THE DEVELOPMENT AND AUTONOMY OF

MICROPOLITAN AREAS IN GEORGIA

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THE DEVELOPMENT AND AUTONOMY OF MICROPOLITAN

AREAS IN GEORGIA

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LIST OF SYMBOLS AND ABBREVIATIONS

Symbol/Abbreviation	Definition	Explanation
PCI	Per Capita Income	Total income of the area divided by total population.
MSA	Metropolitan Statistical Area	MSAs refer to a metropolitan area consisting of groups of counties which are economically and socially linked.
CBSA	Core Based Statistical Areas	Central and outlying counties designated as either micropolitan or metropolitan. The CBSA system replaced the previous system known as Primary Metropolitan Statistical Area.
Non-CBSA	Non-Core Based Statistical Areas	The residual of territories not designated as either micropolitan or metropolitan. Unofficially known as rural territory.
PMSA	Primary Metropolitan Statistical Area	The previous system of defining metropolitan areas was based on economic and social links based on any one of several criteria. The new system reduced the criteria to one factor, commuting patterns.
POP	Population	Some of the tables use POP as an abbreviated format for population.
ED	Education	Some of the tables use ED as an abbreviated format for education.
N	Observations	The number of observations used in a sample.
R	R-squared value	The level of explanation offered by the independent variables in the model.
DF	Degrees of freedom	The number of unrestricted independent variables in the model.
F	F-value	The level of significance offered by the model.
SE	Standard error	Standard error of the equation
Std. errors	Standard error	Standard error of the coefficient
p-values	Significance	The level of significance of the coefficient (with 95 percent confidence)
DIST	Distance	Refers to the proximity coefficient as measured in miles.
IN-GA	In Georgia	A dummy variable that refers to the group of micropolitan areas in proximity to the Atlanta, Georgia metropolis or those in proximity to Jacksonville, Florida.
Metro PCI	Metropolitan per capita income rate	The growth rate of per capita income with the corresponding metropolitan area.
Predicted Y	Y variable	Refers to the micropolitan PCI rate used as the dependent variable in the regression analysis.
IN-CTY	In county	Refers to the county geographic boundaries in the commuting analysis.
ISCED	International Standard Classification of Education	Six stages of educational development primary used in Europe and abroad. The first stage is primary school, and the intermediate ranges are for high school, vocational school and professional training. The final stage refers to college and university-level education.
S1	Study 1	Refers to the first central question: proximity to a metropolitan area and micropolitan PCI growth.
S2	Study 2	Refers to the second central question: the relationship between commuting levels and micropolitan PCI growth.
S3	Study 3	Refers to the third central question: the sustainability of micropolitan areas.
BEA	Bureau of Economic Analysis	Provided the source for income and population data.
BLS	Bureau of Labor Statistics	Provided the source of labor and employment information.

SUMMARY

The introduction of micropolitan areas as an official statistical category has raised questions about this "intermediate category" of formerly rural places. This thesis explores the conventional idea that small urban areas lack economic and social autonomy and that their development relies on proximity to metropolitan areas. Three central questions examine the concept of autonomy among Georgia micropolitan areas with regard to income, industry and demographic structures. Workforce commuting patterns show micropolitan areas in the northern part of the state have less autonomy than those located in Southern Georgia. Policy should reflect these differences, address the reliance on declining manufacturing sectors, and concerns regarding poverty and education. Profiles of Georgia micropolitan areas and case studies of three micropolitan cities offer a baseline for policy makers and future researchers. The information provides the framework that reveals the interdependence with metropolitan areas, the inability to provide sufficient jobs for the workforce and the future economic development potential of micropolitan areas. Methods include regression analysis and a comparative case study of Georgia micropolitan areas with a developing Dutch region. Twente, an old industrial region in the Netherlands, highlights opportunities for Georgia micropolitan areas to recognize creative social and economic opportunities. The comparison illustrates that innovative regional strategies can improve economic prosperity in smaller urban places.

CHAPTER I
LITERATURE REVIEW

Introduction

A recent Census study finds that U.S. populations are moving away from metropolitan areas and into more open spaces.[1] The report, which studied migration patterns from 2000 to 2004, showed the largest metropolitans lost population while the largest micropolitan areas gained population. The speculation is that urban conditions, such as rising home prices, are continuing to drive people out of bigger cities and further into the fringes of metropolitan areas. Declining populations in metropolitan areas, especially in central metropolitan cities, is not a new phenomenon. Growth generally occurs faster in more open territories. National opinion surveys have shown a preference for living in the countryside since at least the 1960s.[2] There is evidence of this preference in other countries, which may suggest the decision to live in urban places occurs from a necessity for higher paying jobs and other factors. Author Charles Landry cited a 1997 United Kingdom study showing that 84 percent of the sample preferred a small village but only 4 percent actually lived in one.[3]

The latest U.S. reclassification of statistical areas recognized this preference with the introduction of micropolitan areas as an official category. U.S. settlement patterns have historically been categorized as either metropolitan or non-metropolitan and this new category acknowledged the importance of an intermediate urban category.[4] The designation of micropolitan areas was aimed at resolving a definitional problem which had suggested that

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[1] Perry, Marc. "Domestic Net Migration in the United States." Census Publications. April 2006.
[2] Fuguitt and Zuiches. (1975) "Residential Preferences and Population Distribution." Demography, 12 (3).
[3] Landry, Charles. (2000) *The Creative City*. Earthscan: Sterling, Virginia.
[4] Under the previous MSA system, non-metropolitan areas referred to counties with populations less than 50,000 and metropolitan areas were counties with 50,000 or more.

official categories could accurately capture the complexity of non-metropolitan places. The problem of placing isolated areas in the mountains and deserts to smaller cities into the same category has existed since the term micropolitan was coined in the book, *Micropolitan*. At the time, authors Luther Tweeten and George Brinkman filled the gap for a single source of literature on economic development for rural areas. They described the diversity of rural places but still grouped all small cities, towns and open country into the same category.[5]

Metropolitan areas still contain the majority of the nation's population growth, with 80 percent of the population in one-fifth of the land mass. This fact is often used to uphold claims that non-metropolitan areas have "little or no economic or social autonomy," according to urban studies researcher Brian Berry.[6] Brown, Cromartie and Kulcsar (2004) refute the idea and suggest micropolitan areas have distinct characteristics from their non-CBSA, or rural, counterparts.[7] On average, micropolitan residents are less educated than those in metropolitan places, but people are even less educated in rural areas. Workers are more likely to fill farming and manufacturing jobs than in metropolitan areas, but less likely compared to rural places. Regardless of industry, earnings are generally higher in micropolitan areas than rural places, but lower compared to metropolitans.[8] Population density is far higher per county in micropolitan areas and there are more public services and

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[5] Tweeten, Luther and George Brinkman. *Micropolitan Development: Theory and Practice of GreaterRural Economic Development.* Ames: Iowa State University Press, 1976.
[6] Berry, B. (1967). The geography of market centers and retail distribution. Englewood Cliffs, NJ: Prentice Hall.
[7] Under the new system, rural areas are known as non-core based statistical areas (non-CBSA), calculated by subtracting metropolitan and micropolitan places from all territory. Before the latest classification rural areas were synonymous with non-metropolitan areas, calculated by subtracting metropolitan places from all other territory.
[8] Service and manufacturing workers, for example, earned 15 percent less in non-CBSA counties than in micropolitan areas (Brown et. al. 2004).

amenities compared to rural places.[9] Micropolitan areas appear to an intermediate range of social and economic characteristics compared to metropolitan and urban places.[10]

This thesis explores the economic development potential of micropolitan areas by examining their level of economic and social autonomy. The central question of the autonomy of metropolitan areas is examined through observations of workforce patterns, metropolitan income spillover, and the long-term consequences of public policies on the sustainability of micropolitan areas. This thesis undertakes an in-depth look at Georgia micropolitan areas and a case study of small cities in the Netherlands. The results will highlight policies and recommendations for Georgia micropolitan areas, opportunities and threats to future development, and areas for further research.

The new standards: A historic perspective

Researchers have historically disputed the best ways to define metropolitan statistical areas. Past attempts to update standards for statistical areas have split the debate into two camps: those who favor frequent changes and greater accuracy and those who prefer fewer changes and greater consistency. The debate resurfaced in the most recent revisions, which began in 1989 and took more than a decade to complete. The Office of Management and Budget, which updates the standards every decade, requested a review of Census definitions for metropolitan areas. Following six years of research, the findings and suggestions were unveiled at a public conference. The proposals drew congressional interest in 1997 and

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[9] The study showed micropolitan areas had 51,000 residents per county in 2000, non-CBSA counties had an average of 18,500 persons per county and metropolitans had 97,000 persons per county.
[10] The survey of central counties of micropolitan areas, small metropolitans and non-CBSA counties showed fewer services for public transportation, airports, museums, media outlets, libraries and educational institutions, and accommodations in micropolitan areas compared to metropolitans. However, micropolitan areas had more of these services than non-CBSA counties.

officials from the OMB and Census testified before a House subcommittee.[11] The following

year, an interagency group called Metropolitan Area Standards Review Committee

(MASRC) formed in partnership between the OMB and a number of federal statistical

agencies. MASRC's recommendations to update the metropolitan system, along with public

hearings and discussions from a federal statistical conference, led to a reclassification in

2000.[12] However, the changes were not applied until 2003 in order to utilize the most recent

Census data.

Under the new classification, economically integrated places with certain population

levels and urban characteristics were now part of the core-based statistical areas (CBSA).

The new system replaced the primary metropolitan statistical areas (PMSA).[13] The new

system was simpler and expanded coverage of statistical areas by 900 counties. The

expansion of statistical coverage meant rural areas would continue to shrink over time as

counties reached the threshold to become metropolitan or micropolitan areas. The county

remained the primary unit of analysis, but the numerous criteria used to determine social and

economic links with central urban areas were pared down to one rule: commuting patterns.

Commuting patterns would determine metropolitan or micropolitan status if either 25 percent

of the workers of the outlying county commute to the central county, or if one quarter of the

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[11] The House Committee on Government Reform and Oversight, Subcommittee on Government Management, Information, and Technology.

[12] Federal Register (Dec. 27, 2000) "Standards for Defining Metropolitan and Micropolitan Areas." Office of Management and Budget. Vol. 65, No. 249, pp. 82227-82238.

[13] The PMSA was commonly referred to as MSA, or metropolitan statistical areas comprised of counties which were economically and socially interdependent.

workers in the central county commute to the outlying county.[14] However, for CBSAs, the threshold is even lower and determined if 15 percent commute to the central or outlying county for work.

Issues raised from the latest reclassification

The 2003 classification may not have signaled new settlement patterns, but it was clear that the conventional metropolitan system was no longer considered an accurate reflection of the U.S. population. Although official statistical categories were designed purely for analytical purposes, they are important since they determine funding and eligibility for government programs.[15] This can affect an area's level of public service, the pace of progress and standards of living. The reclassification resulted in 49 new metropolitan areas.[16] Five metropolitan counties were dropped while another 41 metropolitan counties became identified as micropolitan areas. It seems logical places would be most immediately affected from the classification changes. However, the new system may have other implications.

The new micropolitan category effectively expanded statistical coverage, leaving less than 7 percent of the U.S. population in the rural category. This could effectively challenge conventional ideas about rural and urban areas and exacerbate the perception of rural places as backward or obscure. Rural areas were known as sparsely populated places. Metropolitans

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[14] Commuting links are calculated with the "employment interchange measure," which is the sum of the percentage of employed residents of the smaller area who work in the larger area, or the percentage of employment in the smaller area that is accounted for by workers in the larger area.

[15] US General Accounting Office. (June 2004) "Metropolitan Statistical Areas: New Standards and Their Impact on Selected Federal Programs."

[16] Federal Reserve Bank of Philadelphia. "OMB's Final Standards for Metropolitan and Micropolitan Statistical Areas: Implications for 2004 HMDA Reporting." (www.phil.frb.org/src/srcinsights/srcinsights/q3_03_cc2.cfm)

were densely populated with a distinctive character based on common assumptions about their level of progressivity, public amenities and future prosperity.

Table 1.1 Total population of residents in micropolitan, metropolitan and rural areas.

GA micropolitan areas	29.9 million	10.3 percent
GA metropolitan areas	241.4 million	83.0 percent
GA non-CBSA	19.5 million	6.7 percent
Total U.S. Population	290.8 million	100 percent

Source: Mackun 2005

However, density is no longer a critical factor in the functionality of an area as it was decades ago. A commonly accepted idea was that density declined as distance from the urban center grew. Improvements in information technology and transportation have changed the relationship between density and the urban center. Small cities and towns are now a main source of population growth, in addition to growth in metropolitan areas. This case appears to be especially true with small cities and towns close to metropolitan areas. The designation of the micropolitan category reflects this trend, but has also helped blur the line between rural and urban areas.

Approach to central questions

Recent population declines in metropolitan areas may be the result of population deconcentration, newly defined statistical categories, or some other phenomenon. The Census study showed people are generally moving further out into the exurbs or outer edges of the suburbs. Although deconcentration trends have not been well studied, research has

shown that growth generally occurs faster in less dense areas. This was true in the post-war movements to the sunbelt, and in the case of people and jobs in suburban areas.[17] Plane's study of CBSAs in 2003 showed outlying suburban counties grew faster than central counties, although central counties retained most of the populations. The determinants to the growth surrounding metropolitan areas were relative proximity and size. Proximity was a critical factor in a decades-old study (Fuguitt and Zuiches) which showed, in addition to the size of a metropolitan area, distance affected the development of cities in the region. It seems logical that these "spread effects" would spillover into micropolitan areas, but that places in the hinterlands would develop less functionality. This phenomenon will be examined using regression analysis of per capita income growth and the distance between metropolitan and micropolitan areas. Although earlier studies have focused on population rather than income growth, the results of Study 1 does not support the theory that proximity is a critical factor of metropolitan spillover.

There are only a few works of literature available on micropolitan areas and little is known about what drives their population growth. It is possible that incoming migrants are escaping crime, traffic and urban problems in favor of smaller, more cohesive communities. If people are migrating to micropolitan places in search of safe family environments and other factors that drew people to the suburbs, then lifestyle choices such as commuting to work may be a part of the preference for living in small towns and cities.[18] Micropolitan areas might offer available land, affordable housing and a quieter environment, but lack the

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[17] Carlino, Geraldn. (2000) "From Centralization to Deconcentration: People and Jobs Spread Out." *Business Review.* Federal Reserve Bank of Philadelphia, pp. 15-27.
[18] Gober, Patricia and Michelle Behr. (1982) "Central cities and suburbs as distinct place types: Myth or fact?" *Economic Geography*. Vol. 58, No. 4. pp. 371-385.

quantity or quality of jobs to sustain the population. They might serve as bedroom communities and rely on the metropolitan area for their wages. A qualitative assessment of workforce patterns found this was the case in the northern part of Georgia, while southern Georgia micropolitan areas were generally more self-contained. A regression analysis from Study 2 showed evidence of a relationship between PCI growth and the percentage of people who commute outside the area for work (and between PCI growth and as the population of people who live and work there). However, micropolitan areas in Georgia provide less than three quarters of the labor force employment, which suggests an insufficient level of work to sustain the population.

Georgia micropolitan areas have traditionally focused on traditional industries such as agriculture and manufacturing but have begun to re-position their policies towards more innovative strategies. The policies of micropolitan areas in the Georgia case study were not comparable to the innovative strategies of the Twente case. However, the industry structures and conditions in Georgia offer a snapshot of Twente about 40 years ago, when the area was predominantly an old industrial region. As textiles businesses declined until they were virtually eliminated by competition, Twente was forced to reinvent its regional development strategies and diversify its industry base. It still struggles with its image as a predominantly agricultural region and as a region whose performance lags compared to the rest of the country.

The Twente comparison in Study 3 examines opportunities and threats as micropolitan areas struggle for higher wage, skilled labor. The industry structures in Georgia resemble rural places, with far greater reliance on good producing areas than on producer services. Georgia micropolitan areas need a collective strategy in order to realize more

producer-service industries, such as business, finance and communications, and to ensure adequate, well-paid jobs in the future. The central question of Study 3 examines principles of sustainability in the policies of micropolitan areas. Interviews of policy makers reveal that policies are heavily focused on economic progress, but no balanced strategy to secure their environment, social well-being and economy. Additionally, there appears to be significant diversity among micropolitan areas in their industry base, income and poverty characteristics, and educational capacities.

Why micropolitan areas are important

Micropolitan areas are new to federal statistical categories, but businesses and companies have been paying attention smaller urban areas as potential markets for some time. Businesses are not only tracking population growth into less dense urban areas, they're following a particular demographic.[19] The population trend was documented in the Census 2006 report on population migration, which showed the population of largest metropolitans losing population while the largest micropolitan areas gained population. Some researchers have cited rising home prices in big cities are driving out middle-class families. Micropolitan areas have been called "mini-metros" as places that offer available land and a small-town atmosphere that attracts the middle class. Political campaigners have begun to trail micropolitan areas, and popular press articles suggest they will be key in future elections.[20]

Reclassifying formerly rural counties as micropolitan areas could have implications for funding and eligibility for certain programs and redefine perceptions about rural and

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[19] Nasser, H. (June 28, 2004) Small-town USA goes 'micropolitan' *USA Today*.
[20] Nasser, H. (Nov. 23, 2004) For political trends, think micropolitan. *USA Today*.

metropolitan areas. Based on a selection of federal programs, the GAO revealed that the new classification did result in funding shifts for micropolitan and metropolitan areas, expanding eligibility for some areas and reducing it for others.[21] State programs sometimes use urban and rural designations to allocate funds. As examples, rural areas in Georgia especially rely on the USDA funding. ONE Georgia funds for economic development are also distributed based on urban and rural categories.

Micropolitan growth is aided by access to a reliable highway system. However, rising gas prices and dwindling fossil fuel resources might affect their future sustainability. Will strained energy sources force smaller urban areas to become less reliant on external commutes? Will the population be compelled to move to metropolitan areas to have better access to jobs? Are local policy makers addressing these concerns? This thesis offers a baseline for future research on micropolitan areas. Descriptions about the social and economic conditions of Georgia micropolitan areas, industry structures and public policies provide the framework to answer central questions about their economic development potential and a glimpse of possible ramifications as this category of former rural areas transition into urban places.

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[21] U.S. General Accounting Office. (June 2004) Metropolitan Statistical Areas: New Standards and Their Impact on Federal Programs. *Report to House Subcommittee on Technology, Information Policy, Intergovernmental Relations and the Census* (Committee on Government Reform).

CHAPTER II:
PROFILES OF MICROPOLITAN AREAS IN GEORGIA

Introduction and methods

This chapter categorizes demographic, income and industry data from primary sources on micropolitan counties, and compares the averages with metropolitan areas and Georgia. A description and maps (See Appendix A: Maps) offer an illustration of the development patterns of micropolitan areas based on 2000 Census information. In the analysis of this chapter, demographic characteristics micropolitan cities, counties and the state will be compared (See Table 2.1), followed by a comparison of micropolitan areas, metropolitans and Georgia (Table 2.2). Data from the Bureau of Economic Analysis and Census 2000 are analyzed based on regional location, urban designation and CBSA category. The industry structure of micropolitan areas will also be compared with Georgia based on total annual payrolls obtained from Census county business patterns.[22]

Patterns of development

Ten percent of the state population, or 881,796 people, live inside a micropolitan and another 80 percent, or 6.5 million people, in metropolitan areas. This reflects the national proportion of people living in metropolitan and micropolitan areas. About 100 counties in Georgia, 30 micropolitan counties and 70 metropolitans, are statistically recognized areas. This means about 90 percent of Georgia's population lives in about half of the state's land, or

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[22] Census 2000 demographic data was obtained from a secondary source. County-to-County worker flows were based on Census 2000 data (http://www.census.gov/population/www/cen2000/commuting.html). Industry demographics were obtained from Censtat (http://censtats.census.gov/cbpnaic/cbpnaic.shtml) based on the North American Classification System.

about 53 percent that is statistically recognized as either metropolitan or micropolitan. The 10 percent of the state's population lives on the remaining 47 percent of the state's territory.[23]

The 23 micropolitan areas have developed in similar patterns across the Georgia landscape. Most of them appear to be located along metropolitan rings or between two metropolitan areas. Micropolitan areas in the northern part of the state appear to be more aligned with Atlanta's sprawl, with several single-county micropolitan areas about 60 to 70 miles from the metro's center. Pockets of micropolitan areas are located along Atlanta's metropolitan edges (See Figure 2.1).[24] Inside lies the 28-county metro area, sandwiched between six smaller metropolitans. The Atlanta area stretches from Rome and Dalton in the western part of the state, to Gainesville and Athens in the east, Macon in the middle of the state, and to the Columbus area in the southwest. The micropolitan areas of Summerville and Calhoun are between Chattanooga and Atlanta, and so are in some proximity to both. Cedartown a bit further south and, with less than 50 miles to Atlanta's center, it has the closest proximity to a metropolis of all the other micropolitan areas.[25]

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[23] The percentage of land considered CBSA and non-CBSA was determined using GIS software. CBSA areas were calculated by the combined acreage for micropolitan and metropolitans. The non-CBSA portion was the residual of total land.

[24] Micropolitan areas "surrounding" metro Atlanta are Cedartown, Summerville, Calhoun, Cornelia, Toccoa, Milledgeville, Thomaston and LaGrange. See Figure 2.1 for map.

[25] The US Census Bureau does not recognize the terms metropolis or micropolis. For purposes of this thesis, the term will be used to refer to a metropolitan area with over 1 million inhabitants.

Figure 2.1: Georgia Micropolitan Development Patterns
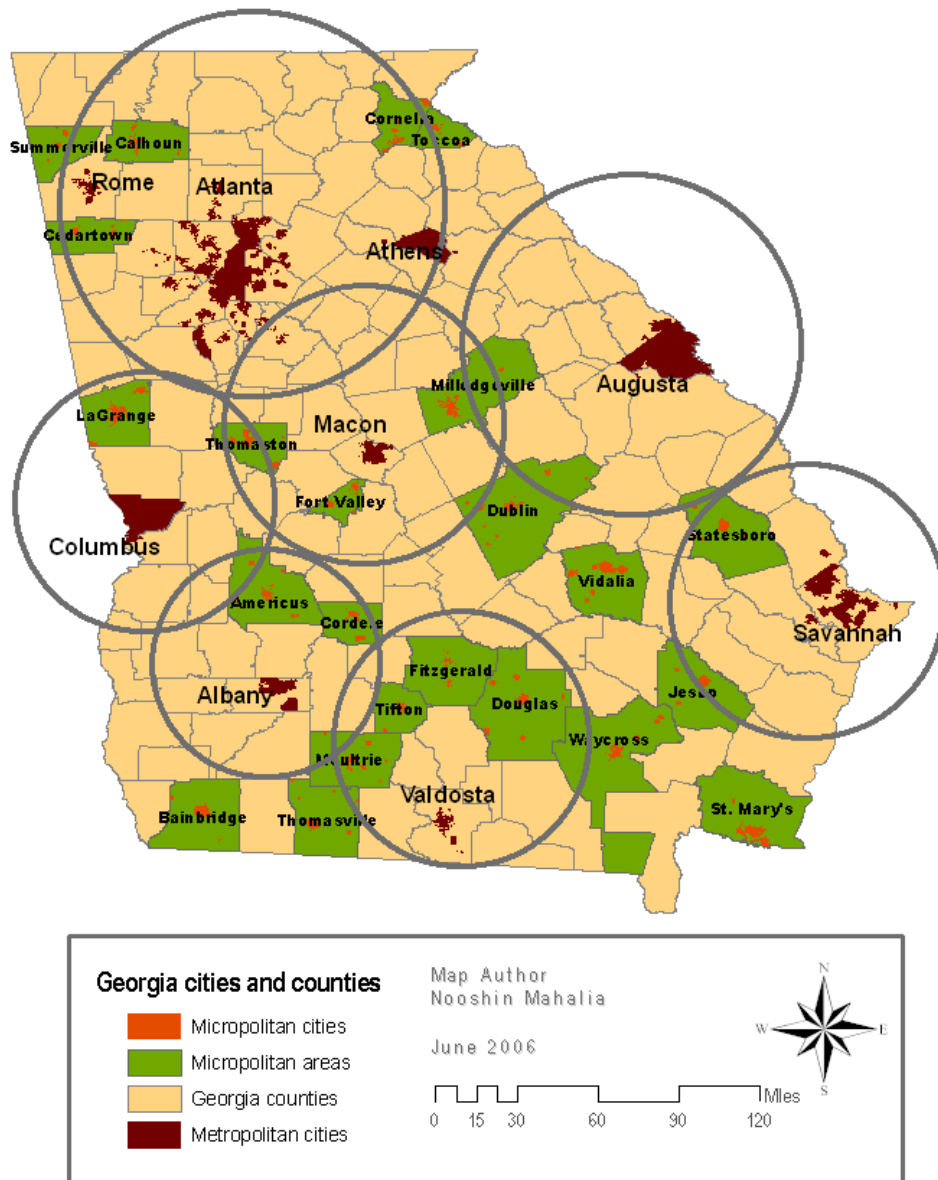
Figure 2.1 Micropolitan locations are shown in relation to metropolitan centers in Georgia.

