



MORGANTOWN
WEST VIRGINIA

How Does the City's Economy Compare to Other College Towns?

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MORGANTOWN WEST VIRGINIA

How Does the City's Economy Compare to Other College Towns?

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EXECUTIVE SUMMARY

In this report we provide an economic profile of Morgantown, West Virginia and compare it with five other cities across the nation that are similar in size to Morgantown and house major research universities that are similar to West Virginia University. We examine a variety of indicators, which can be grouped into the following categories: macroeconomic outcomes; demographics; business and living costs; and public infrastructure. Key findings of this research are as follows:

Macroeconomic Outcomes

- **Employment in the Morgantown MSA has grown rapidly in recent years, outpacing all five cities in our comparison group.**¹
- **Morgantown's unemployment rate for 2013 was 3.7 percent**, significantly lower than the national rate of 7.4 percent and lower than four of the five comparison cities.
- **Morgantown's gross metropolitan product (GMP) per capita has grown by nearly 80 percent in the past decade**, which far surpasses that of any of the comparison cities. As of 2012, GMP per capita in Morgantown was the highest among the comparison cities.
- Despite strong performance in terms of GMP per capita, **real per capita personal income has grown at a relatively slow rate for Morgantown over the past decade**, surpassing only two of the five comparison cities.

Demographics

- **Morgantown has the lowest level of education attainment among the comparison group** in terms of the share of the population who hold a bachelor's degree or higher. Approximately 31 percent of adults in the Morgantown MSA hold at least a bachelor's degree.
- **At 66 percent, the share of Morgantown's population that is of prime working age (20-64) is highest among the comparison cities.**
- **Morgantown ranks slightly below the national average for health outcomes and behaviors.** However, the ranking places Morgantown second among the comparison cities.

Business and Living Costs

- **The overall cost of living in Morgantown is around one percent higher than the national average, which places Morgantown second-highest among the comparison cities.**
- **The cost of a select, higher-end, single-family home in Morgantown exceeds that of all comparison cities;** in contrast, the median single family home price is relatively low among the comparison group.
- **Wages across a group of select occupations tend to be low in Morgantown** in relation to the comparison cities.

Public and Private Infrastructure

- **Mean travel time to work in Morgantown is 22.6 minutes, which is second-highest among the comparison cities.** However, the figure does not vary widely among the cities as they all fall well below average commute times in large US cities.
- **The stock of private-sector housing has grown at a slow rate in Morgantown in recent years.** Single family home construction in Morgantown over the years 2011-2013 ranks among the lowest of our comparison cities.
- In sharp contrast to single-family home building, **Morgantown is essentially tied for first place among the comparison cities in terms of building permits issued for larger housing structures.**

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¹ All statistics in this document refer to the metropolitan statistical area or micropolitan statistical area corresponding to each city.

CHAPTER 1: INTRODUCTION

For city policymakers and business leaders to design policies that are most effective in fostering economic growth and prosperity, they must have a firm grasp of the nature of the city's economy currently. Previous research has shown that Morgantown's overall economic profile is strong in comparison to West Virginia as a whole,² but, to our knowledge, no research exists that compares Morgantown's economy to other cities across the United States. In this report we provide such a comparison. In particular, we profile Morgantown's economy in conjunction with five comparable cities nationwide. These results will provide policymakers and business leaders with a richer grasp of where the city's economic environment stands when judged nationally.

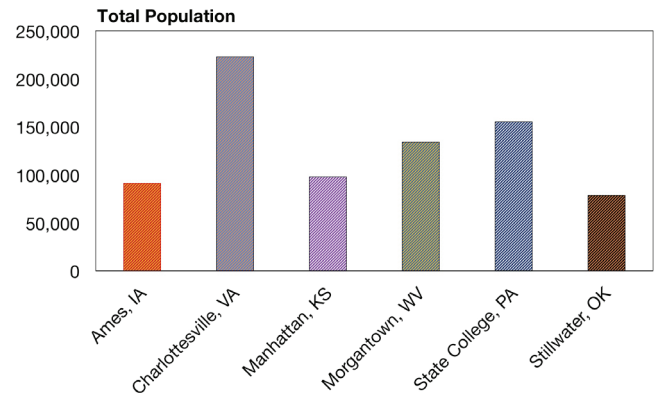
Our set of comparison cities consists of the following five cities: Ames, Iowa; Charlottesville, Virginia; Manhattan, Kansas; State College, Pennsylvania; and Stillwater, Oklahoma. These cities were chosen based on two primary factors. First, the cities each contain a major research university, with four of the five containing land grant universities similar to WVU. Second, the cities are roughly similar in population, and students represent a large proportion of the local population. At their core, these cities would be considered "college towns."

To illustrate, in Figure 1 we report the overall population of each of the six cities. As shown, three of the cities have metropolitan statistical area (MSA) populations that are slightly under 100 thousand; the Morgantown MSA population stands at around 134 thousand; State College stands at 155 thousand; the largest MSA population is Charlottesville, at nearly 223 thousand residents. In Figure 2 we report student enrollments at the major universities in each city. Penn State (College Park) is the largest university with over 46 thousand students, followed by Iowa State (Ames) with around 33 thousand. West Virginia University (Morgantown) is next with nearly 30 thousand students, followed by Kansas State (Manhattan), University of Virginia (Charlottesville), and Oklahoma State (Stillwater). In all cases, it is clear that the student enrollment is large compared to the overall population.

Despite these fundamental similarities, these cities vary considerably in their economic environments. Our economic profile will delineate some of these similarities and differences along four primary dimensions: macroeconomic outcomes; demographics; business and living costs; and public and private infrastructure. Variables related to macroeconomic outcomes consider how broad measures of the city's economy have performed in recent years. Our analysis of each city's demographic characteristics considers fundamental population attributes such as age distribution, educational attainment, health outcomes, and the like. This section is important, in part because businesses that may consider locating in the area are likely to judge these factors when determining whether the local workforce will meet their specific needs. In a similar vein, variables relating to business and living costs are important from a business perspective

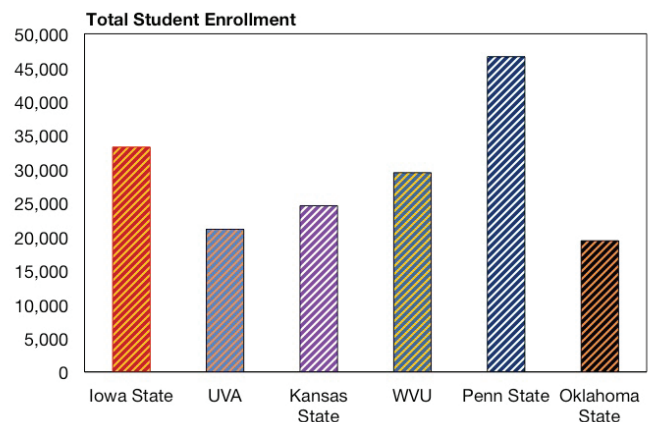
because businesses and individuals are less inclined to locate in a high cost area, holding all else equal. We close with an analysis of variables related to public and private infrastructure as such characteristics also relate to business location decisions, as well as general quality of life.

