6-15-2015

Economic Profile: Village of Middlefield, Ohio

Kirby Date
Cleveland State University, k.date@csuohio.edu

Village of Middlefield

ECONOMIC PROFILE

Maxine Goodman Levin College of Urban Affairs
Center for Community Planning and Development
Student Project Spring 2015
UST 696 – Community Data Analysis Independent Study
FINAL: K. Date revised 7/2/15

EXECUTIVE SUMMARY

A small town of 2700 residents in rural eastern Geauga County, the Village of Middlefield has nonetheless taken an aggressive approach to attracting business, resulting in sizeable local employment that is disproportionate to its small population. As of 2012, 5900 people were employed in the Village and its immediate vicinity, with the potential for an additional 2000 in non-employment and family-based businesses. Businesses have been particularly attracted by the stable, skilled workforce, the small town lifestyle, and the Village's support for business retention and expansion.

A large proportion of the Village's employment, in 2012 over 60%, is based in manufacturing, in particular cabinet and furniture making. This sector has seen a downturn since the recession and associated shrinkage of the homebuilding industry, which has had an overall effect on the local economy. However, as the economy rebounds, this and other sectors relevant to Middlefield are poised for potential growth. This report was prepared to provide the Village with a resource in understanding opportunities for business expansion and retention, as well as attraction of new business.

Several opportunities were identified, summarized as follows:

- **Unique and growing workforce.** The Amish population in the area is robust and continuing to grow; people in the surrounding County area are highly educated. Both populations present a strong workforce foundation for business activity.
- **Support dominant businesses.** As a large percentage of employment is based in a few businesses, the local economy turns with them. The Village can provide support to encourage them to grow.
- **Diversify business base.** Businesses in the top 20 in the Village, many of which are in nondominant sectors, present an opportunity to diversify, and strengthen, the overall economy, by supporting their growth. At the same time, sectors are identified which are currently underrepresented, presenting an opportunity to attract new business.
- **Dominance of manufacturing.** Outlooks for the region indicate that several manufacturing sectors may be poised for growth, including food manufacturing, metal fabrication, and furniture, all of which are traditional strengths for the Middlefield area. Chemical manufacturing may also have potential, along with others.
- **Potential retail growth.** Population growth among the Amish, and likely growth of the population over age 65, present opportunities for growth of the retail sector over time.
- **Accommodation and food services growth.** Expansion of the local tourist economy, both via the Amish community and nearby recreation opportunities, could provide for growth in this sector.
- **Potential for professional/technical business.** With further study, the highly educated Village/County population presents the potential to attract diverse businesses with a need for educated workers.
- **Role of non-employment businesses.** Non-employment businesses, typically sole proprietors, represent an additional 30% of employment in the County; these have the potential to become established businesses over time, and to add to the Village's professional/technical sectors.

1.0 INTRODUCTION

1.1 Middlefield Means Business

The Village of Middlefield is a small town in eastern Geauga County, with a population of 2,703 as of the US Census' 2013 American Communities Survey estimates. With its motto "Middlefield Means Business", the Village has been aggressive about recruiting business, and has a large employment population in proportion to its size. Estimated employment for the zip code area is 5,900 employees, with approximately 14 of the 20 largest establishments in the zip code, including the largest five, located in the Village. In fact, two of the three largest employers in Geauga County are located in the Village.

The Village is in the center of a thriving rural area, with a sizeable Amish population of about 15,000 who use Middlefield as their center of commerce, and who provide a ready workforce for establishments in the area. An emphasis on woodworking, furniture and similar industries has resulted in a large reduction in employment in the area since the economic downturn of 2007-2008, which had a major impact on industry related to home construction. Other industries are generally improving, and this analysis offers some insights and ideas for ways that the Village can focus its efforts going forward.

In 2013, the Village engaged an Economic Director, who is working with an active Economic Development Committee and local business interests to encourage business attraction, expansion and retention. This study was completed as a student project by community planner Kirby Date, AICP, of the Maxine Goodman Levin College of Urban Affairs, as part of her Masters' Degree requirements, working under Dr. Brian Mikelbank, faculty, in consultation with the Economic Development Director and the Committee.

There are three primary uses for the information contained in a typical economic analysis:
1) Understand assets and challenges in the local workforce, population and economy, and where the Village stands in relation to the County and State, to enable the Village to be strategic in focusing economic development efforts and support
2) Identify areas of opportunity to introduce new business, and strengthen existing businesses
3) Provide information that the Village can use in conversations with employers about support, expansion and retention

1.2 Notes on Data

This analysis relies on two main sources of data: The US Census, American Communities Survey, and the US Census County and Zip Code Business Patterns, to draw inferences about the Middlefield population, quality of life, work force, employment, and industries. ("US Census - Data" 2015)

Reference USA and Dunn-Bradstreet data were evaluated and were found not reliable for quantitative analysis due to duplications, estimates, and likelihood that many businesses were no longer in operation. Reference USA was used primarily as a "reality check" and to identify the group of largest employers in the area. CoStar data were not available to us at this time, and it is not clear how accurate and complete it would be, due to the large number of small businesses in the area. The US QCEW data, (Quarterly Census of Employment and Wages), which can provide detailed, accurate, up to date business-by-business data, and is housed at CSU as a regional data center, was found to be largely suppressed for the Middlefield area, due to the Village's small size and dominance by a handful of businesses which could be easily identified. ("ReferenceUSA" 2015)

Therefore, the US Census County Business Patterns (CBP) and Zip Code Business Patterns (ZBP) were used for the industry analyses. This data was not available for the Village alone, so our focus became the 44062 zip code, which comprises the Village of Middlefield, Middlefield Township, and a small part of surrounding rural communities. This data was also largely suppressed at the zip code level, and partially suppressed at the county level, requiring substantial estimation at these levels. Some estimation was required at the state level. See tables for noted estimated values, and text for estimation method. The 3-digit NAICS level was chosen due to substantial suppression at the more detailed levels.

Analysis was included for all sectors available at the 3-digit level for the State of Ohio, even if there was no industry present in that subsector in Middlefield or the County. This was done to allow the Village to identify areas where there is currently no industry existing, that might present opportunities for business attraction.

Due to the estimation involved, it is highly likely that there is a wide margin of error in the data estimated, and in the analysis done using that data. However, it is our opinion that enough information is provided about industry sectors in relation to each other that the Village can find the study useful. It should be used as only one of multiple tools in strategizing economic development effort in the Village.

2.0 POPULATION, HOUSEHOLDS, AND COMMUNITY CHARACTERISTICS

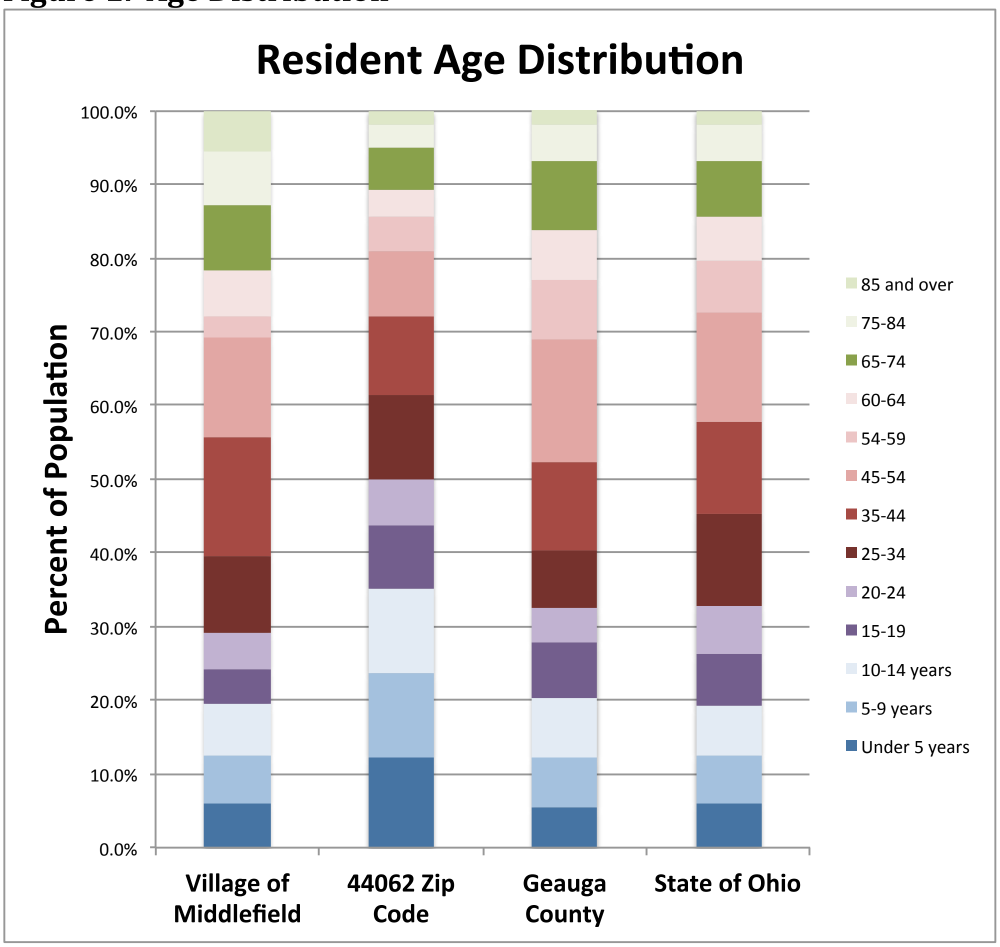
2.1 Population characteristics

Population information is provided in order to describe the community, and in particular, its workforce and future workforce. The age breakdown of the population in Middlefield Village closely parallels that of Geauga County and the state, except for a higher proportion of people aged 35-44, and people over 65. However, the age breakdown of the 44062 zip code, which is a workforce resource, is strongly skewed toward younger people and families, with 40% of the total population under age 18. This is an indication that the workforce population will continue to grow, with associated potential for new businesses to find employees available and ready to work going into the future.

The population of the Middlefield area and the county is less diverse racially than the state as a whole. However, the Amish presence at 15% of the county population, and an estimated much higher proportion of the local population, brings with it many of the opportunities for collaboration and innovation that come with diversity - as both populations work side by side, especially on matters related to business.

The Village of Middlefield itself has a high proportion of people over age 65. This presents implications for a need for expanded community services and health services over time, as more residents retire. It also provides opportunities to encourage independent and consulting business endeavors by those who desire to enage in part-time enterprise.

Figure 1: Age Distribution



Source: US Census, American Communities Survey 2009-2013 5-year estimates
Note: Data for each geographic area is inclusive of the lower-level geographic areas to its left.

Table 1: Population Characteristics

Characteristic	Village of Middlefield	44062 Zip Code	Geauga County	State of Ohio
TOTAL POPULATION, 2013	**2,703**	**15,293**	**93,610**	**11,549,590**
Median age	**41.1**	**25.0**	**43.5**	**39.0**
% Pop 65 and over	21.6%	10.7%	16.3%	14.4%
% Pop 18 and over	77.3%	59.6%	74.6%	76.7%
% Pop under 18	22.7%	40.4%	25.6%	23.3%
% Pop 18-24	6.5%	9.6%	7.0%	9.6%
% Pop 18-64	55.7%	48.9%	58.3%	62.3%
RACE				
White	97.3%	98.5%	97.1%	82.9%
Black or African American	0.6%	0.3%	1.1%	12.1%
American Indian/Alaska Native	0.0%	0.0%	0.0%	0.2%
Asian	0.8%	0.4%	0.6%	1.7%
Native Hawaiian/Pacific Islander	0.0%	0.0%	0.0%	0.0%
Some other race	0.0%	0.0%	0.1%	0.8%
Two or more races	1.4%	0.7%	1.2%	2.2%
Hispanic or Latino of any race	2.6%	1.1%	1.2%	3.2%
AMISH POPULATION				
Estimated Amish Population, 2014			15,230	
% County population, 2013			16.3%	
Average Household Size, 2013			5.16	

Source: US Census American Communities Survey, 2009-2013 5-year estimates; Table DP05
Amish Population Information: Amish Church Directory of Geauga County, 2008; Young Center for Anabaptist and Pietist Studies, Elizabethtown College, PA
Amish Household Size Information: CSU

2.2 Housing and household characteristics

Housing and household characteristics are important to the local economy because households form the main consumer unit of the community. The quality of housing stock affects the ability to attract residents and workers, and also affects the value of property in the area.

