

Global Opportunities Center

# TRIAD REGIONAL EXPORT INITIATIVE

## MARKET ASSESSMENT CIRCA 2016

Contributing Editors:

Mingyan Li, MA, Math and Data Analytics,  
University of North Carolina at Greensboro

E. Blakely Bell, BA, NC State University,  
Post BA Cert. Project Management, Cornell University

Owen George, CGBP, EDFP, Counselor  
International Business Development  
Small Business & Technology Development Center  
(SBTDC)

Joyce Steffan, Senior Director, Fisher College of Business  
The Ohio State University

[www.go-center.org](http://www.go-center.org)



## Table of Contents

INTRODUCTION .....	3
North Carolina Highlights .....	3
NC Triad Region Highlights .....	4
RATIONALE FOR EXPORTS .....	5
Geography and Demographics.....	5
Competitive Global-Orientation .....	7
Technology.....	7
Tourism .....	7
Education .....	8
Existing Initiatives.....	8
MARKET SCAN .....	8
Regional or Related Metro Area Economy and Performance .....	9
Recent Changes in GMP by Industry.....	9
Performance .....	9
Labor Forces.....	9
Employment .....	10
Unemployment.....	11
Industry Clusters (Traded) .....	12
U.S. and Global Export Trends .....	16
Top Ten Export Markets in 2016.....	17
Regional Export Economy .....	19
Overview .....	20
Overall Export Value, Intensity, and Growth .....	20
CONCLUSION .....	20

## **INTRODUCTION**

The Triad Regional Export Initiative (TREI) was initiated by the Global Opportunities Center in Greensboro, North Carolina. Funded in part by a grant from the Golden Leaf Foundation, TREI aims to drive positive outcomes for a group of rural companies that either are engaged in the early stages of exporting, or those that have not yet exported but provide a product or service that has potential for export success. The primary goal of TREI is to retain and grow jobs in rural communities, and to contribute to building a more sustainable Triad economy.

The purpose of this Market Assessment is to provide background information about the Triad regional area, in respect to exports, economic trends, industry sectors that hold potential for exporting, and strengths/weaknesses of the region in respect to exporting.

## **PIEDMONT TRIAD REGION (PTR)**

The North Carolina Department of Commerce defines the Triad region as one of eight economic development

regions in North Carolina. There are 12 counties in the PTR: Alamance, Caswell, Davidson, Davie, Forsyth, Guilford, Montgomery, Randolph, Rockingham, Stokes, Surry, and Yadkin.

## **NORTH CAROLINA'S EXPORT HISTORY**

For decades, North Carolina's key export sectors were largely tobacco, furniture, and textiles. A recent shift towards globalization in each of these sectors has resulted in a loss of thousands of urban and rural jobs. This development also resulted in a radical shift and diversification in the list of key export sectors. Today, the range of North Carolina export industries is very broad, and includes aerospace and defense, automotive, agriculture products, truck and heavy machinery, biotechnology and pharmaceuticals, business and financial services, machinery, and many more.

## **NORTH CAROLINA BUSINESS ENVIRONMENT**

For the last 11 years, North Carolina was listed in *Forbes* "Top Five Best

States for Business.” North Carolina was ranked second in 2016, and claimed the number one spot in both 2017 and 2018. In 2017, North Carolina’s corporate income tax rate was lowered to 3%, which is among the lowest in the United States.

## **PTR REGION HIGHLIGHTS**

The PTR is in the center of the US East Coast. Excellent roads and railway lines make trade accessible and provide convenient access to both US and global markets via several east coast ports.<sup>1</sup> Three metropolitan areas are situated within the PTR: Greensboro, Winston-Salem, and Burlington.

Currently, PTR has a trainable labor force of approximately 650,000. The region benefits from a workforce with experience in manufacturing, financial services, healthcare, and the biomedical fields, to name a few.

There are more than 60,000 students enrolled in 13 colleges and universities in PTR, with an additional 50,000 student enrolled in nine technical and community colleges.<sup>2</sup>

Caswell, Rockingham, and Surry Counties were designated by the North Carolina Department of Commerce as Tier 1 in 2018, (which defines the most distressed counties). Alamance, Davidson, Davie, Forsyth, Guilford, Rockingham, Stokes, Randolph and Surry Counties were ranked as Tier 2 in 2018, which is less distressed than Tier 1.<sup>3</sup>

Additionally, 9.6% of total jobs in the Greensboro-High Point Metro Area result from Foreign Direct Investment (FDI).<sup>4</sup>

Competitive Asset.” Piedmont Triad Partnership, n.d. Web. 20 Nov. 2017.

