration micros tended to grow faster than those micropolitan areas not qualifying in these categories, but this was not consistent across micropolitan areas or category combinations. The combination of recreation, immigration and education provided the greatest effective growth rate benefit.
B. Objective #2 - Compare Micropolitan Areas in Iowa to other Regions

<table>
<thead>
<tr>
<th>Methodological Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step #3 – Compare micropolitan areas in Iowa as a group to other states</td>
</tr>
<tr>
<td>Step #4 – Compare individual micropolitan areas in Iowa to similarly categorized micropolitan areas in other states</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. How do micropolitan areas in Iowa compare to micropolitan areas in other states in attracting and retaining residents?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. If micropolitan areas are included in the same micro categories, then they will experience similar population growth regardless of their location.</td>
</tr>
</tbody>
</table>

Over the last several decades, the population nationally has been migrating to the south and to the west. Micropolitan growth is consistent with this migratory pattern. For analytical purposes, the U.S. Census Bureau separates the country into nine divisions. Examining these nine divisions, the five southern and western divisions grew at a faster rate than the four northeastern and midwestern divisions. However, when the micropolitan areas in these divisions are examined in terms of effective growth rates, a very interesting dynamic emerges. The two highest and three lowest effective growth rates are south and west divisions (Table 13). More revealing are the categorical effective growth rates for these divisions (Table 14).

Although the Mountain West is the fastest growing region in the country, micropolitan areas in this division not only had the highest effective growth rate, but also exceeded the national effective growth rates in every category. In other words, micropolitan areas in the Mountain West grew faster than micropolitan areas in other parts of the country despite controlling for state growth rates. Conversely,
micropolitan areas in West South Central had the lowest effective growth rate. This division also had an effective growth rate lower than the national rate in every category despite population growth greater than half the other divisions.

Table 13. Effective Growth Rate by Geographic Division

<table>
<thead>
<tr>
<th>Division</th>
<th>No. of Micros</th>
<th>Effective Growth Rate</th>
<th>States in Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain West</td>
<td>55</td>
<td>-1.2%</td>
<td>AZ, CO, ID, MT, NV, NM, UT, WY</td>
</tr>
<tr>
<td>East South Central</td>
<td>69</td>
<td>-1.3%</td>
<td>AL, KY, MS, TN</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>36</td>
<td>-1.6%</td>
<td>NJ, NY, PA</td>
</tr>
<tr>
<td>East North Central</td>
<td>102</td>
<td>-1.6%</td>
<td>IL, IN, MI, OH, WI</td>
</tr>
<tr>
<td>New England</td>
<td>13</td>
<td>-2.4%</td>
<td>CT, ME, MA, NH, RI, VT</td>
</tr>
<tr>
<td>West North Central</td>
<td>89</td>
<td>-2.5%</td>
<td>IA, KS, MN, MO, NE, ND, SD</td>
</tr>
<tr>
<td>Pacific West</td>
<td>37</td>
<td>-2.9%</td>
<td>AK, CA, HI, OR, WA</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>87</td>
<td>-3.8%</td>
<td>DE, DC, FL, GA, MD, NC, SC, VA, WV</td>
</tr>
<tr>
<td>West South Central</td>
<td>89</td>
<td>-8.0%</td>
<td>AR, LA, OK, TX</td>
</tr>
</tbody>
</table>