In keeping with the Village's older population, identified earlier, it has a higher proportion of older householders living alone, and a somewhat lower proportion of households with children under 18. However, the zip code area shows a dramatic difference, with 42% of households having children under 18. Average household size and average family size are also larger than the County and State averages. This is a very family-focused community, which can contribute positively to the quality of life and stability of the community and workforce.

Table 2: Household Characteristics

Characteristic	Village of Middlefield	44062 Zip Code	Geauga County	State of Ohio
Total Households	**1,135**	**4,027**	**34,621**	**4,557,655**
Households with children under 18	26.0%	42.1%	32.4%	30.9%
Single-person Households	43.4%	22.4%	21.7%	29.6%
Single-person Households 65 and over	20.9%	9.8%	9.1%	10.7%
Average Household Size	2.27	3.76	2.68	2.47
Average Family Size	3.16	4.59	3.15	3.06
Percent of people 16 and over with no car available	2.30%	47.30%	6.20%	2.90%

Source: US Census, American Communities Survey, 2009-2013 5-year Estimates

Table 3: Housing Characteristics

Characteristic	Village of Middlefield	44062 Zip Code	Geauga County	State of Ohio
Total Number of Housing Units	1,198	4,143	36,552	5,124,221
Occupied units	94.70%	97.20%	94.70%	88.90%
Vacant Housing units	5.30%	2.80%	5.30%	11.10%
Owner-Occupied	53.4%	74.10%	86.60%	67.50%
Renter-Occupied	46.6%	25.90%	13.40%	32.50%
1-Unit, detached	51.2%	72.00%	85.50%	68.50%
1-Unit, attached	6.6%	7.50%	3.50%	4.60%
Duplex	10.6%	5.70%	1.90%	4.40%
Multi-Family	30.6%	14.90%	20.4%	18.50%
Mobile Home	1.0%	5.10%	3.60%	3.90%
Other	0.0%	0%	0.00%	0.00%
Median Housing Value	$ 151,600	$ 165,800	$224,700	$130,800

Source: Us Census, American Communities Survey, 2009-2013 5-year Estimates

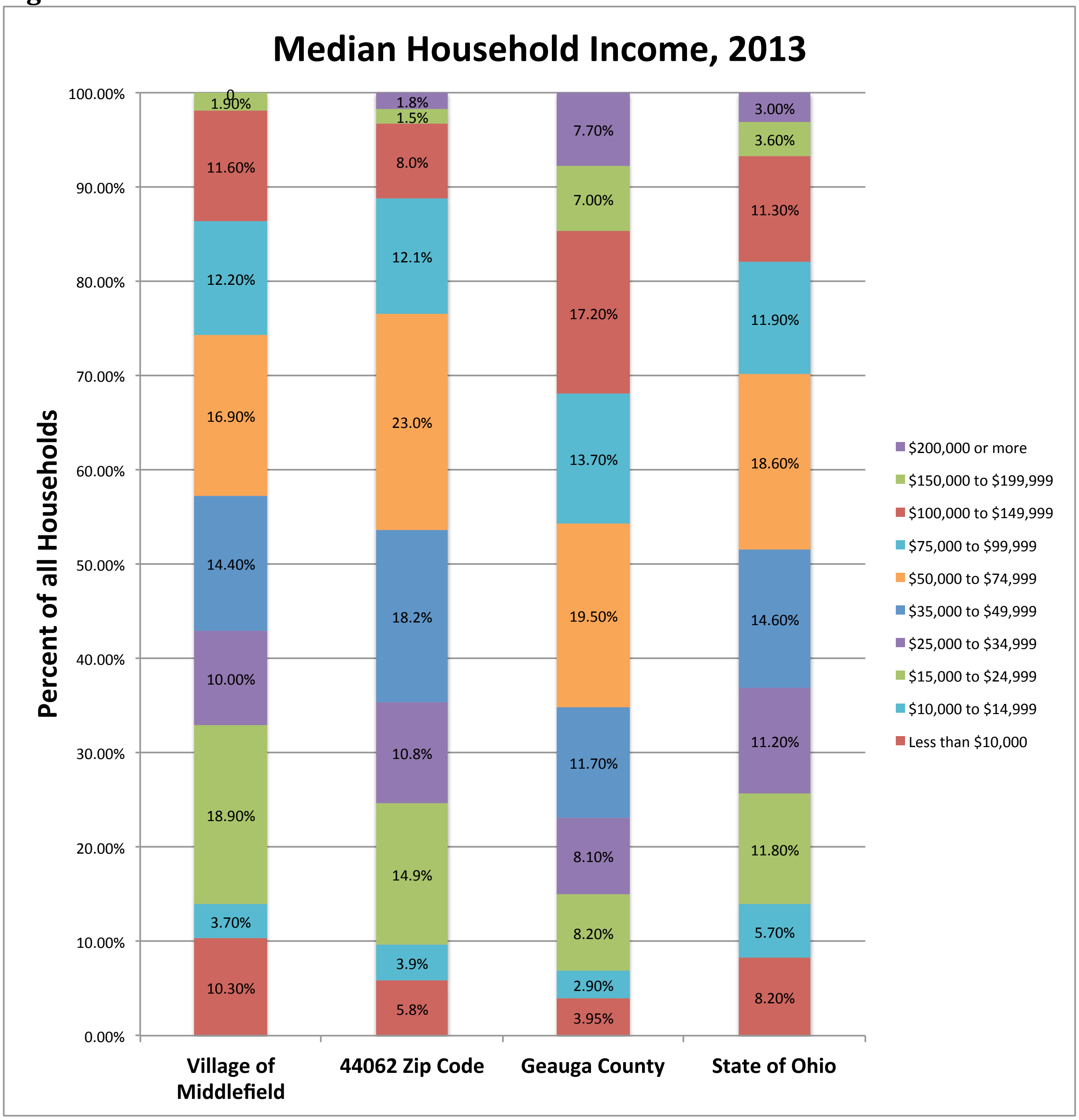
The Village and Township boast a housing vacancy rate that is half that of the state, at 5% vs. 11%, attesting to the stability of households in the area. The median housing value is higher than the state value, although lower than the county as a whole. The Village has a much larger proportion of multi-family and duplex homes than the state or the county, and a larger proportion of renters to homeowners, likely due to rental housing for the identified older population and single-person households. The surrounding area and the county as a whole, however, have a much higher proportion of single-family homes when compared to the state, again reflecting the strong family household base in the area.

2.3 Income and Poverty

Income and poverty levels are important to understanding the expenditures of households in the retail sector, and the overall quality of life and stability of the community. These numbers are generated by the US Census through a sampling, survey and estimation process. It is important to keep in mind, for the Middlefield area, the high likelihood that income is underreported, due to the presence of a barter and largely cash economy among the Amish. Income levels are also likely to be lower in areas that have a high proportion of people over 65, as does the Village.

Income in the Village and the zip code overall are closer to the pattern across the state, with a higher proportion of households in the lower and middle-income categories. The Village of Middlefield had no households over $200,000 income in 2012; the zip code had 1.5%, compared to 3% statewide. Households over $100,000 were represented by 13% of all households in the Village and 11% in the zip code, compared to the state proportion of 17%. Geauga County contrasted with the Middlefield area and the state, with 32% of households over $100,000 annual income. The proportion of income groups for both Middlefield and the zip code is about equally split between the middle-income group, from $35,000 to $100,000, and the lower-income group, below $35,000. Middle income households represented 43.5% in the Village, 53.3% in the zip code, and 45.1% for the state of Ohio. Geauga County was substantially lower, at 33.2% for middle income groups. Lower level income households, below $35,000, came in at 42.9% for the Village, 35.4% for the zip code, and 36.9% for the state. Geauga County's lower income group was 23.2%. The Village's lower income levels are likely explained by the much higher proportion of seniors and householders living alone.

Figure 2: Household Income



Source: US Census, American Communities Survey 2009-2013 5-year estimates
Note: Data for each geographic area is inclusive of the lower-level geographic areas to its left.

Table 4: Household Income

Characteristic	Village of Middlefield	44062 Zip Code	Geauga County	State of Ohio
Total households	1,135	4,027	34,621	4,557,655
Median household income	$ 41,632	$ 46,379	$ 67,663	$ 48,308
Mean Household Income	$ 52,774	$ 57,398	$ 92,481	$ 64,449
% families whose income in the past 12 months is below poverty level	6.6%	12.60%	4.70%	11.60%
% all people whose HH income is below poverty level	9.0%	19.30%	8.10%	15.80%

Source: US Census, American Communities Survey, 2009-2013 5-year estimates

The poverty level in the Village is lower than the state; however, poverty level reported in the 44062 zip code is higher than the state average, both for families and for individuals. Again, this is reflective of the high proportion of Amish.

2.4 Population Employment and Education

Information about employment and education levels of the resident population helps us to understand the capabilities of the workforce in the area. Educational attainment is distinctive in the Middlefield area for its high proportion of people with less than ninth grade education, and less than a high school education. 41% of the population over 25 years old in the zip code area has less than a high school education; another 32% holds a high school diploma. The implications for the attraction of business are that industries that provide hands-on, less information-driven, work are more likely to provide suitable employment for the resident workforce. Parallel to this finding, the proportion of occupations in the zip code area is weighted toward construction, production, transportation, and natural resources.

In contrast, the Village of Middlefield, and Geauga County as a whole, have a much more highly educated workforce. 19% of the Village's population 25 and over, and 36% of the County's population, have a bachelor's degree or higher. In parallel, occupations in the Village and County emphasize science, business, management, and the arts. This is evidence that a workforce could exist for professional and higher-tech industries, or for management and professional activities at industries who also employ skilled labor.