FIGURE 1: Population, 2012



Source: US Bureau of Economic Analysis (www.bea.gov)

FIGURE 2: University Enrollment, 2013-14



Source: University Websites

2. Sartarelli, Jose V., John Deskins, and Brian Lego. "Morgantown MSA Outlook 2014." 2013. Morgantown, WV: West Virginia University Bureau of Business and Economic Research. Available for download at <http://www.be.wvu.edu/bber/pdfs/BBER-2013-10.pdf>

CHAPTER 2: MACROECONOMIC OUTCOMES

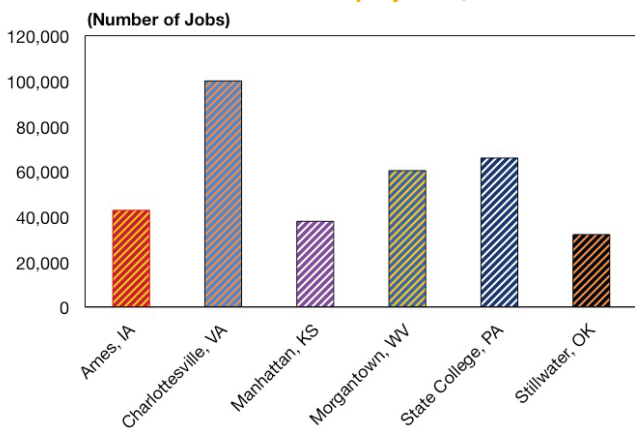
We begin with an examination of several macroeconomic outcome measures to gauge the overall standing and recent performance of each of the comparison cities. As illustrated in Figure 3, overall employment in the Morgantown MSA stands at just over 60 thousand, placing the city third highest among the six cities in the comparison group. Overall employment totals range from just under 100 thousand in the Charlottesville MSA to just over 32 thousand for Stillwater. Altogether, employment levels (Figure 3) track overall population closely (Figure 1), suggesting that employment-to-population ratios do not vary widely across these cities.

As reported in Figure 4, total employment has grown rapidly in Morgantown over the past decade or so. As illustrated, total employment in Morgantown has grown by over 22 percent over the period overall, which surpasses that of all of the other cities. Employment growth in the comparison cities ranges from overall growth of 17 percent in Manhattan, to an employment

decline of just over six percent in Stillwater. Also worthy of note is the fact that employment growth in Morgantown did not exhibit any noticeable decline over the 2007-2009 recession, which stands in contrast to every other city in the comparison group. For comparison purposes, we also illustrate the growth in population in the cities over the last decade in Figure 5. As illustrated, population in Morgantown grew by nearly 19 percent over the period, which is the second highest among the comparison cities and is close to the city's employment growth rate. Interestingly, all of the cities grew over the period, with growth rates ranging from around 12 percent in Stillwater to around 20 percent in Manhattan.

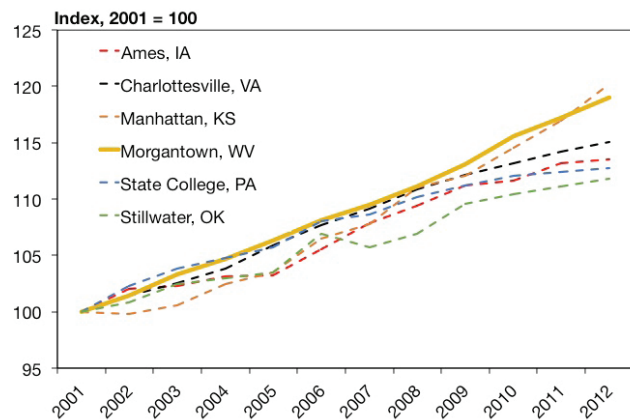
In Figure 6 we examine how population has migrated into each city in 2012. The blue bars illustrate the share of each city's population that lived in a different county within the same state in the previous year while the red bars illustrate the share of each city's population that lived in a different state in the previous year. As illustrated, only around nine percent of Morgantown's population lived in a different West Virginia county in the previous year, which is the lowest share among the comparison cities. The figure ranges as high as 16 percent for Ames. However, Morgantown

FIGURE 3: Total Employment, 2012



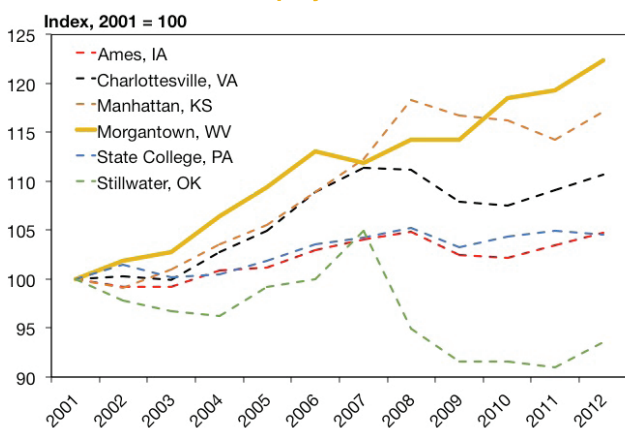
Source: US Bureau of Labor Statistics (www.bls.gov)

FIGURE 5: Total Population Growth, 2001-2012



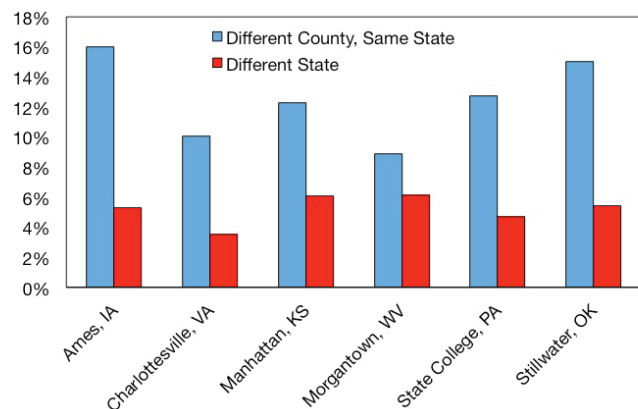
Source: US Bureau of Economic Analysis (www.bea.gov)

FIGURE 4: Total Employment Growth, 2001-2012



Source: US Bureau of Labor Statistics (www.bls.gov)

FIGURE 6: In-Migration, 2012



Source: US Census Bureau (www.census.gov)

Note: Figure shows the percentage of total population that was living in a different county in the same state or another state within the US in 2011.

leads the cities in terms of the share of each population that lived in a different state in the previous year. The statistics show that just over six percent of Morgantown's 2012 population lived in a different state in the previous year, illustrating a relatively high degree of movement into the city from out-of-state.³

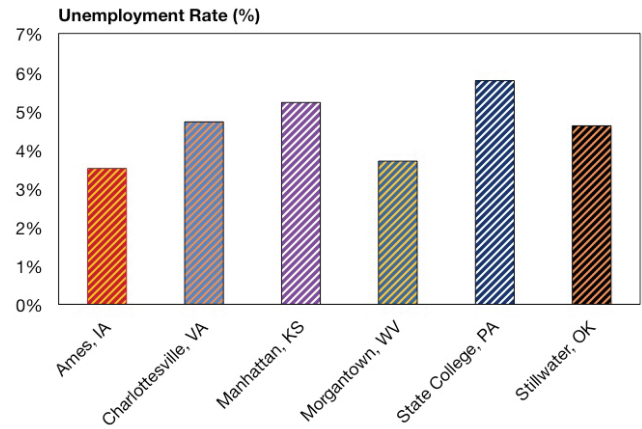
In Figure 7 we illustrate the 2013 average unemployment rate in the six cities. Among our comparison cities, unemployment ranges from around 3.5 percent in Ames to approximately 5.8 percent in State College. The rate in Morgantown stood at 3.7 percent for 2013, placing the city second-lowest among the comparison cities. Interestingly, however, all of the comparison cities boast an unemployment that is below the national figure of 7.4 percent for 2013, which gives rise to the hypothesis that these type of college towns provide strong employment opportunities in general.