In the southern part of the state, several micropolitan areas form a belt from the

Savannah area and snake around Valdosta and Albany. Micropolitan areas in the southern

half of the state also appear to be in some proximity to other metropolitans, reinforcing the idea that their growth extends from metropolitan areas. Rings of micropolitan areas also surround the Augusta, Columbus, Savannah and Valdosta metropolitans. The micropolitan areas of LaGrange, Thomaston and Americus surround the Columbus, while Milledgeville, Dublin, Vidalia, and Statesboro surround Augusta. Statesboro, Vidalia, Jesup and St. Mary's are in some proximity to Savannah.

The two northeastern micropolitan areas, Cornelia and Toccoa are a little more than an hour's drive from the center of Atlanta. The two adjacent counties have a combined population of more than 50,000 but do not qualify as a single metropolitan area.[26] Instead they both meet the "central county" criteria, because they lack the commuting criteria and have independent urban clusters and populations.[27] Of the 30 counties classified as micropolitan areas in Georgia, seven are two-county micropolitan areas and 16 are single-county areas. [28]

Social and economic demographics

This chapter answers questions about what micropolitan areas in Georgia look like, and their social and economic demographic, as part of the foundation for the central

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[26] An outlying county is identified if at least 25 percent of the workers in the central county commute there, or if 25 percent of workers from the outlying county commute to the central county.
[27] A central county is "associated with the urbanized area or urban cluster that accounts for the largest portion of the county's population." It must have either 1) at least 50 percent of the population in an urban area with a population of at least 10,000, or 2) has a population of at least 5,000 in an urban area of 10,000 or more people. (Federal Register 2000)
[28] Two-county micropolitan areas form economically integrated areas set by the Census Bureau's standards for commuting and population density. Micropolitan areas have at least one urban cluster and a population of at least 10,000 but less than 50,000. An urban cluster consists 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." (Federal Register 2000)

questions defined in Chapter III of this thesis. Some of the methods employed in this chapter, comparing micropolitan counties and cities and comparing micropolitan areas and metropolitans, are aimed at one of the central questions involving whether micropolitan areas have grown independent of location or proximity to sprawling metropolitan areas. The larger issue of sprawl and deconcentrating populations require a more expansive look at an entire region. This chapter is limited to understanding the structures of Georgia micropolitan areas, excluding metropolitan rings around Jacksonville, Tallahassee and Chattanooga, and ignoring metro rings that cross state lines around the Columbus, Augusta and Savannah areas. Micropolitan areas social demographics will be compared with metropolitans and with the Georgia average. The comparisons will be followed with a description of micropolitan population and income growth, industry structures and commuting patterns. The final summary weighs these characteristics for a description of the social and economic structures of micropolitan areas.

Demographics: Micropolitan cities and counties

In Georgia, more than half of the state's total population of 8.2 million lives inside a city.[29] This characteristic is even stronger for micropolitan areas in the state, with 57 percent (or 498,378 people) of the population living inside city boundaries. The following analysis uses Census 2000 data to compare county and city demographics for all 23 micropolitan areas in order to examine their social structures.[30] Some of the key characteristics of race,

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[29] The analysis of city populations was conducted using GIS software with Census 2000 data.
[30] Census 2000 data was used in a GIS analysis to explore the micropolitan at the county level, and compare those characteristics with cities inside the micropolitan, as well as the Georgia average.

gender, education and labor force in micropolitan cities make them sound like metropolitan urban centers. However, micropolitan cores and outer areas are not so distinct, although there are some disparities with regard to education and race. The percentage of people in the labor force is also lower in micropolitan cities.

In micropolitan counties, two-thirds of the residents are white and less than a third of residents are black. This compares with other counties in Georgia but not so much within micropolitan urban areas. The cities of micropolitan areas have fewer white residents (about 55 percent), a greater number of black residents (40 percent), but otherwise the same percentages of other races and ethnicities. About 4 percent are Hispanic in micropolitan cities and counties, 3 percent multi-ethnic and a very small minority of Asians and Native Americans. There are more females in micropolitan counties, or about 51 percent, which compares with the cities and Georgia average. Of the population of people over 25 years of age, a greater portion (52 percent) is female. The populations of people over 25 are also roughly the same across micropolitan cities, counties and in Georgia.

About 30 percent of the population in micropolitan cities and counties does not have a high school degree, compared to the state average of 22 percent. A much higher level of the population has a high school-level education in micropolitan areas compared to the state average (35 percent in counties, 32 percent in cities and 29 percent in Georgia). Far fewer people in micropolitan areas have a bachelor's or master's degree. About 10 percent of micropolitan counties and cities have a bachelor's, compared to 16 percent in Georgia, and about 3 to 4 percent have a master's, compared to 6 percent in Georgia. However, the level of PhDs and professional degrees is roughly the same.

The population size participating in the labor force is much less in micropolitan areas (44 percent) than the state average (50 percent). Unemployment is also the same across micropolitan cities, counties and the state. However, it appears to be slightly higher for women in micropolitan cities than in the state. The unemployment figures are not official, and are only for comparison purposes.[31]

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[31] Unemployment was calculated as the percentage of unemployed men/women as a percentage of men/women in the labor force.

Table 2.1 Age, race, education and labor force demographics comparisons of micropolitan counties, micropolitan cities and the state of Georgia.

	Micropolitan counties		Micropolitan cities		Georgia	
Demographic	Population	Pct. Pop.	Population	Pct. Pop.	Population	Pct. Pop.
Males	433,595	49%	236,895	48%	4,022,230	49%
Females	448,201	51%	261,483	52%	4,164,223	51%
Pop over 25	549,523	62%	303,791	61%	5,185,965	63%
Males over 25	262,532	30%	138,891	28%	2,480,870	30%
Females over 25	286,991	33%	164,900	33%	2,705,095	33%
White race	605,009	69%	276,018	55%	5,327,175	65%
Black race	241,113	27%	199,716	40%	2,342,110	29%
Native American	2,182	0%	1,484	0%	23,688	0%
Asian-Pacific Island	5,875	1%	4,914	1%	175,329	2%
Multi-ethnic	27,617	3%	16,246	3%	318,151	4%
Hispanic	36,379	4%	22,046	4%	429,976	5%
ED less than 9th	61,815	11%	36,002	12%	393,197	8%
ED 9th to 12th	104,901	19%	55,986	18%	718,152	14%
ED HS grads	190,194	35%	96,959	32%	1,486,006	29%
Some College	116,111	21%	67,039	22%	1,328,432	26%
ED bachelor	47,356	9%	29,736	10%	829,873	16%
ED master	19,206	3%	12,255	4%	288,888	6%
ED professional	6,560	1%	3,815	1%	97,174	2%
ED PhD	3,380	1%	1,999	1%	44,243	1%
Male labor force	217,921	54%	111,990	51%	2,217,015	54%
Female labor force	187,881	46%	105,624	49%	1,912,651	46%
Total labor force	405,802	46%	217,614	44%	4,129,666	50%
Male unemployment	12,030	3%	7,613	3%	107,652	3%
Female unemployment	13,007	3%	8,774	4%	115,400	2.8%

Source: Census 2000 GIS analysis

Demographics: Metropolitans and micropolitan areas

The basic demographics of metropolitans and micropolitan areas have some similarities, but they diverge when it comes to education. Metropolitan residents are better educated than micropolitan areas and than the state average. About 18 percent of the metropolitan residents hold bachelor degrees and 6 percent have master's degrees, compared

to 9 percent and 3 percent respectively in micropolitan areas. Fewer people have attained

education levels below high school in metropolitan areas, or less than 20 percent compared to

30 percent in micropolitan areas and 22 percent across Georgia.

Table 2.2 compares age, race, education and labor force demographics of micropolitan areas, metropolitan areas and the state of Georgia.

	Micropolitan areas		Metropolitans		Georgia	
Gender/Age	Population	Pct. Pop.	Population	Pct. Pop.	Population	Pct. Pop.
Males	433,595	49%	3206645	49.1%	4,022,230	49%
Females	448,201	51%	3319810	50.9%	4,164,223	51%
Pop over 25	549,523	62%	4,127,992	63%	5,185,965	63%
Males over 25	262,532	30%	1,975,135	48%	2,480,870	30%
Females over 25	286,991	33%	2,152,857	52%	2,705,095	33%
White race	605,009	69%	4,182,717	64%	5,327,175	65%
Black race	241,113	27%	1,884,472	29%	2,342,110	29%
Native American	2,182	0%	19,518	0%	23,688	0%
Asian-Pacific Island	5,875	1%	166,679	3%	175,329	2%
Multi-ethnic	27,617	3%	273,069	4%	318,151	4%
Hispanic	36,379	4%	373,631	6%	429,976	5%
ED less than 9th	61,815	11%	269,003	7%	393,197	8%
ED 9th to 12th	104,901	19%	510,904	12%	718,152	14%
ED HS grads	190,194	35%	1,109,449	27%	1,486,006	29%
Some College	116,111	21%	1,111,474	27%	1,328,432	26%
ED bachelor	47,356	9%	747,599	18%	829,873	16%
ED master	19,206	3%	255,994	6%	288,888	6%
ED professional	6,560	1%	84,764	2%	97,174	2%
ED PhD	3,380	1%	38,805	1%	44,243	1%
Male labor force	217,921	54%	1,816,469	54%	2,217,015	54%
Female labor force	187,881	46%	1,566,559	46%	1,912,651	46%
Total labor force	405,802	46%	3,383,028	52%	4,129,666	50%
Male unemployment	12,030	3%	87,189	3%	107,652	3%
Female unemployment	13,007	3%	91,228	3%	115,400	2.8%

Source: Census 2000 GIS analysis

Poverty in micropolitan areas is much higher than in metropolitans and higher than

the Georgia average. About 17 percent of the population in micropolitan counties is below

the poverty level, compared to 11 percent in metropolitans and 13 percent in Georgia. Public

assistance is also much higher in micropolitan areas with an average of $27 spent per person

as a proportion of the total population, compared to $23 in metropolitans and $24 in Georgia.

Social Security assistance is also much higher in micropolitan areas, compared to

metropolitans and to the state. About $1,145 is spent per person of the total population, compared to $938 across Georgia and $12 per person in metropolitan areas. A part of the explanation may reflect relatively higher percentages of elderly persons in micropolitan areas. People ages 62 and older represent 14 percent of the population in Georgia, compared to 12 percent in the state and 11 percent in metropolitans.

Table 2.3 Poverty, public assistance and the percentage of people 62 and older in micropolitan areas, metropolitan areas and the state of Georgia.

	Micropolitan areas		Metropolitans		Georgia	
Poverty	152,411	17%	740124	11%	1033793	13%
Social Security	$1,010,080,200	$1,145	$80,883,040	$12	$7,676,761,500	$938
Pub Assistance	$23,571,000	$27	$148,093,000	$23	$197,617,100	$24
People over 62	126,455	14%	694,105	11%	951,999	12%

Source: Census 2000 GIS analysis

Population and per capita income

Population and per capita incomes among Georgia micropolitan areas represent tremendous diversity. In the 1990s, a handful of micropolitan areas boomed with population and income growth, while others lagged behind. In 2000, LaGrange had the highest PCI of all Georgia micropolitan areas, with an average of $24,070. Summerville had the lowest rate with $17,998 (For PCI and population data, see Appendix B). PCI tended to accompany population growth. However, there were a few exceptions:

- Thomaston's PCI rose 62 percent but population increased 5 percent.

- LaGrange grew 65 percent in PCI but only 6 percent population.

- Toccoa rose 71 percent in PCI but 8.6 percent in population.

- Americus and Tifton grew 67 percent in PCI but less than 10 percent population.

- Cordele's population grew less than 10 percent but PCI rose 64 percent.

Georgia micropolitan areas all gained population growth with an average of 15 percent, much

faster than the 8 percent population growth of micropolitan areas across the country.[32]

However, this rate was slower than the state average population growth of 26 percent. PCI

increases ranged considerably, from 111 percent (St. Mary's) to Fort Valley (49 percent).

None of the micropolitan areas ranked close to the state average PCI of about $28,000. Total

PCI rose 71 percent, far behind Georgia's average increase of 101 percent.

North Georgia

Along the northern edges of metro Atlanta are the micropolitan areas of Cornelia,

Toccoa, Cedartown, Summerville, and Calhoun. In terms of population, Cornelia's 30

percent rise in population ranked it second among all micropolitan areas. Calhoun grew by

25.9 percent, followed by Summerville (14.4 percent), Cedartown (13 percent) and Toccoa

(8.6 percent). The fastest growing PCI rates in North Georgia micropolitan areas were

Cornelia (91 percent) and Calhoun (87 percent). Micropolitan areas with the slowest PCI

growth in the region were Cedartown (60 percent) and Summerville (62 percent).

Table 2.4 PCI and population growth among micropolitan areas in North Georgia.

Population and PCI growth in North Georgia						
Micropolitan	2000 PCI	2000 POP	1990 PCI	1990 POP	POP % Change	PCI Change
Toccoa	$22,102	25,490	$14,053	23,474	9%	71%
Calhoun	$21,974	44,371	$14,827	35,233	26%	87%
Cornelia	$21,916	36,135	$14,918	27,799	30%	91%
Cedartown	$18,725	38,268	$13,188	33,873	13%	60%
Summerville	$17,998	25,498	$12,707	22,287	14%	62%

Source: Bureau of Economic Analysis

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[32] Lang, Robert and Dawn Dhavale. (2004) "Metropolitan America: A Brand New Category." Metropolitan
Institute at Virginia Tech.

Middle Georgia

Of nine micropolitan areas in Middle Georgia, five are single-county and four are two-county areas (Vidalia, Americus, Dublin, and Milledgeville). Middle Georgia micropolitan areas are located below Atlanta and above the line from Savannah to Albany.[33] Of Middle Georgia micropolitan areas Statesboro had the highest population growth rate (29.4 percent), followed by Milledgeville (12.8 percent), Fort Valley (12.2 percent), and Dublin (10.7 percent). PCI in Statesboro doubled between 1990 and 2000, rose 69 percent in Dublin and 67 percent in Americus. Fort Valley (49 percent), Vidalia (62 percent) and Thomasville (62 percent) experienced the slowest PCI growth.

Table 2.5 PCI and population growth among micropolitan areas in Middle Georgia.

Population and PCI growth in Middle Georgia						
Micropolitan	2000 PCI	2000 POP	1990 PCI	1990 POP	POP % Change	PCI Change
LaGrange	$24,070	58,935	$15,491	55,581	6%	65%
Fort Valley	$21,591	23,812	$16,266	21,225	12%	49%
Dublin	$21,026	53,535	$13,796	48,340	11%	69%
Americus	$20,912	37,031	$13,641	33,926	9%	67%
Thomaston	$20,114	27,636	$13,017	26,329	5%	62%
Milledgeville	$19,902	54,795	$13,752	48,557	13%	63%
Cordele	$19,653	21,990	$13,156	20,022	10%	64%
Statesboro	$19,595	56,159	$12,655	43,412	29%	100%
Vidalia	$19,544	34,400	$13,189	31,524	9%	62%

Source: Bureau of Economic Analysis

South Georgia

With nine micropolitan areas in South Georgia, six are single-county areas.[34] The highest population and PCI growth in the state occurred in the South Georgia micropolitan of St. Mary's, with 111 percent PCI growth and a 42 percent rise in population. Populations

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[33] Micropolitan areas in Middle Georgia are located around Columbus, Macon and Augusta, and also along the northern rings of Savannah and Albany. See Figure 2.1 for a map.

[34] Waycross, Douglas and Fitzgerald micropolitan areas are two-county areas, which means they have a central county and an outlying county as defined by Census commuting standards.

rose considerably slower elsewhere: 16.5 percent in Jesup and 14.7 percent in Moultrie. The

disparities in PCI rates were the greatest in South Georgia. With a PCI that more than

doubled in St. Mary's, Douglas grew 82 percent while Waycross, Moultrie and Bainbridge

grew the slowest.

Table 2.6 PCI and population growth among micropolitan areas in South Georgia.

Population and PCI growth in South Georgia						
Micropolitan	2000 PCI	2000 POP	1990 PCI	1990 POP	POP % Change	PCI Change
Thomasville	$23,166	42,849	$15,093	38,902	10%	69%
Tifton	$21,878	38,450	$14,341	35,071	10%	67%
St. Mary's	$20,939	43,734	$14,095	30,734	42%	111%
Jesup	$20,152	26,167	$13,457	22,463	16%	74%
Fitzgerald	$20,096	27,467	$13,398	24,860	10%	66%
Douglas	$20,063	45,188	$13,935	35,815	26%	82%
Bainbridge	$19,931	28,242	$13,578	25,573	10%	62%
Waycross	$19,634	51,174	$12,815	48,852	5%	60%
Moultrie	$19,219	42,138	$13,627	36,735	15%	62%

Source: Bureau of Economic Analysis

Industry and wages

Micropolitan Area Industries in Georgia

Manufacturing 31%

Health Care 18%

Retail Trade 12%

Construction 6%

Whlsale Trade 5%

Trans & Warehs 4%

Finance & Ins 4%

Waste Remediation 4%

Accom & Food 4%

Other Estabs 3%

Tech & Professional 3%

Mgt. Of Companies 2%

Information 2%

Forestry; Education; Arts & Ent; Utilities 2%

Legend:
- Manufacturing
- Health Care
- Retail Trade
- Construction
- Whlsale Trade
- Trans & Warehs
- Finance & Ins
- Waste Remediation
- Accom & Food
- Other Estabs
- Tech & Professional
- Mgt. Of Companies
- Information
- Forestry, Arts, Utilities

Figure 2.2 The industry distribution of micropolitan counties based on total annual wages.

Micropolitan areas rely heavily on a few industries compared to the state as a whole
and lack the diversity of the overall Georgia economy. This could make it particularly
sensitive to economic swings in certain industries. The manufacturing, health care and retail
sectors are twice as large as in Georgia, representing two-thirds of total annual payroll for
micropolitan places. Manufacturing and health care combined represent half of micropolitan
annual payroll, but only one-quarter in Georgia. Retail is the third largest sector in terms of
annual payroll as well as the number of workers. Although there are as many workers
(450,000) in health care, it contributes far more in annual payroll ($1.2 billion compared to
$800 million for retail).

Micropolitan areas have far less developed producer services sectors compared to the state (See Georgia industry sectors in Appendices). Professional and technical services (9 percent of annual payroll) and wholesale trades (8 percent of annual payroll) are more developed in Georgia than in micropolitan areas, where the two industries combined make up only 8 percent of annual payroll. Finance and insurance, management and information were twice as developed across the state, compared to micropolitan annual payrolls.[35]

As the largest single industry, the manufacturing sector is twice as large in micropolitan areas compared to Georgia (14 percent). This may be a concern if the specific manufacturing businesses are expected to lose jobs. And micropolitan areas which heavily rely on manufacturing could be more sensitive to job losses. LaGrange has the highest percentage of manufacturing in terms of annual payroll ($296 million), and the second largest workforce (7,900). Calhoun also dominates among micropolitan areas in manufacturing, with 12 percent of the total annual payroll ($247 million). It also has the largest workforce (8,300) among micropolitan areas in manufacturing. However, manufacturing was a dominant part of annual payroll in a number of micropolitan areas: Douglas, Dublin, Cornelia, Summerville, Fitzgerald, Cedartown, Tifton and Thomasville. (See Appendix C: Industry Data)

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[35] Drabenstott, M. (2003) A New Era for Rural Policy. Economic Review. Federal Reserve Bank of Kansas City, Fourth Quarter.
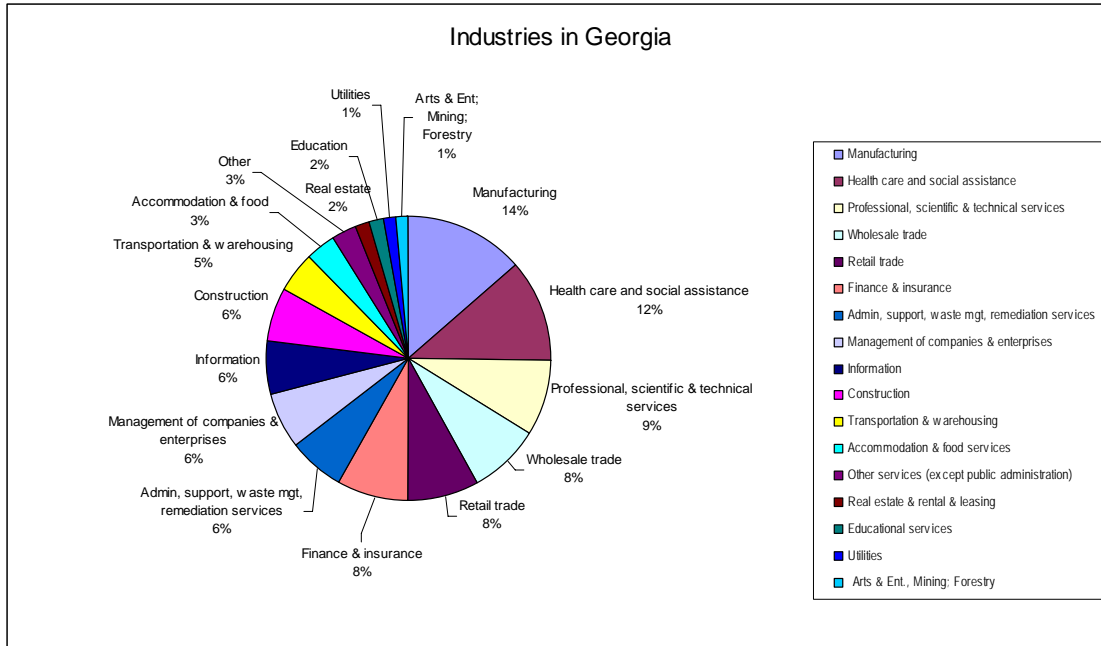
Figure 2.3 The distribution of total annual wages of all Georgia industries.

Health care is the second largest industry among Georgia micropolitan areas, with 17.4 percent of the total payroll. That represents a greater share than Georgia's health care industry (12 percent of annual payroll). The health care industry is expected to grow 3.2 percent in Georgia by 2012[36] with wages of about $723 each week.[37] Milledgeville had the largest share of the health care industry (11 percent) among micropolitan areas, both in terms of annual payroll ($131 million) and the workforce (4,700). This is followed by Dublin (10 percent), Thomasville (9 percent) and LaGrange (8 percent).

Retail is the third most dominant industry among micropolitan areas, with 12 percent of total payroll for micropolitan industries compared to 8 percent in Georgia. About 45,000 workers are part of retail trades, slightly more than the health care fields (42,000).

[36] This figure is based on 2002 base year employment in Health Care and Social Assistance fields, according to the Georgia Department of Labor (explorer.dol.state.ga.us/mis/industry.htm)
[37] Georgia Employment & Wages 2004 Averages, Georgia Department of Labor. pp 5.