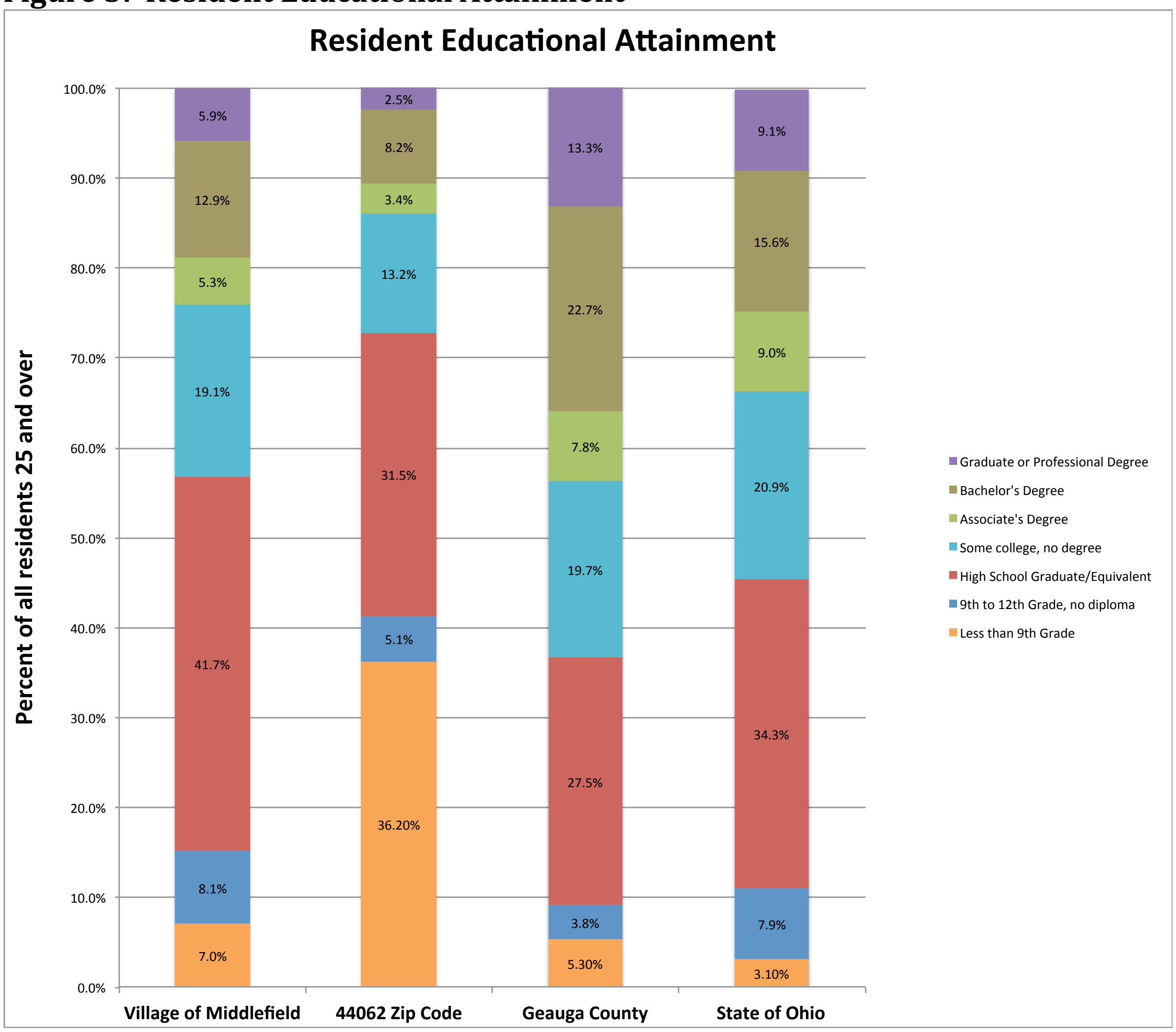
Resident employment by industry is weighted toward education, health care, and social assistance, manufacturing, and retail trade for the Village; manufacturing and construction play the strongest employment role for the zip code area. Again, this aligns with the educational attainment, and the characterization of the population that is dominated by Amish workers.

Table 5: Educational Attainment

Characteristic	Village of Middlefield	44062 Zip Code	Geauga County	State of Ohio
Total Population	2,703	15,293	93,610	11,549,590
Population aged 25 and over	1,913	7,644	63,182	7,746,520
Educational Attainment, Population Aged 25 and over				
Less than 9th Grade	7.0%	36.20%	5.30%	3.10%
9th to 12th Grade, no diploma	8.1%	5.1%	3.8%	7.9%
High School Graduate/Equivalent	41.7%	31.5%	27.5%	34.3%
Some college, no degree	19.1%	13.2%	19.7%	20.9%
Associate's Degree	5.3%	3.4%	7.8%	9.0%
Bachelor's Degree	12.9%	8.2%	22.7%	15.6%
Graduate or Professional Degree	5.9%	2.5%	13.3%	9.1%
Total high school or higher	84.9%	58.8%	91.0%	88.9%
Total bachelor's degree or higher	18.8%	10.7%	36.0%	24.7%

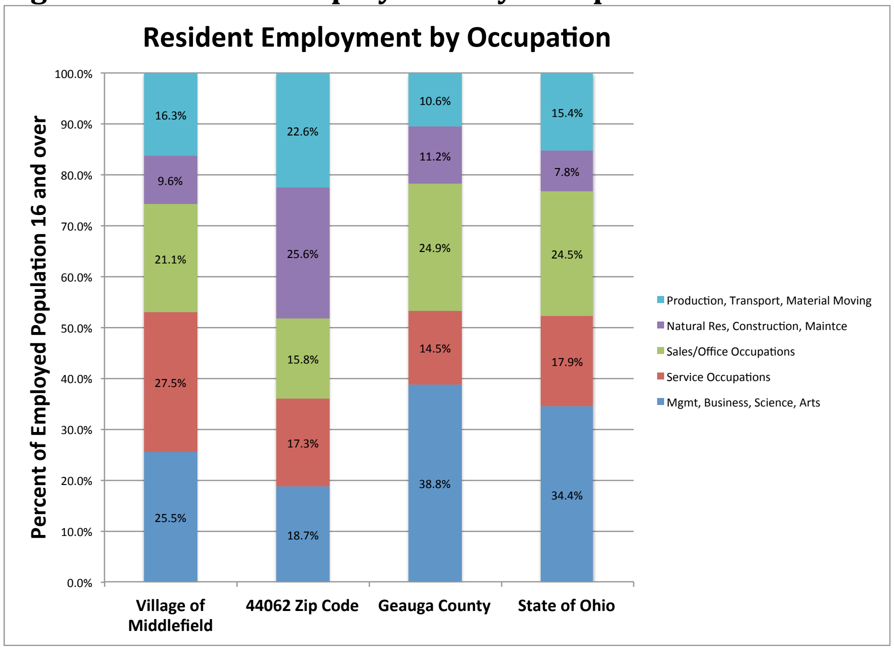
Source: US Census, American Communities Survey, 2009-2013 5-year estimates

Figure 3: Resident Educational Attainment



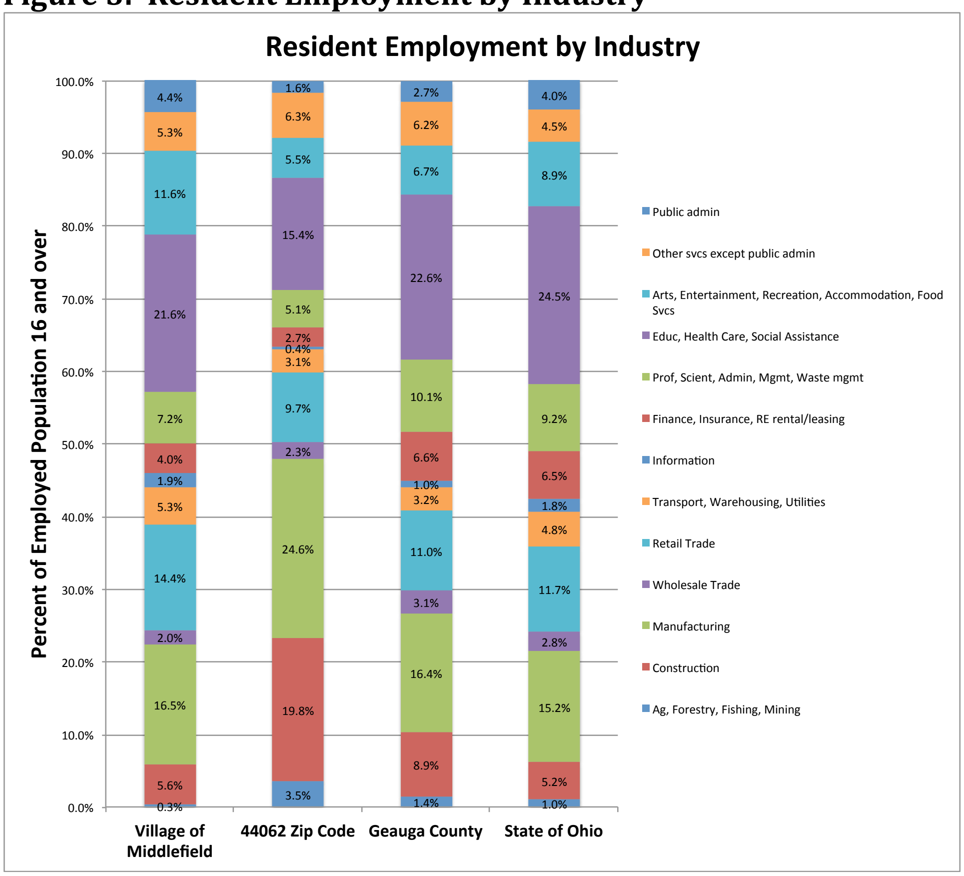
Source: US Census, American Communities Survey, 2009-2013 5-year estimates

Figure 4: Resident Employment by Occupation



Source: US Census, American Communities Survey, 2009-2013 5-year estimates

Figure 5: Resident Employment by Industry



Source: US Census, American Communities Survey, 2009-2013 5-year estimates

Means of travel to work is one further workforce parameter, because of the importance of workforce access to employment. Means of travel to work for the Village and for the County roughly parallels the proportion for the state as a whole. Aligning with the substantial population of Amish, the zip code area has a large proportion of workers (15%) who walked to work, or traveled there "by other means", which in this case is likely to be horse and buggy. A full 47% of people age 16 and over in the zip code area have "no access to a car". An additional 30% travel to work by carpool, which is form of transportation used by the Amish.

Table 6: Means of Travel to Work

Characteristic	Village of Middlefield	44062 Zip Code	Geauga County	State of Ohio
Means of Travel to Work				
Total Workers Age 16 and over	1,199	5,540	44,076	5,164,077
Car, truck or van - drove alone	85.8%	47.80%	81.80%	83.40%
Car, truck or van - carpooled	5.1%	30.30%	8.20%	8.10%
Public Transportation (excluding taxi)	0.0%	0.20%	4%	1.50%
Walked	3.8%	4.60%	1.60%	2.30%
Other means	1.3%	10.60%	1.60%	1.10%
Worked at Home	4.0%	6.60%	6.40%	3.50%
Population 16 and over w/no vehicle access	2.30%	47.30%	6.20%	2.90%

Source: US Census American Communities Survey, 2009-2013 5-year estimates

2.5 Population Change and Projections

Population projections are provided on a limited basis for counties in Ohio by the Ohio Development Services agency. This information can be useful in gaining a sense of the overall trends relative to the economy. In Middlefield and Geauga County's case, it is not clear if the projections take into account the very high growth rates of the Amish population. The Elizabethtown College Center for Anabaptist Studies estimates that the Amish population in many areas doubles every 20 years, which is roughly an increase of 3.5% per year. (Ohio Development Services Agency 2015) ("Amish Studies" 2015)

Overall growth trends in Middlefield show that the Village grew at a faster pace than the zip code area or the county between 2000 and 2010, the only data that was available, for an overall increase of 20% during that decade. The zip code population grew almost 7% in the same time frame. The County overall shows a steadily increasing population from 1970 to 2000, and a somewhat slowing rate of growth from 2000 to 2010. Projections for the county assume growth will continue to slow, and even generate a modest loss between 2030 and 2040.

The differences in population characteristics between Middlefield and the County, combined with the higher population growth rate of the Amish population, mean that county-level projections are likely not indicative of Middlefield's future. However, more data is becoming available in more detail over time, and the Village should be able to track population in both the Village and the surrounding area on an annual basis going forward, providing a basis for projecting trends to generate high, medium and low scenarios.

The implications are that the population, and the related workforce, could likely continue to grow modestly in the Middlefield area, and that the majority of that growth will come from the Amish community.