Figure 8 illustrates how the unemployment has evolved in each of the six cities over the past decade. Morgantown began the period with the highest unemployment rate. Then from 2003 through 2008 the city saw its unemployment rate fall in absolute and relative terms, such that its unemployment rate was the lowest among the six cities by 2008. After 2008, however, the universally-experienced rise in unemployment was somewhat more pronounced such that, by 2011, Morgantown's unemployment rate was once again relatively high (although still well below the national average at the time). Further, however, Morgantown experienced a very rapid fall in unemployment in 2013 and once again enjoyed the second-most-favorable unemployment by the end of the period of analysis.

In Figure 9 we turn our attention to labor force participation. The labor force participation rate captures the share of the adult population that is either employed or is looking for employment. Given that the national labor force participation rate stood at approximately 63 percent in 2012, the figure is relatively low for all of these cities, where the statistic ranges from a high of approximately 64 percent in Manhattan to a low of 47 percent in Stillwater. Morgantown stands in the middle of the comparison group. While a low labor force participation rate is often viewed as a concern for an economic system, in this case the low figure in each of the cities is explainable by the fact that a large share of each city's population is composed of students who are much less likely to participate in the labor force. The labor force participation rate for Morgantown has increased slightly over the past decade, improving about one percentage point over the period.

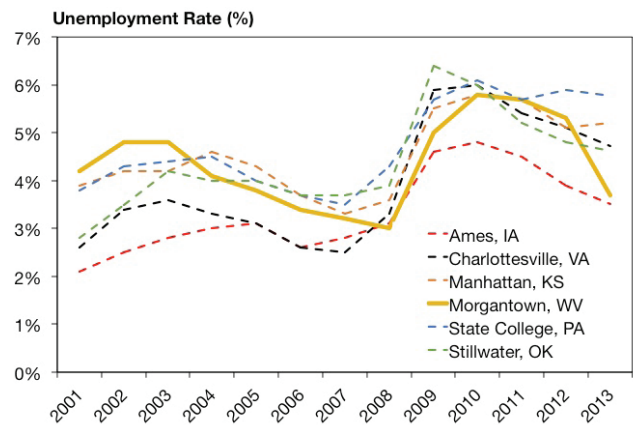
Next we turn to an examination of the composition of each city's employment base by super sector. As reported in Figure 10, 14 percent of Morgantown's work force is in the good-producing sector, which includes industries such as manufacturing, natural resources and mining, and construction. This statistic does not vary widely across the six cities, only ranging from 10 percent in Charlottesville to 16 percent in Ames. In a similar fashion, we report the service-providing share of employment in Figure

FIGURE 7: Unemployment Rate, 2013



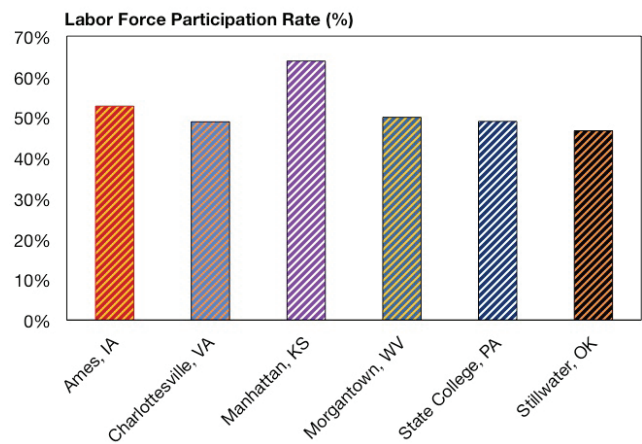
Source: US Bureau of Labor Statistics (www.bls.gov)

FIGURE 8: Unemployment Rate, 2011-2013



Source: US Bureau of Labor Statistics (www.bls.org)

FIGURE 9: Labor Force Participation Rate, 2012



Source: US Bureau of Labor Statistics (www.bls.gov)

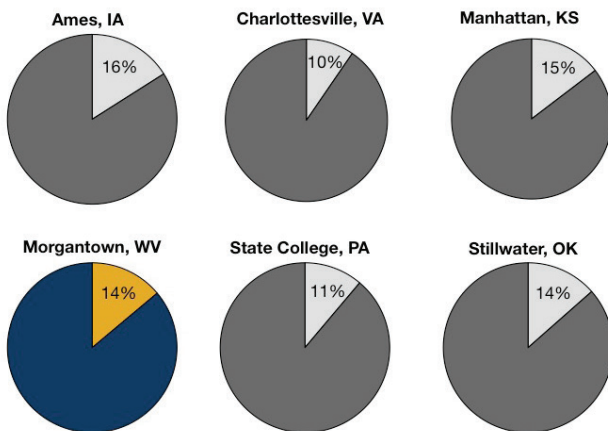
3. The degree to which this in-migration is due to students versus non-students is not answerable with these data. This question is left to future research.

11. Here we see slightly more variation in comparison to the previous figure. Morgantown has the highest service-providing employment share at 64 percent of total employment, and the figure falls to a low of 48 percent in Stillwater.

In Figure 12 we report the government share of total employment. Morgantown exhibits the lowest share of government employment among the six cities at 22 percent of total employment. Indeed, Morgantown is the only city where government comprises less than one-fourth of total employment, and the figure rises to a high of 39 percent in Stillwater. Overall this statistic is generally high in these cities compared to the national average (16 percent) at least in part because these cities have relatively high levels of public university employment. Overall, Morgantown's relatively low government employment share may indicate that Morgantown's economy is more diversified in some ways in comparison to these other college towns. Future research should explore this economic diversification at greater depth.