Employment in retail is projected to grow 1.7 percent in Georgia through 2012 and has a weekly wage of $464. LaGrange outranks other micropolitan areas in retail trade annual payroll ($64 million) and workforce (3,600), followed by Statesboro, Waycross and Dublin—which each have more than $50 million in annual payroll and 3,000 workers.

Table 2.7 is ranked by the percentage of annual payroll of industries in micropolitan counties.
Micropolitan industry sectors in Georgia

| Industry | Employees per week | Payroll ($1,000) | | Establishments | Pct. annual payroll |
		1st quarter	Annual		
Manufacturing	73,924	532,139	2,113,535	1,040	30.6%
Health Care	42,429	290,353	1,201,582	1,898	17.4%
Retail Trade	45,322	192,547	794,255	4,290	11.5%
Construction	13,881	81,842	370,370	1,825	5.4%
Wholesale Trade	10,051	71,271	306,425	936	4.4%
Transport & Warehouse	9,765	70,282	289,162	559	4.2%
Finance & Insurance	8,360	66,277	262,364	1,259	3.8%
Waste Remediation	11,871	58,215	254,966	679	3.7%
Accommodation& Food	26,903	57,618	243,663	1,512	3.5%
Other Establishments	11,770	44,359	184,632	2,137	2.7%
Tech & Professional	6,079	43,256	181,658	1,215	2.6%
Mgt. Of Companies	3,772	42,908	152,489	96	2.2%
Information	4,070	29,045	122,474	287	1.8%
Real Estate & Lease	3,026	12,810	54,560	701	0.8%
Forestry	2,258	10,137	44,998	267	0.7%
Education	3,360	9,308	39,215	128	0.6%
Arts & Entertainment	2,041	4,386	19,851	193	0.3%
Utilities	1,041	1,688	6,501	82	0.1%
Mining	385	0	0	17	0.0%
TOTAL	283,329	1,687,241	6,901,912	19,188	100.0%

Source: Census County Business Patterns

Wages and employment

The average wage per job[38] among micropolitan areas aligned with the Georgia average for non-CBSA areas from 1990 to 2000. Some micropolitan areas surpassed the

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[38] Average wage per job is wage and salary disbursements divided by the number of wage and salary jobs (total wage and salary employment)."

average for non-metropolitan areas ($23,690) which rose 44 percent in the decade up to 2000.[39] St. Mary's had the highest average wage per job ($29,001) and Moultrie had the lowest ($20,925) over the decade. However, none of the micropolitan areas reached the average wages of metropolitans in Georgia, which also rose at much faster rates than micropolitan and non-CBSA place. Cordele had the highest growth rate for the average wage per job (53.1 percent), while Bainbridge had the lowest (33.5). [40]

Table 2.8 Average wage growth in micropolitan, metropolitan and non-CBSA areas in Georgia.

	Average Wage Growth		
	1990	2000	Growth
Micropolitan	$16,989	$24,051	41.6
Metropolitan	$22,838	$35,690	55.8
Non-CBSA	$16,461	$23,690	43.9

Source: Bureau of Labor Statistics

The growth of total wages and salaries were identical in micropolitan areas and non-CBSAs, or 69 percent growth in a decade. Total wages grew fastest in metropolitan areas at a rate of 10 percent.[41] Among micropolitan areas, salaries and wages rose fastest with 115 percent growth in Douglas, while Milledgeville held the slowest wage and salary growth at a rate of 38 percent (See Appendix D: Wages and Salaries).

Table 2.9 Wages and salaries in Georgia grew fastest in metropolitan areas. Micropolitan and non-CBSA counties had the same growth rate in wages.

	1990 Wages & Salary	2000 Wages & Salary	Percent growth
Micropolitan areas	5,714,873	9,640,945	69%
Metropolitan areas	60,355,735	124,785,424	107%
Non-CBSA	9,298,066	15,743,448	69%
Georgia total	69,653,801	140,528,872	102%

Source: Bureau of Labor Statistics

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[39] The Georgia average wage for metropolitan areas was $35,582, an increase of 56 percent in 2000.

[40] Wages reflect the amount of money dispersed, not earned. It includes "monetary remuneration of employees, including the compensation of corporate officers; commissions, tips, and bonuses; and receipts in kind, or pay-in-kind, such as the meals furnished to the employees of restaurants.

[41] Wage and salary disbursements are measured before deductions, such as social security contributions and union dues.

Farming and agriculture

While some characteristics show micropolitan areas in Georgia are more like rural places, the following analysis shows micropolitan areas rely very little on agriculture. It makes up a negligible part of the micropolitan economy, representing only 3.3 percent of total income for micropolitan areas in Georgia. As agriculture becomes a smaller part of the Georgia economy, farming and agriculture are forecast to continue declining by 1.2 percent of annual employment through 2012.[42] Farm income fell 0.7 percent as a proportion of total income from 1990 to 2000, at 2.6 percent of total micropolitan income. For micropolitan areas with the highest levels of farming income, the sector continues to decline in terms of the market value of production.

Half of the micropolitan areas are experienced a decline in farming, although a few such as Americus experienced an increase (1.3 percent). Compared other Georgia micropolitan areas, Americus and Bainbridge rely more on farming income, or about 6 percent of their total incomes. In Americus, the market value of agriculture production dropped 48 percent in Sumter to $49 million and 19 percent in Schley to $10 million in five years (1997-2002). Jesup lost 15 percent of its market value of production to $16 million and Polk was down 2 percent to $19 million. In Milledgeville, the total market value of agriculture declined 54 percent in Hancock to $1.6 million, but was up 93 percent in Baldwin County to $7 million in 2002. Bainbridge's farming production grew to $100.5 million in 2002.[43]

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[42] The source for this data was BEA's regional economic data. (www.bea.gov/bea/regional/bearfacts).
[43] The U.S. Department of Agriculture's National Agriculture Statistics (www.nass.usda.gov/census/census02/profiles/ga/)

Table 2.10 Farming in Georgia micropolitan areas declined by 1 percent as a percentage of total income.

Farming income for Georgia micropolitan areas

Micropolitan	Pct Total Income 1990	Pct Total Income 2000	Difference
Americus	4.5%	5.8%	1.3%
Bainbridge	5.7%	6.1%	0.4%
Jesup	0.9%	1.2%	0.3%
Cedartown	0.5%	0.8%	0.2%
Milledgeville	0.2%	0.4%	0.2%
Toccoa	1.7%	1.8%	0.2%
Waycross	2.3%	2.4%	0.1%
St. Mary's	0.1%	0.1%	0.0%
LaGrange	0.1%	0.1%	0.0%
Summerville	0.4%	0.3%	-0.1%
Statesboro	2.7%	2.6%	-0.1%
Thomaston	0.8%	0.3%	-0.4%
Fitzgerald	5.2%	4.7%	-0.5%
Thomasville	2.1%	1.5%	-0.6%
Dublin	2.1%	1.4%	-0.7%
Fort Valley	3.5%	2.8%	-0.7%
Vidalia	4.1%	3.2%	-0.8%
Cordele	4.0%	3.1%	-0.9%
Calhoun	3.9%	2.0%	-2.0%
Tifton	5.4%	3.4%	-2.0%
Cornelia	6.8%	3.8%	-3.0%
Moultrie	9.2%	6.1%	-3.2%
Douglas	11.5%	8.2%	-3.4%
TOTAL	3.3%	2.6%	-0.7%

Source: Bureau of Economic Analysis

Conclusions

The analysis of social and demographic characteristics of micropolitan areas shows the city centers are comparable to the micropolitan as a whole. Much of the differences are negligible and there appears to be no "metropolitization," with distinctive urban cores in micropolitan cities. Those findings correspond with Lang & Dhavale's study which showed micropolitan areas have emerged without large centers. However, their study found many overlaps between micropolitan areas and smaller metropolitans, including micropolitan areas

with higher populations than smaller metro places. Micropolitan areas don't overlap in Georgia, where the smallest metropolitan, Hinesville-Fort Stewart, had a population of 72,000 in 2000, and the largest micropolitan, LaGrange, had about 60,000 residents. The highest PCI rate, LaGrange, was about $24,000 in 2000, or about $4,000 less than the state average.

However, there are significant differences between micropolitan and metropolitan areas. Micropolitan areas had much higher levels of government spending for public assistance and Social Security. The comparison showed higher poverty rates with metropolitan areas and the Georgia average. An analysis of PCI revealed some micropolitan areas are wealthier than others, with a difference of about $6,000 between the poorest (Summerville) and wealthiest (LaGrange). Population and PCI soared Cornelia, Statesboro and St. Mary's in the 1990s, while other micropolitan areas managed higher PCI growth with a steadier increase in population. Some micropolitan areas, such as Cedartown, Summerville and Fort Valley, were at the bottom of their respective regions regarding PCI growth.

Micropolitan industry more closely resembles rural areas, except there is little reliance on farming and agriculture. Their economies rely mostly on manufacturing, health care and retail, with little diversity in other industry sectors. The descriptions of industry structures, wages and wealth in micropolitan areas put them in line with rural places. Some micropolitan areas are addressing the lack of diversity in their industries and the risks they face in the event of economic declines, as the case studies in Chapter III will show.

The following chapter sheds light into the social and economic structures and future policy challenges of three Georgia micropolitan areas. While their conditions might be symptomatic of other micropolitan places in the United States, the following chapter shows

some policy challenges are not a symptom of their population size. The comparative case study of Twente in the Netherlands reveals similar sized municipalities can have greater economic diversity, as well as the ability to sustain its diversity with higher levels of education in the local population. However, some external conditions might influence these differences. For example, municipalities in Twente have far more dependence on regional governmental bodies to administer capital projects, policies and public initiatives. Georgia micropolitan areas, on the other hand, assume greater risks but also have more authority over their policy decisions.

CHAPTER III: CASE STUDIES

Introduction

From an outsider's perspective, it would seem impossible to compare the regions of Twente in the Netherlands and Georgia micropolitan areas. The two regions operate in different parts of the world, with their own educational systems, social values and currencies. But Twente's reliance on manufacturing and on declining industry sectors seems to mirror of Georgia micropolitan areas. The transformation of Twente's economy over the past few decades provides policy options with a model that focuses on developing knowledge capital, promoting innovation and collaborating with private industry. The Twente case shows that regional cooperation, a commitment to education and an innovative climate can lead to significant progress in a short time.

The Twente region was once one of the poorest in the Netherlands. As it emerged from the success of the textiles industry, few investments were made in education, technology or infrastructure. As the industry began its decline in the mid-1950s, there was no single source of leadership to recognize the need to retrain the workforce and develop the region's economy. It was only after massive job losses and an economic recession that national and local leaders began to act. The creation of a regional economic development agency facilitated decades of collaborative efforts to improve innovative climate, grow venture capital money and for capital projects. The new Twente has the organizational network, infrastructure and knowledge base for the national government to recognize its innovative capacities. Despite its achievements, local leaders continue to compete with more successful regions for funding, to retain younger workers who prefer to live in the big cities, and to reinvent the area's image as an agricultural region.

The following case studies briefly describe the social and economic conditions in two municipalities in Twente and three micropolitan areas in Georgia. Interviews, industry data and public information were compiled for the descriptions. In the case of Georgia, the micropolitan areas of Americus, Summerville and Cornelia show the opportunities and challenges that exist in Georgia micropolitan areas. The region of Twente is also described as well as its municipalities of Oldenzaal and Hellendoorn. Of 14 municipalities in Twente, those two also provide the diversity of regions of the Netherlands. They also illustrate the various characters, economic structures and social conditions in Twente.

A case study of three Georgia micropolitan areas

Background

The micropolitan areas included in the case study of Georgia micropolitan areas have unique roles in Georgia history. Americus, Summerville and Cornelia were selected for their individual roots and locations across the state. Their demographics and economic structures vary from the average micropolitan in Georgia. But they share in common the reliance on declining manufacturing sectors and the threat to long-term sustainability. The defining character of the micropolitan areas is the small-town charm, which some respondents have described as a "Mayberry feel." Georgia micropolitan areas may be struggling to retain this distinguishing character as they continue to growth.

One of the interesting finds from the case study is the diversity of places of Georgia micropolitan areas. About 65 percent of employment in Summerville is related to the manufacturing sector, and predominantly to declining textiles manufacturing. Cornelia and Americus had more diverse economic structures, but their race and age demographics were quite different from each other. The two micropolitan areas in the northern part of the state

were more similar in demographics of home ownership, racial composition and median age. Also noteworthy is that population and income rose much faster in Cornelia than in Summerville and Americus. This may be further evidence that proximity to a metropolitan may not be a direct factor in future development, since Summerville and Cornelia are about equidistant to the Atlanta center.

The final point in this study relates to education and poverty. The population in this sample was more likely to drop out of high school, compared to the Georgia average. And they were much less likely to go to college or graduate with an advanced degree. However, the rate of people below the poverty level in Americus was 20 percent, although its income and education demographics were close to the state average. This may suggest that there may be a greater gap between the haves and have-nots in micropolitan areas such as Americus, while poverty in Summerville and Cornelia were much closer to the state average.

Demographics

Race and age

If the sample is representative of all micropolitan areas, then the northern part of the state could represent a much greyer, older population. The median age in Georgia was 33, and so was the median age in the central county for Americus. Cornelia and Summerville had median ages of 36 and 36, respectively.

The two northern micropolitan areas also had much higher concentrations of white residents, in comparison with the state average. The populations of both Summerville and Cornelia were nearly 90 percent white, compared to the state average of 65 percent. Americus had a higher concentration of black residents, with 47 percent compared to 29 percent in Georgia. Cornelia matched the Georgia average for populations of other races and

ethnicities, or about 6 percent. There was only 2 percent of the population listed as other races or ethnicities in Summerville, and only 3 percent in Americus.

Table 3.1 Basic demographics in three micropolitan areas are compared with Georgia.

	Summerville	Cornelia	Americus	Georgia
Median age	37	36	33*	33
Pct white	87%	89%	50%	65%
Pct black	11%	5%	47%	29%
Own housing	28%	28%	57%	67%
Rental	9%	9%	30%	33%
Per capita inc	$17,998	$21,917	$20,912	$27,989
Individuals below poverty	14%	12%	20%	13%
PCI growth	62%	91%	67%	59%
Pop growth	14%	30%	9%	26%

Source: Census 2000, BEA. Note: The central county of Sumter provided the median age for Americus.

Population and income

Per capita income (PCI) grew much faster in all three micropolitan areas, in comparison with the state average of 60 percent.44 However, Summerville and Americus PCI growth rose more slowly than the micropolitan average of 71 percent (see referring tables). Population rose more slowly in Americus and Summerville in comparison with the state average of 26 percent. Cornelia's population rose 30 percent and micropolitan areas on average grew 15 percent.

The percentage of individuals below poverty level in Summerville and Cornelia were comparable to the state average (about 13 percent). However the percentage in Americus exceeded those figures with a rate of 20 percent below poverty. This shows there is

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[44] Bureau of Economic Analysis figures were used for 1990 and 2000.

tremendous diversity among micropolitan areas, although as a whole they may have much lower PCI and higher poverty than the state average.

Education of the labor force

With regard to education demographics, Summerville, in the northwestern part of the state, had a much higher rate of high school drop-outs compared to Cornelia in the northeast and Americus in the southwest. The high school dropout rate was much higher than the Georgia average, about 21 percent. However, there are more people with high school degrees than in Georgia. Cornelia and Americus had higher rates of people with a bachelor, master and professional degrees. Americus was close to the state average of 8 percent population with a graduate or PhD degree.

Table 3.2 Education levels in three micropolitan areas and Georgia.

	Summerville	Cornelia	Americus	Georgia
HS dropout	40%	30%	30%	21%
HS graduate	35%	33%	31%	29%
Some college	18%	22%	21%	26%
Bachelors	4%	9%	10%	16%
Graduate/PhD	3%	5%	7%	8%

Source: Georgia Department of Labor's economic profiles; Census. The Georgia DOL provided the source of county-level data on education based on 2000 Census figures for the percentage of the labor force ages 18 and older. The Georgia total is for the population ages 25 and older.

Jobs and industry

Unemployment

Americus had the highest unemployment rate of the three micropolitan areas in the study. Cornelia fared better with a rate of 0.04 percent unemployment while Summerville held the same rate as the state average.[45]

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[45] Based on figures for 2004, Georgia Department of Labor.

Table 3.3 Employment and labor force figures in three micropolitan areas and Georgia.

	2004		Unemployed	
	Labor force	Employed	Level	Rate
Georgia	4,390,414	4,188,278	202136	0.05
Summerville	11,244	10,721	523	0.05
Cornelia	19,249	18,574	675	0.04
Americus	16,394	15,473	921	0.06

Source: Georgia Department of Labor

<u>Industry base</u>

The micropolitan areas in the study reflect the structure of all micropolitan areas—a heavy reliance on manufacturing and on goods producing fields. Retail and health care also large parts of the economic engines in this case study. While it might appear that all three micropolitan areas in the study are somewhat homogeneous in their industry makeup, further examination demonstrates otherwise. Americus and Cornelia are more similar to the typical micropolitan industry structure in Georgia. However, manufacturing represents 65 percent of Summerville's employment, followed by retail (12 percent) and accommodations (5 percent). Employment in apparel and textiles, Summerville's largest manufacturing sector, is projected to decline by 84 percent, or the loss of about 520 jobs, in the northwest Georgia area.[46]

A third of the workforce in Cornelia was employed in manufacturing, followed by retail (15 percent) and health care (8 percent). Georgia Department of Labor predicts mixed results for three major manufacturing categories (wood products, furniture and fabricated metals) in the Cornelia area for the decade ending 2012. Fabricated metals will grow 6

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[46] Information on job losses was only available for the Northwest Georgia Workforce Investment Area for the 2002-2012 decade. Department of Labor website, Georgia Labor Market Explorer industry profiles (http://explorer.dol.state.ga.us/labormarket.asp)

percent in Habersham, with about 160 new jobs, furniture manufacturing sector will lose 70 percent, while wood manufacturing is expected to grow employment by 8 percent.[47]

Manufacturing made up one-quarter of all employment in Americus, followed by health care (20 percent) and retail (15 percent).[48] That figure suggests slightly less reliance on manufacturing than the average of 31 percent across micropolitan areas in Georgia. As in Cornelia, furniture and wood products were also a part of the manufacturing base Americus area. However, the state's forecast for those sectors looks less optimistic for the Americus area. Jobs related to making wood products will decline 15 percent and those related to making furniture are expected to decline 93 percent in the Middle Flint Workforce Investment Area. The non-metallic mineral mining and quarrying sector, which employs about 250 workers in Americus, is expected to remain steady through the decade.

A look at three Georgia micropolitan areas

<u>Summerville</u>

Demographic characteristics

Population: 25,470
Top employers in the central county: Best Manufacturing, Mowhawk Industries, Mt. Vernon Mills Inc., Oak View Nursing & Rehabilitation Center, Wal-Mart Associates Inc.
Nearby metropolitans: Rome, Dalton, Chattanooga
Median age: 37
Racial composition: 87 % white, 11 % black, 2 % other
Housing: 28 % owner occupied, 9 % rental
Persons below poverty: 14 %
Per capita income: $17,998

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[47] Where county-level forecasts were not available, information was used for the Workforce Investment Area. Cornelia is represented by the Georgia Mountains Workforce Investment Area.
[48] Only the central county of the Americus micropolitan was analyzed in this report, since it represents the vast majority of the micropolitan area's employment.

Incorporated: 1897

Summerville was once known as "Selma" when early settlers arrived in the Cherokee Indian Nation. Designated as the county seat in the mid-1800s, Summerville grew with the textile manufacturing businesses that were drawn to the Northwest Georgia region. Located between Atlanta and Chattanooga about 40 miles off Interstate 75, Summerville has experienced rapid growth in recent years, with some of its migrants moving from metropolitan areas. The preference of suburbanites to move to places such as Summerville is good news. But the leadership has been facing some tough challenges.

The micropolitan has one of the highest poverty rates in the state. Conditions for public education include high drop out rates, low SAT scores and one of the highest illiteracy rates in Georgia. A literacy council has been active over the past two years, in partnership with the Chamber Education Committee. However, that's a work in progress. Among all Georgia micropolitan areas, Summerville ranks at the bottom in per capita income.[49]

Unemployment rose sharply from a low of 3 percent in 2002, but was remained steady over the decade (around 5 percent). However, jobs for the local population have grown scarcer. From 1999 to 2004, Chattooga County lost nearly 1,000 jobs. A large portion of the population (36 percent of the workforce) travels outside the micropolitan for work. The vast majority of those workers, or about 80 percent, commute to metropolitan areas such as Chattanooga and Rome.

Despite the downturn in its main industry and the economy, population in the Summerville micropolitan increased by 15 percent from 1990 to 2000. A 12 percent increase

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[49] BEA figures estimates of PCI were favored for consistency with Chapter IV: Data Analysis.

is projected for 2010, bringing the population to more than 28,000 residents. But finding ways to meet the needs of projected growth has been challenging since Summerville taxpayers have resisted attempts to finance infrastructure such as water and sewer lines. Local Chamber Executive Director Nichole Dyer, who is 23 years old, and Chairman Jason Winters, 26, have embarked on a public education campaign to solicit support from the public. It's difficult to get taxpayers to invest more, Dyer says, especially when so many of them are perfectly happy drinking well water.

Past economic development policies have depended largely on the success of textiles manufacturing. But the latest economic downturn and global competition have led to "a standstill in economic growth" as the textiles manufacturing business continues its decline. Projections show the industry will have one of the most rapid declines in employment in the state.[50] Summerville decision makers have sought ways to diversify the economy, by promoting entrepreneurship and tourism, and establish a more diversified business sector. Part of the business plan includes recruiting manufacturing suppliers from the region.

The local Chamber of Commerce has been formulating strategies to establish Summerville as a tourist attraction and began a campaign for tourism this year.[51] Visitors generally are interested in the old historic sites tied to its history with the Native American population, such as an 1835 settler's cabin, and the railroad era, which includes a 1918 train depot.

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[50] The Georgia Department of Labor's figures were projected over a 10-year period through 2012 (explorer.dol.state.ga.us/mis/industry.htm).

[51] Telephone interview with Summerville Chamber of Commerce Executive Director Nicole Dyer.

Cornelia

Demographic characteristics

Population: 35,902
Top employers in the central county: Habersham County: Arrendale State Prison, Ethicon Inc., Fieldale Farms Corp., Habersham County Medical Center, Piedmont College
Higher education: North Georgia Technical College, Piedmont College
Nearby metropolitans: Gainesville, Atlanta
Median age: 36
Racial composition: 89 % white, 5 % black, 6 % other
Housing: 28 % owner occupied, 9 % rental
Persons below poverty: 12 %
Per capita income: $21,916
Incorporated: 1887

It's hard to miss the 7-foot-high apple statue for drivers passing through northeastern Georgia along Interstate 985. For the local population, the statue at the old train depot downtown serves as a focal point for community events and pays tribute to its agricultural past. Like many cities its size, the Cornelia area has been busy reviving historic sites and expanding tourism. Sometimes, the locals will talk candidly about the area's shady history, swearing by rumors that elected officials some decades ago had for a time operated municipal budgets from cigar boxes. Current elected officials have to make efforts to shed the image and "good old' boy" reputation it seems to have earned from its cultural legacy.

These days, officials are consumed dealing with population growth that doesn't appear to be slowing much in the near future. Cornelia had the highest population growth of all micropolitan areas in Georgia from 1990 to 2000. Population climbed 30 percent during the decade, and is forecast to rise 25 percent to 45,000 residents in 2010.[52]

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[52] The Georgia Department of Labor's online economic profiles were based on 2000 Census figures. Projections for 2010 were based on estimates from the Governor's Office of Planning and Budget.

Perhaps because of the boom, the micropolitan fared better than the state average in unemployment, with a rate of 3.5 percent compared to 4.6 in Georgia. The number of jobs has grown steadily in Cornelia since 1994, although there have been period of job losses during that period. Companies and workers are increasingly feeling the effects of overseas competition.