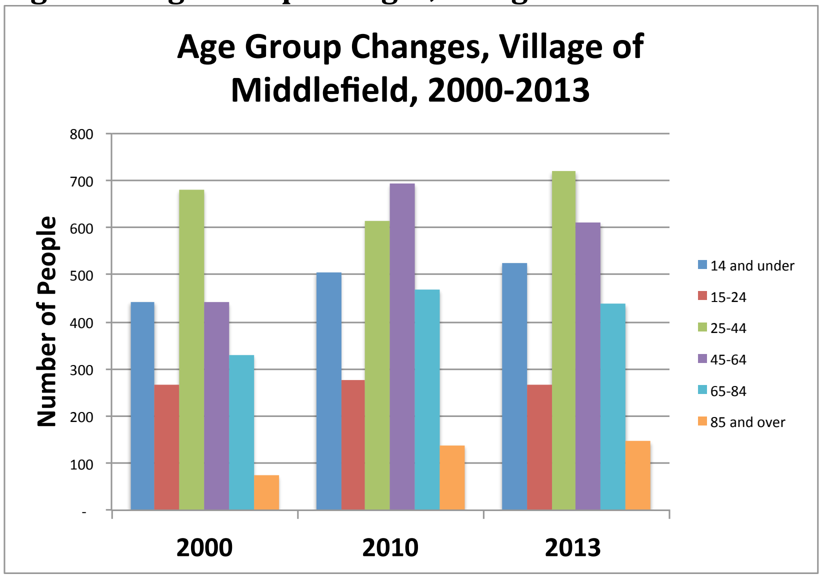
Table 7: Overall Population Growth Trends and Projections

Year	Village of Middlefield	44062 Zip Code	Geauga County
GROWTH			
1970	1,726		62,977
Absolute Percent Change (APC)	15.7%		18.3%
Average Annual Percent Change (AAPC)	1.5%		1.7%
1980	1,997		74,474
APC	-5.0%		8.9%
AAPC	-0.5%		0.9%
1990	1,898		81,129
APC	17.7%		12.0%
AAPC	1.6%		1.1%
2000	2,233	14,029	90,895
APC	20.6%	6.7%	2.7%
AAPC	1.9%	0.7%	0.3%
2010	2,694	14,972	93,389
APC			0.1%
AAPC			0.0%
PROJECTIONS			
2020			93,510
APC			1.5%
AAPC			0.2%
2030			94,930
APC			-0.2%
AAPC			0.0%
2040			94,710

Source: Population, through 2010: US Census, Decennial Census Projections: Population, after 2010: Ohio Development Services Agency; APC and AAPC calculations, CSU

One final area of consideration is changes in age groups over time. Trends in age group change can help the Village to anticipate potential changes in tax revenues and expenditures, housing needs, and the need for services. As shown below, age groups that are trending to increase include 14 and under, 25-44, and over 85. The growth in the 25-44 age group demonstrates a labor force base within the village that will likely be there over the coming decade. Growth in the under 14 age group could have implications for the schools; growth in the over 85 age group could have implications for the need for supportive housing and health care, although shrinkage in the age group below it, 45-64, could lead to fewer needs over time.

Figure 6: Age Group Changes, Village of Middlefield



Source: US Census, Decennial Census 2000 and 2010; American Communities Survey 5-year Estimates 2013

3.0 INDUSTRY

3.1 Analysis approach and estimation

This analysis of economic trends in the Middlefield area is based on employment and number of establishments, in total, and by sector and subsector, as measures of the status of the industries present. For many industries, employment is a good measure of the relative strength of different industries in relation to each other and to other benchmark geographies. The exceptions are agriculture and rail, which are not included in County and Zip Code Business Patterns data, and which we are not evaluating here. These are more commonly measured by quantity of goods produced or transported. However, for most of the industry activity in the Middlefield area, employment is a satisfactory measure. It also is the basic data point indicating potential tax revenues to the community, and potential consumer household income available to support retail establishments.

We focus on the Middlefield zip code, 44062, as the lowest level where employment data is available, and we compare to Geauga County and the State of Ohio as benchmark geographies. In the body of this report, highlight industries are summarized in comparison to the state. Full tables, with county comparisons and all industry estimates, are included in the Appendices.

A very important point in this analysis is the need for estimation of data. The US Census suppresses data where the number of firms is small, in order to protect the identities of individual businesses. For suppressed industry sectors and subsectors, total employment overall is given, and the number of establishments of different size ranges, but total employment for the sector or subsector is not given. For this analysis, data was suppressed very little at the state level, and modestly at the county level, depending on industry; at the zip code level, all employment by sector was suppressed.

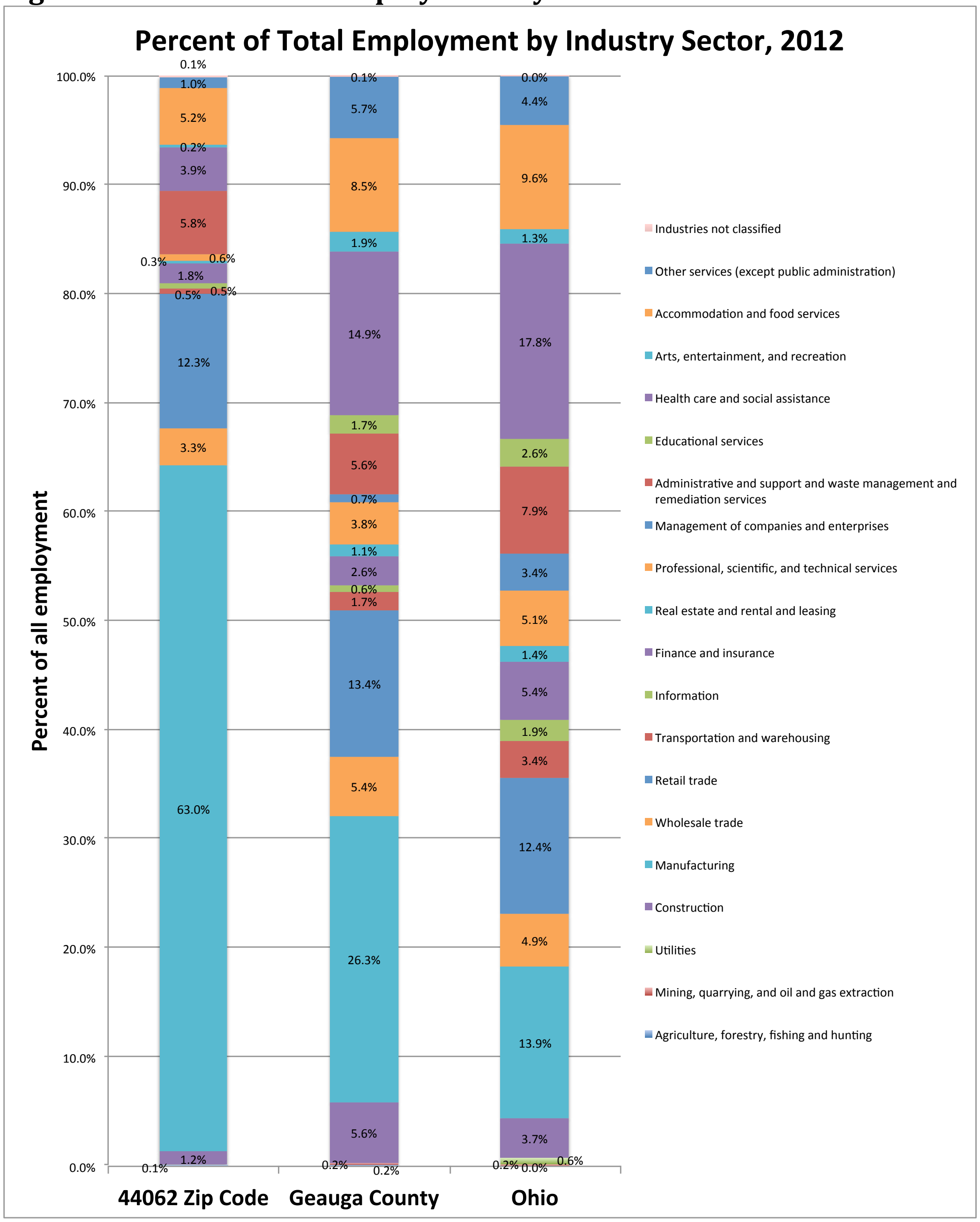
In order to provide some sense of trends that could be useful to the Village, suppressed data was estimated in this analysis. The estimation method used weighted averages of employment for each sector or subsector, based on the midpoint of firm size classes, to arrive at a total that matched the given total. Large businesses over 1000 employment used Reference USA estimates. In our analysis tables below, estimated data were clearly marked. While the estimated data was utilized to give the Village some useful information to consider about industry sectors in relation to each other, it is also likely that there is a wide margin of error between the estimations and actual employment in individual businesses.

Finally, we note that in the data available (US Census County and Zip Code Business Patterns), two industries, NAICS 61, Educational services, and NAICS 92, Public Administration, are not addressed at the zip code level; and 92, Public Administration, is not addressed at the county level. Since they are not included in the total figures given, we did not estimate them. Schools and colleges, included under Educational services, along with local training, arts and other education programs, can be sizeable employment providers when taken in total. Public administration, while projected to experience shrinkage in the coming years, can also be a contributing employer in a local economy, especially at the county level. This is one area where the Village might want to do further investigation.

3.2 Overall employment

Information from the US Census, County Business Patterns, illustrates the strong dominance of manufacturing in the Middlefield area economy. 64% of all employment is based in manufacturing in the 44062 zip code. This contrasts with 26% of the County's employment in the manufacturing sector. For the county, health care/social assistance come next at 14%; both the county and the zip code's retail employment is around 13 to 14%. In contrast, employment in manufacturing and retail in the state are at 14% and 12% respectively; health care and social assistance comes in somewhat larger at about 18%.

Figure 7: Percent Total Employment By Sector

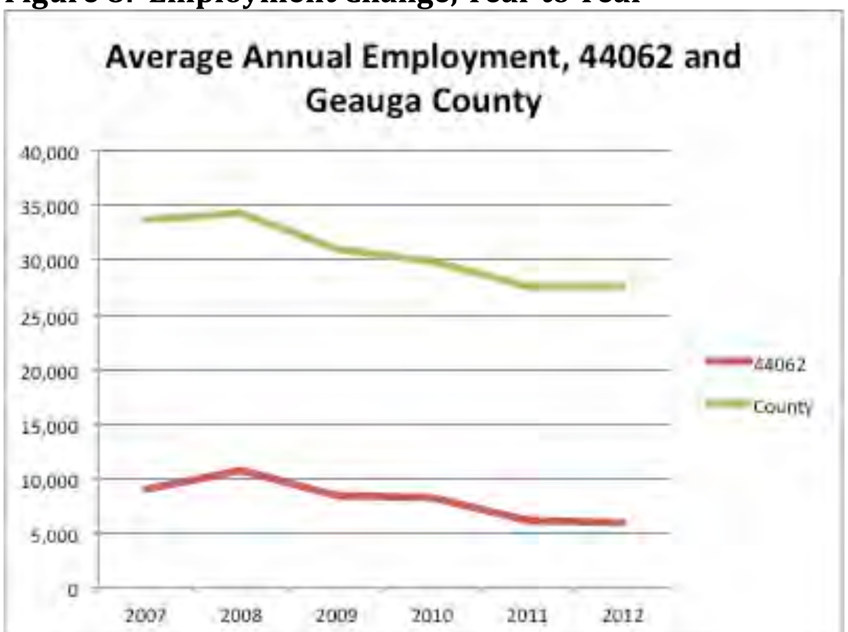


Source: US census, Zip Code and County Business Patterns; estimation by CSU CCPD – see Table 8

3.2 Employment change overall

Total employment shows a great deal of change year to year over the past eight years, which has not yet returned to pre-2008 levels. Annual employment shrinkage at the zip code level was as much as 25% in the 2008-2009 and 2011-2012 years, and up to 10% in the 2008-2009 year in the County. In the zip code area, overall employment has dropped 34% since 2007, compared to 18% for the County and 5% for the state. This is likely due to the majority of employment in the zip code being located with a limited number of firms that provided goods for the home construction industry, which overall has not yet seen a rebound to pre-economic recession levels.

Figure 8: Employment Change, Year to Year



Source: US Census, County Business Patterns; Zip Code Business Patterns

3.3 Employment and Change by Industry Subsector

In both the zip code and county levels, employment shrinkage was experienced from 2007 to 2012 almost across the board in all subsectors. Of interest, gains in the zip code area were experienced in chemical manufacturing, merchant wholesalers of nondurable goods, and miscellaneous and nonstore retailers. Nondurable goods include wholesalers of paper, books, food, plastic and chemical products, and food products. The miscellaneous and nonstore retail sector is probably represented by the growth of Amish home- and farm-based sales.