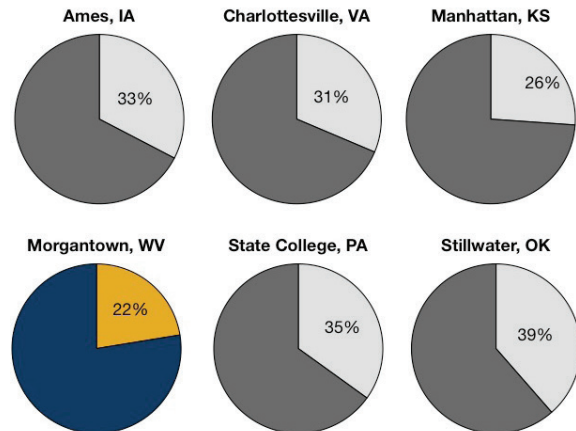
Next we turn our attention to income in the various cities. We focus on per capita personal income (PCPI), which includes all sources of income earned in each city, but then also accounts for taxes paid to the US federal government as well as transfers back from the federal government in the form of unemployment insurance compensation, social security, welfare spending, and the like. As such, PCPI is typically viewed as the best measure of standard of living enjoyed by the typical person. As illustrated in Figure 13, at just under \$37 thousand, PCPI in Morgantown stood at second-lowest among the comparison cities in 2012, surpassing only Stillwater. Charlottesville lead the comparison group with a per capita personal income of over \$46 thousand, approximately 26 percent higher than Morgantown. Figure 14 illustrates the change in PCPI over the past decade. As illustrated, the figure has grown by approximately 22 percent over the period in Morgantown, which places the city above only State College and Charlottesville in terms of recent income growth.

FIGURE 10: Goods Producing Share of Total Employment, 2012



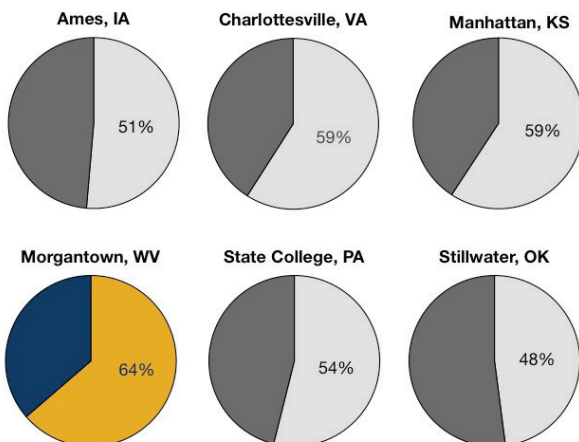
Source: US Bureau of Labor Statistics (www.bls.gov)

FIGURE 12: Government Share of Total Employment, 2012



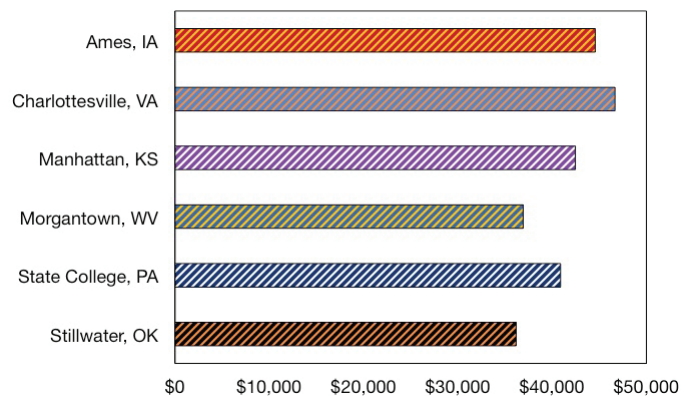
Source: US Bureau of Economic Analysis (www.bea.gov)

FIGURE 11: Service Providing Share of Total Employment, 2012



Source: US Bureau of Labor Statistics (www.bls.gov)

FIGURE 13: Per Capita Personal Income, 2012



Source: US Bureau of Economic Analysis (www.bea.gov)

In Figure 15 we present gross metro product (GMP) per capita for the cities. This figure captures the total economic output of each of the metro areas and does not account for transfers to and from the US federal government. As such, GMP per capita is typically used to measure the overall strength of the region's economic engine on a per person basis rather than as a standard of living measure. As depicted in the figure, at a level of close to \$50 thousand, Morgantown enjoys the highest GMP per capita in the comparison group. The figure for Morgantown just surpasses that of Ames, but exceeds Manhattan, which has the lowest GMP per capita, by approximately 57 percent.⁴

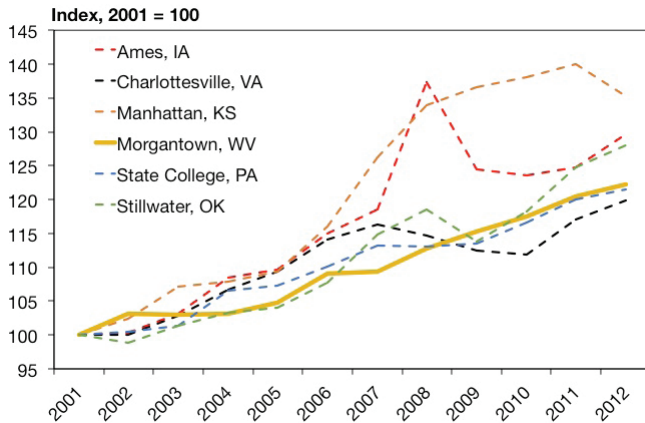
In Figure 16 we report how GMP per capita has evolved over the past decade or so. As illustrated, growth in Morgantown has grown by nearly 78 percent over the period of analysis, which far surpasses any other city in the comparison group. GMP per capita growth for the other four cities ranges from 45 percent to 55 percent for the decade.

CHAPTER 3: DEMOGRAPHIC PROFILE

Here we turn our attention to the demographic characteristics of each of the four cities. Fundamental demographic characteristics are of vital importance for economic development for various reasons. For instance, basic demographic attributes are viewed as one key element for businesses to consider when entering into a given market.

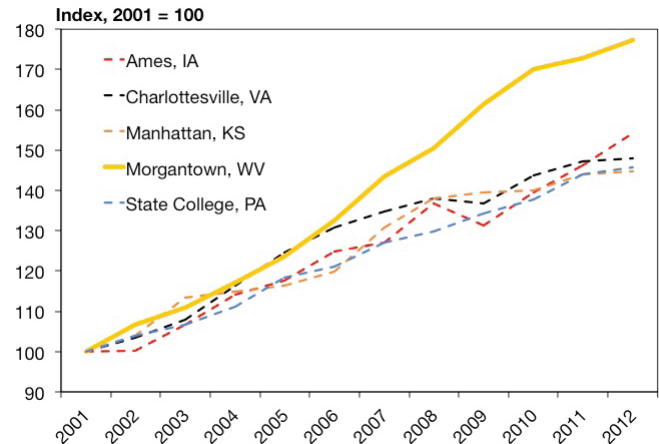
In Figure 17 we illustrate educational attainment in the comparison cities. As illustrated in the figure, only around 31 percent of adults aged 25 and above in the Morgantown MSA hold a bachelor's degree, which is the lowest figure among the comparison cities. Aside from Morgantown, the figure ranges from around 33 percent in Manhattan to over 50 percent in Ames. The figure has improved for Morgantown over the past decade or so, increasing from around 26 percent in 2000.