Table 14. Effective Growth Rate by Geographic Division and Category*

<table>
<thead>
<tr>
<th>Division</th>
<th>Agglomerated</th>
<th>Recreation</th>
<th>Immigration</th>
<th>Education</th>
<th>Diversified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain West</td>
<td>-0.5% (7)</td>
<td>11.4% (16)</td>
<td>-0.3% (25)</td>
<td>6.1% (25)</td>
<td>-3.7% (10)</td>
</tr>
<tr>
<td>East South Central</td>
<td>2.2% (17)</td>
<td>-5.1% (3)</td>
<td>6.9% (1)</td>
<td>11.7% (4)</td>
<td>-4.3% (17)</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>-3.8% (11)</td>
<td>41.5% (1)</td>
<td>41.5% (1)</td>
<td>2.6% (6)</td>
<td>-3.9% (9)</td>
</tr>
<tr>
<td>East North Central</td>
<td>-0.1% (32)</td>
<td>5.3% (10)</td>
<td>8.3% (2)</td>
<td>-1.1% (25)</td>
<td>-3.8% (19)</td>
</tr>
<tr>
<td>New England</td>
<td>2.2% (4)</td>
<td>-3.1% (6)</td>
<td>1.0% (1)</td>
<td>-1.8% (11)</td>
<td>--- (0)</td>
</tr>
<tr>
<td>West North Central</td>
<td>-2.5% (13)</td>
<td>8.8% (8)</td>
<td>1.3% (11)</td>
<td>-2.7% (47)</td>
<td>-3.7% (33)</td>
</tr>
<tr>
<td>Pacific West</td>
<td>3.4% (5)</td>
<td>-0.6% (13)</td>
<td>-0.9% (20)</td>
<td>-3.0% (18)</td>
<td>-7.9% (11)</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>0.9% (25)</td>
<td>3.0% (12)</td>
<td>3.9% (19)</td>
<td>6.3% (12)</td>
<td>-8.4% (17)</td>
</tr>
<tr>
<td>West South Central</td>
<td>-4.5% (25)</td>
<td>-10.6% (2)</td>
<td>-11.9% (26)</td>
<td>-2.1% (8)</td>
<td>-7.7% (34)</td>
</tr>
<tr>
<td>Nationwide</td>
<td>-0.8%</td>
<td>4.5%</td>
<td>-1.7%</td>
<td>0.3%</td>
<td>-5.5%</td>
</tr>
</tbody>
</table>

* Shaded values exceed the rate for all micropolitan areas in the category. The number of micropolitan areas qualifying in each category is indicated in parenthesis

When examining the five categories by division, larger variances emerge. In many cases, those micro categories that are less common appear to be growing at a faster than average rate. Conversely, the more common categories are growing at a slower rate. For example, in New England recreation and education micros were the most common and slowest growing micropolitan areas. Conversely, agglomerated and immigration micros were the least common and fastest growing micropolitan areas. In relation to national effective growth rates, immigration and recreation micros tended to perform better in the north and east, while education and agglomerated micros were
higher performers in the south and west. Figure 15 identifies those categories in each division that were much higher or lower than the national rate.

Examining micropolitan areas at the individual state level, more interesting insights are discovered. For example, among the ten fastest growing states between 1990 and 2000, all of which are in the south and the west, only two experienced growth rates among their metropolitan areas above the national average. In fact, the effective growth rates among metropolitan areas in Florida and Colorado were both negative, -0.1 percent and -0.2 percent respectively. At the same time, micropolitan areas in Florida and Colorado had strong effective growth rates of 4.1 percent and 13.6 percent respectively. This, however, was not the typical dynamic. Only 16 states had positive effective growth rates among their micropolitan areas, while 36 states produced positive effective growth rates among their metropolitan areas. Eleven states had positive effective growth rates among non-core areas.
**Agglomerated Micros**

Although agglomeration micros tend to perform better than non-agglomerated micros nationally, in Iowa agglomeration appears to have a much more significant impact. The correlation between effective growth rate and employment interchange measure, the factor used to qualify micropolitan areas as agglomerated micros, was substantially higher in Iowa than the national average. Correlation coefficients for Iowa are compared to the national rates in Table 15. Three of Iowa’s five fastest growing micropolitan areas are agglomerated micros. Two are a part of the Des Moines CSA and one is part of the Ames CSA. Nearly one in five Iowans live in one of these two CSAs. This was not necessarily a consistent growth pattern for agglomerated micros nationwide.

<table>
<thead>
<tr>
<th>Qualifying Factor</th>
<th>EGR for All Micros</th>
<th>EGR for Iowa Micros</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomerated – Employment Interchange Measure</td>
<td>0.1597</td>
<td>0.3709</td>
<td>+0.2112</td>
</tr>
<tr>
<td>Recreation – Weighted Index</td>
<td>0.4241</td>
<td>0.4053</td>
<td>-0.0188</td>
</tr>
<tr>
<td>Immigration - % Foreign Population</td>
<td>0.1070</td>
<td>0.0657</td>
<td>-0.0413</td>
</tr>
<tr>
<td>Education – College graduates less H.S. dropouts</td>
<td>0.2122</td>
<td>0.4344</td>
<td>+0.2222</td>
</tr>
</tbody>
</table>