At the county level, growth was seen across a more diverse group of subsectors, including forestry/logging, food manufacturing, petroleum and coal products manufacturing, wholesalers of durable goods, transportation support, data processing, insurance, and some retail and arts-related subsectors. State growth areas included an even wider range of subsectors.

Table 8: Employment and Change by Industry Subsector

NAICS 3-DIGIT CODE	DESCRIPTION	44062 GROWTH RATE, 2007-2012	OHIO GROWTH RATE, 2007-2012
0	**Total for all sectors**	**-34%**	**-5%**
23	**Construction**	**-53%**	**-22%**
238	Specialty trade contractors	-48%	-18%
31-33	**Manufacturing**	**-36%**	**-17%**
311	Food manufacturing	27%	2%
321	Wood product manufacturing	-53%	-36%
325	Chemical manufacturing	64%	-5%
326	Plastics and rubber products manufacturing	-53%	-21%
332	Fabricated metal product manufacturing	-72%	-18%
333	Machinery manufacturing	-21%	-10%
334	Computer and electronic product manufacturing	-38%	9%
337	Furniture and related product manufacturing	-27%	-38%
42	**Wholesale trade**	**-27%**	**-5%**
423	Merchant wholesalers, durable goods	20%	-3%
424	Merchant wholesalers, nondurable goods	530%	-10%
425	Wholesale electronic markets and agents and broke	-99%	15%
44-45	**Retail trade**	**-27%**	**-5%**
441	Motor vehicle and parts dealers	-11%	-5%
445	Food and beverage stores	-25%	-2%
446	Health and personal care stores	-41%	16%
447	Gasoline stations	-73%	-7%
452	General merchandise stores	-29%	-5%
454	Nonstore retailers	56%	6%
48-49	**Transportation and warehousing**	**-69%**	**-12%**
484	Truck transportation	-70%	-13%
493	Warehousing and storage	-27%	-8%
51	**Information**	**-35%**	**-12%**
517	Telecommunications	4859%	-12%
518	Data processing, hosting, and related services	3824%	-6%
52	**Finance and insurance**	**-84%**	**-9%**
522	Credit intermediation and related activities	-100%	-6%
54	**Professional, scientific, and technical services**	**-45%**	**-5%**
56	**Administrative and support and waste managemen**	**-12%**	**5%**
561	Administrative and support services	-9%	5%
62	**Health care and social assistance**	**-26%**	**7%**
621	Ambulatory health care services	-2%	11%
623	Nursing and residential care facilities	-27%	2%
72	**Accommodation and food services**	**-31%**	**0%**
722	Food services and drinking places	-31%	0%
81	**Other services (except public administration)**	**-46%**	**-10%**
812	Personal and laundry services	-48%	-7%

Source: US Census, County Business Patterns; Zip Code Business Patterns; with estimation by CSU

3.4 Establishment trends

The likely twenty largest employers were reviewed based on Reference USA estimates, the best available data. As mentioned above, this data includes duplications and businesses which might no longer exist, and employment estimates are based on an algorithm and statistical techniques, supplemented by individual calls. Its use is limited, and the margin of error is wide, but it can give an overall impression of the role that certain businesses and locations play in the local economy.

Analysis shows that businesses located in the Village of Middlefield play a strong role in overall employment in the zip code area and in Geauga County.

Establishments have increased in number, while reducing in average size, in both the zip code area and the County, since 2000. From 2000 to 2012, the number of establishments in the zip code area increased 7%, while the average size reduced from 28 to 21 employees per firm. Given the local concentration of employment in a handful of firms, the firm size information is a little deceiving. When the two largest employers are removed, overall average size per establishment is closer to 11 employees per firm in 2012, down from 14 in 2000. The trend for the number of establishments to increase, while their average size is decreasing, aligns with the growth of retail, and the growth of smaller, sole proprietor, home- and farm-based businesses in the area.

Table 9: Number of Establishments, 2000-2013

	44062 Zip Code			
Year	No. Establishments	No. Employees	Annual Percent Change, No. Estab	Cumulative Change, No. Estab
2000	261	7,406		
2001	262	7,143	-3.6%	0.4%
2002	268	7,420	3.9%	2.7%
2003	273	7,837	5.6%	4.6%
2004	266	7,480	-4.6%	1.9%
2005	274	8,506	13.7%	5.0%
2006	291	9,131	7.3%	11.5%
2007	290	8,959	-1.9%	11.1%
2008	264	10,765	20.2%	1.1%
2009	261	8,415	-21.8%	0.0%
2010	263	8,214	-2.4%	0.8%
2011	266	6,099	-25.7%	1.9%
2012	280	5,902	-3.2%	7.3%
2013	---	---		

Source: US Census, County and Zip Code Business Patterns

Table 10: Establishment Size Trends, 2000-2013

Year	44062 Zip Code No. Establishments	No. Employees	Avge No. Employees/ Firm	Annual Percent Change, Avge Estab Size	Cumulative Change, Estab Size
2000	261	7,406	28.4		
2001	262	7,143	27.3	-3.9%	-3.9%
2002	268	7,420	27.7	1.6%	-2.4%
2003	273	7,837	28.7	3.7%	1.2%
2004	266	7,480	28.1	-2.0%	-0.9%
2005	274	8,506	31.0	10.4%	9.4%
2006	291	9,131	31.4	1.1%	10.6%
2007	290	8,959	30.9	-1.5%	8.9%
2008	264	10,765	40.8	32.0%	43.7%
2009	261	8,415	32.2	-20.9%	13.6%
2010	263	8,214	31.2	-3.1%	10.1%
2011	266	6,099	22.9	-26.6%	-19.2%
2012	280	5,902	21.1	-8.1%	-25.7%
2013	---	---	---	---	---

Source: US Census, County and Zip Code Business Patterns

Nonemployer Establishments

Nonemployers are establishments which do not have paid employees, but which have income on which they pay taxes. They are reported by the US Census Bureau at the County level. Nonemployer establishments are typically sole proprietorships which may or may not be the sole source of income for their owners. Given the likely role that the Middlefield area plays in the number of small independent businesses in the county, it makes sense to include this information here. According to the US Census, "the majority of business establishments in the United States are nonemployers". Nonemployers also form the base from which employing small businesses will grow.

Geauga County's nonemployer businesses have been growing since 2007. There were over 10,000 of these businesses in the County in 2012. Sectors which have been showing growth over 10% include agriculture, mining, manufacturing, information, real estate, educational services, health care and social assistance, and other services. The sector which has been showing shrinkage over 10% is accommodation and food service.

Table 11: Nonemployer Statistics, Geauga County

NAICS	NAICS Description	2007 Establishments	2012 Establishments	% Change, 2007-2012
00	Total for all sectors	9,907	10,436	5.3%
'11'	Agriculture, forestry, fishing and hunting	284	337	18.7%
'21'	Mining, quarrying, and oil and gas extraction	44	51	15.9%
'22'	Utilities	8	8	0.0%
'23'	Construction	2,205	2,259	2.4%
'31-33'	Manufacturing	299	352	17.7%
'42'	Wholesale trade	220	212	-3.6%
'44-45'	Retail trade	834	789	-5.4%
'48-49'	Transportation and warehousing	322	305	-5.3%
'51'	Information	89	105	18.0%
'52'	Finance and insurance	317	289	-8.8%
'53'	Real estate and rental and leasing	913	1,016	11.3%
'54'	Professional, scientific, and technical services	1,476	1,543	4.5%
'56'	Administrative and support and waste management	855	942	10.2%
'61'	Educational services	276	330	19.6%
'62'	Health care and social assistance	420	488	16.2%
'71'	Arts, entertainment, and recreation	379	389	2.6%
'72'	Accommodation and food services	94	84	-10.6%
'81'	Other services (except public administration)	872	937	7.5%

Source: U.S. Census Bureau

= estimated figures

3.5 Wage trends

Average wage trends in the zip code area show an overall loss of 8% since 2000, which do demonstrate some improvement from cumulative losses that were up to 15% in 2008. Sizeable shrinkage in the average annual wage occurred in 2007-2008, with modest growth since then. The reduction in average wage is likely due to the overall shrinkage of the economy during the recession, and the associated loss of well-paying manufacturing jobs. Another probable factor is the overall increase in number of service sector jobs and home-based jobs, which traditionally do not pay as well. If manufacturing is encouraged and is able to expand, it can be expected that average wages will increase. In addition, encouragement of higher-paying jobs in administration, professional and technical sectors will help as well.

Wage trends were adjusted to 2012 or 2013 dollars, using latest data available, per the US Department of Commerce Consumer Price Index for the Northeast Ohio region. (“Consumer Price Index (CPI)” 2015)

Table 12: Average Wage Trends, 2000-2013

	44062 Zip Code				
Year	No. Employees	Avge Annual Wage	Adjusted Wages, 2012 dollars	Annual Percent Change	Cumulative Change
2000	7,406	$ 29,105	$ 38,805		
2001	7,143	$ 28,259	$ 36,635	-5.6%	-5.6%
2002	7,420	$ 32,386	$ 41,331	12.8%	6.5%
2003	7,837	$ 32,426	$ 40,461	-2.1%	4.3%
2004	7,480	$ 34,026	$ 41,356	2.2%	6.6%
2005	8,506	$ 35,701	$ 41,970	1.5%	8.2%
2006	9,131	$ 35,682	$ 40,636	-3.2%	4.7%
2007	8,959	$ 36,328	$ 40,227	-1.0%	3.7%
2008	10,765	$ 30,976	$ 33,033	-17.9%	-14.9%
2009	8,415	$ 32,002	$ 34,265	3.7%	-11.7%
2010	8,214	$ 32,634	$ 34,361	0.3%	-11.5%
2011	6,099	$ 35,144	$ 35,872	4.4%	-7.6%
2012	5,902	$ 35,544	$ 35,544	-0.9%	-8.4%
2013	---	---	---	---	---

Source: US Census, Zip Code and County Business Patterns; inflation adjustment by CSU per the US Department of Commerce Consumer Price Index for the NE Ohio region.
Note: See Appendices for full tables, and county comparisons

Wage information by industry sector was only available at the County level. A net increase from 2000 to 2013 of 3% overall, in 2013 dollars, was the result of increases in many sectors, most notably mining, construction, real estate, management, and administration. Manufacturing also demonstrated a net increase in average annual wages of 7%. Sectors showing wage shrinkage included arts and entertainment, retail trade, accommodation and food service, and agriculture/fishing/forestry/hunting.