FIGURE 14: Real Per Capita Personal Income



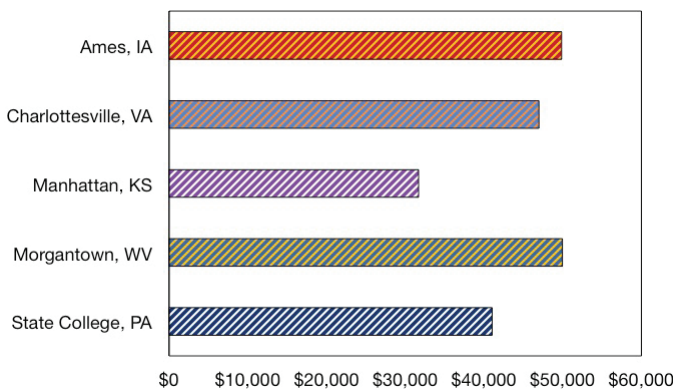
Source: US Bureau of Economic Analysis (www.bea.gov)

FIGURE 16: Real Per Capita Gross Metropolitan Product



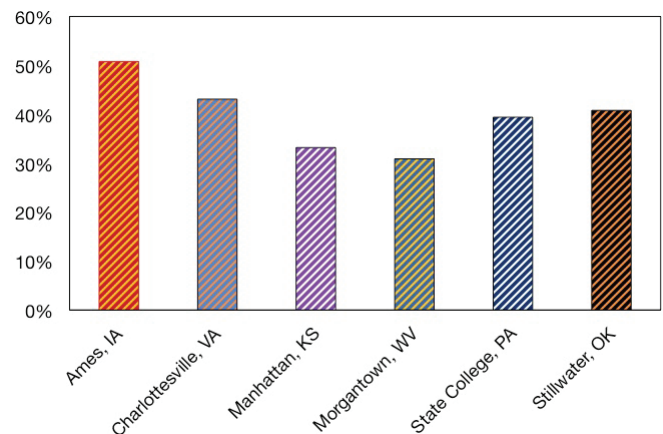
Source: US Bureau of Economic Analysis (www.bea.gov)

FIGURE 15: Per Capita Gross Metro Product, 2012



Source: US Bureau of Economic Analysis (www.bea.gov)

FIGURE 17: Percentage of Population with a Bachelor's Degree or Higher, 2012



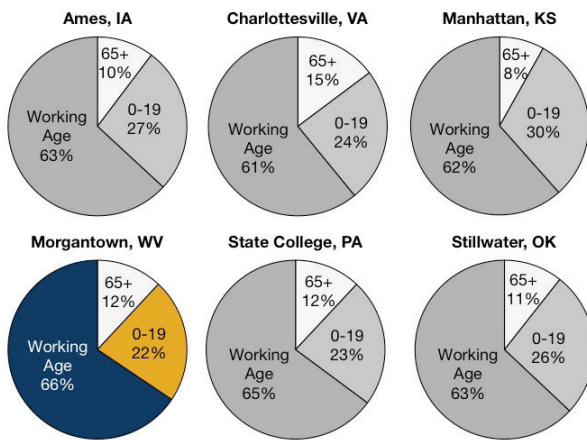
Source: US Census Bureau (www.census.gov)

⁴ Stillwater is not included in the data presented in Figures 15 or 16. Stillwater is the only city in our comparison group that is classified as a micropolitan statistical area; these data are only available for metropolitan statistical areas.

The age distribution of a population is also a potentially important driver of economic growth. For instance, a larger population share in the over-age-65 grouping may mean that fewer people are available to work for a given total population size. Also, a larger population share in the combined over-age-65 group plus the under age-19 group may mean higher public service demands in conjunction with a smaller tax base. This could, in turn, signify

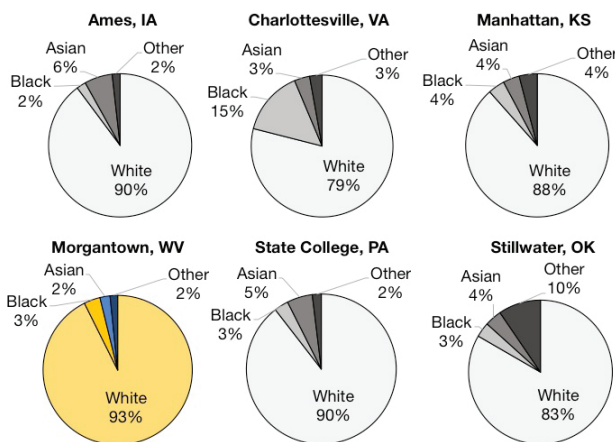
stronger budgetary pressures from the perspective of state and local government. In Figure 18 we illustrate the share of the population that is of typical working age (20-64) for each of the cities as well as the population shares in the 0-19 age grouping and the age 65 and over group. At 66 percent, Morgantown has the highest proportion of working age residents of the comparison cities. Aside from Morgantown, the working age population share in the comparison cities ranges from 61 percent in Charlottesville to 65 percent in State College. The working age population share in Morgantown has improved in recent years, increasing from 63 percent in 2000. At 22 percent, Morgantown has the smallest population share in the 0-19 age grouping among the comparison group. That figure ranges as high as 30 percent in Manhattan.

FIGURE 18: Population, 2012



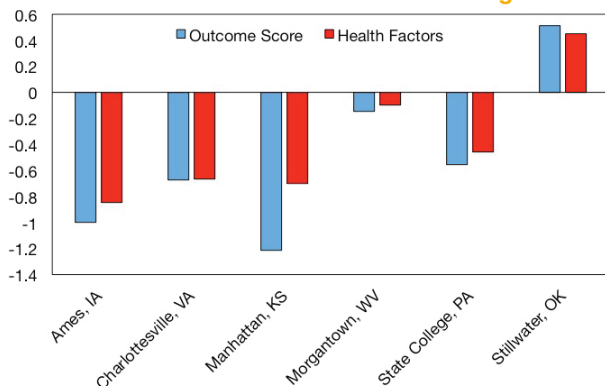
Source: US Census Bureau (www.census.gov)

FIGURE 19: Population by Race, 2010



Source: US Census Bureau (www.census.gov)

FIGURE 20: 2014 MSA Health Rankings



Source: www.countyhealthrankings.com

Next we consider the racial composition of each city's population. A more racially diverse population may be attractive for several reasons from a business perspective. For instance, individuals may be reluctant to migrate into an area that is too racially homogenous, and as a result, businesses may be more inclined to move or expand operations in more racially diverse areas. As illustrated in Figure 19, Morgantown has the smallest minority population share among the comparison cities with 93 percent of the city's population classified as white by the US Census Bureau. Aside from Morgantown, the figure ranges from a low of 79 percent in Charlottesville, to 90 percent in both Ames and State College. In general, all of these cities have a relatively low minority population given that the white share of the US population is 72 percent. Morgantown is slightly more diverse than West Virginia as a whole, where the white share of the overall population is 94 percent.