Economic development policy continues to focus considerable attention on recruitment of retail and manufacturing companies. Two small plants are opening soon, one makes medical orthodontic devices and the other makes motion picture sound equipment. Evidently there has also been enough room for big box retailers to move in. The latest additions are Home Depot and a Lowe's home improvement store on Georgia State Highway 441. To grow its commercial and industry base, a new industrial park was constructed and the airport was expanded to accommodate corporate jets.

Much of the concerns regarding future sustainability revolve around regional cooperation and the environment. For starters, Habersham contains tributaries the Chattahoochee River, and so it's automatically involved in a three-state ongoing dispute over future water rights. Habersham's richness in water resources won't exempt it from regulations on water conservation and restrictions on treatment for public consumption. The solution might require a good deal of leadership and regional cooperation, but the area is split with inter-city disputes. Some of the disputes stem from the way water and treatment permits were structured between the cities and the Georgia Environmental Protection Division. The disputes are exacerbated by the fact that largest urban center is in Cornelia (pop 3,674), the county seat in Clarksville (pop 1,454), and Piedmont College—the area's academic resources and one of the largest employers—is in Demorest (pop 1,465).

Other concerns about future sustainability are of a more urban nature. There are concerns about crime and the emergence of gangs in the area.[53] Traffic congestion is also worsening from population growth and worker commutes. About 31 percent of people in Habersham County commute outside for work, and half of them go to either Gainesville or Atlanta.

The average commute time was 24 minutes, not as bad as Baldwin County in the Milledgeville micropolitan. With an average of 36 minute work commute, Baldwin residents hold the record among micropolitan areas in Georgia.[54] But long commutes are a problem not just for frustrated drivers but also because of increasing worries over highway safety. The Governor's Office of Highway Safety designated the intersection of highways 365 and 441 as part of its Northeast Traffic Enforcement Network. The program is part of increased enforcement along "high crash severity corridors" in the state.[55]

Americus

Demographic characteristics

Population: 37,031
Top employers in the central county: Cooper Lighting, JPS Automotive, Magnolia Manor Inc., Sumter Regional Hospital, Wal-Mart Associates Inc.
Higher education: Georgia Southwestern State University, South Georgia Technical College
Nearby metropolitans: Macon, Columbus and Albany
Median age: 33 in Sumter and 36 in Schley
Racial composition: 50 % white, 47 % black, 3 % other
Housing: 57 % owner occupied, 30 % rental
Persons below poverty: 20 %
Per capita income: $20,912

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[53] Interview with Ed Nichols, director of the Habersham County Chamber of Commerce.
[54] The 2000 census was the source of the commute times.
[55] http://www.gahighwaysafety.org/NSSSFIRST.HTML

Incorporated: 1832

Americus is known among Civil War history buffs for its role in the war as a site of hospitals for Confederate soldiers. But there are other interesting points not related to its Confederate past. Habitat for Humanity's first headquarters opened in Americus. It was the first city in the state to deploy electric street cars. And former President Jimmy Carter's hometown of Plains is only a 15-minute drive away.[56]

With a population of 16,700, the city of Americus is the county seat and the center of one of several two-county micropolitan areas in the state. Between Sumter and the outlying county of Schley, population grew about 10 percent. Since 2000, Sumter has lost 1 percent of its population and is forecast to grow about 3 percent by 2010. The outlying county of Schley grew 7 percent and is projected to rise 30 percent by 2010.[57]

Perhaps depopulation has followed unemployment. In 2004, the rate was 5.7 percent in Sumter, higher that the state average of 4.6 percent. Schley fared worse with an unemployment rate of 6 percent. With the downturn, the micropolitan held steady on the number jobs (more than 15,000) over the decade.

Once known for its agriculture, growing peanuts, cotton, soybeans and corn, Americus has managed to hang on to that sector for longer than other Georgia micropolitan areas. Its predominant industry is manufacturing (25 percent of the workforce), followed by

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[56] http://www.americus-sumterchamber.com/
[57] Georgia Department of Labor Local Area Profiles.

health care (20 percent) and retail (15 percent). Agriculture represents only 3 percent of its

workforce, but also hired more workers (about 300) than other micropolitan areas.[58]

The area has managed to preserve its cultural legacy in the agriculture business, but

the types of businesses moving in may threaten to alter the area's future character. Big box

retailers have begun to target places like Americus and fulfill promises of jobs. However, that

leaves fewer and fewer smaller, family-run shops that help create its small-town charm.[59]

The micropolitan area's development strategy was rooted in low-cost housing, cheap

labor and affordable land. It was once the capital for manufactured housing since the 1960s,

until the state regulations made 16-foot-wide mobile homes in Georgia obsolete and

prompted the industry to relocate elsewhere. The strategy toward low-wage labor began to

change with global competition with even cheaper wages and land in Mexico and China.[60]

The area lost 400 jobs when one of its biggest employers, Cooper Industries, relocated jobs

to Mexico. It recently gained 150 jobs with the opening of the Zavata Inc. call center.[61] The

new strategy is to continue growing skilled and technical jobs, as well as to bolster

entrepreneurship in a partnership with Georgia Southwestern Technical College.

In addition to promoting entrepreneurship, economic developers have been debating

ways to expand training and educational opportunities for its workforce. There's also debate

over creating a new marketing strategy targeting residents and new business. Tourism is no

longer the focus of the area's strategy, although it's still important to the area's development.

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[58] Based on combined totals of Sumter and Schley counties of the estimated workers per week. Source was the 2003 County Business Patterns.
[59] Telephone interview with Angela Davis, Americus community and economic development director,
[60] Telephone interview with Wally Summers, vice president of economic development, South Georgia Technical College.
[61] http://www.zavata.com/newsroom/releases/press_sumter_county.asp

About 25 miles east of Interstate 75, Americus is in the southwestern part of the state and more than two hours from Atlanta. It's convenient to the metropolitan areas of Columbus, Macon and Albany. About 13 percent of Sumter's and 25 percent of Schley's population commute outside the micropolitan for work. [62]

A case study of the Twente region

Facts about Twente

Province: Overijssel
2005 Population: 617,000
Ten-year growth: 5.1 %
Major industries: Manufacturing, retail, construction
Per capita income: 11,800 €
Unemployment rate: 9.8 %

Background

Given the small size of the country and conditions below sea level, centralized government authority is necessary part of life in the Netherlands. The entire country of is not much bigger than the size of Maryland. Because much of the country is below sea level, much of it would be submerged under water without a sophisticated, efficient water management system. The national government has long recognized the drawbacks of operating a small country, and its policies appear to acknowledge the concept of strength in numbers. Years ago, the national government set about reducing the number of cities in the Netherlands because they were simply too small to function productively. The number of cities in the Netherlands has shrunk from 1,500 to 1,000 and to less than 500 a few years ago.

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[62] About 17 percent of Sumter's and 60 percent of Schley's workers commute outside their respective counties. To estimate the micropolitan commute, commutes between Schley and Sumter were subtracted from the total.

There have been repeated attempts in the region of Twente, located in the far eastern part of the country, to better compete for government funds. Last year, it began talks to merge its largest cities into a more powerful union. The agreement to form a combined metropolitan union with a population of more than 300,000 fell through on local fears that the individual cities would lose their identities.[63] This sense of identity with respective towns and cities is even stronger among small business owners. Businesses owners identify strongly with their hometowns and that's where they overwhelmingly prefer to locate their business. This sometimes creates friction and intensifies the rivalry between the big cities and municipalities.[64] Leaders from the municipalities complain that the bigger cities already receive favorable treatment from the national government and then unfairly recruit development away into their territories. From the perspective of national policy, the big cities are doing everything right: growth should be directed to densely populated areas, which already have the infrastructure and supports in place. From the perspective of the municipalities, those few instances represent only one of many contradictions between policy and practice.

In its rhetoric, innovation was presented as one of the centerpieces of the current Balkenende administration. In practice, the government directs funding to top performing institutions, which generally tend to be older and more established. The national government also dedicates the bulk of public spending on major cities, especially the cities of Amsterdam, Rotterdam and The Hague. Under this policy, poorer regions in the north and

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[63] CBS Statline figures from 2003 (statline.cbs.nl).
[64] In the Netherlands, the meanings of municipality and city are more distinctive. Municipal areas can include several smaller cities, while word city refers to any incorporated urban place.

east of the Netherlands have struggled to catch up and regions such as Twente have been forced to adopt more innovative strategies.[65]

The university has played a major role in Twente's transformation from an old industrial region over the past few decades. Before it became a leader in the textiles industry, the Twente region was little more than a poor farming region. Located 15 kilometers from the border of Germany, Twente was known for its cross-border trading. When the province of Overijssel was formed, Zwolle became the provincial capital since it was the economic center at the time. However, this created a void in political leadership after the rise of the textiles industry, because the wealth of the province shifted to Twente. Protected with cushy national policies, the "textile barons," as they referred to in local circles, did little need to invest in innovative technologies, and neither did the provincial leaders in Zwolle. With a major recession in the 1970s, unemployment and municipal budget shortages mounted and the region lost 40,000 jobs in a span of 35 years. In response to that crisis, the region began a transformation into its current system of institutional and organizational networks.

The national government created the regional economic development agency, Overijssel Ontwikkelings Maatschappij (OOM), which acted as the liaison between government, private business and the university. Leadership within the university, one of the three major technical universities in the Netherlands, led to a number of partnerships that helped Twente reposition itself for the knowledge economy. The university created a steady knowledge pool and interacted with the private sector to promote research and development. Its most successful program, Temporary Program for Entrepreneurs (TOP), has led to the

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[65] Interview and correspondence with Dr. Gert-Jan Hospers, associate professor of economics and strategy, University of Twente (Enschede, the Netherlands)

creation of 550 spin-off companies since the program's inception in the late 1970s. Public-private partnerships led to the creation of the Business Technology Center, the *Ondernemerhuis* (entrepreneur's house), and investment holdings for start-up businesses. The Balkenende government has labeled the Twente region and the university as an "innovative hotspot," acknowledging its innovative capacities. But the government hasn't shifted plans to cut university funding.

The primary concerns regarding the future of the Twente's model involves cultural and behavioral changes. Implementing changes in deep-rooted cultural practice has been an ongoing challenge. The university's promotion of technology transfer within academic departments, for example, sometimes clashes with conservative Dutch academic culture, which values practical applied science over commercialization. In another example, the local population is known for *noaberschap*, or bond between neighbors who survived harsh economic times. This custom, rooted in the area's history as a poor farming region, is often viewed by outsiders as indifference. Newcomers often complain that the strength of local ties also make it more difficult to tap into the region's networks and organizations. [66] *Noaberschap* extends to the municipalities, but the cities in Twente have historically had a lack of regional cooperation. There is also a history of political divisions between the *steden*, or bigger cities, and *platteland*, or municipalities in the rural areas.

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[66] Benneworth, Paul. "Bridging Cambridge to Consett? Building university-centered entrepreneurial networks in peripheral regions." www.staff.ncl.ac.uk/p.s.benneworth/test.htm (Accessed Feb. 24, 2006).

Employment and jobs

The region has diversified its industry and business sectors, but its unemployment rate is still higher than the regional average. Unemployment began to rise in 2001, reaching higher than 10 percent in 2005, compared to the national average of 9 percent. From 1999 to 2005, some of the region's manufacturing sectors have been growing, but the paper industry, metals, electronics, and the textiles industry, which has about 3,000 workers left, have been declining. In sum, Twente lost 11 percent of its manufacturing-related jobs, or about 6,000 workers. The fastest growing sectors in Twente are health care, real estate and education. Compared to the region of Twente, Georgia micropolitan areas have a much lower rate of providing jobs for the population. In Georgia, micropolitan areas provide only 70 percent of the jobs for the population, or about 283,000 jobs for a workforce of 406,000. This is much lower that the Georgia average of 95 percent. However, Twente provides 94 percent of the jobs for its labor force population, which is comparable to the national average. However, jobs for the labor force are growing more rapidly in the country than in the region.

Table 3.4 Population comparisons of the Twente region and the Netherlands.

	Netherlands			Twente		
	1996	2003	Growth	1996	2003	Growth
People	15,493,889	16,192,572	4.5%	587,897	613,932	4.4%
Employment	6,158,646	7,331,054	19.0%	220,264	262,990	19.4%
Labor force	6,686,000	7,510,000	12.3%	236,000	279,000	18.2%
Jobs/Labor	92.1%	97.6%	6.0%	93.3%	94.3%	1.0%

Source: CBS Statline

Much of the region's workforce commutes at much higher levels than in Georgia, but this can be partly attributed to efficient transportation systems. Workers in the big cities in Twente commute to a far greater extent than in the municipalities. Most of the commutes are contained within Twente. The commuting patterns in the table below shows the interdependence of the workforce in Twente cities.

Table 3.5 Work commuting patterns are compared in Twente's big cities and two municipalities.

Twente work commutes

	Workforce	In-City	Pct. In-city	Pct. outflow	Outflow	Location	Outflow	Location	Outflow
Hellendoorn	16,508	7,429	45%	55%	9,079	Almelo	1,657	Rijssen	1,315
Oldenzaal	14,594	6,737	46%	54%	7,857	Enschede	2,942	Hengelo	1,330
Enschede	64,384	45,533	71%	29%	18,851	Hengelo	4,256	Oldenzaal	1,474
Almelo	30,604	18,144	59%	41%	12,460	Hengelo	1,839	Enschede	1,754
Hengelo	36,969	20,291	55%	45%	16,678	Enschede	6,013	Almelo	1,454

Source: CBS Statline, Dutch National Census 2001

Population growth

Rapid growth and development is not a major concern in the Netherlands, or certainly not by American standards. The entire region of Twente grew 3.4 percent in the decade from 1995 to 2005, much slower than the national average in the decade. Housing and industry growth is typically targeted and projected at the municipal and provincial levels, and development rarely extends beyond the available resources. Municipal leaders meet with regional representatives regularly to discuss growth projections, infrastructure projects and other concerns. In the Netherlands, the cities are responsible for developing properties and selling land to individuals and businesses.

A few municipalities have been losing population since 1995. Borne lost 5 percent, and Losser declined 1 percent. On average, municipalities grew no faster than 5 percent a decade. The bigger cities didn't grow rapidly either. Enschede's population rose 3 percent, Hengelo's by 5 percent and Almelo's by 10 percent in the eight-year period.[67]

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[67] Populations were not tabulated for each year because of the government redrew boundaries for some municipalities in January 2001. Hof van Twente, for example, was newly formed and included Goor and a number of other towns. Changes affected Vriezenveen which was newly formed in 2001, and Rijssen's merger with the town of Holten explains the 42 percent rise in population.

Tables 3.6 Population growth in the municipalities of Twente.

Municipality	2003 pop	2000 pop	1995 pop	95-00 rate	95-03 rate
Borne	20651	22316	21700	2.8%	-4.8%
Den Ham		14939	14837	0.7%	
Denekamp		12425	12289	1.1%	
Goor		12363	12302	0.5%	
Haaksbergen	24109	23885	23558	1.4%	2.3%
Hellendorn	36146	35674	35523	0.4%	1.8%
Hof van Twente	35038				
Losser	22587	22595	22808	-0.9%	-1.0%
Oldenzaal	31374	30746	30673	0.2%	2.3%
Rijsen	35885	26213	25211	4.0%	42.3%
Tubbergen	20262	19938	19407	2.7%	4.4%
Twenterland	33427				
Vriezenveen		19944	19244	3.6%	
Weirden	23444	23392	22907	2.1%	2.3%

Source: CBS Statline

Tables 3.7 Population growth in Twente's big cities of Almelo, Enschede and Hengelo.

City	2003 pop	2000 pop	1995 pop	95-00 rate	95-03 rate
Almelo	71,729	66,263	65,019	1.9%	10.3%
Enschede	152,321	149,505	148,034	1.0%	2.9%
Hengelo	80,962	79,751	77,409	3.0%	4.6%

Source: CBS Statline

Municipalities in Twente

The term *municipality* in the Netherlands is not used interchangeably with the word *city*. Dutch cities are oftentimes so small that the national government has been reducing the number of municipalities so that they include several cities. In Twente, the municipalities are the size of U.S. micropolitan areas, following the governments 2001 consolidating city governments.

According to the Wim van Dalfsen, the regional manager of the Chamber of Commerce in Enschede, much of the growth that has occurred in the past five years has taken place in the municipalities. In general, people in the municipalities are on average more educated and wealthier that the big cities, partly because education and wealth disparities there are considerable. There are also shifts taking place with jobs in the municipalities. As

the low-skilled manufacturing jobs continue to go overseas, new jobs are becoming increasingly skill and knowledge intensive.[68] The table below shows the municipalities sometimes have higher education levels than the region. The municipality of Oldenzaal is more educated than Hellendorn, the larger cities and than the overall region. The Twente region overall has less education levels than the national average.

Table 3.8 Education levels in Twente are higher in the municipality of Oldenzaal, but not in Hellendorn, compared to the region of Twente and its big cities.

Education levels in Twente

	ISCED 1st-2nd Stage	ISCED 3rd-4th Stage	ISCED 5th-6th Stage
Twente	56%	32%	12%
Hellendoorn	57%	34%	9%
Oldenzaal	48%	37%	15%
Twente big cities	55%	32%	13%

Source: CBS Statline. Note: The Netherlands uses the International Standard Classification of Education (ISCED), which is split into six stages. The first and second stages are primary education and generally end at around age 15. The third and fourth stage is trade school, vocational school, and other types of professional school. The fifth and sixth stages are reserved for bachelor and doctoral studies.

Industry in the municipalities

Agriculture has been declining faster in the two municipalities of Hellendorn and Oldenzaal, at a loss of 41 percent and 17 percent respectively. Both of those municipalities have gained manufacturing jobs, with an increase of 8 percent and 22 percent. Both have gained financial businesses (34 percent and 323 percent), which declined 5 percent in the region.

The industry structure of Hellendorn is even less reliant on manufacturing that the region of Twente, with 16 percent of employment in the sector compared to 19 percent in Twente. Retail is the second largest of Hellendorn's industry base (18 percent), followed by

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[68] Interview with Wim van Dalfsen, Regio Secretaris, Kamer van Koophandel Enschede (regional manager of the Chamber of Commerce, Enschede).

manufacturing and health care (14 percent). In Oldenzaal, manufacturing is 21 percent, followed by building and construction (17 percent), restaurant and accommodations (14 percent), and utilities (13 percent). The smaller cities don't share the diversity of the Twente economy, but have their individual specializations. The manufacturing industry that once dominated the region of has been balanced with the retail (19 %) and health Care (15 %) sectors.[69]

A look at two Dutch municipalities

Oldenzaal

2003 Population: 35,674
Percent of workers commuting outside: 55 %
1995-2003 population growth: 1.8 %
Total workforce: 14,594
Jobs growth: 24 %

The availability of land is one of the most critical sustainability issues for the municipality of Oldenzaal. The municipality is constantly in talks to annex land, but options are increasingly limited since it is essentially landlocked with Twente airport property, nationally protected greenspace, and other municipalities.

The town grew in the 12th and 13th Century as the Catholic center of the province and flourished with the textiles businesses of Twente. Anneke van Oss, the city's economic development director, says there are also concerns about sufficient high-paid jobs to sustain the population and the mismatch of worker skills with the available jobs. The jobs that are

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[69] Data was obtained from a secondary source to provide records from the RegioTwente annual employment 1999 to 2005 (Enschede, Netherlands).

available typically do not appeal to the younger population, who has become increasingly educated.

Oldenzaal is a part of the Netwerkstad, an agglomeration of the cities of Enschede, Hengelo, Almelo and Borne. Located a 15-minutes car ride away from Enschede, Oldenzaal's problems have grown more urban: traffic congestion and vandalism. In the most recent local elections March 7, there was a political turnover with three of four aldermen voted out of office. The local population has been voicing its concerns to preserve the nature of Oldenzaal and keep the city atmosphere pristine, safe and peaceful.[70]

Hellendorn

2003 Population: 36,146
Largest employers: Ten Cate, Van Keulen, Mobile Bouw
Percent of workers commuting outside: 55 %
1995-2003 population growth: 1.8 %
Total workforce: 16,508
Jobs growth: 10 %

The Hellendorn municipal area is in the far northeastern corner of the Twente region. There are five cities inside the municipality, including the administrative center of Nijverdal. Between 1995 and 2003, the population in Hellendorn grew less than 2 percent to about 36,000 residents. Wim Landman, economic development director of the Hellendoorn municipal area, says the municipality's policy is to grow higher skilled jobs, not just rapid development. "The people don't want to grow fast," he said. "They don't want to become a big city."

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[70] Personal interview with Anneke van Oss, economic development director, Oldenzaal municipal area.

Nearly everyone in the Hellendorn area was born and raise there. Neighbors know each other well and newcomers favor the lifestyle of the Dutch countryside. More than 90 percent of the businesses in the municipal area are locally owned. The others represent the number of businesses in search of cheaper land, lower operating costs and less traffic congestion. In recent years, traffic congestion has steadily grown worse, presenting a concern for the area's future sustainability. Local life had to be constantly coordinated around rush hour. Every workday, the N35 Highway, bottlenecks in Nijverdal as commuters travel in both directions across the Twente region. City representatives have worked with federal officials build an underpass for the main thoroughfare in town. It should be built by 2012.

Entrepreneurship and innovation plays some role in development policy. The government owns a small facility to house ventures for the manufacturing industry. Built 10 years ago, the government has leased 14 of 15 office spaces at the 'T Lochter facility to new industrial start-ups at discounted rates. In general, innovations are more commonplace in the private sector.

Conclusions

The Twente case demonstrates that the small size of Georgia micropolitan areas should not hinder significant progress in a few decades. In Twente, this was achieved by creating a model of economic development that suited local conditions. Following the loss of 40,000 jobs and the largest industry sector of textiles manufacturing, it diversified its industry base and built a steady pool of trained workers. The result of these crises have led to collaborative efforts of the region as a whole were sufficient to implement changes across the

region. However, provincial and national interests sometimes continue to clash with local policy and municipalities continue to compete with each other rather than collaborate.

Some commonalities between Georgia and Twente suggest a few similarities might be a symptom of a small size. Twente municipalities also have populations between 10,000 and 50,000. Twente municipalities lack the diversity of producer service jobs compared to the region, but also have greater economic diversity compared to micropolitan areas. Some of the differences stem from individual national policies, social values and historic events. Georgia micropolitan areas have developed in a span of less than two centuries, while Twente municipalities have had much longer to develop. Dutch municipalities receive financial support from the national government, even for basic public services. However, the municipalities are very limited in the use of funds, which are redistributed by the national government. At the same time, the national government assumes much of the risks associated with development, infrastructure and major public services such as education.

The U.S. local government system is decentralized, and offers tremendous discretion to cities regarding growth and development. Consequently, Georgia micropolitan areas also have far greater authority, but receive much less federal assistance. Subsequently, micropolitan areas must convince taxpayers to raise funds for infrastructure and other projects. They must set their own agendas and create their own policies. The disadvantage lies within a local educational system that relies on local tax funding. Micropolitan areas residents make only three-quarters of the state average in per capita income, so there are expected risks associated with the need for new schools and infrastructure. [71]

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[71] Personal interview with Rinus Alberti, Senior Advisor on Economic Development, Regio Twente, Enschede.

Micropolitan industries, demographic characteristics and policies in Georgia resemble conditions in Twente about 40 year ago. There is tremendous reliance on manufacturing and declining industry sectors. Like Twente's municipalities, there is no sense of immediacy for a collective response to invest in innovation, to re-train workers or to focus on education to expand future economic development capacities. Twente's future economic development concerns its ability to advance knowledge-based development and continue the spillover into the regional economy. The region appears to have entered a second phase where activities and associations are gaining momentum away from the university. However, its strength still lies in its knowledge centers around the university. Georgia micropolitan areas have the opportunity to implement knowledge-based economic development, since about half of Georgia's micropolitan areas are the sites of state technical colleges (See Georgia Technical Colleges in Appendix A: Maps).