TABLE 13: Wage change by industry sector, Geauga County, 2000-2013

NAICS Code	Sector Description	2013 Paid Employees	2013 Avge Annual Wage	2000 Paid Employees	2000 Avge Annual Wage	2000 Adjusted for Inflation to 2013	Percent Change, 2000-2013, Adjusted for Inflation
	TOTAL	**27,828**	**$ 41,090**	**29,171**	**$ 29,594**	**$ 40,035**	**3%**
11----	Agriculture, Forestry, Fishing and Hunting	34	$ 23,441	35	$ 19,771	$ 26,747	-12%
21----	Mining, Quarrying, and Oil and Gas Extraction	38	$ 100,789	121	$ 42,331	$ 57,266	76%
22----	Utilities	6	$ 102,667	N/A	----	----	----
23----	Construction	1,558	$ 55,013	2,241	$ 34,784	$ 47,056	17%
31----	Manufacturing	7,476	$ 50,707	10,938	$ 35,171	$ 47,581	7%
42----	Wholesale Trade	1,544	$ 58,916	1,172	$ 44,830	$ 60,648	-3%
44----	Retail Trade	3,689	$ 24,814	3,385	$ 20,058	$ 27,135	-9%
48----	Transportation and Warehousing	554	$ 49,144	684	$ 30,152	$ 40,791	20%
51----	Information	132	$ 45,682	126	$ 31,714	$ 42,904	6%
52----	Finance and Insurance	728	$ 50,386	553	$ 36,600	$ 49,514	2%
53----	Real Estate and Rental and Leasing	199	$ 32,482	268	$ 20,534	$ 27,778	17%
54----	Professional, Scientific, and Technical Services	1,091	$ 54,940	942	$ 39,572	$ 53,534	3%
55----	Management of Companies and Enterprises	204	$ 132,029	177	$ 56,774	$ 76,805	72%
56----	Administrative and Support and Waste Manageme	1,635	$ 38,649	1,389	$ 24,957	$ 33,762	14%
61----	Educational Services	407	$ 29,170	399	$ 21,857	$ 29,569	-1%
62----	Health Care and Social Assistance	4,172	$ 40,289	2,786	$ 26,880	$ 36,365	11%
71----	Arts, Entertainment, and Recreation	476	$ 21,555	500	$ 20,402	$ 27,600	-22%
72----	Accommodation and Food Services	2,336	$ 12,968	2,125	$ 10,144	$ 13,723	-5%
81----	Other Services (except Public Administration)	1,546	$ 28,190	1,263	$ 20,329	$ 27,501	3%
95---	Auxiliaries (Mgmt)	N/A	---	4	$ 17,000	$ 22,998	-----
99----	Industries not classified	3	$ 117,333	63	$ 14,317	$ 19,369	506%

Source: US Census, County Business Patterns; estimation by CSU

Notes:

(shaded) =estimated figures

N/A = sectors not included in that year's data

3.6 Location Quotient Analysis

A Location Quotient statistic provides an evaluation of the strength of industry sectors at a particular point in time, in relation to a larger benchmark region. Higher location quotient ratings show that the sector has a larger proportion than its share of that industry employment in the larger benchmark area. Lower ratings indicate that the industry has a lower proportion than its share.

Location Quotients (LQ) are evaluated based on 2012 data for the zip code area, in relation to both the state and Geauga County. LQs under .8, and over 1.2, are considered "significant" by the CSU Levin College Center for Economic Development. LQs between .8 and 1.2 are considered to be average, or in equilibrium with the larger benchmark region.

Areas of strength, weakness, and equilibrium overall are outlined below.

Areas of strength: (LQ over 1.2, in relation to the state and/or county)

- Ag/forestry/logging: Forestry and logging overall, and support activities for agriculture/forestry, in relation to the state.
- Manufacturing: textile mills, wood products, plastics and rubber products, furniture and related products, miscellaneous manufacturing. In particular, furniture, wood products, miscellaneous, and plastics/rubber products, were very strong in relation to the state economy. Chemical manufacturing was also significant in relation to the state economy.

- Industries not classified: in particular, in relation to the state economy.
- Retail: Building materials equipment and supply retail stores, general merchandise stores. Miscellaneous retail and nonstore retailers in relation to the State.
- Other: Merchant wholesalers, Warehousing and storage, Publishing and motion pictures, Telecommunications, and Data processing, in particular in relation to the County economy.

Areas of equilibrium: (LQ from .8 to 1.2, in relation to the state and/or county)
- Manufacturing: Food manufacturing, machinery, computer/electronic, textile, in relation to both the state and county.
- Retail: furniture, electronics/appliance stores, miscellaneous and nonstore retailers, in relation to the county.
- Administrative support: in relation to the county.

Areas of weakness: (LQ under .8 in relation to the state and/or county:
- Construction
- Manufacturing: fabricated metal, machinery, electrical equipment, transportation equipment.
- Wholesale Trade: durable goods.
- Retail trade: clothing, gasoline, food/beverages, motor vehicle parts
- Transportation/Warehousing
- Information (except telecommunications)
- Finance/Insurance
- Real Estate rental and leasing
- Professional, scientific and technical services
- Arts/Entertainment
- Health care and social services
- Other services

Areas of strength and equilibrium in relation to the county may be a result of Middlefield's disproportionate role in employment in the county. While Chardon is a dominant player in the overall County market, especially for retail establishments, it is clear that Middlefield plays a strong role in certain industries, such as manufacturing and retail building materials. The Village is drawing employees and customers from the larger county area.

The identification of construction as a weakness is a question worth understanding, given the large proportion of Amish who are engaged in construction in the area. This is likely reflective of the overall economic downturn and its effect on the homebuilding and construction industry.

Table 14: Location Quotient, 2012

NAICS 3-DIGIT CODE	DESCRIPTION	2012 Location Quotient Zip to State
0	**Total for all sectors**	
23	**Construction**	**0.33**
238	Specialty trade contractors	0.40
31-33	**Manufacturing**	**4.54**
311	Food manufacturing	1.04
321	Wood product manufacturing	9.10
325	Chemical manufacturing	1.25
326	Plastics and rubber products manufacturing	10.73
332	Fabricated metal product manufacturing	0.13
333	Machinery manufacturing	1.17
334	Computer and electronic product manufacturing	0.97
337	Furniture and related product manufacturing	143.68
339	Miscellaneous manufacturing	2.96
42	**Wholesale trade**	**0.68**
423	Merchant wholesalers, durable goods	0.33
424	Merchant wholesalers, nondurable goods	1.41
425	Wholesale electronic markets and agents and brokers	0.09
44-45	**Retail trade**	**1.00**
441	Motor vehicle and parts dealers	0.51
444	Building material and garden equipment and supplies	1.49
445	Food and beverage stores	0.86
446	Health and personal care stores	0.63
447	Gasoline stations	0.39
452	General merchandise stores	2.16
454	Nonstore retailers	1.51
48-49	**Transportation and warehousing**	**0.14**
484	Truck transportation	0.35
493	Warehousing and storage	0.04
517	Telecommunications	2.68
518	Data processing, hosting, and related services	6.33
52	**Finance and insurance**	**0.07**
54	**Professional, scientific, and technical services**	**0.12**
56	**Administrative and support and waste management**	**0.73**
561	Administrative and support services	0.75
62	**Health care and social assistance**	**0.22**
621	Ambulatory health care services	0.25
623	Nursing and residential care facilities	0.64
72	**Accommodation and food services**	**0.54**
722	Food services and drinking places	0.58
81	**Other services (except public administration)**	**0.23**
812	Personal and laundry services	0.48

Source: US Census, County Business Patterns; Zip Code Business Patterns; estimation by CSU
Note: See Appendices for full tables, and county comparisons

= estimated figures

3.7 Shift-Share Analysis

Shift-share analysis was done in relation to Geauga County and the state of Ohio, for the period from 2007-2012.

Shift-share analysis evaluates the growth of industry sectors in relation to overall economic trends, as well as trends within a specific industry overall and regionally. The technique allows us to understand the factors that influence growth or loss of employment over time in a particular industry in a particular region, in relation to growth in a larger benchmark region. In this study, we evaluated industry change in the Middlefield zip code (44062), in separate analyses in relation to the county and the state. This will allow us to understand the localized influence of change in the county, as well as the area in relation to the larger economy, represented by the state of Ohio as a benchmark region.

The first element addressed in the analysis isolates the *"benchmark share"*, in this case, the "county share" or the "state share". This shows the amount of the total job gains or losses in the zip code that can be attributed to the overall gains or losses in the county or state economy as a whole. Analysis shows that the losses in the zip code of 3057 jobs during the study period are roughly equally attributable to county and local factors; but in relation to the state economy, are much more attributable to local shrinkage than to overall state economic shrinkage. If the zip code area had followed the state economic trend closely, only about 438 jobs would have been lost. However, due to the local economy lagging the state economy even further, an additional local job loss of 2619 is accounted for.

The second part of the shift-share analysis looks at *"industry mix"*. This measure indicates the proportion of job changes in each industry sector that can be attributed to the overall change (growth or shrinkage) in this industry, indicated by change in the larger benchmark region (the county or the state). For example, in the "zip code vs. state" shift-share analysis, 718 of the 2137 local job losses in the manufacturing sector can be attributed to shrinkage of the manufacturing sector statewide, over and above 286 attributed to overall shrinkage of the Ohio economy.

The third *"region (zip code) growth share"* shift-share element shows changes that are attributed to shrinkage or growth of the economy in the local zip code area. This tells us that the largest proportion of job shrinkage in the Middlefield zip code was due to local economic conditions.

The shift-share analysis results vary quite a bit between the county and state benchmarks. This is possibly due to the large proportion of county employment, especially in some sectors such as manufacturing, that is based in Middlefield, and the fact that conditions in a handful of large employers, the largest of which is based in Middlefield, drive the economic conditions in the county. It makes sense that Middlefield would much more closely follow conditions in the County; and that the County would show a greater shrinkage compared to the state, given the shrinkage at the County's two or three large employers.

Overall Observations:

- The 34% loss of employment in the zip code area likely reflects the economic downturn's strong impact on the few large businesses in the area. There is also a likely multiplier effect as those businesses reduced employment, and families experiencing unemployment spent less.
- When the county is used as the benchmark, the employment losses in Middlefield are about equally attributable to local and county economic impacts. However, when the state is used as a benchmark, the local economic impacts have a much larger share of the losses than the state, by a factor of almost five. This again reflects the role of a few large businesses dominating the gains and losses in the area.

Areas of growth overall (percent growth)**:**

- Food manufacturing
- Chemical manufacturing
- Merchant wholesalers, durable and nondurable goods
- Nonstore retailers
- Telecommunications
- Data processing and hosting and related services
- Arts/entertainment/recreation: amusement industries
- Industries not classified

Areas of the largest percent losses (over 50%)**:**

- Mining, quarrying, natural gas
- Nonmetallic mineral product manufacturing
- Credit intermediation
- Management of companies and enterprises
- Educational services

Areas of the largest amount of employment shrinkage:

- Manufacturing
- Wholesale trade
- Retail trade
- Accommodation and Food services
- Finance and Insurance

Sectors whose losses were largely due to the overall county downturn: (over 1/3 of total change attributable to county change)

- Construction
- Plastics manufacturing
- Machinery manufacturing
- Computer and electronic product manufacturing
- Furniture manufacturing
- Motor vehicle and parts dealers
- Building materials

- Food and beverage stores
- Health care and social assistance
- Accommodation and food services

There were no industries with such sizeable losses attributed to state trends, when compared to the state as benchmark. State growth share hovered around 10-20% for most industries. This reflects a downturn that was more localized for many of the subject industries in the Northeast Ohio/Geauga county area. It also may reflect the large proportion of Geauga industries that are located in Middlefield – hence we are comparing the region to itself.

Sectors showing strength in industry mix: (growth of an industry in Middlefield in relation to the same industry's growth in the county or state as a whole) include:

- Food manufacturing
- Chemical manufacturing
- Fabricated metal product manufacturing
- Wholesale durable goods
- Retail trade in general
- Finance and Insurance
- Professional services

All of these, however, showed large enough losses as a result of the strong local effect of the recession to more than offset industry mix gains. This is particularly evident when the state is used as a benchmark, with the local economy not as strong in relation to the state as it is in relation to the county.

Sectors showing strong negative influence of the local recession:
The local recession had its greatest impact on manufacturing, as shown in the "regional (zip) growth share" part of the Shift-Share table. Other areas of strong recessional local influence included plastics manufacturing, and retail trade.