In Figure 20 we consider health outcomes in the comparison cities. Unsurprisingly, a healthier population will be more attractive from a business standpoint because it will carry with it a larger and better-able workforce for a given total population size. A healthier population may also be related to a stronger government because the healthier population will demand fewer public services and it will likely be associated with a stronger tax base. In the figure we present two health-related statistics.⁵ For these statistics, each city is given a health score based on a variety of criteria, which are divided into those that describe health outcomes, such as premature deaths and low infant birth weight, and those that describe various factors that contribute to health, such as smoking habits and access to medical care. The figure illustrates the extent to which each measure deviates from the national average across the cities. As illustrated, Morgantown falls 0.14 points below the national average on the Outcomes Score scale and around 0.1 points below the national average on the Health Factors scale. While Morgantown does fall slightly below the national average on both of these measures, these ratings place Morgantown as second-healthiest among the comparison cities. Stillwater is the only city in the comparison group that ranks above the national average.

5. Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute. "County Health Rankings & Roadmaps." Robert Wood Johnson Foundation, last modified Jan 1, accessed April 14, 2014, <http://www.countyhealthrankings.org>.

CHAPTER 4: COST OF LIVING AND COST OF DOING BUSINESS

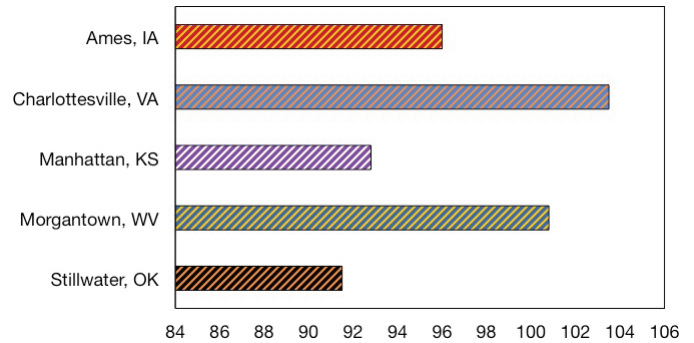
Next we consider cost of living and cost of doing business. In Figure 21 we report an overall cost of living index as calculated by the Council for Community and Economic Research. For this statistic, an index value of 100 indicates the national average. As illustrated, only Charlottesville and Morgantown have a cost of living that exceeds the national average. Overall, the cost of living in Charlottesville is around 3 percent above the national average; the figure in Morgantown is around one percent above the national average. The other three cities all fall below the national average, where the figure ranges between nearly 92 percent of the average in Stillwater to 96 percent of the average in Ames.⁶ The figure has improved very slightly for Morgantown in recent years, falling from 101.1 in 2005 to 100.8 in 2013.

With Figure 22 we investigate cost of living more thoroughly by depicting housing costs for the comparison cities. We illustrate the median home price (red bars) as well as an index that captures the cost of a house that meets a set of select characteristics (blue bars).⁷ The latter measure may more fully capture the cost of higher-end housing that would likely be more relevant from the perspective of higher-income individuals who may be considering moving into an area. As depicted, the median home price in Morgantown is around \$132 thousand, which places the city second lowest among the comparison cities. Morgantown comes in just above Stillwater (at \$125 thousand), but is well below Charlottesville, which has the highest median home price at \$232 thousand.

In sharp contrast to median income, however, the average price for the select home that we consider is actually highest in Morgantown relative to the comparison cities. The average price for the select home stands at just over \$341 thousand for Morgantown, and ranges between \$331 thousand for Charlottesville to \$269 thousand for Stillwater.⁸

Turning to rental properties, in Figure 23 we depict the average rental rate for a two-bedroom apartment for the cities.⁹ As shown, rentals are substantially more expensive in Charlottesville, and lower in Stillwater, but do not vary widely among the other three cities. Average monthly rental rates in Morgantown are third-highest at \$841. For the other cities, rental rates based on this measure range from \$1,080 in Charlottesville to \$653 in Stillwater.

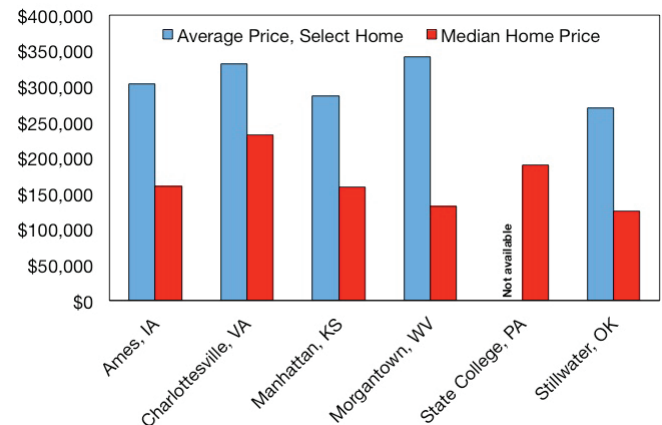
FIGURE 21: Overall Cost of Living Composite Index, 2013



Source: Council for Community and Economic Research Cost of Living Index

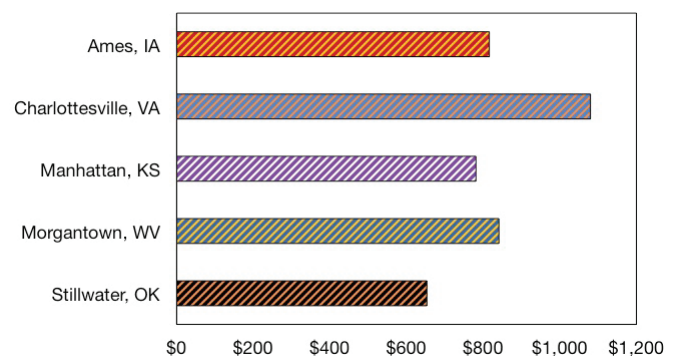
Note: An index value greater than 100 indicates that a region's overall cost of living is higher than the national average.

FIGURE 22: Housing Cost



Source: US Census Bureau (www.census.gov)

FIGURE 23: Average Rental Rate, Two Bedroom Apartment



Source: US Census Bureau (www.census.gov)

6. This cost of living index is not available for State College.

7. This survey considers only new construction, single-family homes with four bedrooms and 2,400 square feet of living space on a 1/5-acre lot.

