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Economic Growth in the Grand Rapids Region

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The 2008–2009 economic downturn severely disrupted the growth of the U.S. economy (Figure 1). Workers were especially affected by the recession, with the national unemployment rate rising from 4.4% in 2007 to 10% in October 2009. After a slow recovery, real GDP per capita, which measures the average production value per person, finally reached its pre-recession peak in 2013, but the unemployment rate was still at 7.2% in September 2013.

The economic decline at the end of the decade was even more pronounced in the Grand Rapids region. The unemployment rate in the region reached 12.4% in January 2010. This deeper decline was partially due to the greater reliance on the manufacturing industry, which was especially hard hit during the recession. Manufacturing accounted for 25% of the regional production value in 2012 compared to 13% at the national level. The negative impact of the manufacturing decline on the regional economy can be seen in Figure 2, which shows a $3.1 billion reduction in annual value added by the industry from 2007 to 2009. In fact, more than half of the decline in the regional GDP during that period was due to the manufacturing decline.

Figure 1: Real GDP per capita (chained 2005 dollar)

Real GDP measures the inflation-adjusted total value added by producers in the economy. There is no data available for GR MSA in 2000. GR MSA refers to the Grand Rapids-Wyoming Metropolitan Statistical Area, which comprises Kent, Ottawa, Barry, and Montcalm Counties.

Source: Bureau of Economic Analysis

Other major industries had smaller changes in real GDP during this period. Total real GDP in 2012 was $38,171 million.

Source: Bureau of Economic Analysis

Economic Growth Factors

Economists generally focus on changes in real GDP per capita, not total GDP, when analyzing economic growth. The ratio of total output divided by the population gives a more accurate picture of the well-being of the average person in an economy, thus the growth (or decline) in per capita production is more relevant. From Figure 1 it is apparent that real GDP per capita in the region increased from 2001 to 2005, declined from 2005 to 2009, and has been rising ever since. However, the 2012 level is slightly lower than in 2001, so the average resident ended up slightly worse off if based exclusively on the region’s production. In practice, residents can get income from external sources, and part of the income generated in the region is sent away. That said, the recent upswing in the economy has been fairly steep, and the trajectory suggests that production per capita in the region will soon recover to its 2001 mark.

Looking at production growth in the region since 2001, consider two questions: (1) What are the economic forces behind the overall decline in the real GDP per capita since 2001? and (2) What is driving the relatively sharp recovery that the region has experienced since the end of the recession in 2009?
The answer to question (1) is quite simple and perhaps a bit surprising. The per capita level of production has declined because the population has grown faster than total production. Although Michigan’s population decreased slightly from 2000 to 2012, it has increased by 8% for the GR MSA (see Table 1). This population growth in and of itself is not a bad thing, and potentially reflects, at least to some degree, better economic opportunities in the GR MSA relative to other regions across the Midwest. The fact that total real GDP grew by a slower rate (only 4% between 2001 and 2012) is the explanation for the decline in real production per capita. The region now produces more goods and services than in 2001, but the increase has not been large enough to offset the growth in population.

To answer question (2), for the rise in production per capita since 2009, the seminal work by Robert Solow (1956) can help explain. Solow points out that production growth requires that the physical capital stock grows more quickly than the population, for a constant technology. Although data for capital stock or usage at the regional level are not available, the breakdown of output by industry shows that manufacturing has been recovering very noticeably since 2009 (see Figure 2). Manufacturing remains very important in the region and relies heavily on physical capital (machinery, tools, equipment, building, etc.). Thus, it is likely that the growth or reemployment of the capital stock in recent years allowed a quick recovery in manufacturing output and, thus, in total production per capita.

Beyond physical capital, Robert Lucas (1988) and Paul Romer (1990) studied the importance of advancements in technology and human capital (education, training and experience of workers). As human capital rises, workers become more productive, so more goods and services can be produced. Technology is a broad concept that refers to the underlying state of knowledge about the production process, and when technology advances, more output can be produced with a given amount of inputs.