<sup>2</sup> “Welcome to the Piedmont Triad Region of NC!” About the Region. The Piedmont Triad Regional Council, n.d. Web. 20 Nov. 2017.

<sup>3</sup> “2018 County Tier Designations,” the North Carolina Department of Commerce. N.d. Web. 11 Dec, 2017.

<sup>4</sup> “FDI in U.S. Metro Areas: The Geography of Jobs in Foreign-Owned Establishments,” Brookings, 20 Jun, 2014. Web. 11 Nov, 2017.

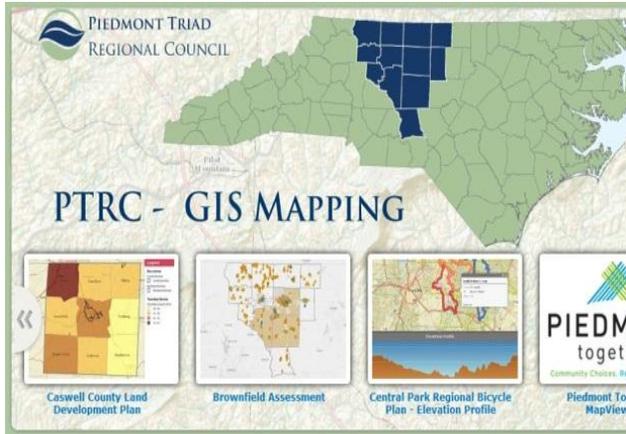


Figure 1 Map of Piedmont Triad Region<sup>5</sup>

## RATIONALE FOR EXPORTS

### Geography and Demographics

As noted above, the PTR is one of eight Economic Development Regions in North Carolina and is situated in north central North Carolina, as shown in the map in Figure 1. Twelve counties lie within PTR, containing 1,700,231<sup>6</sup> residents in 2016. Over half of the land area is considered rural<sup>7</sup> and nine of the 12 counties are defined as rural. From 2010 to 2016, the population in urban areas of PTR increased by 4.1%. The population in the rural counties of PTR increased by 2.3%. Population changes

in urban and rural areas of PTR can be observed in Figure 2. The trend in change of population within rural counties in PTR aligns with the overall trend of population change across the region. While the trends align, the actual rates of change differ and the decline in population is more pronounced in rural counties.

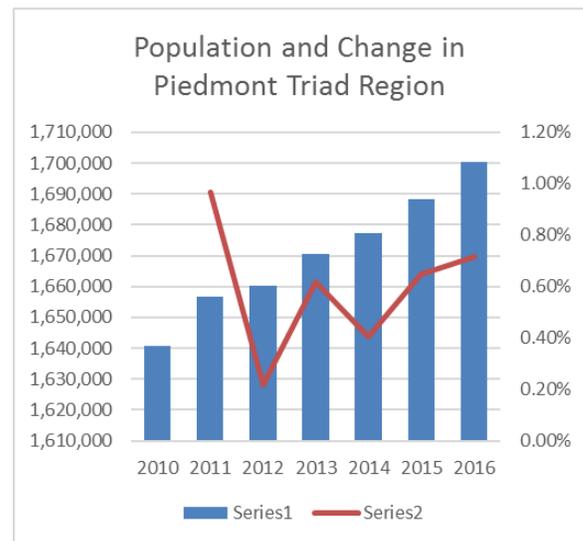


Figure 2 Population Change from 2010 to 2016 in PTR and rural counties

<sup>5</sup> "GIS & Mapping," Regional Planning, About PTRC. Piedmont Triad Regional Council, n.d. Web. 20 Nov. 2017.