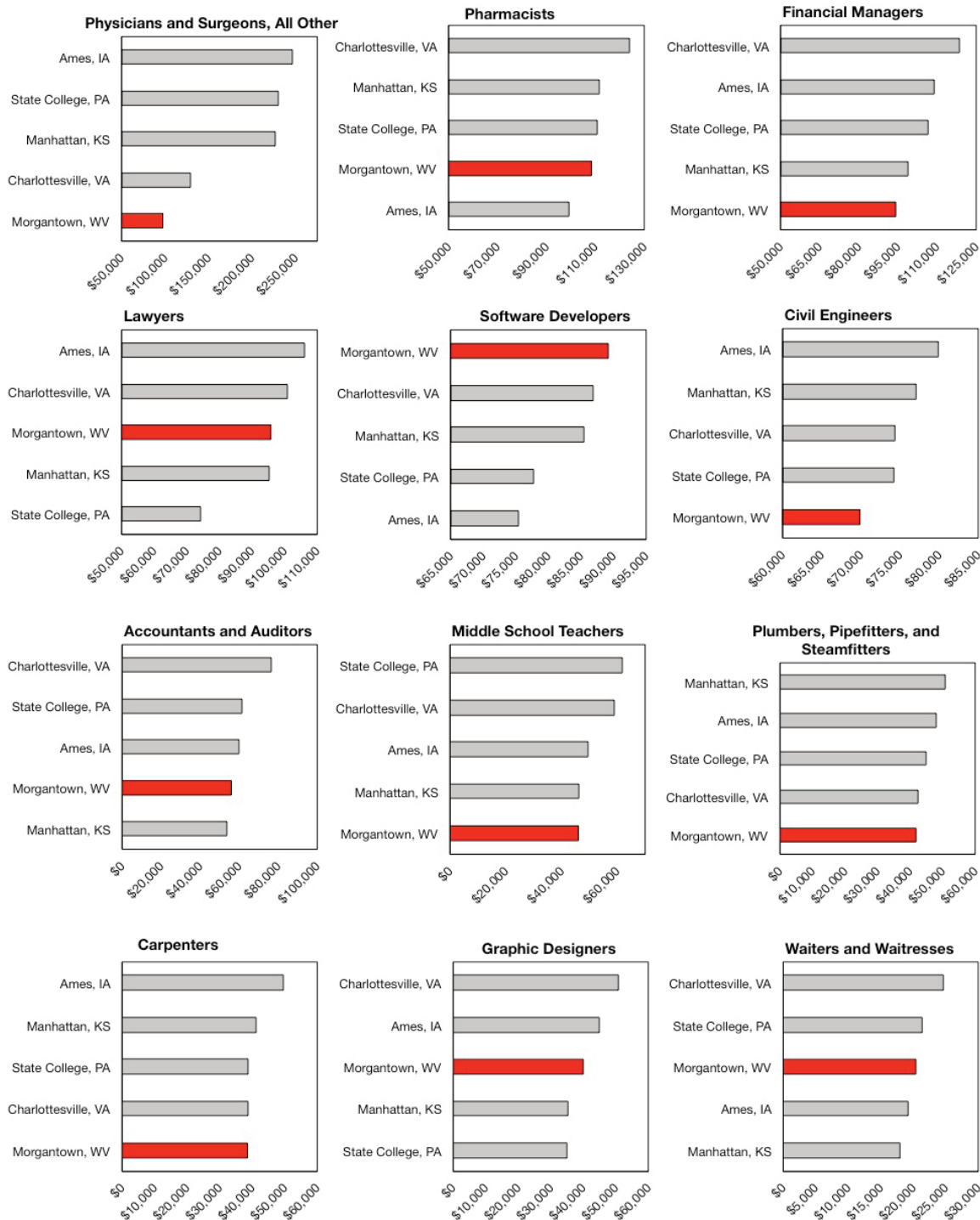
8. This statistic is not available for State College.

9. Rental rates in the survey used to compile this statistic reflect two-bedroom apartments in developments primarily aimed at professionals, rather than student housing.

In Figure 24 we examine wages across the comparison cities by examining average wages from 12 select occupations common to the various cities.¹⁰ Overall, wages in Morgantown appear to be relatively low. The city falls into the lower half of the group of cities in terms of wage levels in eight of the 12 select occupations. In particular, wages in Morgantown are the

lowest among the comparison cities for physicians and surgeons; financial managers; civil engineers; plumbers, pipefitters, and steamfitters; and carpenters. Wages in Morgantown are either highest or second-highest for only software developers. Overall, relatively low wages in Morgantown may be attractive to potential businesses.

FIGURE 24: Wages by Major Occupation, 2013



Source: US Bureau of Labor Statistics (www.bls.gov)

¹⁰ Stillwater is not included in the data presented in Figure 24. Stillwater is the only city in our comparison group that is classified as a micropolitan statistical area; these data are only available for metropolitan statistical areas.

CHAPTER 5: PUBLIC AND PRIVATE INFRASTRUCTURE

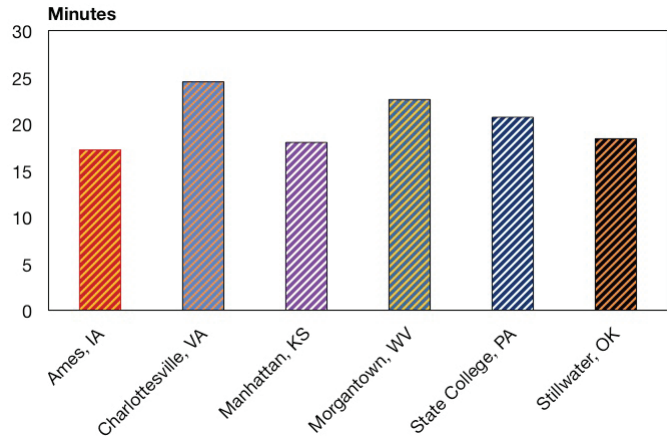
We close our analysis with a consideration of public and private infrastructure in each of our comparison cities. We begin by considering data on mean travel time to work. This measure can serve as a proxy for public roads: less efficient and more highly congested road infrastructure can lead to longer travel times to work. As illustrated in Figure 25, at 22.6 minutes, the mean travel time to work in Morgantown is second-highest among the comparison cities. However, given the fact that these cities are all relatively small in comparison to the nation's largest cities, mean travel times are all relatively low and are fairly close, ranging from a high of 24.5 minutes in Charlottesville to a low of 17.2 minutes in Ames.

Next we examine housing growth in the six cities. Regarding single family home construction, normally researchers would examine building permits because that statistic is widely available and generally tracks closely with housing starts. However, the Morgantown metro area is unusual in that permitting is not required outside of the city limits, where a significant portion of the single family home construction takes place. Alternatively we could examine housing starts, but we do not have access to that statistic for areas outside of West Virginia. As a result, in Figure 26 we report a combination of these statistics. In particular, we report single family home building permits for each city, and we also report single family housing starts for Morgantown only.

As illustrated in Figure 26, Morgantown reports 27 single family home building permits on average annually for the years 2011-2013 (yellow portion of the Morgantown bar), and the city reports 80 single family housing starts annually for the same time period. Again, we believe the 80 figure offers a reasonable comparison to the figures presented in the other cities, because the housing starts figure and the building permits figure are typically similar whereas Morgantown is an outlier due to limited permitting requirements. Overall Morgantown reports a level of single family home construction that is comparable with Stillwater, but is considerably lower than the other four cities. Aside from Morgantown and Stillwater, the building permits figure ranges from 583 in Charlottesville to 158 in Ames.