Smaller cities in Twente and Georgia share the problem of younger populations wanting to leave the area for work. Young people in Twente's municipalities prefer the western provinces for better nightlife and job opportunities. In response, Twente is struggling to preserve its history as an old agricultural region, but also expand cultural and social opportunities. Low crime has motivated people in the Netherlands to move away from the edges of the cities to the countryside. Twente ranks high as a safe place to live and start a business, but it doesn't rank high in cultural opportunities. For example, the largest cities in Twente have fewer cafes and quality restaurants per 1,000 inhabitants compared to the largest 50 cities in the Netherlands.

Georgia micropolitan areas are concerned about the future social climate. The challenge has been to attract the right mix of jobs to retain younger workers and preserve their historic character and small-town climate. They would like to grow more entrepreneurs and small businesses, but attract companies that can hire a larger workforce. Micropolitan areas should draw from the idea in the Netherlands that strength comes in numbers and collaborate for solutions. However, there has not been a collective response to the challenges that micropolitan areas share in Georgia.

CHAPTER IV:
DATA ANALYSIS

Hypothesis, data and methodology

Introduction

This thesis focuses on three central questions of micropolitan areas and their level of social and economic autonomy. The first question tests the connection between income growth and proximity to metropolitan places, or more specifically whether micropolitan areas benefit from benefit from metropolitan spillover. Proximity to a metropolitan may be less of a factor in generating wealth as technology and transportation have blurred location barriers. With linear regression methods, the results will show insufficient evidence to support location as a key factor in generating PCI growth among micropolitan areas in Georgia.

The second study gauges the economic autonomy of micropolitan areas by examining the micropolitan area's capacity to meet their population's demands for work. Quantitative methods measure the relationship between workforce commuting and returns to labor as measured by PCI growth rates. The central question tests whether places with higher rates of commuting outflows have smaller PCI growth, and if areas with fewer people living and working in the micropolitan have higher PCI growth. There are some threats to the validity of these claims. For example, high outflows might suggest the income differentials are considerable enough for workers to commute the distance. Second, available jobs in the micropolitan might not match the skills of the workforce, and workers have to go elsewhere to find jobs. Finally, there might be plenty of jobs available in the micropolitan, but they won't translate into higher PCI if the jobs are predominantly low wage. Subsequently, there is not substantial evidence to show a difference in PCI growth. However, qualitative methods

show less economic autonomy with some micropolitan areas, especially those in the northern part of the state. Micropolitan areas in the southern part of the state show greater levels of autonomy with regard to their workforce commutes.

The final study weighs factors that determine the micropolitan area's capacity to sustain the social and economic needs of the population. Micropolitan areas may act as autonomous places, but internal conditions may threaten its future position. On the other hand, they might lack economic autonomy, but implement innovative policies that charter a different course. A qualitative assessment will be included using a case study comparison of a region with micropolitan-size cities. This will offer policies and opportunities that could expand the innovative capacities of Georgia micropolitan areas. Quantitative measures used in this study show micropolitan areas are not sustainable with regard to an educated workforce, a diversified industry base, and standards of living. That test was determined using education, poverty, and income rates of micropolitan areas compared with the state average. The methods employed in Study 3 use state averages since the information was readily available and inherently account for metropolitan and rural categories.

Study 1: Metropolitan proximity and micropolitan location

Central question

Are micropolitan and metropolitan places linked in their PCI growth? As a measure of metropolitan spillover, PCI growth is expected to be higher in micropolitan areas with closer locations to metropolitan areas. The question of micropolitan PCI growth and proximity to metropolitans is analyzed with two hypotheses. In Hypothesis 1, the size of the metropolis is expected to have an impact on micropolitan PCI growth. In Hypothesis 2,

reduced proximity to metropolitan areas is expected to show a spillover of wealth among micropolitan areas.

Methods – Study 1

Multiple-variable regression methods were used to measure the relationship proximity and income of micropolitan areas and metropolitan cities. The dependent variable was micropolitan PCI growth and independent variables were distance to the center of the metropolitan.[72] A control variable, either metropolitan PCI or a location dummy variable, was selected for the two versions of the hypotheses. Additionally, there are two variations of the tests to account for wealth and location differences among metropolitans. Tests 1-A and 2-A use a location dummy \ and tests 1-B and 2-B use metro PCI growth rates as control variables.

The construction of hypotheses 1 and 2 differed in the parameters for distance and the scale of the metropolitan area. The scale of the metropolitan area was expected to have an impact on the dependent variable under Hypothesis 1. The parameters for Atlanta and Jacksonville were taken from Lang and Dhavale's work comparing the growth rates of U.S. micropolitan areas and distances to the corresponding metropolis. These parameters shift under Hypothesis 2, since metropolitans smaller in size but closer in proximity are presumed to have a measurable spillover effect. Here, new distance parameters were measured with GIS software in miles from micropolitan and metropolitan centers. Three metropolitan

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[72] In Hypothesis 1, the parameters for the cities and distance from micropolitan to the metropolis was taken from Lang & Dhavale's study at Metropolitan Institute of Virginia Tech. In Hypothesis 2, distance was measured in miles using GIS technology.

areas—Macon, Valdosta and Savannah—were selected based on locations across different parts of Georgia and the clarity of their position in proximity to micropolitan areas.

S1-H1 (Hypothesis 1)

Micropolitan per capita income growth rates should inversely relate to the proximity of the nearest metropolis and positively relate with that metro's per capita income growth rate. Micropolitan PCI growth is a function of distance to the metro, so the closer a micropolitan is to a metropolis, the higher the PCI growth. Micropolitan areas further away from the metropolis are expected to have smaller PCI growth rates. Under the null hypothesis, micropolitan income growth rates may positively relate to the proximity to a metropolis, show no relationship, or have a non-linear relationship.

S1-H1-Test 1A

Does the distance between a metropolis and a micropolitan have an effect on per capita income growth, controlling for location of the metropolis?

S1-H1-Test 1B

Does the distance between a metropolis and a micropolitan have an effect on per capita income growth, controlling for the PCI growth rate of the metropolis?

S1-H2 (Hypothesis 2)

Micropolitan per capita income growth rates should inversely relate to the proximity to the nearest metropolitan and positively relate with the metro's per capita income growth rate. The closer the micropolitan is to a metropolitan, the higher the PCI. Micropolitan areas farther away from metropolitans are expected to have lower PCI rates. Under the null

hypothesis, micropolitan income growth rates may be positively related or unrelated to proximity of a metropolitan, and inversely or unrelated to metro PCI growth.

S1-H2-Test 2A

Does the distance between a metropolitan in closer proximity and micropolitan have an effect on per capita income, controlling for location of the metropolitan?

S1-H2-Test 2B

Does the distance between a metropolitan in closer proximity and micropolitan have an effect on per capita income, controlling for metropolitan PCI rates?

Data and parameters—Study 1

The source of data for per capita incomes was the BEA website.[73] County-level income and population data for 1990 and 2000 was used to measure the total change in PCI for 13 single-county and seven dual-county micropolitan areas, and the selected metropolitans. For Hypothesis 1, PCI rate for the Atlanta area was 29.3 percent and 24.4 percent for Jacksonville. Of 23 micropolitan areas in Georgia, 13 were in proximity to Atlanta and 12 were closer to Jacksonville. PCI ranged for Jacksonville-area micropolitan areas from 60 percent (Waycross) to 111 percent (St. Mary's). Population growth ranged from 4.8 percent (Waycross) to 42.3 percent (St. Mary's). Atlanta-area micropolitan PCI growth ranged from 49 percent (Fort Valley) to 91 percent (Cornelia), and population ranged from 5 percent (Thomaston) to 30 percent (Cornelia). For micropolitan areas in proximity to

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[73] The source was the Bureau of Economic Analysis website (www.bea.gov/bea/regional/reis/).

Atlanta, distances ranged from 45.8 (Cedartown) to 131.6 (Cordele), and from 50.6 to 122.3

for Jacksonville.

For Hypothesis 2, three metros were selected with the best set of micropolitan areas in

proximity. The following five metropolitans—Albany, Macon, Savannah, Augusta and

Valdosta—were all located in the middle and southern part of the state. They all had a

selection of micropolitan areas along their metropolitan rings to include in the sample. PCI

rates for the metro areas ranged from 40 to 55 percent. For the micropolitan areas below, PCI

growth ranged from 49 percent (Fort Valley) to 51.7 percent (St. Mary's), and distances

ranged from 25 miles to 93 miles to the metro. Macon, Valdosta and Savannah were selected

since the above data will show they had the greatest number of micropolitan areas to include

in the sample. Plus, micropolitan areas for the other metropolitans, such as Augusta, were not

as clearly defined and could arguably be in proximity to Atlanta, Macon or Savannah.

Table 4.1 The data used to select a sample of metropolitan and micropolitan areas.

Metropolitan	Metro PCI growth	Micropolitan areas in proximity
Augusta	39.1	Dublin, Milledgeville, Statesboro, Vidalia
Valdosta	49.5	Douglas, Fitzgerald, Moultrie, Thomasville, Tifton, Waycross
Albany	50.9	Americus, Cordele, Tifton, Fitzgerald, Moultrie, Thomasville, Bainbridge
Savannah	51.7	Statesboro, Vidalia, Jesup, Waycross, St. Mary's
Macon	54.5	Milledgeville, Dublin, Fort Valley, Thomaston

Source: BEA

Study 2: Micropolitan growth and work commuting patterns

The central question

   Are micropolitan places socially and economically autonomous as measured by the patterns of its commuting workforce? The first part of this question presumes that places with greater autonomy will retain higher levels of people who work and live in the same place. Secondly, this level should result in a substantial difference in the micropolitan returns to labor, measured with PCI growth. High levels of commuting outflows demonstrate greater economic dependence, and less self-reliance (Hypothesis 1). Micropolitan interdependence within the region could qualify them as autonomous places if there is substantial levels of commuting inflows. This would suggest micropolitan areas serve as employment magnets for the region (Hypothesis 2) in sufficient levels to result in higher PCI rates. Hypothesis 3 measures the ability of micropolitan areas to retain higher levels of people living and working there to result in higher PCI growth.

Methods – Study 2

   Questions about the level of self-sufficiency among micropolitan places will be approached with a qualitative and quantitative analysis. For the quantitative section, linear regression methods will be used for all three hypotheses. The construction of the three hypotheses differs in the use of the independent variable. With micropolitan PCI growth as the dependent variable in Study 2, Hypothesis 1 tests the relationship with commuting outflows, Hypothesis 2 tests commuting inflows, and Hypothesis 3 the levels of people living and working inside micropolitan areas. Hypothesis 3-B was constructed slightly differently, since the control variables were eliminated and only a single-variable linear regression was used.

As in Study 1, the use of the control variables differed in versions of the tests. Variables for location and distance to the metropolitan were used as controls in tests 1-A, 2 and 3A. Metropolitan PCI rates were used as a variable in test 1-B. The three metropolitans of Macon, Valdosta and Savanna from Hypothesis 2 in Study 1 will serve as the basis of the control variables. This selection addresses validity concerns of the use of the metropolis as an independent variable.

The data results and analysis of Study 2 include a qualitative perspective of workforce commutes. This was designed to address some of the validity issues raised in the introduction of this chapter regarding the use of workforce commutes to answer questions of economic and social autonomy.

S2-H1 (Hypothesis 1)

Under Hypothesis 1 (Tests 1-A and 1B), micropolitan areas with higher outflows, or percentages of commuters leaving the area will result in lower PCI rates. The inverse relationship between micropolitan PCI growth and the percentage of commuting outflows is expected to maintain a positive relationship with metro PCI growth or location and inverse relationship to metropolitan distance. The null hypothesis would suggest that commuting outflows bear no relationship, or a positive relationship to micropolitan PCI growth, and a positive or inverse relationship of distance and micropolitan PCI growth.

S2-H1-Test 1A

Is there a link between Georgia micropolitan per capita income and the percentage of commuters that leave the area for work, controlling for location and distance to a metropolitan?

S2-H1-Test 1B

Is there a link between Georgia micropolitan per capita income and the percentage of commuters that leave the area for work, controlling for metropolitan PCI rates and distance to a metropolitan?

S2-H2 (Hypothesis 2)

Micropolitan per capita income growth is positively related to metro inflows, or the percentage of commuters traveling into the area for work, and negatively related with metro per capita income rates. The null hypothesis says that more commuters flowing into a micropolitan has no effect, or an inverse effect, on its income growth rates. Micropolitan income growth is positively associated, or not at all related, to commuting inflows.

S2-H2-Test 2A

For a particular micropolitan PCI growth rate, what is the percentage of people from other counties commuting in? How does commuter inflow affect micropolitan PCI growth, controlling for location and distance to a metropolitan?

S2-H3 (Hypothesis 3)

Micropolitan per capita income growth is positively related to the percentage of commuters who live and work inside the micropolitan. The null hypothesis says that higher rates of commuters living and working in a county have no effect, or an inverse effect, on income growth rates.

S2-H3-Test 3A

How does the percentage of people living and working in a micropolitan affect PCI growth, controlling for location and distance to a metropolitan?

<u>S2-H3-Test 3B</u>

Is there a relationship between the percentage of people living and working in a micropolitan and income growth rates? Economic autonomy, as measured by the percentage of people living and working in a micropolitan, is expected to have no interaction with distance and metropolitan location.

<u>Data and parameters-Study 2</u>

Primary data was used from Census Worker Flow records, BEA demographic and income data and distance data measured with GIS software. The following chart shows the population and income data used in the sample of 16 micropolitan areas.[74] The average PCI growth for the sample was 69 percent, compared to 71 percent for all 23 micropolitan areas. Average population growth was 14.6 for the sample, or the same as the total average. The range for per capita income growth was 111 percent (St. Mary's) to 49 percent (Fort Valley). Population growth rates ranged from 42 percent (St. Mary's) to 4.8 percent (Waycross).

For commuting data, the sample was fairly representative of the entire population of micropolitan worker flows. In the sample, a total of 25 percent of micropolitan residents left the county for work. The same percentage of people traveled to micropolitan areas for work. Commuting inflows and outflows were 26 percent for the entire micropolitan population. In the sample, about 74 micropolitan residents also work in the county they live, compared to 75 percent for the whole micropolitan population.

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[74] The sample of 16 micropolitan areas and metropolitan control variables was selected from Hypothesis 1, Study 1.

Table 4.2 Income, population, distance and commuting data in the sample of micropolitan areas.

Micropolitan	2000 PCI Percent Change	Location Dummy	Distance to nearest MSA	Pct In-CTY	Total Outflow	MSA PCI growth	Total Inflow
Americus	67%	1	62	75%	21%	54.5%	25%
Cordele	64%	1	61	74%	21%	54.5%	26%
Douglas	82%	0	52	77%	18%	49.5%	23%
Dublin	69%	1	48	79%	21%	54.5%	21%
Fitzgerald	66%	0	57	67%	34%	49.5%	33%
Fort Valley	49%	1	25	48%	57%	54.5%	52%
Jesup	74%	2	55	82%	25%	51.7%	18%
Milledgeville	63%	1	35	72%	27%	54.5%	28%
Moultrie	62%	0	38	87%	23%	49.5%	13%
St. Mary's	111%	2	95	82%	22%	51.7%	18%
Statesboro	100%	2	50	79%	23%	51.7%	21%
Thomaston	62%	1	40	84%	27%	54.5%	16%
Thomasville	69%	0	43	76%	14%	49.5%	24%
Tifton	67%	0	46	68%	15%	49.5%	32%
Vidalia	62%	2	80	69%	36%	51.7%	31%
Waycross	60%	0	61	68%	32%	49.5%	32%

Sources: BEA, Census worker flows, GIS analysis.

Study 3: Micropolitan growth and sustainability

Central question

What is the capacity of micropolitan areas to sustain their social and economic positions in the future? Are their levels of education, industry mix, and employment comparable to the state average? Are their innovative capacities comparable to two cities of similar size in a developing Dutch region?

Methods – Study 3

For Test A, data from the BEA, BLS, Census and Georgia Department of Labor on Georgia micropolitan areas is compared with the state average in the areas of wages, poverty and per capita income growth, education and industry mix. For Test B, a qualitative assessment will be used based on data collected from interviews, documentation and observation of Georgia micropolitan areas and the two Dutch municipalities. The Georgia

case was compiled using structured interviews with local officials in the micropolitan areas of Summerville, Americus and Cornelia. The three cities were chosen because of their locations in different regions in Georgia. Summerville is in the northwestern, Cornelia in the northeastern, and Americus in the southern part of the state. In Georgia, telephone interviews were conducted with two economic development professionals in each micropolitan during April 2006.

The comparative case analysis of the municipalities in Twente will be used to assess policy opportunities among micropolitan areas. Industry structures, education demographics and policies are compared to gauge the innovative capacities of Georgia micropolitan areas. The case of Twente was built with in-person interviews of an economic development in the municipalities of Oldenzaal and Hellendoorn. Four additional in-person interviews were conducted of regional economic development professionals and academic experts on the region. The interviews took place in Amsterdam and Enschede between February and June 2006. Open-ended, structured interview questions were used and in one case, a translator was used during the interview. For documentation, the national statistical online service CBS Statline was used to compile information on the region and municipalities. Some literature was available in English on the region's development. However, in other cases documentation and internet sites were translated using Euroglot software, online source of Babelfish (world.altavista.com), and translations using Microsoft Word.

S3-H1 (Hypothesis 1)

Where Georgia micropolitan areas support sustainable policies, we anticipate education levels, average wages, and industry mix to be comparable to the Georgia average. Or, where policies poorly support sustainability, we anticipate education levels, average

wages, and industry mix to be lower than average. Null hypothesis: where there are sustainable policies, we anticipate education levels, average wages, and industry mix to be equal to or less than the micropolitan average. Where policies poorly support sustainability, we anticipate education levels, average wages, and industry mix to be equal to or greater than the micropolitan average.

<u>S3-H1-Test 1A</u>

How do the levels of education, wages and employment, and industry mix for micropolitan areas compare to the Georgia average?

<u>S3-H1-Test 1B</u>

Do Georgia micropolitan areas support sustainable policies? How do their policies compare to the region of Twente?

<u>Data and parameters</u>

Demographic information on income, age and race, education, housing, and other characteristics will be weighed for micropolitan areas selected in a case study and for micropolitan areas in general. This quantitative data for Test A was taken from Chapter II: Micropolitan Profiles. In Test B, qualitative assessments of Georgia micropolitan areas and on Twente are based on information from interviews, literature, the internet and other sources. The following chart shows the disparities in demographic information between the Georgia average and micropolitan areas from the case studies. The differences in individual micropolitan areas vary a great deal compared with the state. For the data sources, please refer to Chapter IV: Case Studies.

Table 4.3 Demographic data for three micropolitan areas compared with Georgia.

	Summerville	Cornelia	Americus	Georgia
Median age	37	36	33*	33
Pct White	87%	89%	50%	65%
Pct Black	11%	5%	47%	29%
Own Housing	28%	28%	57%	67%
Rental	9%	9%	30%	33%
Per Capita Inc	$17,998	$21,917	$20,912	$27,989
Individuals below poverty	14%	12%	20%	13%
PCI growth	62%	91%	67%	59%
Pop growth	14%	30%	9%	26%

Source: Census 2000.

Data results and analysis

Study 1: Micropolitan per capita income growth and proximity to metropolitans

There is weak evidence to support the idea that location of micropolitan areas or the proximity to a metropolitan is important to rising per capita incomes. The results of Study 1 show proximity to a metropolitan appears to have no significant impact in micropolitan prosperity as measure by PCI growth. There was stronger evidence for this idea as the distance parameters were reduced in S1-H2-1A and S1-H2-1B. The R-squared values grew between S1-H1 and S1-H2 of this study, showing better fit with granular data from southern Georgia micropolitan areas and metropolitans. But the levels of significance were insufficient to support S1-H1 or S2-H2.

Table 4.4 The observations, regression results and significance for the Study 1 tests.

Test	N	R	SE	F	DF
S1-H1-Test 1A	23	0.21	0.14	2.57	2
S1-H1-Test 1B	23	0.21	0.14	2.58	2
S1-H1-Test 2A	16	0.26	0.13	3.63	2
S1-H1-Test 2B	16	0.22	0.14	3.09	2

S1-H1-Test 1A: Atlanta and Jacksonville

In S1-H1, metropolitan spillover was expected to have a positive effect on micropolitan PCI. However, a linear multivariable regression showed the hypothesis can not be supported with certainty. The null hypothesis—that micropolitan PCI growth rates may be unrelated to distance to a metropolitan—cannot be rejected with this test. Consequently, proximity to a metropolitan may not be a factor in PCI growth among micropolitan areas. Alternatively, the relationship may be positive, suggesting the possibility that micropolitan areas further away gain higher rates of PCI than those closer to metropolitan areas.

Table 4.5 S1-H1-Test 1A results show the DIST and IN-GA coefficients were not statistically significant.

	Y-intercept	IN-GA	DIST
Predicted Y =	0.94	− 0.13	− 0.002
Std. errors	(0.11)	(0.06)	(0.001)
p-values	(0)	(0.06)	(0.07)

Note: DIST = distance in miles between micropolitan areas in proximity to metropolis; IN-GA = A dummy variable associating micropolitan PCI data Atlanta, Georgia and Jacksonville, Florida.

The results of S1-H1-Test 1A could not support distance to a metropolis and location as a factor of micropolitan PCI growth. The results show distance has the expected inverse relationship with micropolitan PCI growth. The R-squared value shows the model explains only 21 percent of micropolitan PCI growth. Furthermore, the coefficients for distance and location lacked statistical significance, with respective P-values of 0.07 and 0.06. The distance variable was essentially a constant in the equation since the coefficient was so close to zero.

S1-H1-Test 1B: Atlanta and Jacksonville and metro PCI growth

This test is similar to S1-H1-Test 1A, except that the location dummy was replaced with a variable for metropolitan income growth (Metro PCI). The results were interesting,

but were not statistically meaningful. Metropolitan PCI rates had an inverse relationship to micropolitan PCI growth, suggesting micropolitan areas in proximity to metros with slower PCI growth are better off than they are near metros with higher growth rates. With the distance variable still close to zero, the null hypothesis—that micropolitan PCI growth rates may be unrelated to distance to metropolitans, or unrelated to metro PCI rates—cannot be rejected.

Table 4.6 The distance and metropolitan PCI variables are not significant in the results of S1-H1-Test 1B.

	Y-intercept	Metro PCI	DIST
Predicted Y =	1.57	− 0.03	− 0.002
Std. errors	(0.4)	(0.01)	(0.0009)
p-values	(0.0009)	(0.06)	(0.07)

Note: DIST = distance in miles between micropolitan areas in proximity to metropolis; Metro PCI = A variable associating micropolitan PCI data with metropolitan PCI growth for Atlanta, Georgia and Jacksonville, Florida.

S1-H2-Test 2A: Macon, Savannah and Albany

Based on newly constructed parameters for distance, this test presumes metropolitans closer to a sample of micropolitan areas can result in greater spillover. Despite closer proximities to micropolitan areas, the locations of Macon, Valdosta and Savannah were not statistically significant and explained only 26 percent of the dependent variable.

Table 4.7 The distance coefficient was very close to zero for S1-H2-Test 2A.

	Y-intercept	DIST	LOC
Predicted Y =	0.45	− 0.004	0.05
Std. errors	(.111)	(0.002)	(0.05)
p-values	0.002	0.09	0.34

Note: DIST (distance between micropolitan areas in proximity to the Macon, Valdosta and Savannah) and LOC (dummy variable associating micropolitan areas and closest metropolitan, Valdosta=0, Macon=1, Savannah=2).

S1-H2-Test 2B: Micropolitan areas, distance and metropolitan PCI growth

The inclusion of metropolitan PCI growth on the new sample of micropolitan areas in middle and southern Georgia lead to interesting results, but not sufficient to suggest a relationship. Hypothesis 2 (S1-H2) says micropolitan and metropolitan PCI growth are positively related. However, the results of metropolitan PCI growth show an inverse relationship with micropolitan PCI levels. The null hypothesis—that micropolitan PCI growth is unrelated to metro PCI growth—cannot be rejected. The model explains only 22 percent of the dependent variable and distance was virtually a constant.