3.8 Employment Projections

The Ohio Bureau of Labor Market Information predicts that overall in Ohio from 2012 through 2022, employment in goods-producing industries will increase by 2.1% overall, with a -3.2% shrinkage in manufacturing offset by increases in construction (23%) and mining (4%). Service-Producing Industries will experience an overall 8.3% expansion in employment, led by health care/social assistance (22%), professional/technical services (19%), administrative and waste services (19%), and private educational services (16%). Accommodation and food services are predicted to increase by 9%, and other services except public administration, by 8%. Government is predicted to increase by 3% in the 10-year period. ("Ohio Labor Market Projections" 2015)

The JobsOhio Network provides projections for the Northeast Ohio region from 2010 to 2020. Their tables are included in the Appendices in full, as they present several good ideas for the Middlefield area. In this section, selected industries are noted in Table 19. ("Ohio Labor Market Projections" 2015)

Overall, goods-producing industries are expected to grow 3.3%, including a 23% growth in construction jobs and a 60% growth in mining jobs, offsetting shrinkages in manufacturing (-.6%), and natural resources/agriculture (-.2%). Of interest, several manufacturing subsectors are expected to grow, including food manufacturing (1.7%), fabricated metal product manufacturing (8.8%), and furniture and related products (5.6%). Service-providing industries are projected to grow by 11.3% in the Northeast Ohio market overall, led by professional and business services (18.4%), education and health services (18.4%), leisure and hospitality (9.3%), and other services (7.1%). Self-employed and unpaid family workers are expected to reduce (-2.7%).

The areas of expansion identified include areas that have potential for Middlefield employment – food, metal fabrication, and furniture manufacturing, education/health services, leisure and hospitality, and other services such as repair.

While a rationale is not given, the shrinkage in nonemployers could be because an expansion of the economy will allow many of them to hire employees and leave the nonemployment category, or to find employment with other establishments.

Table 15: JobsOhio Employment Projections 2010-2020, Cleveland Region, Selected Industries

NAICS CODE	Description	2010 Annual	2020 Projected	Change in Employment 2010-2020	Percent
	TOTAL	**2,003,100**	**2,189,200**	**186,100**	**9.3%**
	Construction	**62,300**	**76,600**	**14,300**	**23.0%**
236	Construction of buildings	13,700	17,000	3,300	24.1%
237	Heavy & civil engineering construction	7,200	8,600	1,400	19.4%
238	Specialty trade contractors	41,400	51,100	9,700	23.4%
	Manufacturing	**249,600**	**248,000**	**-1,600**	**-0.6%**
311	Food manufacturing	17,500	17,800	300	1.7%
332	Fabricated metal product manufacturing	51,100	55,600	4,500	8.8%
337	Furniture and related product mfg.	5,400	5,700	300	5.6%
	Trade and Transportation and Utilities	**345,300**	**371,600**	**26,300**	**7.6%**
	Wholesale Trade	81,500	87,300	5,800	7.1%
	Retail Trade	207,100	220,800	13,700	6.6%
	Transportation and Warehousing	50,600	58,400	7,800	15.4%
	Information	**25,800**	**25,300**	**-500**	**-1.9%**
	Financial Activities	**93,900**	**100,500**	**6,600**	**7.0%**
	Professional and Business Services	**219,500**	**259,800**	**40,300**	**18.4%**
	Education and Health Services	**460,700**	**545,600**	**84,900**	**18.4%**
	Leisure and Hospitality	**176,800**	**193,200**	**16,400**	**9.3%**
	Arts, Entertainment, and Recreation	25,200	29,500	4,300	17.1%
	Accommodation and Food Services	151,600	163,700	12,100	8.0%
	Other Services	**84,900**	**90,900**	**6,000**	**7.1%**
	Government	**133,600**	**130,800**	**-2,800**	**-2.1%**
	Local Government	93,500	95,700	2,200	2.4%
	Self Employed & Unpaid Family Workers	114,300	111,200	-3,100	-2.7%

Source: Ohio Department of Job and Family Services, Bureau of Labor Market Information.

Note: See Appendices for full tables at NAICS-3 level.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Overall Conclusions and Recommendations

The data presented above, and the findings presented in each section, indicate several broad themes for the Village's consideration.

Unique and growing workforce. The Middlefield area's available workforce is growing, and has unique characteristics. Higher-than-average population growth rates in the Amish community, which is centered in Middlefield, are reflected in the high percentage of children under 18, who will be the workforce of the coming years. The proportion of Amish in the area's population will likely continue to increase. The Amish population brings with it several unique characteristics: reliable, family-oriented adults; very strong work ethic; high motivation to work in the immediate area, due to family focus and limited and/or expensive transportation options; ability to work starting at age 14; and typical eighth grade education. There is room for expanding employment in industries that do not require a high level of education, but can benefit from highly skilled, reliable labor.

Dominance of a few businesses. The Middlefield area's economy is dominated by a handful of businesses; as noted above, 60% of the zip code's employment is located in the top two employers, and 70% in the top 5 employers. This presents the need for a dual focus for the Village: 1) encourage and support existing businesses, especially those in the top 5, to strengthen their employment potential; and 2) work to diversify the economic base over the long term, which can come from encouraging new businesses, but also by strengthening existing businesses below the top 5. In particular, attention to the top 20 will focus the Village's attention on those which are poised to grow.

Dominance of manufacturing. The manufacturing sector is the clear leader in the Middlefield area, representing 63% of employment in the 44062 zip code in 2012. While manufacturing in the area has shrunk since the recession, and is predicted to shrink overall at the state level, outlooks for the region indicate that several manufacturing sectors may be poised for growth, including food manufacturing, metal fabrication, and furniture, all of which are traditional strengths for the Middlefield area. Chemical manufacturing, while not predicted for growth in the state, has shown growth in the area, and may also have potential. Additional opportunities are summarized in this report.

Potential retail growth. The retail sector represents 12% of the area's economy, which is typical for the state. Retail capacity is closely tied to the population size of a geography, as the needs of households for both basic goods and specialty goods are typically met nearby. This is particularly true of the Amish population, which is less likely to shop by internet or go far for basic weekly supplies. In addition, older citizens, whether they are in the Village or living nearby, are more likely to shop near their place of residence. As the Amish population, and the older population, are growing, it is possible that retail expansion could be supported as well. A related CSU report providing a Retail Market Study, completed in 2014, gives more detail on ways that growth can be supported.

Accommodation and food services growth. Accommodation and food services is the third largest sector of the local economy, at 5% of the employment. Expansion of the local tourist economy, both via the Amish community and nearby recreation opportunities, could continue to provide for growth in this sector. Trail connections, overnight lodging, downtown urban design, and recruitment of tourist-attracting businesses will all contribute to the Village's expanding participation in the tourist-based economy.

Potential for professional/technical business. While the population of the 44062 zip code area is distinct in its common below-ninth-grade education level, the population of the Village, and larger Geauga County area as a whole, is highly educated. This population brings the opportunity to attract diverse businesses with a need for educated workers. It might be interesting for the Village to do more detailed analysis of the occupations and job locations of Geauga County workers as a whole. Many who currently travel to employment centers for work might be encouraged to find employment closer to home. Research into businesses that would suit a small town, exurban location would also be warranted.

Role of non-employment businesses. Geauga County's 10,000 non-employers in 2012 represent another 37% of workers beyond its 27,000 jobs in employment establishments, assuming that each one engages one individual. A proportional number in the Middlefield area would yield about 2,000 individuals working in some sort of sole proprietorship or family endeavor. These businesses present opportunities to add employment if they grow, and also represent opportunities for professional, technical, real estate and other industry sector representation within the Village. As the baby boom generation retires, the Village may see more people establishing independent work at home, attracted by Middlefield for its small town lifestyle. The Village may want to explore ways to quantify and support at-home businesses, especially within the Village. The idea of providing a small business incubator, micro-business mall, or other way to help nonemployer businesses reach customers and establish business locations at low cost would be worth exploring. Such an approach could help them bridge to become employing businesses in the long run.

4.2 Caveats

This report was based on data that required estimation at the local and county level. Therefore, the estimated areas are likely to include a wide margin of error, and must be taken with caution. It will be important to verify the findings of this report with local business owners to get a "reality check" on what is actually happening.

In addition, the "best available data" was used, primarily 2012 for industry data, and 2013 for population and household data, which might not reflect the current condition. Information at the county and zip code level might not be applicable to the Village itself. It will be important for the Village to monitor any changes over time.

Finally, no amount of data can necessarily predict the success or failure of any business. There are many factors that go into business success; understanding trends is useful to the economic development aspect of a community, and to business owners, but is only one factor in the long term growth of business.

BIBLIOGRAPHY

"Amish Studies." 2015. *Elizabethtown College, Young Center for Anabaptist and Pietist Studies*. Accessed April 25. http://www2.etown.edu/amishstudies/Index.asp.
"Consumer Price Index (CPI)." 2015. Accessed April 25. http://www.bls.gov/cpi/.
Ohio Development Services Agency. 2015. "Ohio Population Characteristics and Projections." Accessed April 25. http://development.ohio.gov/reports/reports_pop_proj_map.htm.
"Ohio Labor Market Projections." 2015. Accessed April 16. http://ohiolmi.com/proj/projections.htm.
"ReferenceUSA." 2015. Accessed May 8. http://www.referenceusa.com/.
"US Census - Data." 2015. *US Census*. Accessed May 8. http://www.census.gov/data.html.

APPENDICES

A.1 Supporting Tables – Establishment Trends

Table A1.1: Number of Establishments, 2000-2013

	44062 Zip Code				Geauga County			
Year	No. Establishments	No. Employees	Annual Percent Change, No. Estab	Cumulative Change, No. Estab	No. Establish-ments	No. Employees	Annual Percent Change, No. Estab	Cumulative Change, No. Estab.
2000	261	7,406			2615	29,171		
2001	262	7,143	-3.6%	0.4%	2647	29,994	1.2%	1.2%
2002	268	7,420	3.9%	2.7%	2664	28,417	0.6%	1.9%
2003	273	7,837	5.6%	4.6%	2681	29,121	0.6%	2.5%
2004	266	7,480	-4.6%	1.9%	2733	28,869	1.9%	4.5%
2005	274	8,506	13.7%	5.0%	2755	30,429	0.8%	5.4%
2006	291	9,131	7.3%	11.5%	2745	31,051	-0.4%	5.0%
2007	290	8,959	-1.9%	11.1%	2928	33,703	6.7%	12.0%
2008	264	10,765	20.2%	1.1%	2852	34,303	-2.6%	9.1%
2009	261	8,415	-21.8%	0.0%	2749	31,094	-3.6%	5.1%
2010	263	8,214	-2.4%	0.8%	2741	29,824	-0.3%	4.8%
2011	266	6,099	-25.7%	1.9%	2726	27,533	-0.5%	4.2%
2012	280	5,902	-3.2%	7.3%	2748	27,662	0.8%	5.1%
2013	---	---			2755	27,828	0.3%	5.4%

Source: US Census, County and Zip Code Business Patterns

Table A1.2: Establishment Size Trends, 2000-2013

	44062 Zip Code					Geauga County				
Year	No. Establishments	No. Employees	Avge No. Employees/ Firm	Annual Percent Change, Avge Estab Size	Cumulative Change, Estab Size	No. Establish-ments	No. Employees	Avge No. Employees/ Estab	Annual Percent Change, Avg Estab Size	Cumulative Change, Estab Size
2000	261	7,406	28.4			2615	29,171	11.2		
2001	262	7,143	27.3	-3.9%	-3.9%	2647	29,994	11.3	1.6%	1.6%
2002	268	7,420	27.7	1.6%	-2.4%	2664	28,417	10.7	-5.9%	-4.4%
2003	273	7,837	28.7	3.7%	1.2%	2681	29,121	10.9	1.8%	-2.6%
2004	266	7,480	28.1	-2.0%	-0.9%	2733	28,869	10.6	-2.8%	-5.3%
2005	274	8,506	31.0	10.4%	9.4%	2755	30,429	11.0	4.6%	-1.0%
2006	291	9,131	31.4	1.1%	10.6%	2745	31,051	11.3	2.4%	1.4%
2007	290	8,959	30.9	-1.5%	8.9%	2928	33,703	11.5	1.8%	3.2%
2008	264	10,765	40.8	32.0%	43.7%	2852	34,303	12.0	4.5%	7.8%
2009	261	8,415	32.2	-20.9%	13.6%	2749	31,094	11.3	-6.0%	1.4%
2010	263	8,214	31.2	-3.1%	10.1%	2741	29,824	10.9	-3.8%	-2.5%
2011	266	6,099	22.9	-26.6%	-19.2%	2726	27,533	10.1	-7.2%	-9.5%
2012	280	5,902	21.1	-8.1%	-25.7%	2748	27,662	10.1	-0.3%	-9.8%
2013	---	---	---	---	---	2755	27,828	10.1	0.3%	-9.5%