According to the Census Bureau, 24% of the adults aged 25 years and over in the Grand Rapids region had a college degree or higher in 2000. By 2011, that share had increased by four percentage points to 28%. Though the data does not yield a breakdown by industry, it is reasonable to conclude that human capital has advanced across most sectors. Education and health services particularly rely on human capital, and between 2001 and 2012, the output in this industry has increased by 39%, while employment has risen by 37% (see Figure 3). That industry has experienced a steady growth since 2001, making a direct contribution to the recent upswing in production per capita. The industry growth can also contribute indirectly via the incentive that it creates for potential workers across all sectors to move to the region. Labor is highly

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**Table 1: Population Growth**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2012</th>
<th>Total</th>
<th>Age 0 to 24</th>
<th>Age 25 to 64</th>
<th>Age 65 over</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>281,424,600</td>
<td>313,914,040</td>
<td>+11.5%</td>
<td>+5.7%</td>
<td>+12.7%</td>
<td>+23.3%</td>
</tr>
<tr>
<td>Michigan</td>
<td>9,938,823</td>
<td>9,883,360</td>
<td>-0.6%</td>
<td>-7.4%</td>
<td>-0.3%</td>
<td>+18.4%</td>
</tr>
<tr>
<td>GR MSA</td>
<td>930,880</td>
<td>1,005,648</td>
<td>+8.0%</td>
<td>+0.3%</td>
<td>+10.1%</td>
<td>+26.6%</td>
</tr>
</tbody>
</table>


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**Figure 3: Employment by Industry in the Grand Rapids Region***

* The data includes Newaygo and Ionia Counties, but not Montcalm County. For 2013, the average is calculated using data from January to August. Other major industries had smaller changes in employment during this period. **Source: Bureau of Labor Statistics**
mobile, thus well qualified workers in the Midwest might find West Michigan an attractive place to live as education and health care services expand there.

Technology is difficult to measure explicitly, but better machinery and more efficient management lead to higher labor productivity. This seems to be the case with manufacturing production in the region. Even during the recent recovery, manufacturing output has increased much faster than employment. Production reached its lowest point in 2009, but by 2012 it had risen to a level 11% above the 2001 mark. Employment, on the other hand, declined by a whopping 23% in the same period. Again, because manufacturing accounts for a large share of the regional production, greater labor productivity in the industry seems to have contributed to the sharp rise in production per capita since 2009.

Demographics and labor market
For future economic growth, demographic trends can be a concern. Population has grown 8% from 2000 to 2012 in the region, above the state average, but below the national trend (Table 1). The lower growth rate correlates to the loss of jobs in many industries (total employment in 2013 was still 5% below its level in 2000; see Table 2). Another possible concern is that the population of people under 25 years old has not increased, while the population of people over 65 years old rose by 27% from 2000 to 2012. This aging pattern is more noticeable in the region relative to the national trend, indicating that, despite attractive living conditions (low housing cost, leisure and cultural activities, some great schools, etc.), employment growth is needed to retain or attract younger workers and their families.

Hopefully, the shift in industry composition from low job growth to high job growth industries can help with recruitment in the future. From 2000 to 2013, there were large job losses in manufacturing, trade, and construction related industries (see Figure 3), while the largest gains happened in the education and health industry and in the professional and business services industry (the latter includes activities that generally support businesses like legal, accounting, management, engineering, and computer system services). Leisure and hospitality is also a high job growth industry at the national level, and it has grown rapidly in the region recently. A thriving community is needed to attract and retain educated and entrepreneurial people, so it is important that the economy can rely more on high job growth industries.

References


<table>
<thead>
<tr>
<th>Table 2: Civil Employment</th>
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<tbody>
<tr>
<td><strong>U.S. (million)</strong></td>
</tr>
<tr>
<td>2000</td>
</tr>
<tr>
<td>2007</td>
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<tr>
<td>2010</td>
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<td>2013</td>
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<td>2000–2013 change</td>
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<td>2007–2010 change</td>
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<tr>
<td>2010–2013 change</td>
</tr>
</tbody>
</table>

The values reported are annual average employment (for 2013, it includes data from January to August).

Source: Bureau of Labor Statistics