Table 4.8 The results for S1-H2-Test 2B show an inverse relationship between metropolitan PCI and micropolitan PCI growth. However, the results were not statistically significant.

	Y-intercept	DIST	MSA_PCI
Predicted Y =	0.85	0.005	-0.78
Std. errors	(0.85)	(0.002)	(1.6)
p-values	0.34	0.04	0.64

Note: DIST = Distance in miles between micropolitan areas in proximity to the Macon, Valdosta and Savannah metro areas; MSA_PCI = Growth rates of the metro areas of Macon, Valdosta and Savannah.

Study 2: Commuting patterns and economic integration with metropolitans

The quantitative section of Study 2 shows that high levels of commuting outflows, or high percentages of the population leaving the area for work, may be related to smaller PCI growth rates. The inverse relationship between high levels of outflows and lower PCI rates (S2-H2) was established using multivariable regression methods, controlling for metropolitan distance and location. S2-H2 and S2-H3 indicate that micropolitan areas with higher rates of internal employment ought to be wealthier than micropolitan areas where people have to commute elsewhere for work. This result also suggests that jobs inside the micropolitan should match the skills of the population. None of the tests in Study 2 took into account concerns over skills mismatch. However, this could be once explanation for high levels of

workers leaving the area for jobs. Wage differences might also cause workers to commute elsewhere. In future studies, factors such as wages and the disparities between education and employment might help explain PCI growth among micropolitan areas.

It seems logical that the levels of people living and working inside an area would indicate social and economic autonomy, but there were mixed results in the multivariable regression of S2-H3-Test 3A. There was no linear relationship between PCI growth and the percentage of people living and working in a micropolitan using controls for metropolitan location and distance. However, the single-variable equation of S2-H3-Test 3B resulted in a statistically significant positive relationship. The results were weak, with only 20 percent of the dependent variable explained by the level of people living and working in a micropolitan. Although this model lacks numerous other explanatory factors, there was a high level of confidence to support a positive correlation between people living and working in a micropolitan and higher PCI growth.

S2-H2 (Hypothesis 2) did not meet the confidence tests. It was expected that places with high levels of incoming commuters would be economic hubs, or serve as employment magnets within their respective regions. However, the results suggest commuting inflows may be related to the micropolitan area's PCI growth.

Table 4.9 The results of the tests in Study 2: N (the number of observations), R-value (the level of explanation offered in the model), SE (the standard error for the equation), F-value (the level of significance for the equation) and DF (degrees of freedom).

Test	N	R	SE	F	DF
S2-H1-Test 1A	16	0.43	0.12	4.75	3
S2-H1-Test 1B	16	0.29	0.13	3.00	3
S2-H1-Test 2	16	0.35	0.12	3.72	3
S2-H1-Test 3A	16	0.35	0.12	3.72	3
S2-H1-Test 3A	16	0.19	0.08	4.46	1

<u>S2-H1-Test 1A: Micropolitan PCI growth and total commuting outflow</u>

The level of outflowing commuters is inversely related to micropolitan PCI growth, supporting the hypothesis that high levels of workers commuting elsewhere can result in smaller PCI rates. The results show that for every percentage increase of commuting outflow, the micropolitan tends to make 0.68 percent less PCI, and that places with fewer commuters leaving the area for work generally have higher PCI growth. The coefficient for the independent variable (OUTFLO) was statistically significant with a P-value of 0.05. The model explained 43 percent of dependent variable, with controls for the micropolitan location relative to the metropolitan (LOC) and distance to the metropolitan (DIST).

Table 4.10 Results of S2-H1-Test 1A show an inverse relationship between the OUTFLO independent variable, or levels of workers commuting elsewhere, and the dependent variable. The p-value of OUTFLO shows the results are statistically significant.

	Y-intercept	LOC	DIST	OUTFLO
Predicted Y =	0.67	2.58	0.003	-0.68
Std. errors	(0.14)	(0.4)	(0.002)	(0.31)
p-values	0.001	0.12	0.21	0.049

<u>S2-H1-Test 1B: Outflows and metro PCI rates</u>

Consistent tests in Study 1, this model with metropolitan PCI growth as a control variable explains little of micropolitan PCI growth. The independent variable OUFLO has maintained its inverse relationship but not a significant factor in this equation. The model explains less than 30 percent of the dependent variable. The null hypothesis—that metropolitan PCI rates, distance and location have no relationship with micropolitan PCI rates—is not rejected in this test.

Table 4.11 The OUTFLO (levels of workers commuting outside) coefficient has maintained its inverse relationship, but the coefficient has no significance in this model.

	Y-intercept	MSA_PCI	DIST	OUTFLO
Predicted Y =	0.69	2.58	0.003	-0.68
Std. errors	(0.82)	(1.58)	(0.002)	(0.34)
p-values	(0.42)	(0.92)	(0.05)	(0.16)

S2-H2-Test 2: Micropolitan PCI growth and total commuting inflow

The test of whether or not micropolitan areas serve as an economic hub or magnet for jobs in their regional economies plays a role in the central question of micropolitan autonomy. However, based on the same methods and sample for southern Georgia micropolitan areas, level of commuters flowing into the micropolitan area (INFLO) might not be related to micropolitan PCI. Although an R-value of 35 percent shows some fit, the independent variables have no statistical significance to micropolitan areas PCI rates.

Table 4.12 The independent variable INFLO (percentage of people commuting into a micropolitan for work) has no statistical significance, with a p-value of 0.12.

	Y-intercept	LOC	DIST	INFLO
Predicted Y =	0.64	0.65	0.003	- 0.62
Std. errors	(0.16)	(0.04)	(0.002)	(0.37)
p-values	0.001	0.36	0.14	0.12

S2-H3-Test 3A: People who live and work in micropolitan areas and PCI growth

Results of this model were insufficient to show the levels of people living and working in an area are a good measure of micropolitan autonomy. Using metropolitan distance and location as controls, the null hypothesis could not be rejected with certainty. None of the variables are statistically significant, although 35 percent of the model explains micropolitan PCI growth.

Table 4.13 The coefficient for IN-CTY, which measures levels of workers who do not commute outside the area for work, is not statistically related to the dependent variable in this model.

	Y-intercept	LOC	DIST	IN-CTY
Predicted Y =	0.03	0.04	0.0003	- 0.62
Std. errors	(0.27)	(0.04)	(0.002)	(0.36)
p-values	(0.91)	(0.36)	(0.14)	(0.12)

S2-H3-Test 3B:

In this test, a single regression model shows the level people who live and work inside a micropolitan could explain a part of PCI growth. The coefficient for the independent variable (IN-CTY) is statistically significant, but only 19 percent of people living and working inside micropolitan counties can explain micropolitan PCI growth. Although there are clearly more explanatory factors missing in this model, there is sufficient evidence to reject the null hypothesis.

Table 4.14 There may be a relationship with micropolitan PCI and the independent variable (IN-CTY).

	Y-intercept	(IN-CTY)
Y =	0.52	(0.14)
Std. errors	(0.1)	(0.04)
p-values	(0)	(0.05)

Study 2: Assessment of commuting patterns

The quantitative section of Study 2 suggests higher PCI rates are related to places with sufficient jobs to support the population. Those results support the premise that economically autonomous places have higher levels of work employment for the population, and that this would result in higher returns to labor. This assumes that the local population prefers to work and live in the same area and that outflows might indicate long-term instability.

Commuting patterns are only one way to measure self-sufficiency, and present a number of validity concerns. For example, the use of commuting times, used in this qualitative section, ignores traffic congestion. Additionally, the inclusion of commuting criteria as the Census definition of an economic integrated area naturally distorts the estimates for two-county micropolitan areas.[75] The table below shows higher percentages of commuters leaving the micropolitan in outlying counties. The effects are enough to boost the percentage of outflows in two-county micropolitan areas.

Table 4.15 Work commuting levels from the outlying counties, shown here as the counties with smaller populations, distorts the picture for the micropolitan as a whole.

Micropolitan	County	Commute total	Pct work outside	Commute to metros	Commute to micros	Pct. to metros	Pct. to micros
Douglas	Atkinson Co.	3,146	43%	52	197	2%	6%
	Coffee Co.	15,350	12%	156	623	1%	4%
		18,496	18%	208	820	1%	4%
Fitzgerald	Ben Hill Co.	7,203	21%	94	573	1%	8%
	Irwin Co.	4021	57%	79	999	2%	25%
		11,224	34%	173	1,572	2%	14%
Vidalia	Montgomery Co	3,483	68%	126	178	4%	5%
	Toombs Co.	10,823	25%	356	290	3%	3%
		14,306	36%	482	468	3%	3%
Waycross	Pierce Co.	6,847	56%	360	311	5%	5%
	Ware Co.	13,657	19%	460	561	3%	4%
		20,504	32%	820	872	4%	4%
Americus	Schley Co.	1,577	59%	174	20	11%	1%
	Sumter Co.	13,963	17%	897	386	6%	3%
		15,540	21%	1,071	406	7%	3%
Dublin	Johnson Co.	2969	55%	61	53	2%	2%
	Laurens Co.	18,980	15%	903	194	5%	1%
		21949	21%	964	247	4%	1%
Milledgeville	Baldwin Co.	17115	20%	1462	654	9%	4%
	Hancock Co.	2,881	64%	207	26	7%	1%
		19996	27%	1669	680	8%	3%

[75] The Census definition for joined micropolitan areas requires commuting levels of at least a quarter of the workers coming into a central county for work, or commuting to the outlying county for work.

The following chart shows micropolitan workers are better off in their work commutes than their counterparts in metropolitan areas and Georgia. They commute less time than workers in metropolitan and in Georgia. About 23 percent of micropolitan residents commutes 30 minutes or longer, compared to 38 percent of metropolitan residents and 36 percent of the population across the state.[76] (See Appendix B:)

Average commuting times

[Chart: Line graph showing "Percentage of population" (y-axis, 0% to 40%) versus "Commuting times (minutes)" (x-axis: 0-9 mins, 10-19 mins, 20-29 mins, 30+ mins). Three series: Micropolitans, Metropolitans, Georgia.]
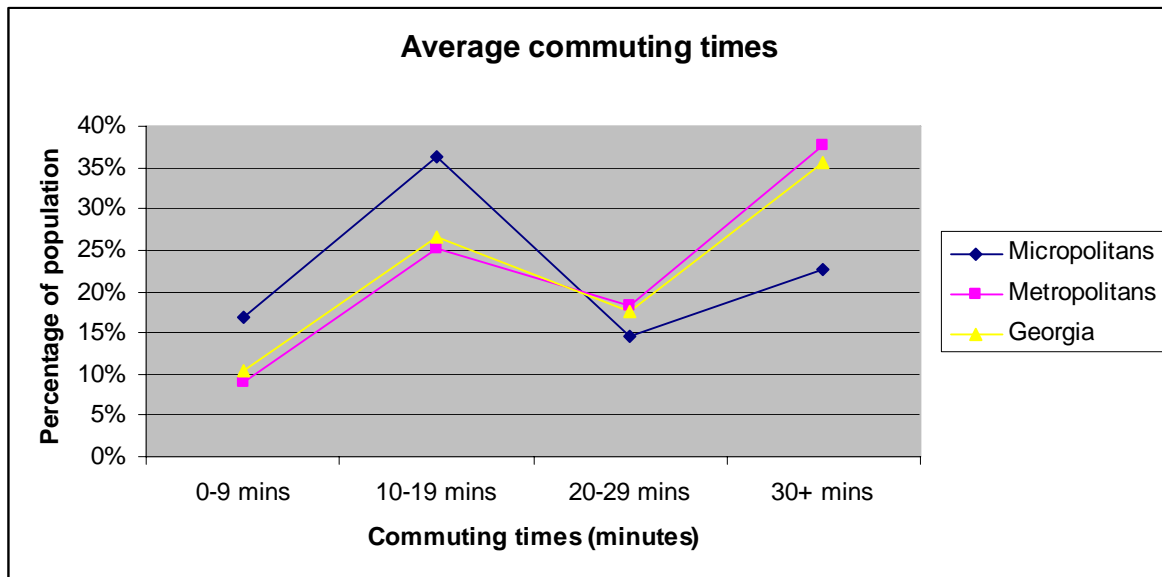
Figure 4.1 Average commuting times for micropolitan areas are lower than Georgia and metropolitan areas.

Although micropolitan areas residents don't have to commute as long as metropolitan residents, the percentage of people leaving the area for work will better illustrate their level of dependence on other places for jobs. The following analysis examines the percentages of micropolitan workers who commute outside for work, as well as the percentage of people who travel to the area for work. The results show that some micropolitan areas are more economically autonomous, or have less commuting outflows than others. However,

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[76] These figures were calculated in GIS using Census 2000 figures.

commuting outflows alone do not explain the entire picture, since a number of micropolitan areas have high levels of outflows as well as inflows. The descriptions in the commuting outflows and inflows help illustrate the level of interdependence with metropolitan areas in Georgia, as well as with other micropolitan areas. A final summary will show the net results, which shows which micropolitan areas are more economic self-reliant.

Commuting outflows

Nearly half of the commuters leaving the micropolitan worked in metropolitan areas.[77] Those that relied on metropolitan areas the most were located in Middle and North Georgia. Cedartown, Calhoun, Thomaston, Fort Valley and Summerville all had over 80 percent of their workforce commute to metropolitans. Cedartown outranked other micropolitan areas in terms of commutes to metropolitan areas. Two-thirds of its commuting populations left Polk County for metropolitan Atlanta and the other third for Rome. With the exception of Cornelia, Toccoa and LaGrange, the micropolitan areas with the highest levels of outflows were along the outer edges of the Atlanta area (See Figures xx).

South Georgia micropolitan areas tended to rely more on other micropolitan areas and outlying counties than metropolitan areas and had much lower levels of commutes to metropolitan areas. An analysis of commuters in the micropolitan areas of Milledgeville, Douglas, Fitzgerald, Waycross, Tifton, Bainbridge, Vidalia and St. Mary showed low levels

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[77] This figure was calculated as the percentage of commuters who left the county for work.

of commutes to Valdosta, Brusnwick, Albany, Fort Stewart or Savannah.[78] However, there were a few exceptions:

- Albany had more than 1,000 workers commuting from Moultrie, about 400 from Cordele and 650 from Americus.

- Under the new standards, Fort Valley is no longer part of the Macon metropolitan area and after the Census designated Peach County as a micropolitan area. However, nearly 60 percent commutes outside the area and the workforce is still highly integrated with Macon (26 percent of outflows) and Warner Robins (20 percent of outflows).

- About 16 percent of Jesup commuters worked in Fort Stewart or Brunswick.

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[78] Excludes data from counties outside the state and excludes Georgia Counties that are part of CBSAs outside Georgia.

Table 4.16 About 26 percent of micropolitan residents commute outside their residence counties for work. Of those, half commute to metropolitan areas and 11 percent to other micropolitan areas.

Micropolitan	Total commuters	In-County	Outflow	Pct outflow	Total to metro areas	Total to other micros	Pct to metro areas	Pct. to other micros
Fort Valley	9,731	4,137	5,594	57%	4,613	78	82%	1%
Cedartown	15,552	8,582	6,970	45%	6,706	126	96%	2%
Summerville	10,513	6,708	3,805	36%	3,068	217	81%	6%
Vidalia	14,306	9,190	5,116	36%	482	468	9%	9%
Fitzgerald	11,224	7,404	3,820	34%	173	1,572	5%	41%
Waycross	20,504	14,011	6,493	32%	820	872	13%	13%
Cornelia	16,482	11,308	5,174	31%	2,802	459	54%	9%
Calhoun	22,017	15,172	6,845	31%	6,552	20	96%	0%
Thomaston	11,252	8,229	3,023	27%	2,813	79	93%	3%
Milledgeville	19,996	14,672	5,324	27%	1,669	680	31%	13%
Jesup	10,125	7,585	2,540	25%	1,668	237	66%	9%
Toccoa	11,795	9,045	2,750	23%	594	729	22%	27%
Moultrie	17,806	13,708	4,098	23%	1,531	1,423	37%	35%
Statesboro	24,248	18,778	5,470	23%	3,631	117	66%	2%
St. Mary's	21,054	16,357	4,697	22%	1,490	134	32%	3%
Bainbridge	11,087	8,634	2,453	22%	240	202	10%	8%
Americus	15,540	12,292	3,248	21%	1,071	406	33%	13%
Dublin	21,949	17,370	4,579	21%	964	247	21%	5%
Cordele	8,638	6,856	1,782	21%	515	436	29%	24%
Douglas	18,496	15,242	3,254	18%	208	820	6%	25%
LaGrange	26,339	22,074	4,265	16%	3,192	14	75%	0%
Tifton	16,912	14,291	2,621	15%	874	802	33%	31%
Thomasville	17,833	15,361	2,472	14%	652	456	26%	18%
TOTAL	373,399	277,006	96,393	26%	46,328	10,594	48%	11%

Source: Census 2000 Journey to Work

About one quarter of workers in micropolitan areas commutes outside their residence counties for work. Those that exceeded the average percentage of out-commutes were Fort Valley (57 percent), Cedartown (45 percent) and Summerville (36 percent). Micropolitan areas with lower outflows are presumed to have greater self-sufficiency, since they can provide jobs to sustain their population. Thomasville, Tifton, LaGrange, and Douglas had the least levels of outflows (the range was 14 to 18 percent), and are assumed to have greater self-sufficiency than those with higher levels of their workforce commuting elsewhere.

Micropolitan areas with high levels of outflows didn't necessarily commute to Atlanta. In Calhoun, north of Atlanta and Rome, a third of the commuting population left the micropolitan for work. More than half of them worked in Dalton, a third in metro Atlanta and 15 percent in Rome. Thomaston's commuters also preferred metropolitans. Located between Columbus and Macon, and on the southern tip of Atlanta's metro, 27 percent of commuters in Thomaston left the area for work. Almost 90 percent of them went to metro Atlanta, and the remaining to Macon. Rather than travel to the center, commuters preferred a five-county region of the southern part of metro Atlanta: Lamar, Meriwether, Spalding, Pike and Fayette.

It was noteworthy that micropolitan areas with the least outflows to metropolitans were all in the southern part of the state. Fitzgerald, Douglas, Vidalia, Bainbridge and Waycross had fewer than 15 percent of the workforce leave for metropolitans. The southern part of the state had greater interdependence on other micropolitan areas, especially the adjacent micropolitan areas around Valdosta and Albany. A total of 11 percent of micropolitan commuters left for other micropolitan areas. Moultrie and Fitzgerald had the highest percentage of workers leave the area for other micropolitan areas. In the northern part of the state, there was virtually no reliance on other micropolitan areas.

Commuting Inflows

An analysis of commuting inflows reveals a level of interdependence with metropolitan and other areas. The percentage of commuting inflows is the about same as the levels of outflows, or one quarter of the commuting workforce. This shows that micropolitan areas are not self-contained in the sense that they are inward-looking areas with little outside contact. There is a mutual interdependence with metropolitans, micropolitan areas and other places. What is most revealing are the micropolitan losing or gaining a net difference of their

commuting workforce. Table 3.xx will show micropolitan areas in the northern part of the state are losing much more of their workforce than the levels of in-commutes.

The assumption that places with high levels of dependence to metropolitan places lack self-sufficiency does not really hold since metropolitan area commuters made up one third of incoming commutes to micropolitan areas. Micropolitan areas which had the highest levels of in-commutes from metropolitan counties were Calhoun, Cedartown, Thomaston and Fort Valley—all with more than 70 percent from metro areas. Fort Valley and Fitzgerald are examples of interdependence with metropolitan and micropolitan places. Fort Valley had the highest percentage of people commute outside for work (57 percent), also had the highest percentage of commuters flowing into the county (52 percent). A third of the commuters into the county were from the Macon area and another third were from the Warner Robins area. Fitzgerald, which had 34 percent of its commuting population leave for work, had 33 percent travel into the micropolitan. One-quarter of incoming commuters in Fitzgerald were from other micropolitan areas. Further examples of economic interdependence is shown with these examples:

- About 30 percent of Calhoun's incoming commuters were from Atlanta, another 30 percent from Rome, 25 percent from Dalton and 5 percent from Georgia counties in the Chattanooga area.
- Cedartown, which had the highest level of out-commutes, had half of its commuting workforce travel from Atlanta and a third from Rome.
- Micropolitan areas made up 11 percent of the commuting workforce, about 10,000 workers, from other micropolitan areas. Those which ranked highest for micropolitan in-commutes were again in the southern part of the state.

The following table shows the net difference of commuting inflows and outflows. Micropolitan areas with a positive difference of 5 percent or more are shown in orange and those with a negative difference of at least 5 percent is shown in blue. Six micropolitan areas are losing 5 percent or more of their commuting population to other places, including Cedartown (19 percent), Summerville (16 percent), and Thomaston (11 percent). Several other micropolitan areas appear to be a magnet for commuters, including Tifton (17 percent), LaGrange (14 percent) and Thomasville (11 percent). About 4,000 more commuters travel to Tifton for work than those who left, and another 14,000 residents live and work there. LaGrange, which had the largest commuting population (37,000 workers), had a positive difference of about 5,000 commuters, or 14 percent, travel there for work.

Table 4.17 The net difference of commuting outflows and inflows. Micropolitan areas highlighted in blue lose 5 percent or more of their commuting workforce. Those in orange are gain 5 percent or more of the commuting workforce.

Micropolitan	Total count*	Pct Inflow	Pct outflow	Difference
Americus	16,297	25%	21%	4%
Bainbridge	11,618	26%	22%	4%
Calhoun	21,388	29%	31%	-2%
Cedartown	11,637	26%	45%	-19%
Cordele	9,209	26%	21%	5%
Cornelia	15,492	27%	31%	-4%
Douglas	19,819	23%	18%	6%
Dublin	22,001	21%	21%	0%
Fitzgerald	11,116	33%	34%	-1%
Fort Valley	8,553	52%	57%	-6%
Jesup	9,293	18%	25%	-7%
LaGrange	31,759	30%	16%	14%
Milledgeville	20,308	28%	27%	1%
Moultrie	15,818	13%	23%	-10%
St. Mary's	19,928	18%	22%	-4%
Statesboro	23,847	21%	23%	-1%
Summerville	8,447	21%	36%	-16%
Thomaston	9,834	16%	27%	-11%
Thomasville	20,318	24%	14%	11%
Tifton	21,019	32%	15%	17%
Toccoa	11,399	21%	23%	-3%
Vidalia	13,295	31%	36%	-5%
Waycross	20,507	32%	32%	0%
TOTAL	372,902	26%	26%	0%

Note: Total count refers to commuters by work county.
Source: Census 2000 Journey to Work

It is notable that none of the micropolitan areas with positive net differences (shown in orange) are in North Georgia, but that the two micropolitan areas with the largest net losses are in North Georgia (Cedartown and Summerville). However, micropolitan areas in the middle and southern parts of the state were mixed with high levels of incoming commuters and those with losses in commuting populations. As an example, Thomaston lost 11 percent of its commuting population to other areas. About 93 percent left for metropolitans, while three-quarters of its inflows were from metropolitans. Its reliance on the

southern metro Atlanta region for jobs was reciprocated with workers from Pike (350 commuters), Lamar, (200 commuters), and Meriwether (110 commuters).

Study 3: Sustainability of Georgia micropolitan areas

S3-H1 (Hypothesis 1)

The results of the quantitative test show micropolitan areas are not on a sustainable path, but the qualitative assessment indicates otherwise (next section). The quantitative test shows the demographic, industry structure and income of micropolitan areas resemble rural places and do not compare with the state average. However, rapid growth has caused some micropolitan areas to respond and implement policies to improve public services. This shows that innovative capacities, based on the case study information in Chapter IV, do exist. However, their innovative capacities are exist to a far lesser degree than municipalities in Twente. Subsequently, there is insufficient evidence to support the hypothesis that micropolitan areas in Georgia are sustainable in the long-run.