Among the agglomerated micros with the highest effective growth rate, the vast majority are located in the south and west. In fact, 18 of the top 25 are in the south or west. Nine of the top 25 are near large metropolitan areas with a population over one million, such as Dallas, Washington and Seattle. Four are adjacent to smaller, rapidly expanding metropolitan areas like Bend, Oregon. Interestingly, six are located in Midwest states experiencing relatively slow growth, such as Ohio, Pennsylvania, Indiana and Michigan.
Many of these rapidly growing agglomerated micros may be reclassified after the 2010 U.S. Census, provided the current definitions are maintained. For a county to be defined as an outlying county to a metropolitan area, 25 percent of that county must work in the central metropolitan county or 25 percent of that county’s workers must live in the central metropolitan county. Among the 25 fastest growing agglomerated micros, eight have exceeded 20 percent in at least one of those commuting requirements and another six have exceeded 15 percent. In fact, among all agglomerated micros, 55 have exceeded 15 percent for at least one commuting requirement. It is quite feasible to expect many of these communities to be no longer classified as micropolitan areas by the next census and to become part of a larger metropolitan area.

This is also a possibility among some Iowa micropolitan areas. For example, according to the 2000 U.S. Census, 22.9 percent of Boone micropolitan area employed residents work in Story County in the Ames metropolitan area. Also 18.4 percent of Newton micropolitan area residents work in Polk County, the principal county in the Des Moines metropolitan area. Some communities not currently qualified as agglomerated micros may attain that status by 2010. In Iowa, Clinton and Muscatine may be incorporated into a combined statistical area that includes the Davenport metropolitan area. An employment interchange measure of 25 percent is required to join a CSA. In 2000, the employment interchange measures for Clinton and Muscatine are 19.7 percent and 15.6 percent respectively.
Recreation Micros

Recreation micros experienced the greatest average population growth among all micro categories. Additionally, 50 of the 71 recreation micros grew at a rate exceeding the average micropolitan growth rate nationally. As a group, these recreation micros rely heavy upon their natural surroundings, such as mountains, oceans and lakes, to stimulate population growth, as well as economic and social development.

Examining the 25 fastest growing recreation micros, the most common location was the mountain west, which contains nine of them. However, more of the 25 appeared in Michigan (3) than any other state. In fact, nine are located in northern or eastern parts of the country. Twenty of the top 25 also qualified as education micros, 10 as immigration micros and four as agglomerated micros. None of the 25 qualified as diversified micros. In an effort to identify the recreation draw in these areas, nearly all of them contained a natural resource. Among the 25, seven include major ski resorts, six are on an ocean, five include or are adjacent to a national park and three include major lakes. Most of these natural conditions are not indigenous to Iowa. Lacking mountains, ocean access and national parks, Iowa is reliant upon its lakes and waterways for the benefits recreation micros can provide.

Among Iowa’s micropolitan areas, only Spirit Lake qualified as a recreation micro. All other Iowa micropolitan areas were well below the national average, based on the weighted average used to qualify as a recreation micro. Only Spirit Lake recorded earnings or employment above the national average in the four recreation-related industries - real estate, accommodation, food and drink and amusement. In
terms of seasonal housing, only Spirit Lake and Mason City exceed the national average.

Another approach to procuring the benefits associated with recreation micros is by increasing tourism. One relatively new source of tourism in Iowa communities is the development of gambling establishments. Iowa is one of only 11 states in the country with commercial casinos and 28 with tribal casinos. However, Iowa is one of only six states with both. There are also 11 states with racetracks, of which Iowa is one of only six that also have casinos (American Gaming Association, 2007). Today, there are 17 casinos, racetracks or some combination of the two in Iowa employing nearly 10,000 people with an annual payroll of $263 million. In 2006, more than 22 million visitors patronize Iowa gaming spending more than $1 billion. Nationwide $32 billion was spent in casinos. Compared to other forms of entertainment, this is three times the amount spent on movies and twice the amount spent in bookstores (American Gaming Association, 2007).

The Travel Industry Association of America found that nearly $5.4 billion is generated from tourism-related activities (TIAA, 2007). When their analysis is examined at the county level it is revealed that micropolitan areas represent $958 million, or 18 percent of the revenue. This is comparable to micropolitan areas as a proportion of the state’s population. However, metropolitan areas, 53 percent of the state’s population, provided 68 percent of the tourism-related revenue. While six of Iowa’s nine metropolitan areas provided more tourism-related revenue per resident than the state average, only Spirit Lake and Mason City did the same among micropolitan areas.
Immigration Micros

Traditionally, foreign immigrants have settled in a few large “gateway cities” such as Chicago, New York and Los Angeles (Durand, 2000). However, a growing number of new immigrants have been opting for smaller communities (Kandel and Cromartie, 2004). The majority of foreign-born residents in the United States continue to migrate to large metropolitan areas, yet 1.7 million have chosen micropolitan areas instead (U.S. Census Bureau, 2003). Although the number of foreign-born residents is increasing in most areas of the country, the greatest concentrations continue to be in the south and west. This is consistent among micropolitan areas where more than half of all immigration micros are located in five states (Texas, 25; New Mexico, 9; Florida, 8; Georgia, 7; California, 5). However, some non-traditional states are also beginning to attract foreign immigrants, such as Kansas with five immigration micros. Micropolitan areas qualifying as immigration micros had some of the highest, as well as the lowest, effective growth rates.