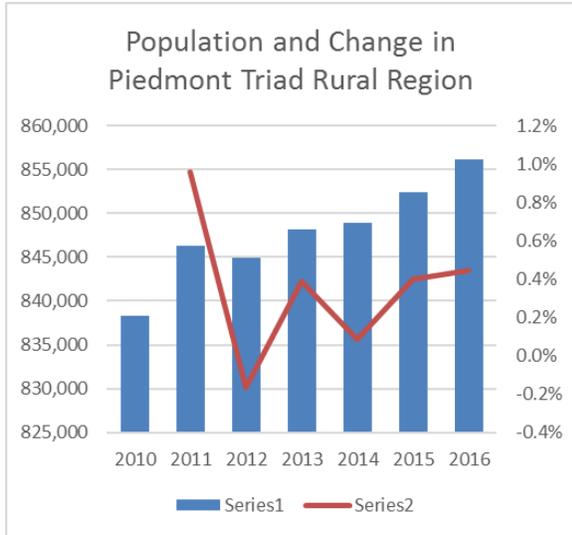


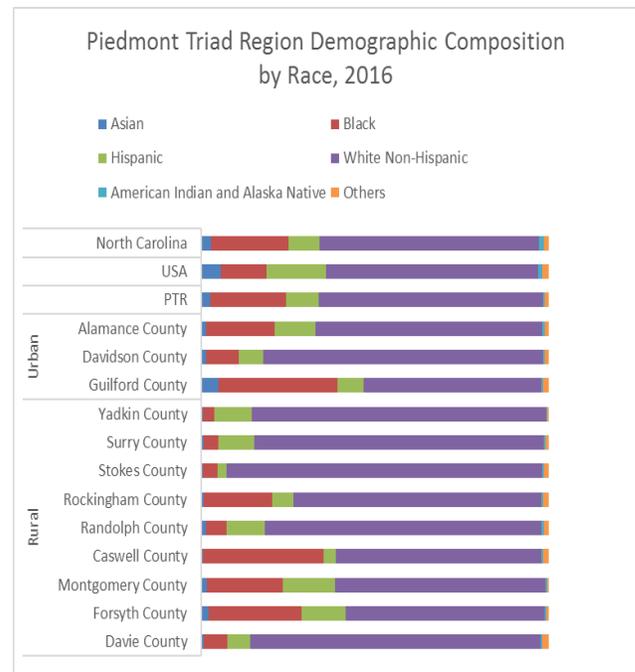
Figure 2 Continued Population Change from 2010 to 2016 in PTR and rural counties of PTR<sup>7</sup>

In 2016, the racial and ethnic demographics were less diverse in the Piedmont Triad Region than they were throughout the United States. Figure 3 shows that the portion of White Non-Hispanic's in the region is larger than it was in the entire US, but the PTR had a larger Black population than the US average.

The growth rates of different ethnicities from 2010 to 2016 also demonstrate a similar trend in the state and the US. When breaking down the region to counties in Figure 3, four of 12 counties in the region were more diverse than the general US population, and three out of

the four were defined as rural counties. The major population of these counties became more diverse than the national level because they contained a larger Black population as well as a similar portion of Hispanic and Asian populations.

The region retained almost the same racial composition in comparison to the State of North Carolina in 2016, other than that the State retained a higher portion of the Asian population.



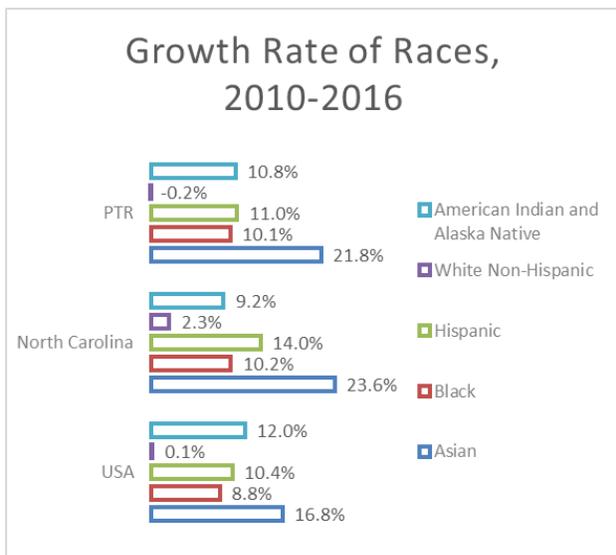
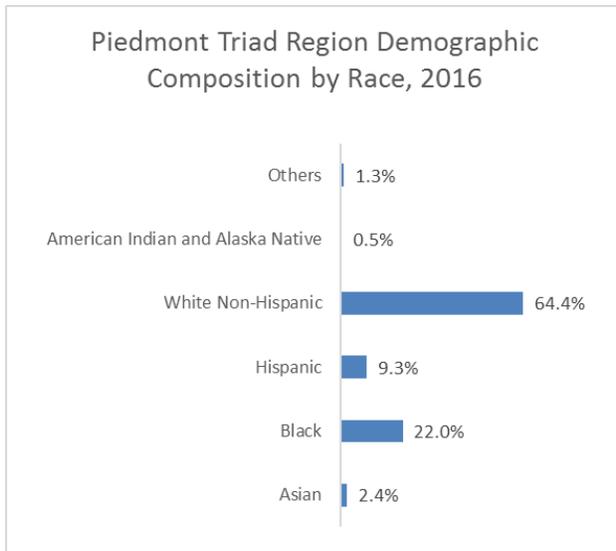