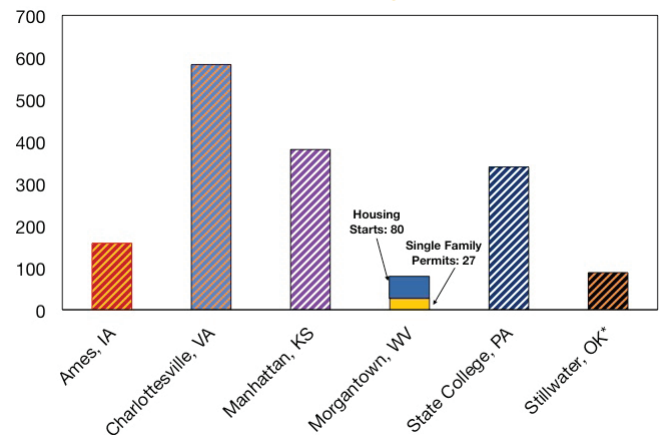
In Figure 27 we report average annual total home building permits over the years 2011-2013. This figure includes permits for single-family homes as well as for multi-family housing. Here we do not incorporate housing starts, as discussed in the previous figure. Although Morgantown still ranks low among the comparison group but the city for total building permits, the city stands much higher relative to the comparison group. Based on this measure, with 382 building permits in total on average for the years 2011-2013, Morgantown is second-lowest, coming in above Stillwater, but is in the range of building permits issued in Ames, Manhattan, and State College, especially when considering that the reported figure for Morgantown is an underestimate based on the discussion above. Charlottesville still leads the comparison

FIGURE 25: Mean Travel Time to Work, 2012



Source: US Census Bureau (www.census.gov)

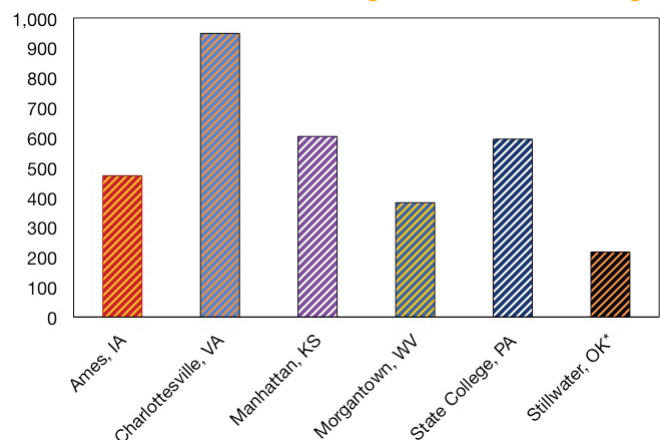
FIGURE 26: Single Family Home Building Permits, 3-Year Average*



Source: US Census Bureau (www.census.gov); McGraw Hill Construction.

Note: We report housing starts (blue bar) as well as single family home building permits (yellow bar) for Morgantown. All MSA numbers are averages of 2011, 2012, and 2013 data except for Stillwater, OK which uses an average of 2010, 2011, and 2012 data.

FIGURE 27: Total Home Building Permits, 3-Year Average



Source: US Census Bureau (www.census.gov)

Note: All MSA numbers are averages of 2011, 2012, and 2013 data except for Stillwater, OK which uses an average of 2010, 2011, and 2012 data.

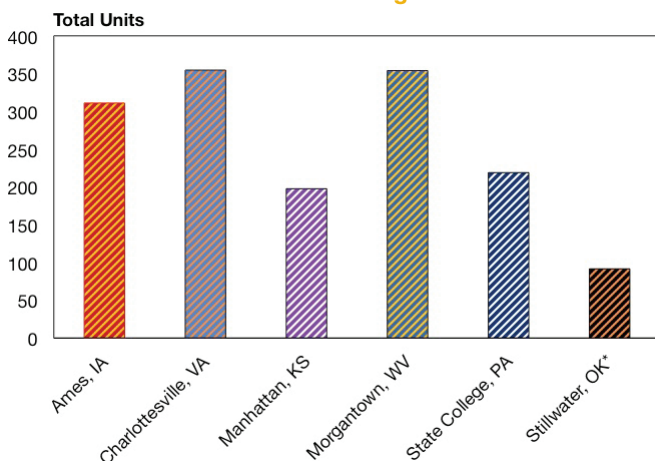
cities by a wide margin for this measure. Overall Figures 26 and 27 indicate that the overwhelming majority of housing that has been permitted in Morgantown over the 2011-2013 period has been multi-family housing, which makes Morgantown unique among the cities in this regard.

To complete our picture of home construction, we close with Figure 28, where we present data on the total number of building permits issued for housing complexes that include at least five individual living units. As illustrated, in very sharp contrast to the previous two figures, Morgantown is essentially tied for first place with Charlottesville in terms of building permits issued for large structures. Overall, these statistics show that Morgantown ranks very highly in terms of construction of large housing units but very low in terms of single family home construction.

Though home construction in these college towns is likely to be heavily related to the growth at the university, a more direct measure of growth would be construction performed by the university itself. At West Virginia University, a five-year project to expand and renovate a number of university buildings has been under way since 2011, with completion scheduled for 2015 to 2016. In all the university plans to spend more than \$700 million on construction during this time period.¹¹

The BBER conducted a study in 2013 to examine the economic impact of WVU's construction projects.¹² The study found that the construction projects produced more than \$1 billion of economic impact in the region, and supported more than 7 thousand jobs. Of this total, approximately \$669 million was felt within West Virginia, supporting more than 4 thousand jobs.

FIGURE 28: Home Building Permits 5 Units or More, 3-Year Average



Source: US Census Bureau (www.census.gov)

Note: All MSA numbers are averages of 2011, 2012, and 2013 data except for Stillwater, OK which uses and average of 2010, 2011, and 2012 data. This figure shows the total number of units within structures that have at least 5 individual units contained within.

11. Similar figures are unavailable for the other metropolitan areas in this study.

12. Bowen, Eric. "WVU Construction Projects Pump \$1 Billion, 7,100 Jobs into Regional Economy." <http://wvutoday.wvu.edu/n/2013/06/26/wvu-construction-projects-pump-1-billion-7-100-jobs-into-regional-economy>.

CHAPTER 6: CONCLUDING THOUGHTS AND FUTURE RESEARCH

This analysis shows that Morgantown is a rapidly growing city that compares favorably to its sister cities on a wide variety of criteria. In terms of population, employment, and overall economic activity, Morgantown is growing as fast as, or faster than, the comparable cities considered in this report. Morgantown's employment growth over the past decade is the highest of the six cities considered, and Morgantown enjoys one of the lowest unemployment rates. Morgantown has the lowest level of government employment as a share of total employment, and the largest working population of any of the six cities. It is also healthier, on average, than four of the five cities in the comparison group.

Morgantown faces some challenges related to income and cost of living, however. Per capita personal income is among the lowest of the college towns considered in this report. Wages in Morgantown rank low for most of the occupational categories considered. Morgantown's college-educated population share is also the lowest in the sample. On the other hand, Morgantown has the second-highest overall cost of living, and the city ranks highest in terms of the price of select single-family homes. Single-family home construction is low in Morgantown in comparison with the other university cities included in this analysis. Morgantown does fare well in terms of the volume of larger multi-family housing units constructed in recent years.

While this report has shed light on how Morgantown fares along four key dimensions, more research is needed to fully understand the city's economy and possible public and business policy initiatives that could improve the city's economy further in the long-run. Additional areas that should be examined in future research include the following: local government structure and budget; tax rates and other tax incentives for economic development; local urban planning policy; crime and public safety; and small business formulation and growth.

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