Among the 25 immigration micros with the highest effective growth rate, 16 were concentrated in south or west. Yet, they were also distributed across 15 different states. Interestingly, after Florida, with five, Kansas was the second most common state among the top 25 with three. Examining the 25 immigration micros with the lowest effective growth rates, they are all located in the south or west, in fact ten are in Texas alone.

Focusing more closely on the immigration micros in and around Iowa, six immigration micros were compared, including Storm Lake, Iowa (Table 16). There are several similarities among all six communities. For example, a significant portion of
their respective economies rely on meat processing. In fact, the vast majority of foreign-born residents in these communities are employed in the meat processing industry.

**Table 16. Immigration Micros in Non-Traditional States**

<table>
<thead>
<tr>
<th>Micropolitan Area</th>
<th>State</th>
<th>% Micro Foreign-Born</th>
<th>% State Foreign-Born</th>
<th>Micro Pop Chg % 1990-2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal</td>
<td>Kansas</td>
<td>27.4%</td>
<td>5.0%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Garden City</td>
<td>Kansas</td>
<td>22.7%</td>
<td>5.0%</td>
<td>22.5%</td>
</tr>
<tr>
<td>Dodge City</td>
<td>Kansas</td>
<td>22.5%</td>
<td>5.0%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Guymon</td>
<td>Oklahoma</td>
<td>16.9%</td>
<td>3.8%</td>
<td>22.5%</td>
</tr>
<tr>
<td>Lexington</td>
<td>Nebraska</td>
<td>14.6%</td>
<td>4.4%</td>
<td>21.1%</td>
</tr>
<tr>
<td>Storm Lake</td>
<td>Iowa</td>
<td>12.4%</td>
<td>3.1%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

However, what is most striking is the disparity between the population growth in Storm Lake and that of the other five micropolitan areas. When this is examined more closely, the primary difference between Storm Lake and the other five communities is not the influx of foreign immigrants, but the departure of white residents (Table 17). During the 1990’s, Storm Lake’s Hispanic and Asian population grew from 556 to 3,444. Conversely, the non-Hispanic, non-Asian population has declined from 19,409 to 16,967. None of the other five Midwestern communities experiencing a significant influx of foreign immigrants had such an exodus. Garden City, Liberal, Dodge City and Guymon experienced an increase among all racial categories (U.S. Census Bureau, 2002c).

**Table 17. Population Growth by Race in Non-Traditional Immigration Micros**

<table>
<thead>
<tr>
<th>Micropolitan Area</th>
<th>Hispanic Pop Chg</th>
<th>White, Non-Hispanic Pop Chg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garden City, KS</td>
<td>+9,195</td>
<td>+1,522</td>
</tr>
<tr>
<td>Dodge City, KS</td>
<td>+8,148</td>
<td>+1,422</td>
</tr>
<tr>
<td>Liberal, KS</td>
<td>+5,826</td>
<td>+235</td>
</tr>
<tr>
<td>Lexington, NE</td>
<td>+4,369</td>
<td>+719</td>
</tr>
<tr>
<td>Guymon, OK</td>
<td>+5,533</td>
<td>+190</td>
</tr>
<tr>
<td>Storm Lake, IA</td>
<td>+2,400</td>
<td>-1,496</td>
</tr>
</tbody>
</table>
**Education Micros**

Nearly half of education micros (64) had a positive effective growth rate. However, it is questionable whether education was the most significant category impacting these communities. Among those 64 micropolitan areas, 52 qualified in at least one other category. Among the remaining 12 communities, 9 contained a four-year college or university with at least 1,000 students.

Among the 25 education micros with the highest effective growth rates, 24 qualified in at least one other category. The remaining micropolitan area, Oxford, Mississippi, is home of the University of Mississippi. Twenty of the 25 qualified as recreation micros, 11 as immigration micros and six as agglomerated micros. None qualified as diversified micros. The majority, 18 of 25, were located in the south or west, but not concentrated in any particular state. Eighteen different states contained at least education micro among the top 25 and no state contained more than two. Only 27 of the 156 education micros did not contain a college or university with at least 1,000 students, a major military base or qualified as a recreation micro.