S3-H1-Test 1A

In the areas of education, wages, poverty and per capita income, and industry mix, Georgia micropolitan areas fall below the state average. In the lowest education levels (see Table 2.1), about 11 percent of the population of micropolitan counties has attained a 9th grade education or less, compared to 8 percent in Georgia. Those who reach high school but do not graduate represent 19 percent of micropolitan areas compared to 14 percent in Georgia. At higher education levels, micropolitan areas have 9 percent of their populations finish a bachelor's degree, compared to 16 percent in Georgia. Only 3 percent have a master's degree, compared to 6 percent in Georgia.

Standards of living are also much lower in micropolitan areas and more closely resemble rural places. Per capita incomes among micropolitan areas are considerably lower than the state average of nearly $28,000 in 2000. Poverty levels are higher than the state average (see Table 2.3), or 17 percent in micropolitan areas compared to 13 percent in Georgia. Wages and salaries in micropolitan areas are like wages in rural places, and the average growth, 69 percent, is below the state's average of 100 percent for the decade.

Table 4.18 The differences in population and growth in micropolitan areas and Georgia.

	Pop/PCI	2000	1990	Pct. Change
Georgia	PCI growth	$27,989	$17,603	101%
	Pop growth	8230155	6512602	26%
Micropolitan areas	PCI growth	$20,717	$13,890	71%
	Pop growth	883464	770,587	15%

Source: BEA

The industry mix of micropolitan areas was not as diverse as the state average. Based on the information compiled in Chapter II: Micropolitan Profiles, the manufacturing, health care and retail represented twice the state average. Higher skilled industry sectors, such as finance, information and communication, were underrepresented in Georgia micropolitan areas. An analysis of the three micropolitan areas in the case study reveals the industries are more heavily concentrated in producer goods, compared to the state. Producer services represent 65 percent of the state's employment, but only 30 to 50 percent of the three micropolitan areas in the cases from Chapter IV. Micropolitan areas also relay far more on manufacturing, health care and retail compared to the region of Twente. The region of Twente has far more diversity in its employment base and represents higher-wage service areas (See Chapter IV: Case Studies).
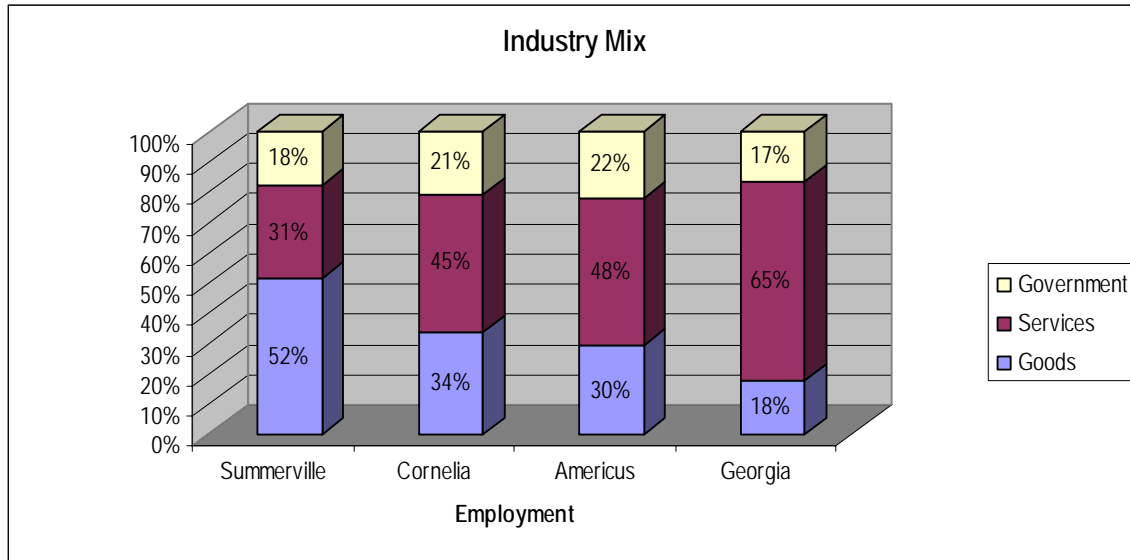
Industry Mix

	Summerville	Cornelia	Americus	Georgia
Government	18%	21%	22%	17%
Services	31%	45%	48%	65%
Goods	52%	34%	30%	18%

Employment

Figure 4.2 The industry mix of three micropolitan areas is more heavily concentrated in goods producing areas compared to Georgia.

In an earlier question of economic autonomy of Georgia micropolitan areas, commuting patterns as a measure of whether the area could sustain the population's demand for work. In terms of commuting times, this was an area where micropolitan areas surpassed the state average. About 35 percent of the state population commuted 30 minutes or more to work, compared to 22 percent among micropolitan commuters. (See figure on Average Commuting Times) However, Georgia micropolitan areas fared better than the region of Twente in terms of the percentage of population which commutes outside the urban area. Sixty to 70 percent of Twente workers in the big cities, and about 45 percent in the municipal areas, commuted outside for work. However, most of these commutes were contained to the region.

In terms of providing sufficient jobs for the population, micropolitan areas fell short. Micropolitan areas only provide 70 percent of employment for its population, compared to average of 95 percent in Georgia. Twente provides about 95 percent, which compares to its national average (See Chapter III: Case Studies).

Table 4.19 Employment as a percentage of the labor force population is compared with micropolitan areas and the Georgia average.

	Georgia	Micropolitan areas
People	8,230,155	883,464
Employment	4,188,278	283,329
Labor force	4,390,144	405,739
Jobs/Labor	95%	70%

Source: BLS 2000, Census County Business Patterns, GDL Economic Profiles.

S3-H1-Test 1B

Based on the interviews assessed from the Chapter IV case studies, micropolitan areas are beginning to implement policies to support future sustainability. However, the policy changes are relatively new and it could take years to observe substantial effects or results. The main goal of policy in the three micropolitan areas is to expand the number and quality of employment, a focus which was shared by the municipalities in Twente. Some vocalized a need to expand the industry base, but still focused on attracting sectors related to manufacturing. Summerville, which relies predominantly on declining textiles manufacturing, is diversifying to attract other manufacturing suppliers in the region. Americus is focusing on small businesses but has been attracting big retail chains in order to bring more jobs to the region. Cornelia has some diversity in its manufacturing base, but still relies heavily on manufacturing and faces the threat of job losses in some manufacturing sectors. Micropolitan areas in the sample also relied on state worker training programs within the state technical colleges, but appeared to have no distinctive policies to retrain the workforce.

Innovative capacities of Georgia micropolitan areas and Twente

Interviews with micropolitan areas revealed education, another measure of the area's capacity for economic development, is a major challenge to sustainability in Georgia. In Twente, education is comparable in the municipalities, big cities and regional average. But in

Georgia, education was far below state averages. A part of the explanation is that local government policies give deference to local education boards, which are beholden to local taxpayers. In Twente, local schools do not have to raise funds for educational infrastructure because the national government is responsible for educating the public. Subsequently, the quality of schools in the U.S. education system is a reflection of the area's wealth. The fact that micropolitan areas have much higher rates of poverty compared to the state average could be a reflection of their lagging educational performance.

The social environment of the micropolitan areas were far more difficult to assess. Interviewees responded that small-town atmosphere and charm were key attractions of the area's lifestyle offerings. Newcomers were attracted to the neighborhood cohesiveness and close-knit communities that were safer and more peaceful than more urban areas. Some micropolitan areas had policies to preserve their historic character primarily as a means for tourism. However, social policies are harder to detect and depend on the extent to which local government protects neighborhood cohesiveness (Jacobs 1961).

The innovative capacities of the three micropolitan areas and the region of Twente are difficult to compare in terms of industry makeup. For Georgia micropolitan areas, their educational characteristics and higher levels of poverty compare to the Twente region 40 to 50 years ago. In the case of Twente, university-led economic development and entrepreneurship has transformed the region's workforce and created a steady knowledge pool. Georgia micropolitan areas have only begun to undertake new strategies to respond to societal changes to services. Some of their policies do show innovative capacities:

- Summerville and Americus adopted policies to educate the public to support improvements to infrastructure, education, and other public services.

- Entrepreneurship programs are being implemented in Americus to retain younger workers, grow more small businesses, and foster an innovative climate.

- Cornelia is changing its approach to the environment in light of its position along the Chattahoochee River and state demands for water.

The following chapter will combine the results of the data analysis chapter and from the case studies. Conclusions and recommendations will provide options for micropolitan area policies regarding economic development and future sustainability. The qualitative and quantitative data will reveal policy options to realize the economic development capacity of micropolitan areas in Georgia.

CHAPTER V:
CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The results of this thesis support the concept of micropolitan areas as a new type of "mini city" which has emerged with preferences for countryside living and the decreasing importance of location with improvements to technology and transportation. [79] The results of this thesis showed no evidence to support conventional ideas that proximity and size of metropolitan areas determine regional development (Fuguitt and Zuiches). Metropolitan size appeared to influence peripheral development, as in North Georgia, but didn't translate to returns to labor or the benefits of wealth spillover. Study 1 showed no relationship between micropolitan PCI growth and the proximity to metropolitan areas.

Study 2 revealed the possibility of a link between higher levels of people living and working inside a micropolitan, or lower rates of commuting outflows, to higher PCI growth. With a small sample size in this thesis, the results had little external validity. Tests were constructed to focus on micropolitan areas in the southern part of Georgia and ignored the effects from Atlanta's hegemony in the northern part of the state. The qualitative assessment in Study 2 supported indications of a link between high commuting outflows and lower PCI rates. Fort Valley, for example, had one of the highest levels of commuting outflows and the lowest PCI growth of all micropolitan areas. St. Mary's had the highest PCI growth and one of the highest levels of people living and working in the micropolitan.

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[79] Muller, Peter. (1982). "Everyday life in suburbia: A review of changing social and economic conditions."

Study 3 showed micropolitan areas are not on a sustainable path, although the case studies showed policies were addressing some of the challenges. Although some micropolitan areas were found to have greater autonomy than others, micropolitan areas as a whole do not provide sufficient jobs to sustain the workforce. Thirty percent of the populations in Georgia micropolitan areas must travel elsewhere for work, suggesting they serve as bedroom and retirement communities. The Twente case study showed that smaller municipalities have the capacity to develop a broader range of employment opportunities, although they too lacked the ability to enough jobs to sustain the population.

Some micropolitan areas were found to have greater autonomy than others. Places such as Summerville illustrated patterns with high levels of commutes and dependence with Atlanta, but low education levels and high poverty rates. Summerville was nearly equidistant to Atlanta as Cornelia and Toccoa are in the northeastern part of the state. But Cornelia and Toccoa had greater autonomy in terms of workforce commutes than the micropolitan areas with the highest levels of dependence on metropolitan areas for work. They also appeared to be more sustainable as defined by PCI growth, education and employment diversity. LaGrange, about 60 miles from Atlanta, had one of the highest levels of autonomy among micropolitan areas. It had the highest percentage of people living and working there, as well as net gains of commuting inflows and outflows and 2000 PCI.

The meanings of economic development capacity and sustainability differed in Twente and in Georgia. The goals of both places were to improve the quantity and quality of jobs, protect the social character and raise standards of living. Some Twente municipalities need more land, jobs to match worker skills and the ability to retain younger populations. In Twente, retaining a younger population benefits the economy, and is also a reflection of the

area's cultural offerings. The national government has the primary responsibility of education in Twente. In Georgia, education is important to future economic development capacity. However, the responsibility to fund and direct educational efforts lies with local school boards. In addition to education, poverty and infrastructure are main concerns for Georgia micropolitan areas.

Study 3 revealed that micropolitan areas resemble rural places in terms of education, poverty and employment. In order to transition meet societal changes to a service-based economy, micropolitan areas should diversify their industries and retrain workers employed in declining manufacturing sectors (apparel, textiles and paper).[80] Policies in micropolitan areas reflect rural challenges. If micropolitan areas were to collaborate in order to form a collective response, they could implement the sorts of innovative changes that have occurred in Twente over the past few decades.

Urban policy literature calls for creative, innovative solutions that meet the values of the community, rather than adopting one-size-fits policies. The international comparison of Twente in the Netherlands identified policy options that suitable for a similar economic structure. From an old industrial region, Twente reinvented itself as an innovative "hot spot."[81] Dutch regions in general tend to be innovative because of conditions that have forced them to be superior at managing their land. Twente has been forced to be innovative from

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[80] Georgia Department of Labor, long-term industry projections 2002 to 2012, (explorer.dol.state.ga.us/mis/industry.htm)

[81] The Netherlands Ministry of Economic Affairs referred to the Twente region as an innovative "hot spot" in a special report. Report to MINEZ, Den Hague. (2003) P. Sijde, S. Karnebeck & J. Bentham.

necessity because of government underinvestment and its history with the now-defunct

textiles manufacturing industry.

This thesis did not support early literature on micropolitan areas characterizing them

as an intermediate category. Brown, Cromartie and Kulcsar showed micropolitan areas were

an intermediate urban category, with more amenities, higher wages and a more diverse

industry than rural places but lower than metropolitan categories.[82] However, the social and

economic structures of Georgia micropolitan areas resemble rural places. Like rural places,

they are challenged by the transition to a service-based economy, poverty and a less educated

workforce.[83] Future studies of micropolitan areas should explore their role as an intermediate

category by examining their differences with metropolitan and rural places.

The growth of micropolitan areas might also reflect the preference for small towns.

Micropolitan areas may have developed as suburban places did: the escape from urban

problems of congestion, crime, taxes and poverty, or to meet the demand for affordable

land.[84] Perhaps they are an extension of the suburban lifestyle that Gober and Behr suggested

had flourished from exclusionary practices and family style residential environments. If

micropolitan areas have the same underlying forces of growth that has explained suburban

development, then the journey to work may be a part of the lifestyle. Or, higher levels of

worker commutes could suggest residents can't find work that matches their level of skill.

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[82] Brown, Cromartie & Kulcsar 2004.
[83] Drabenstott, M. (2005) A New Map for Rural America's Economic Frontier. Economic Development America, summer edition, 5-7.
[84] Leichenko, Robin. (2001) "Growth and change in the U.S. cities and suburbs." Growth and Change. Vol. 32, pp. 326-354.

Following the study of Brown, Cromartie & Kulcsar on micropolitan areas as an intermediate category, how should policy prescriptions for micropolitan areas differ from rural areas? Are conditions in Georgia micropolitan areas closer to rural places while those across the country are more intermediate with regard to wealth, education and employment? Tweeten and Brinkman suggested smaller cities and rural areas should not operate on urban policies, but should have distinct public policies, at the heart of which is job creation. Job creation is at the heart of micropolitan area policies, according to the interviews in the case study. However, micropolitan areas should distinguish themselves and their policies from rural places. They should recognize the combination of rural and urban qualities that make them unique and set them apart from metropolitan areas.

Smaller towns tend to have greater community cohesiveness, while larger cities lack the sense of functionality among their neighborhoods. Are these neighborhoods large and powerful enough to represent themselves in government? Big cities are natural generators of diversity, and have the population to support smaller businesses, businesses entertainment venues and specialty shops that Jane Jacobs discussed in her classic.[85] Is it possible for small cities find their niche with a population too small to promote wide ranges in variety? The Richard Florida school of thought suggests diversity and creativity are the main drivers of population growth. Under his theory on the Creative Class, regional economic growth depends on a creative ecosystem. However, he also suggests small and mid-size cities should create the "best fit" for themselves rather than adopt standard strategies. Rather than adopt

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[85] Jacobs, Jane. (1961) *The Death and Life of Great American Cities.* New York, NY: Random House.

conventional strategies, policy makers should create their own guidelines to cultivate

creativity in their communities.[86]

This thesis has approached a study of micropolitan areas from the perspective of

economic and social independence. However, there are a number of alternative approaches

that can underscore trends in micropolitan development. Below are six suggested ideas for

future research and five recommendations for state and local policy makers. Most of the

ideas build on the results of this thesis and the need to distinguish micropolitan areas from

rural places and metropolitan areas in terms of employment, housing and lifestyle patterns.

The simplest way to answer those questions is with a more extensive GIS analysis

(suggestion #1) and the remaining suggestions follow on that idea.

Suggestions for future research

1. Expand GIS analysis of micropolitan areas. An extensive GIS analysis is

essential to understand the urban character of micropolitan areas. The results could help

improve policy options for housing, education and employment in micropolitan areas. Policy

makers will also be able to analyze conditions in the outer rural parts of micropolitan areas,

using a simple erase operation in GIS, as well as areas just outside the micropolitan. A GIS

analysis of population densities in the outer fringes of micropolitan areas could reveal if

sprawl also occurs in micropolitan places.

2. Extend comparisons of micropolitan, metropolitan and rural areas. There is

tremendous diversity within micropolitan areas in Georgia. Their characteristics differ from

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[86] Florida, Richard. (2002) Rise of the Creative Class. New York, NY: Basic Books.

micropolitan areas across the country. In Georgia, there are no overlaps between larger

micropolitan and smaller metropolitan areas, as shown with micropolitan areas nationally in

Lang & Dhavale's study. Micropolitan demographics, industry structures and wealth more

closely resemble rural areas in Georgia. Although micropolitan areas are a new urban

category, they bear no resemblance to metropolitan areas. However, more study is needed of

micropolitan areas to explore other factors that make them more urban than rural places. The

recommendation is to extend the study by Brown, Cromartie & Kulcsar, which showed

higher levels of amenities and public services compared to rural places. This study can be

done in Georgia with a survey of micropolitan areas and rural counties to measure wages and

job growth, the level of public services (such as the existence of a local airport, multiple-

branch libraries, and a hospital, and industry structures.

3. Fast-growth and slow-growth micropolitan areas. For some micropolitan areas,

economic growth was synonymous with economic development. Population growth has

accompanied PCI growth in the micropolitan areas of St. Mary's, Statesboro and Cornelia,

each of which have gained about 30 percent in population and 90 percent in PCI over a

decade. However, with the examples of the wealthiest micropolitan areas in terms of PCI,

LaGrange and Thomasville grew only 6 and 10 percent respectively in population in a

decade. The question is under what conditions does high population growth accompany or

not accompany higher rates of wealth? How is population growth a reflection of local policy

and what are other influencing factors? Are the policy problems in fast-growth micropolitan

areas distinct from those in the slower growth areas?

4. Analysis of housing and real estate. Does affordable housing and real estate drive

growth among micropolitan areas? That sort of study could reveal the role of micropolitan

areas as bedroom communities, or places with affordable housing and cheap rents. What is the average price for a single-family in micropolitan, metropolitan and rural areas? How do average house prices, the growth of new home permits, and the availability of jobs? Does public policy favor exclusionary zoning practices as suburban places once have? How are high-growth micropolitan areas likely to sustain themselves?

5. Sustainability of jobs and population growth. High-wage jobs attract people to metropolitan areas. But micropolitan areas in Georgia grew faster than the national average, despite the lack of jobs to sustain the population, since what is the level in each county, in the northern and southern parts of the state? What is the correlation between low levels of employment and high levels of commutes? Job growth can be viewed in terms of the efficiency of internal business development and external business development. With regard to internal job growth, an analysis is needed of entrepreneurship and business development. With regard to internal business development, do the types of jobs available match the worker skills in the area? What types of skills are workers being trained for? How has population growth outpaced job growth in general? Interviewees in micropolitan areas also mentioned entrepreneurship as a means of internal job growth. Have entrepreneurship initiatives led to any new businesses? How can the programs be improved? What types of businesses are moving there? The external business development, or the recruitment of businesses to the micropolitan area, may be drawn to the population demographic, cheaper office rents, and access to a reliable highway system. What sorts of factors draw businesses that can thrive on such low density areas?

6. Funding implications for a new urban category. Because the reclassification is so new, policy makers in many micropolitan areas are not aware that they are now considered

an urban category. However, those areas could be affected by rural funding programs, if eligibility requirements were to change for programs such as ONE Georgia and USDA grants. ONE Georgia, for example, is a rural development program targeted for all non-metropolitan counties. However, eligibility is population-based and targets areas with less than 50,000 residents. It offers a number of programs, such as loan guarantees for small business and entrepreneurship and funds to retain businesses and jobs. Unless ONE Georgia revises the requirements to reflect CBSA and non-CBSA places, micropolitan areas should continue to be eligible under ONE Georgia.[87] The USDA's Rural Community Development Initiative provides another example. Georgia USDA business and community development programs target non-metropolitan counties, or places with populations less than 50,000, as part of the rural category. However, the national USDA center has recognized places with populations of 20,000 or more as urban, non-metropolitan areas.[88] The USDA, which has long recognized the diversity of rural areas, has had the classification system since 1974. Based on 1990 information, the U.S. Economic Development Administration also considers rural places as non-metropolitan areas with populations less than 50,000.[89] As the GAO report noted in a 2004 report, funding could expand in some instances but contract in others. In Georgia, there are a number of programs with initiatives that administer funds based on rural and urban qualities. They include programs for housing, youth development, economic development and small business. A case study of which programs could affect micropolitan

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[87] Smaller metropolitan areas, or counties with populations of less than 500,000 can be "conditionally eligible," which means they can receive support if they join a collaborative effort for rural development (http://www.onegeorgia.org/eligibility.html).
[88] http://www.ers.usda.gov/data/ruralurbancontinuumcodes/
[89] http://www.eda.gov/Research/Rural.xml

areas and rural areas could determine where eligibility expands and shrinks as a result of a

new urban category. What is the current level of government monetary support for

micropolitan areas, and how is it likely to shift in the future? Should funding be re-evaluated

to reflect the latest population changes?

1. Does the land use allow for a mixture of residential dwellings and offices in more

densely populated areas? How well planned are the neighborhoods? Is there attention to the

visual design of the buildings or are they standardized? Are there any places which allow for

higher density growth? Are there any spots with common shopping areas, neighborhoods,

parks and work areas, or are they split with sprawling traffic arteries?

Recommendations

Recommendation # 1: Diversify industry and employment base

Employment in micropolitan areas is twice as concentrated in the areas of

manufacturing, retail and health care compared to Georgia. Micropolitan areas will have to

diversify their economies in order to acknowledge the societal transition from goods to

services. Interviews with micropolitan area economic developers showed an interest in

diversifying industries, but without a clear strategy of how to develop producer services

sectors. There was also acknowledgement that education would be key in economic well-

being and future development of worker skills. Micropolitan areas can also focus on

developing specific sectors, and forming strategies that suit the area's needs. Cluster

development is more efficient since it allows regions to develop groups of companies rather

than individual firms.90 As shown in the case of Twente, it is possible to focus on education as the key to expand other industry sectors.

Recommendation # 2: Regional collaboration, not competition

Micropolitans are not bound by geography as municipalities in the Twente case study. Located in different parts of the state, with different regional economies and geographies, the only common factor of micropolitan areas in Georgia are their size and status as a new urban category. Without the resources, income and infrastructure of metropolitan places, micropolitan areas must find their own niche to develop their business and industry base. Rather than view each other as competition, micropolitan areas should pool their resources to improve their entrepreneurship and business development programs. The Twente case has also shown than lack of cooperation among the municipalities, between the big cities and smaller urban places, and with state leadership could lead to economic decline. If the goal is to achieve a pool of higher skilled workers and better paying jobs, the case showed that collaboration can lead to partnerships to tangible improvements in education, infrastructure and organizational networks.

The focus should be on regional development. Micropolitan areas in the northwestern part of the state should find ways to reinvent their economies as textiles continue to decline. Micropolitan areas in northeastern part of Georgia can draw from their higher educational assets, or private universities in Toccoa and near Cornelia, to play a role in future economic

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[90] Cortright, Joseph. (March 2006) "Making Sense of Clusters: Regional Competitiveness and Economic Development." The Brookings Institution Metropolitan Policy Program. (www.brookings.edu/metro/pubs/20060313_Clusters.pdf)

development. Middle and southern Georgia micropolitan areas can also take advantage of their own regional strengths and assets to develop their economies in the future.