Source: US Census, Zip Code and County Business Patterns

A.2 Supporting Tables – Wage Trends

Table A2.1: Average Wage Trends, 2000-2013

	44062 Zip Code					Geauga County				
Year	No. Employees	Avge Annual Wage	Adjusted Wages, 2012 dollars	Annual Percent Change	Cumulative Change	No. Employees	Avge Wage	Adjusted Wages, 2013 dollars	Annual Percent Change	Cumulative Change
2000	7,406	$ 29,105	$ 38,805			29,171	$ 29,594	$ 40,035		
2001	7,143	$ 28,259	$ 36,635	-5.6%	-5.6%	29,994	$ 29,278	$ 38,513	-3.8%	-3.8%
2002	7,420	$ 32,386	$ 41,331	12.8%	6.5%	28,417	$ 30,469	$ 39,456	2.4%	-1.4%
2003	7,837	$ 32,426	$ 40,461	-2.1%	4.3%	29,121	$ 30,683	$ 38,846	-1.5%	-3.0%
2004	7,480	$ 34,026	$ 41,356	2.2%	6.6%	28,869	$ 32,158	$ 39,658	2.1%	-0.9%
2005	8,506	$ 35,701	$ 41,970	1.5%	8.2%	30,429	$ 33,430	$ 39,876	0.5%	-0.4%
2006	9,131	$ 35,682	$ 40,636	-3.2%	4.7%	31,051	$ 34,389	$ 39,738	-0.3%	-0.7%
2007	8,959	$ 36,328	$ 40,227	-1.0%	3.7%	33,703	$ 36,181	$ 40,651	2.3%	1.5%
2008	10,765	$ 30,976	$ 33,033	-17.9%	-14.9%	34,303	$ 36,374	$ 39,356	-3.2%	-1.7%
2009	8,415	$ 32,002	$ 34,265	3.7%	-11.7%	31,094	$ 35,866	$ 38,963	-1.0%	-2.7%
2010	8,214	$ 32,634	$ 34,361	0.3%	-11.5%	29,824	$ 38,280	$ 40,896	5.0%	2.2%
2011	6,099	$ 35,144	$ 35,872	4.4%	-7.6%	27,533	$ 40,109	$ 41,539	1.6%	3.8%
2012	5,902	$ 35,544	$ 35,544	-0.9%	-8.4%	27,662	$ 40,365	$ 40,957	-1.4%	2.3%
2013	---	---	---	---	---	27,828	$ 41,090	$ 41,090	0.3%	2.6%

Source: US Census, Zip Code and County Business Patterns; inflation adjustment by CSU per the US Department of Commerce Consumer Price Index for the NE Ohio region.

A.3 Supporting Tables – Industry Employment Projections

Table A3A: Employment Projections 2010-2020, Cleveland Region

JobsOhio Network - Cleveland (Northeast Ohio)

Industry Employment Projection Report: 2010-2020

NAICS CODE	Description	Employment 2010 Annual	Employment 2020 Projected	Projected Change in Employment 2010-2020	Percent
	TOTAL	**2,003,100**	**2,189,200**	**186,100**	**9.3%**
	Goods Producing	**348,300**	**360,400**	**12,100**	**3.5%**
	Natural Resources, incl. Agriculture and Mining	**36,500**	**35,700**	**-800**	**-2.2%**
211	Oil & gas extraction	500	800	300	60.0%
212	Mining (except oil & gas)	1,400	1,400	0	0.0%
213	Support activities for mining	800	1,000	200	25.0%
	Construction	**62,300**	**76,600**	**14,300**	**23.0%**
236	Construction of buildings	13,700	17,000	3,300	24.1%
237	Heavy & civil engineering construction	7,200	8,600	1,400	19.4%
238	Specialty trade contractors	41,400	51,100	9,700	23.4%
	Manufacturing	**249,600**	**248,000**	**-1,600**	**-0.6%**
311	Food manufacturing	17,500	17,800	300	1.7%
312	Beverage & tobacco product manufacturing	1,100	1,100	0	0.0%
313	Textile mills	700	600	-100	-14.3%
314	Textile product mills	1,500	1,400	-100	-6.7%
315	Apparel manufacturing	600	400	-200	-33.3%
322	Paper manufacturing	7,300	6,700	-600	-8.2%
324	Petroleum & coal products manufacturing	1,300	1,000	-300	-23.1%
325	Chemical manufacturing	18,500	17,400	-1,100	-5.9%
331	Primary metal manufacturing	19,500	18,800	-700	-3.6%
332	Fabricated metal product manufacturing	51,100	55,600	4,500	8.8%
333	Machinery manufacturing	28,900	26,500	-2,400	-8.3%
334	Computer & electronic product mfg.	8,800	7,500	-1,300	-14.8%
335	Electrical equipment and appliance mfg.	9,300	8,000	-1,300	-14.0%
337	Furniture and related product mfg.	5,400	5,700	300	5.6%
339	Miscellaneous manufacturing	10,800	9,500	-1,300	-12.0%

Source: Ohio Dept of Job and Family Services, Bureau of Labor Market Information

Table A3B: Industry Employment Projections

JobsOhio Network - Cleveland (Northeast Ohio)

Industry Employment Projection Report: 2010-2020

NAICS CODE	Description	Employment 2010 Annual	Employment 2020 Projected	Projected Change in Employment 2010-2020	Percent
	TOTAL	**2,003,100**	**2,189,200**	**186,100**	**9.3%**
	Service-Providing	**1,540,500**	**1,717,600**	**177,100**	**11.5%**
	Trade and Transportation and Utilities	**345,300**	**371,600**	**26,300**	**7.6%**
	Wholesale Trade	81,500	87,300	5,800	7.1%
423	Merchant wholesalers, durable goods	49,200	50,900	1,700	3.5%
424	Merchant wholesalers, nondurable goods	24,800	27,600	2,800	11.3%
425	Electronic markets and agents and brokers	7,400	8,700	1,300	17.6%
	Retail Trade	207,100	220,800	13,700	6.6%
441	Motor vehicle and parts dealers	25,800	29,000	3,200	12.4%
443	Electronics and appliance stores	6,100	6,300	200	3.3%
444	Building material & garden supply stores	16,800	19,600	2,800	16.7%
445	Food and beverage stores	42,700	43,700	1,000	2.3%
446	Health and personal care stores	15,200	17,200	2,000	13.2%
447	Gasoline stations	11,300	10,100	-1,200	-10.6%
448	Clothing and clothing accessories stores	16,500	17,900	1,400	8.5%
451	Sporting goods, hobby, book, and music stores	8,700	9,000	300	3.4%
453	Miscellaneous store retailers	10,300	9,700	-600	-5.8%
	Transportation and Warehousing	50,600	58,400	7,800	15.4%
481	Air transportation	4,300	4,400	100	2.3%
484	Truck transportation	20,800	25,200	4,400	21.2%
485	Transit and ground passenger transportation	3,300	3,800	500	15.2%
492	Couriers and messengers	6,400	7,200	800	12.5%
493	Warehousing and storage	7,200	8,500	1,300	18.1%
	Utilities	6,100	5,100	-1,000	-16.4%
	Information	**25,800**	**25,300**	**-500**	**-1.9%**
511	Publishing industries	10,200	9,400	-800	-7.8%
512	Motion picture and sound recording industries	1,900	1,800	-100	-5.3%
515	Broadcasting (except internet)	2,200	2,300	100	4.5%
517	Telecommunications	9,200	9,200	0	0.0%
519	Other information services	700	800	100	14.3%
	Financial Activities	**93,900**	**100,500**	**6,600**	**7.0%**
	Finance and Insurance	70,800	75,000	4,200	5.9%
522	Credit intermediation and related activities	31,500	32,000	500	1.6%
523	Securities, commodity contracts, investments	7,100	8,100	1,000	14.1%
524	Insurance carriers and related activities	31,200	33,700	2,500	8.0%
	Real Estate and Rental and Leasing	23,000	25,500	2,500	10.9%
532	Rental and leasing services	6,600	7,500	900	13.6%

Source: Ohio Dept of Job and Family Services, Bureau of Labor Market Information

Table A3C: Industry Employment Projections

JobsOhio Network - Cleveland (Northeast Ohio)

Industry Employment Projection Report: 2010-2020

NAICS CODE	Description	Employment 2010 Annual	Employment 2020 Projected	Projected Change in Employment 2010-2020	Percent
	TOTAL	**2,003,100**	**2,189,200**	**186,100**	**9.3%**
	Professional and Business Services	**219,500**	**259,800**	**40,300**	**18.4%**
	Professional and Technical Services	77,600	95,300	17,700	22.8%
5411	Legal services	15,500	16,400	900	5.8%
5412	Accounting and bookkeeping services	13,300	14,400	1,100	8.3%
5414	Specialized design services	1,200	1,600	400	33.3%
5415	Computer systems design and related services	12,900	18,100	5,200	40.3%
5417	Scientific research and development services	3,100	3,300	200	6.5%
5418	Advertising, PR, and related services	3,900	4,700	800	20.5%
5419	Other professional and technical services	6,300	7,700	1,400	22.2%
5611	Office administrative services	4,200	5,100	900	21.4%
5612	Facilities support services	1,700	2,100	400	23.5%
5613	Employment services	39,200	49,800	10,600	27.0%
5614	Business support services	16,700	19,700	3,000	18.0%
5615	Travel arrangement and reservation services	1,400	1,400	0	0.0%
5616	Investigation and security services	9,700	11,300	1,600	16.5%
5617	Services to buildings and dwellings	21,400	24,500	3,100	14.5%
5619	Other support services	3,000	3,000	0	0.0%
	Education and Health Services	**460,700**	**545,600**	**84,900**	**18.4%**
	Educational Services	160,300	172,000	11,700	7.3%
	Health Care and Social Assistance	300,400	373,600	73,200	24.4%
621	Ambulatory health care services	89,300	120,300	31,000	34.7%
622	Hospitals	109,200	125,600	16,400	15.0%
623	Nursing and residential care facilities	67,600	79,800	12,200	18.0%
624	Social assistance	34,300	47,900	13,600	39.7%
	Leisure and Hospitality	**176,800**	**193,200**	**16,400**	**9.3%**
	Arts, Entertainment, and Recreation	25,200	29,500	4,300	17.1%
711	Performing arts and spectator sports	5,600	6,300	700	12.5%
712	Museums, historical sites, and similar institution	1,800	2,000	200	11.1%
713	Amusement, gambling, and recreation	17,800	21,100	3,300	18.5%
	Accommodation and Food Services	151,600	163,700	12,100	8.0%
721	Accommodation	12,500	13,600	1,100	8.8%
722	Food services and drinking places	139,000	150,100	11,100	8.0%
	Other Services	**84,900**	**90,900**	**6,000**	**7.1%**
811	Repair and maintenance	16,100	17,500	1,400	8.7%
812	Personal and laundry services	21,900	23,200	1,300	5.9%
813	Membership associations and organizations	39,600	43,000	3,400	8.6%
	Government	**133,600**	**130,800**	**-2,800**	**-2.1%**
	Federal Government	27,800	23,000	-4,800	-17.3%
	Postal Service	9,800	7,000	-2,800	-28.6%
	Federal government, except postal service	18,000	16,000	-2,000	-11.1%
	State Government	12,300	12,000	-300	-2.4%
	Local Government	93,500	95,700	2,200	2.4%
	Self Employed & Unpaid Family Workers	114,300	111,200	-3,100	-2.7%

Source: Ohio Department of Job and Family Services, Bureau of Labor Market Information.