The 25 education micros with the lowest effective growth rates, 18 qualified in at least one other category. The additional qualifying was even distributed across the other four categories (immigration 6, recreation 5, diversified 5, agglomerated 4). Fifteen were located in the south or west, but Kansas was the most prevalent state with three micropolitan areas. The 25 were distributed across 17 states.

Education micros are the most prevalent category of micropolitan areas in Iowa with eight qualifiers. These qualified micros include four of the fastest growing micropolitan areas in Iowa (Spirit Lake, Newton, Pella and Boone) and four with a
declining population (Fort Dodge, Burlington, Mason City and Spencer). The four growing communities also qualified in another category, Spirit Lake as a recreation micro and Newton, Pella and Boone as agglomerated micros. Among the declining communities, Fort Dodge and Spencer qualified as diversified micros, but Mason City and Burlington did not qualify in any other category. Among Iowa’s three micropolitan areas containing a four-year college or university only Pella qualified as an education micro. Neither Storm Lake nor Oskaloosa qualified in the category despite having colleges in their communities.

**Diversified Micros**

Micropolitan areas classified in this category have an overall growth rate that is below the national average. However, there are some positive exceptions. Among diversified micros, 34 of the 150 had positive effective growth rates. Although this is a smaller percentage than the other four, it does indicate that not all diversified micros were performing poorly. Unlike the other four categories, stronger performing diversified micros tended to not qualify in other categories. Examining the 25 diversified micros with the highest effective growth rates, nine did not qualify in any other category and only one qualified in three categories. Among the 25, 17 were in the south and west, with the largest number in Louisiana with three. A total of 19 states appeared in the top 25.

Among the 25 diversified micros with the lowest effective growth rates, the 17 were located in the south. More specifically, seven are in Texas and five are in Georgia. Similar to the top 25, 14 of the bottom 25 did not qualify in any other category.
All five of Iowa’s diversified micros had negative effective growth rates, but the average was less than the national average, -3.9 percent to -5.5 percent. Among Iowa’s five diversified micros, Boone, which qualified as an agglomerated micro and an education micro, had the best effective growth rate at -1.3 percent. The two Iowa diversified micros that failed to qualify in any other category, Oskaloosa (-1.6 percent) and Ottumwa (-4.4 percent), both had higher effective growth rates than the national average for diversified micros. Fort Dodge (-5.7 percent) and Spencer (6.1 percent), also qualifying as education micros, had the worst effective growth rates among Iowa micropolitan areas in the category.

Comparing Iowa’s five diversified micros to five growing diversified micros in the Midwest may provide some insight into what causes some diversified micros to grow. These five diversified micros were compared to Iowa’s five diversified micros in four economic categories: employment, income, housing and poverty (Table 18). The results failed to provide much clarity on why some communities were growing while others were not. Four out of the five growing diversified micros recorded an employment index above 1.00, indicating that there is a larger number of people living

<table>
<thead>
<tr>
<th>Micropolitan Area</th>
<th>Employment Index</th>
<th>Median Earnings</th>
<th>Housing Affordability</th>
<th>Poverty Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone, IA</td>
<td>0.76</td>
<td>$21,884</td>
<td>16.1%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Fort Dodge, IA</td>
<td>1.09</td>
<td>$20,738</td>
<td>14.6%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Oskaloosa, IA</td>
<td>0.79</td>
<td>$22,104</td>
<td>14.5%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Ottumwa, IA</td>
<td>1.02</td>
<td>$19,567</td>
<td>14.8%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Spencer, IA</td>
<td>1.11</td>
<td>$20,476</td>
<td>15.0%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Bemidji, MN</td>
<td>1.05</td>
<td>$16,048</td>
<td>16.1%</td>
<td>18.7%</td>
</tr>
<tr>
<td>West Plains, MO</td>
<td>1.11</td>
<td>$16,474</td>
<td>16.3%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Kearney, NE</td>
<td>1.04</td>
<td>$19,132</td>
<td>15.9%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Yankton, SD</td>
<td>1.14</td>
<td>$19,258</td>
<td>16.2%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Monroe, WI</td>
<td>0.86</td>
<td>$22,910</td>
<td>18.9%</td>
<td>5.1%</td>
</tr>
</tbody>
</table>
Iowa’s five diversified micros also recorded an employment index above 1.00. In fact, Spencer, Iowa’s diversified micro with the highest employment index had the largest decline in population. Employment was gauged using an employment index that represented the ratio of jobs in the micropolitan area to workers residing in the micropolitan area. This should indicate whether the community is a net job provider or whether more of their workers are leaving the micropolitan area for work.