Recommendation # 3: Comprehensive policy for future sustainability

Much of the information online and within the state administration is outdated and fails to acknowledge micropolitan areas as urban. Although the line between rural and urban is somewhat blurred, the state should review its funding programs for possible changes as a result of the micropolitan category. Georgia administrators should also recognize micropolitan areas as places with distinctive capacities for innovation and development. Research has shown that smaller urban places have innovative capacities in more traditional, mature technological areas.91 State policies should address the nature, assets and capacities of micropolitan areas in future economic development.

Recommendation # 4: Collaborative effort to prepare for dwindling energy supplies

State and local policy makers should recognize the differences and diversity of micropolitan places and their economic and social autonomy. Micropolitans have a certain level of autonomy as shown in their work commuting patterns. There is a certain level of interdependence with metropolitan areas. However, the degree of autonomy declines in the northwestern and middle parts of Georgia, which have far greater reliance on metropolitan areas for jobs. Micropolitans do not commute as long as residents of metropolitan areas. However, the sustainability of their future economies could be at risk as gas prices climb and

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[91] Orlando, Michael and Michael Verba. "Do Only Big Cities Innovate? Technological Maturity and the Location of Innovation." *Economic Review.* Federal Reserve Bank of Kansas City, pp. 31-57. (http://www.kansascityfed.org/PUBLICAT/ECONREV/PDF/2Q05orla.pdf)

with their reliance on a finite source of energy. Incomes and poverty in micropolitan areas resemble rural places, and are far lower than the state average. This suggests their economies will be more susceptible with fluctuations in gas prices and the dwindling resources of fossil fuel energy in general. Subsequently, micropolitan areas need a collaborative strategy to prepare for possible shortages or disruptions in the availability of gasoline.

Recommendation # 5: Protecting the social character of micropolitan areas

Many local policy makers in micropolitan areas have not heard the term and felt no certainty regarding the significance. For some, micropolitan areas reminded them of the small-town character of their communities. That reflects the nature of micropolitan areas to some extent. If they are truly an intermediate urban category, then they should recognize this new quality in their long-term marketing strategies. They should also work to protect the character and charm that makes them distinctively micropolitan. Rather than adopt one-size-fits strategies, they should acknowledge their individual histories and qualities in their economic development policy. National chain stores and companies have begun to track micropolitan development as potential markets. The attraction of big firms and companies translates into more jobs. However, micropolitan areas should also recognize the value of their small businesses and entrepreneurship assets as potential job generators.

APPENDIX A: MAPS

Figure 2.2: Georgia micropolitan and metropolitan counties

Chattanooga
Dalton
Rome
Gainesville
Athens
Atlanta
Augusta
Macon
Columbus
Warner Robins
Savannah
Ft. Stewart
Albany
Brunswick
Valdosta
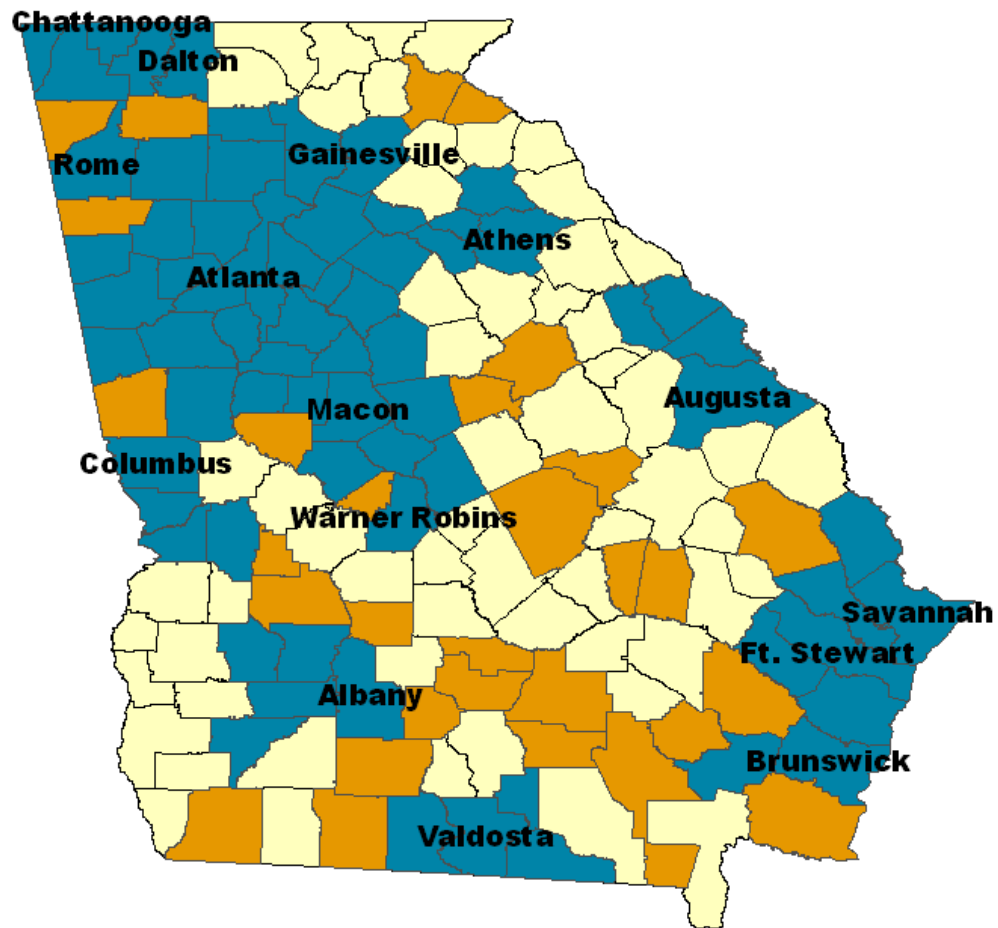
Georgia metropolitans

- Non-CBSA counties
- Micropolitan counties
- Metropolitan counties

The borders of Georgia's metropolitan areas often border micropolitans. This map shows metropolitan and micropolitan counties.

Map Author
Nooshin Mahalia

June 2006

Miles
0   15   30   60   90   120

Figure 2.4: Micropolitan counties and metropolitan areas in Georgia
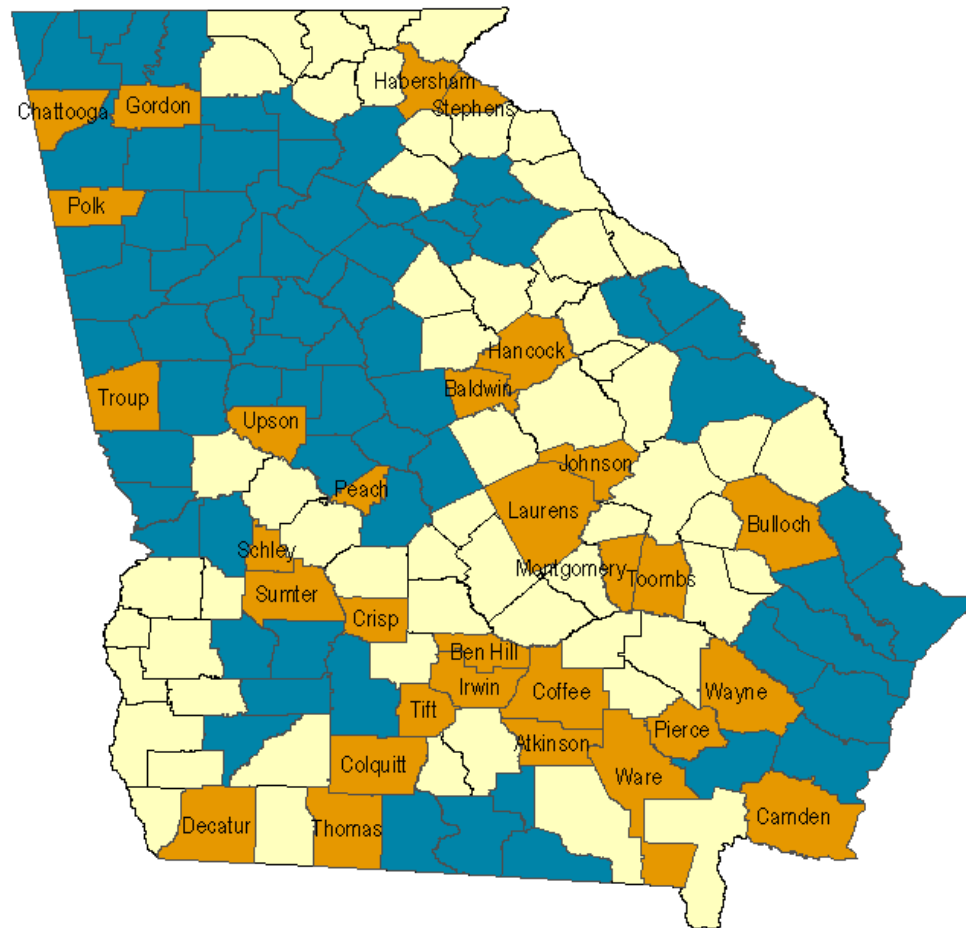
Metropolitan and micropolitan cities

- Non-CBSA counties
- Micropolitan counties
- Metropolitan counties

Counties in Georgia's micropolitans:
Two-county areas are located in
the southern part of the state.

Miles
0   15   30   60   90   120

Map Author   June 2006
Nooshin Mahalia

Technical colleges in Georgia

Legend:
- Denotes Technical College Service Delivery Area
- Technical College Facility
- University System College With Technical Division

Northwestern Tech
Dalton State College
North Georgia Tech
Coosa Valley Tech
Appalachian Tech
North MetroTech
Lanier Tech
Gwinnett Tech
Athens Tech
Chattahoochee Tech
DeKalb Tech
West Central Tech
Clayton State Univ.
Atlanta Tech
Augusta Tech
Griffin Tech
West Georgia Tech
Central Georgia Tech
Sandersville Tech
Flint River Tech
Heart of Georgia Tech
Swainsboro Tech
Columbus Tech
Ogeechee Tech
Middle Georgia Tech
Georgia Aviation Tech
Southeastern Tech
Savannah Tech
South Georgia Tech
Altamaha Tech
Albany Tech
East Central Tech
Coastal Georgia Community College
Moultrie Tech
Bainbridge College
Southwest Georgia Tech
Valdosta Tech
Okefenokee Tech

Map of Twente, Netherlands
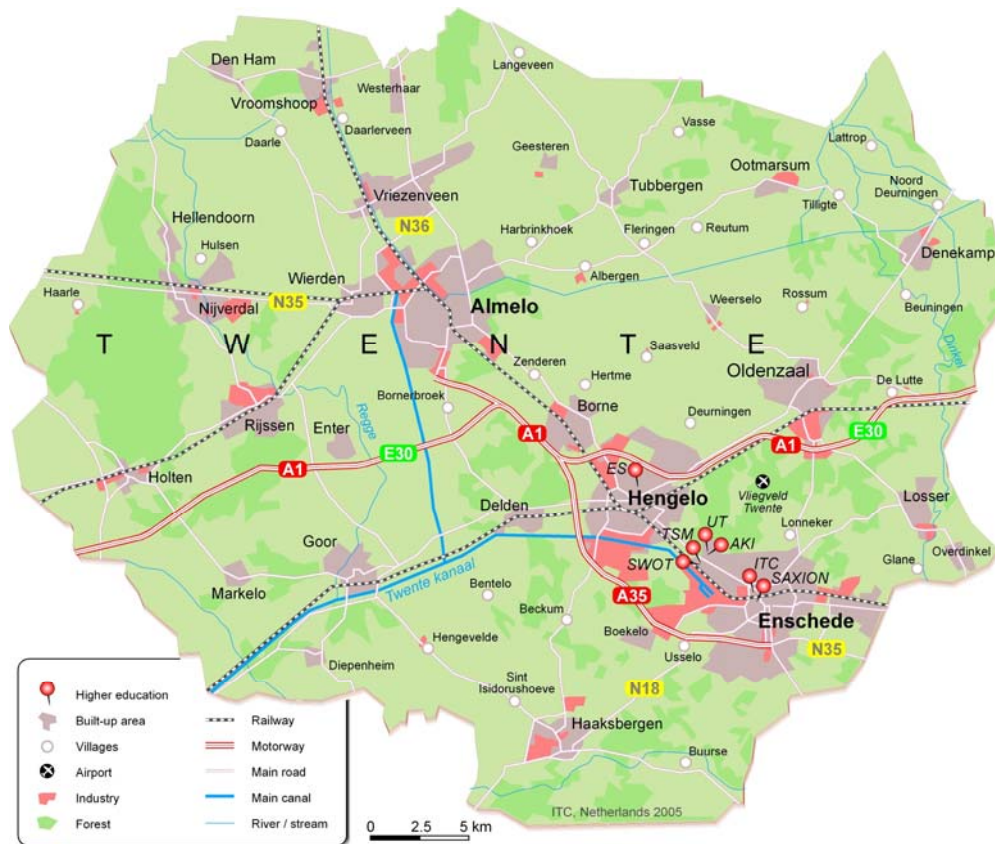
APPENDIX B: POPULATION, PCI AND COMMUTING DATA

Commute time	Commuting Averages Data					
	Micropolitan areas		Metropolitans		Georgia	
0-9 mins	68,074	17%	302,015	9%	427,849	10%
10-19 mins	147,276	36%	852,387	25%	1,095,448	27%
20-29 mins	58,959	15%	621,647	18%	729,249	18%
30+ mins	92,198	23%	1,274,879	38%	1,471,271	36%

Source: Census 2000

Note: The commuting populations were calculated in GIS as percentages of the labor force, so the totals percentages do not add up to 100 percent.

Micropolitan	2000 PCI	2000 POP	2000 Total Income	1990 PCI	1990 POP	1990 Total Income	POP Change	PCI Change	Region
St. Mary's	$20,939	43,734	$915,746,226	$14,095	30,734	$433,195,730	42%	111%	SGA
Statesboro	$19,595	56,159	$1,100,435,605	$12,655	43,412	$549,378,860	29%	100%	MGA
Cornelia	$21,916	36,135	$791,934,660	$14,918	27,799	$414,705,482	30%	91%	NGA
Calhoun	$21,974	44,371	$975,008,354	$14,827	35,233	$522,399,691	26%	87%	NGA
Jesup	$20,152	26,167	$527,317,384	$13,457	22,463	$302,284,591	16%	74%	SGA
Toccoa	$22,102	25,490	$563,379,980	$14,053	23,474	$329,880,122	9%	71%	NGA
Thomasville	$23,166	42,849	$992,639,934	$15,093	38,902	$587,147,886	10%	69%	SGA
Tifton	$21,878	38,450	$841,209,100	$14,341	35,071	$502,953,211	10%	67%	SGA
LaGrange	$24,070	58,935	$1,418,565,450	$15,491	55,581	$861,005,271	6%	65%	MGA
Cordele	$19,653	21,990	$432,169,470	$13,156	20,022	$263,409,432	10%	64%	MGA
Thomaston	$20,114	27,636	$555,870,504	$13,017	26,329	$342,724,593	5%	62%	MGA
Bainbridge	$19,931	28,242	$562,891,302	$13,578	25,573	$347,230,194	10%	62%	SGA
Summerville	$17,998	25,498	$458,913,004	$12,707	22,287	$283,200,909	14%	62%	NGA
Moultrie	$19,219	42,138	$809,850,222	$13,627	36,735	$500,587,845	15%	62%	SGA
Cedartown	$18,725	38,268	$716,568,300	$13,188	33,873	$446,717,124	13%	60%	NGA
Fort Valley	$21,591	23,812	$514,124,892	$16,266	21,225	$345,245,850	12%	49%	MGA
Douglas	$20,063	45,188	$906,611,594	$13,935	35,815	$499,082,925	26%	82%	SGA
Fitzgerald	$20,096	27,467	$551,973,114	$13,398	24,860	$333,078,056	10%	66%	SGA
Vidalia	$19,544	34,400	$672,316,225	$13,189	31,524	$415,768,460	9%	62%	MGA
Waycross	$19,634	51,174	$1,004,737,896	$12,815	48,852	$626,058,500	5%	60%	SGA
Americus	$20,912	37,031	$774,403,049	$13,641	33,926	$462,771,412	9%	67%	MGA
Dublin	$21,026	53,535	$1,125,606,137	$13,796	48,340	$666,878,519	11%	69%	MGA
Milledgeville	$19,902	54,795	$1,090,547,137	$13,752	48,557	$667,752,598	13%	63%	MGA

Source: BEA

APPENDIX C:
INDUSTRY DATA

Micropolitan	Manufacturing sector by micropolitan area			
	Employees	Annual Payroll		
	(weekly)	($1,000s)	Total Est.	Pct. Payroll
Calhoun	8,273	$246,674	111	12%
LaGrange	7,896	$295,945	93	14%
Douglas	5002	$121,573	53	6%
Cornelia	4,190	$110,202	63	5%
Summerville	4,160	$96,097	22	5%
Dublin	4064	$120,219	51	6%
Fitzgerald	3,498	$92,710	38	4%
Cedartown	3,199	$91,329	38	4%
Thomasville	3,151	$90,549	51	4%
Tifton	3,105	$90,873	55	4%
Americus	2970	$82,039	45	4%
Milledgeville	2,953	$61,756	22	3%
Toccoa	2,814	$80,099	54	4%
Fort Valley	2,503	$77,680	25	4%
Statesboro	2,376	$61,184	51	3%
Thomaston	2,219	$67,211	24	3%
Moultrie	2,217	$45,653	51	2%
Bainbridge	2,098	$64,562	27	3%
Vidalia	1962	$45,441	47	2%
Waycross	1646	$38,259	49	2%
Jesup	1,625	$72,883	26	3%
Cordele	1,556	$43,919	25	2%
St. Mary's	447	$16,678	19	1%
Total annual payroll	73,924	$2,113,535	1040	100%

Source: Census, County Business Patterns

Georgia industry sectors

Industry	Employees /week	Payroll ($1,000)		Establishments	Pct. annual payroll
		1st quarter	Annual		
Manufacturing	449,486	3,904,568	15,839,451	8,652	13.6%
Health care and social assistance	391,258	3,132,653	13,504,306	18,312	11.6%
Professional, scientific & technical services	193,142	2,488,708	10,212,542	24,249	8.8%
Wholesale trade	197,951	2,387,305	9,361,536	13,713	8.0%
Retail trade	449,362	2,217,062	9,258,742	34,012	8.0%
Finance & insurance	176,060	2,576,827	9,248,920	13,922	8.0%
Admin, support, waste mgt, remediation services	290,276	1,785,652	7,502,497	10,294	6.5%
Management of companies & enterprises	100,189	1,982,182	7,364,138	1,508	6.3%
Information	135,902	1,907,155	7,280,684	4,172	6.3%
Construction	195,255	1,658,292	7,107,410	20,957	6.1%
Transportation & warehousing	143,212	1,344,884	5,471,125	5,686	4.7%
Accommodation & food services	316,339	919,720	3,880,971	16,177	3.3%
Other services (except public administration)	146,458	743,357	3,089,859	20,245	2.7%
Real estate & rental & leasing	59,866	531,323	2,174,498	10,082	1.9%
Educational services	66,113	440,975	1,827,241	2,032	1.6%
Utilities	22,076	556,636	1,602,099	601	1.4%
Arts, entertainment & recreation	37,747	251,908	1,043,574	2,446	0.9%
Mining	6,450	74,287	281,155	224	0.2%
Forestry, fishing, hunting, and agriculture support	9,074	58,461	241,673	1,119	0.2%
Unclassified establishments	1,121	4,020	18,628	734	0.0%
Total	3,387,337	28,965,975	116,311,049	209,137	100.0%

APPENDIX D:
WAGES AND SALARIES

Average wage per job

	1990	2000	Pct. change
St. Mary's, GA	21707	29001	33.6%
LaGrange, GA	19059	28150	47.7%
Calhoun, GA	18892	25953	37.4%
Fort Valley, GA	18933	25537	34.9%
Jesup, GA	18960	25443	34.2%
Thomasville, GA	16887	25315	49.9%
Toccoa, GA	16614	25301	52.3%
Tifton, GA	17219	24395	41.7%
Dublin, GA	16852	24140	43.2%
Cornelia, GA	16693	24071	44.2%
Cedartown, GA	16683	24049	44.2%
Fitzgerald, GA	16373	23746	45.0%
Thomaston, GA	15762	23392	48.4%
Summerville, GA	16101	23363	45.1%
Waycross, GA	16661	23308	39.9%
Milledgeville, GA	17142	23109	34.8%
Americus, GA	16577	22876	38.0%
Statesboro, GA	16628	22769	36.9%
Douglas, GA	15659	22529	43.9%
Bainbridge, GA	16790	22409	33.5%
Cordele, GA	14302	21892	53.1%
Vidalia, GA	15096	21500	42.4%
Moultrie, GA	15160	20925	38.0%

Source: www.bea.gov/bea/regional/reis/

Wages and Salary
Dispersements
1990-2000

Micropolitan	1990	2000	Pct. change
Americus	$246,358	$399,111	62.0%
Bainbridge	$192,429	$280,986	46.0%
Calhoun	$345,263	$589,803	70.8%
Cedartown	$170,351	$270,186	58.6%
Cordele	$126,540	$214,280	69.3%
Cornelia	$217,258	$365,184	68.1%
Douglas	$235,917	$506,072	114.5%
Dublin	$346,686	$583,085	68.2%
Fitzgerald	$154,350	$284,877	84.6%
Fort Valley	$149,308	$238,366	59.6%
Jesup	$163,136	$250,558	53.6%
LaGrange	$569,480	$1,018,580	78.9%
Milledgeville	$367,643	$508,856	38.4%
Moultrie	$214,697	$346,480	61.4%
St. Mary's	$344,689	$579,610	68.2%
Statesboro	$271,155	$528,226	94.8%
Summerville	$122,156	$205,151	67.9%
Thomaston	$166,891	$244,396	46.4%
Thomasville	$317,412	$577,923	82.1%
Tifton	$312,661	$549,514	75.8%
Toccoa	$187,061	$285,545	52.6%
Vidalia	$178,439	$293,497	64.5%
Waycross	$314,993	$520,659	65.3%

Source: BEA

APPENDIX E: INTERVIEWS

Interviews with the following individuals took place between the months of April and June 2006. Interviews of representatives from Georgia micropolitan areas were conducted by phone while interviews in Twente were conducted in person.

Telephone interviews, Georgia
April 2006

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GLOSSARY

Autonomy – Describes conditions of economic and social self-sufficiency and it can be measured in a number of ways. For purposes of this study, the term will refer to places that are reliant on other places for jobs, wealth and economic growth.

Central county – A part of the micropolitan area which has either 1) at least 50 percent of the population in an urban area with a population of at least 10,000, or 2) has a population of at least 5,000 in an urban area of 10,000 or more people. It is "associated with the urbanized area or urban cluster that accounts for the largest portion of the county's population." (Federal Register 2000)

Inflows – The percentage of people who commute to the area for work.

Micropolitan area – A federal statistical category which describes economically integrated areas defined by the Census Bureau's standards for commuting and population. A micropolitan area must have one or more one urban clusters and a population of 10,000 to 49,000 people and 25 percent of the workforce commutes between the central and outlying counties.

Metropolitan – Area with an urban core and a population of at least 50,000 residents.

Metropolis – A metropolitan area with an urban core and a total population of at least 1 million residents.

Municipality – In the Netherlands, a municipal area refers to collections of small cities and towns.

Per capita income – Total income of a county divided by the total population.

Proximity – Distance in miles between the metropolitan area and the micropolitan. Center-to-center proximity was used to refer to the distances between micropolitan areas and metropolitan areas.[92]

Outflows – The percentage of the population that commutes outside the area for work.

Outlying county – Describes the micropolitan or metropolitan areas outside the central counties. An outlying county is identified if at least 25 percent of the workers in the

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[92] The proximities of the centers, rather than the edges of the micropolitan areas and metropolitans were determined to be a better measure of distance than measuring edge-to-edge distance. This was because the metropolitan areas were so large (See Appendix A: Maps) that the distance from the edges of micropolitan areas and metropolitans was often zero.

central county commute there, or if 25 percent of workers from the outlying county commute to the central county.

Urban cluster – Consists 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." (Federal Register, Dec. 2000)