Median earnings among Iowa diversified micros exceeded four of the five growing diversified micros. With the exception of Boone, Iowa micros had lower housing affordability percentages, indicating home owner costs represented a lower percentage of household earnings, than the growing micros. Finally, although the poverty rate in Monroe, Wisconsin was the lowest among all ten micropolitan areas, Bemidji, Minnesota and West Plains, Missouri were the highest. The poverty rate among Iowa micros averaged 9.8 percent while the other five micropolitan areas averaged 12.4 percent.

Generally speaking, the growing diversified micros were providing more jobs than workers, earning less, with higher relative housing costs and a higher poverty rate than Iowa’s diversified micros.

**Hypothesis #3:** If micropolitan areas are included in the same micro categories, then they will experience similar effective growth rates regardless of their location. This hypothesis was not sustained through this research. There does not seem to be consistency among similarly categorized micros. Although a correlation can be argued between recreation micros and effective growth rate, the impact of category qualification was generally not significant. Overall, similar effective growth rates were
not apparent among similarly categorized micropolitan areas. Additionally, significant variations were found between regional divisions for particular categories.

**Research Question #2: How do micropolitan areas in Iowa compare to micropolitan areas in other states in attracting and retaining residents?** Iowa’s recreation micro seemed consistent with those in other states, growing at a rate beyond that of other micropolitan areas and the overall state growth rate. Unlike other states, education micros, the most frequent category in Iowa, did not perform as well as other parts of the country. States in which education micros were less common appeared to perform better. This scarcity consideration may explain the performance of agglomerated micros in Iowa. Growth in this category was slight nationwide, but Iowa’s three agglomerated micros performed above the national rate. Two of the three Iowa micropolitan areas with positive effective growth rates were agglomerated micros. All three agglomerated micros outperformed the effective growth rate among micropolitan areas nationwide. Immigration micros were mixed, but other such communities in similar states such as Nebraska and South Dakota have performed very well. Diversified micros in Iowa, like other parts of the country, tended to underperform the group as a whole. Iowa’s two micropolitan areas that failed to qualify in any category were among the three worst performers.
V. CONCLUSIONS

Burdened with the ongoing challenge of attracting and retaining residents, micropolitan areas may serve as a key component for stimulating growth. While the metropolitan areas continue to grow and the non-core areas continue to decline, the future of micropolitan areas is unclear. Iowa, along with other slow growth states, may be well served to capitalize on particular observations discovered through this study. Recreation and education micros, for example, performed well nationally while diversified micros did not. Additionally, regional and state-level variations must also be acknowledged. In Iowa, agglomerated micros performed better than they did nationally and education micros performed worse. Some results suggest that certain combinations of micro categories were more prone to grow, most notably recreation-immigration-education micros. This chapter addresses the conclusions from this study in three ways: the general conclusions drawn from each of the five categories, practical applications in Iowa’s micropolitan areas and future areas of research.

In examining the growth patterns among micropolitan areas, it seems that those identified as recreation micros are best positioned to grow. Communities provided with appealing natural amenities, such as mountains or access to a large body of water, appear to have an easier time attracting and retaining new residents. Tourism and recreation development leads to higher employment growth rates, a higher percentage of employed residents, higher wages and lower poverty rates (Reeder and Brown, 2005).
Education micros also performed well. Although the growth in this category was not as definitive as recreation micros, it was better than the other three categories. Frey (2004), in primarily studying metropolitan areas, indicated there was a relationship between population growth and educational attainment. It appears a similar relationship exists among micropolitan areas. As Sander (2006) pointed out, the gap between more educated metro residents and lesser educated non-metro residents has begun to narrow. A secondary result of metro residents moving to micropolitan areas may be a general increase in educational attainment. This study revealed that educated micros tended to include an educational institution or major military base. Education micros also appeared to be most successful in areas were they were most uncommon, such as the South. More so than any other category, education micros tended to also qualify in other categories, especially as growth rates increased.

Conversely, micropolitan areas qualifying as an agglomerated micro were the least likely to qualify in another category. This category provided mixed results. Like education micros, they tended to perform best in areas were they were least common. Although agglomerated micros also qualifying as recreation or education micros tended to grow. In some cases, qualification as an immigration micro was also beneficial. While the benefits associated with proximity to a large metropolitan area could be seen in some communities, it was by no means universal.

Similarly, the performance of immigration micros varied greatly. More than any other category, qualification as an immigration micro was not clearly positive or negative. The influx of a large number of foreign immigrants can also be disruptive to a community. A survey regarding the perceived impact of foreign immigration showed
75 percent of respondents believe an influx of foreign immigrants will cause wages to decline and unemployment to increase (Scheve and Slaughter, 2001). However, detailed economic studies have found immigration actually has very little impact on employment and wages (Bodvarsson and Van den Berg, 2003). This may limit the ability of some communities to become immigration micros. While qualification as an immigration micro alone may not benefit a community, when combined with education and/or recreation, immigration micros were some of the fastest growing communities. Some of these fast growing communities were also located in slow-growth states that historically did not attract foreign immigrants, such as Nebraska and Kansas.

Diversified micros were the only category that appeared to have a negative effect on growth. Although diversification may be beneficial in some communities the vast majority of diversified micros had poor growth rates. The industry-specific communities had much higher growth rates. This was especially true among service-, government- and recreation-specific communities. This study was unable to identify a clear distinction between growing diversified micros and those in decline.

If Iowa’s 15 micropolitan areas are to play a role in the future growth of the state, it is necessary to focus on the qualities these communities possess and how they might leverage them to stimulate growth. Close scrutiny should be given to each of the five categories to determine whether factors relating to each may benefit Iowa’s micropolitan areas.

Growth among recreation micros is better than any other category, but it is also the least common micro in Iowa. Among all Iowa micropolitan areas, Spirit Lake, the
only recreation micros in the state, holds great promise for continued population
growth. In many ways, Spirit Lake is a prototypical recreation micro. With recreation
micros being scarce in Iowa, Spirit Lake has an effective growth rate that exceeds the
national rate among recreation micros and far exceeds all other Iowa micropolitan
areas. The blessing of natural amenities appears to have been the primary basis for this
success. Iowa contains fifteen lakes that are 1,000 acres or larger. Four of these lakes
are in the Spirit Lake micropolitan area (East Okoboji Lake, West Okoboji Lake, Spirit
Lake and Silver Lake).

There are two primary means by which Iowa micropolitan areas may benefit
from factors associated with recreation micros: greater utilization of major lakes and
the addition of amusement facilities. Although it is unlikely that other Iowa
micropolitan areas will qualify as recreation micros in the near future, there are a few
that may still benefit from recreation-related characteristics in their communities.
Besides Spirit Lake, there are four other Iowa micropolitan areas that with one of
Iowa’s 15 major lakes (Pella, Mason City, Storm Lake and Spencer). These lakes are
natural amenities which appear to be central to the success of most recreation micros.
By drawing in tourists and providing commercial growth in recreation-related
industries these lakes expose their communities to more potential residents than it
might ordinarily attract.

Another way to attract tourists and other potential residents is the addition of
an amusement facility. Casinos have been built in four of Iowa’s slowest growing and
declining micropolitan areas (Mason City, Clinton, Burlington, Fort Madison-Keokuk).
Although there are some positive indications that casinos may help a community, it is
unclear whether this will provide the necessary assistance to these struggling micropolitan areas. In the absence of other prospects these gaming institutions might be the initial stimulus necessary to reverse years of losing residents.

After recreation micros, agglomerated micros were the next best performing category. Iowa’s three agglomerated micros (Pella, Newton and Boone) were among the five fastest growing micropolitan areas and had effective growth rates above the national average. There are two other micropolitan areas that may qualify as agglomerated micros after the 2010 census, Clinton and Muscatine. Both have high interconnectedness with the Davenport-Rock Island-Moline metropolitan area. Additionally, two other micropolitan areas may benefit from their proximity to growing micropolitan areas, Oskaloosa and Spencer. Provided the interconnectedness between Oskaloosa and Pella continues to increase, as it did between 1990 and 2000, they may be included in the same CSA or even be combined into one micropolitan area by the OMB. This is not as likely for Spencer, but there is a high degree of interaction between Spencer and Spirit Lake. The considerable growth Spirit Lake has been experiencing may provide a boost to neighboring Spencer.

Education micros are the most common in Iowa with eight qualifying micropolitan areas. Four are among the fastest growing (Pella, Newton, Boone and Spirit Lake) and four face declining populations (Fort Dodge, Mason City, Spencer and Burlington). The interesting distinction between these two extremes is that the growing communities also qualified as agglomerated or recreation micros. Conversely, two of the declining communities qualified as diversified micros and two failed to qualify in any other category. Although Iowa education micros underperformed the
national effective growth rate, greater insight can be drawn from examining the other categories these eight communities for which they also qualified. Four other micropolitan areas came very close to qualifying (Clinton, Storm Lake, Marshalltown and Oskaloosa). Improvements in this area may provide an added boost for these communities, most notable Storm Lake and Marshalltown which also qualified as immigration micros. As the study indicated, qualification as both an immigration micro and an education micro resulted in an effective growth rate of +6.6 percent nationwide. No micropolitan areas in Iowa qualified for both categories.

Education may be the key to attracting and retaining residents in Iowa’s immigration micros. As was discovered among strong performing education micros, the existence of an institute of higher learning was prevalent. Educational micros that contained a college or university tended to perform better than other educational micros, but this did not hold in Iowa. One consideration regarding higher education is the results of the National Center for Public Policy and Higher Education report (2004). This report rated each state in a variety of categories as a means to assess the quality of higher education in that state. Although Iowa was rated quite well in preparing high school students for higher education, the availability of educational opportunities and the progress achieved by students once enrolled, Iowa received an “F” in affordability. Iowans devote a significant amount of their income toward higher education than other states. Iowa provides very little in terms of financial support relative to other states. This is compounded by the departure of nearly 60 percent of university students in Iowa upon graduation (The Economist, 2001). According to Betsy Brandsgard, a member of Iowa’s Strategic Planning Council, Iowa’s excellent schools and
universities are subsidizing employers everywhere else (The Economist, 2001). This is born out in 2000 U.S. Census figures regarding domestic migration. Iowa had a net out-migration of 11,691 young, single and educated residents between 1995 and 2000. Only North Dakota had a higher rate of out-migration (Franklin, 2003).

The business leaders in Iowa’s immigrant micros continue to support the meat processing plants indicating that they believe the economic benefits outweigh the problems. However, this balancing act is a growing concern among these communities. It may be advisable to broaden the industrial base and including new foreign-born residents in developing a new future. Iowa contains three immigration micros – Storm Lake, Marshalltown and Muscatine. All three failed to qualify in any other category. As this study has suggested, immigration micros tend to benefit from qualifying in multiple categories. Among the three, Storm Lake may contain the greatest resources to capitalize on an influx of foreign immigrants. As was discovered through this study, the combination of qualifying as a recreation, immigration and education micro appeared a strong benefit to micropolitan areas. Storm Lake, already an immigration micro, has the tools to make progress in the other two categories. Storm Lake namesake is one of Iowa’s major lakes. Additionally, it is the home of Buena Vista University.

The five categories analyzed in this study can provide some guidance for local and state policy. However, a deeper examination of the characteristics associated with each category is warranted for the development of a long-term population growth. As this study showed, there are great variances between communities, even those that are similarly categorized. Four of five factors used for category qualification had low
correlation coefficients relative to effective growth rates. Although micropolitan areas qualifying in particular categorical combination has higher effective growth rates, more research is required to isolate critical growth factors at the individual community level.

There are a number of areas for future research that could provide greater insight into these communities. For example, huge variances were discovered for particular categories between regional divisions. It appeared that those categories that were less common tended to be more significant in a particular region, but this needs greater scrutiny. Variances in population demographics, such as age, may help micropolitan areas better understand the role of a growing elderly population. Along those lines, a more detailed examination of domestic migration patterns for the elder, as well as other demographic categories, could also provide some insight to micropolitan area appeal. This research should also be applied to states beyond Iowa and future census data to more fully represent growth trends and community characteristics. A longitudinal study of both current micropolitan areas and metropolitan areas formerly the size of micropolitan areas, such as Las Vegas, Tallahassee, Bakersfield, could provide a greater understanding of the growth patterns for micropolitan areas.

The newly classified micropolitan statistical area is still in the process of being fully understood. As concerns regarding metropolitan living, such as traffic congestion, pollution and crime, and people continue to migrate from these communities, a greater understanding of micropolitan areas could make the United States better equipped to understand these demographic trends. While Iowa struggles to attracting and retaining
residents, the study of micropolitan areas may provide the valuable insight in formulating a strategy for future growth.
References


U.S. Census Bureau (1999) Table 1: Nativity of the Population and Place of Birth of the Native Population: 1850 to 1990.