Figure 3 Racial Distribution Comparison<sup>8</sup>

## PTR COMPETITIVE GLOBAL ORIENTATION

### Technology

Over the last ten years, the technology industry in PTR has expanded, while

total manufacturing has decreased from previous decades. The technology industry includes the life science and information sectors.

## EDUCATION FOR JOB GROWTH

Key industrial growth sectors such as life sciences and technology require most of their skilled workforce to have completed studies at community colleges or universities. It is generally predicted that the life science and technology industries will further expand with the continual development of two research parks: Piedmont Triad Research Park and Gateway University Research Park located in PTR.

## Tourism

PTR has an abundant history and culture that attracts a healthy influx of tourists to the region each year. In 2016, PTR hosted 85% of total international visitors to the state of North Carolina. More than 35% of these international visitors to PTR were Canadians, who were also the number

one consumer in the region, having spent an estimated total of US \$79.9 million.<sup>9</sup>

## **Export Education**

PTR is home to 13 universities and colleges and nine technical and community colleges, which educate the future workforce and elevate the proficiency of jobs and the economy in the region. Some of these institutions also provide international business education. The Bryan School of Business at UNCG provides undergraduate and graduate level classes that focus on building students' export knowledge. For example, UNCG's undergraduate business course, Export Odyssey, partners students with export-oriented PTR companies, with the goal for students to help execute a real-life export success story.

## **Existing Export Initiatives**

North Carolina Department of Commerce, along with partner agencies

US Commercial Service, SBTDC, and NC Department of Agriculture have a 20-year history of helping NC small and medium-size companies export their products and services.

In 2008, the Obama administration's National Export Initiative set high goals for growing exports across the US. In North Carolina, a collaborative program dubbed *North Carolina Passport to Export* was established to reinforce the collaboration between our state's agencies that support exporting. That program supported more than 500 NC companies seeking to export. However, the vast majority of the companies supported by the initiative were urban-based companies.

## **MARKET SCAN**

Statistical data reveals that the total gross metropolitan product (GMP) of the four major metro areas within the PTR region increased by more than 16% between 2010 to 2016, as shown in Figure 4. With the exception of one or two years during this period where the

<sup>9</sup> "2016 International Visitation to North Carolina," Visitor Profile Studies, Economic

Development Partnership of North Carolina, n.d. Web. 27 Nov, 2017.

GMP decreased, the total average annual increase rate has been 2.6%. According to the latest data available from the Bureau of Economic Analysis, the total GMP in 2016 was approximately US \$74 billion.

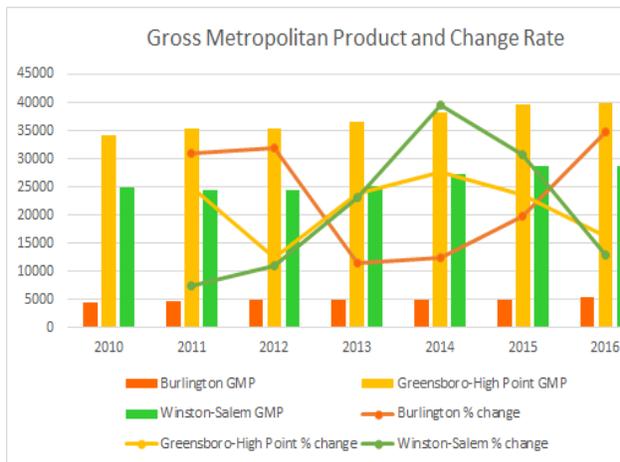


Figure 4 GMP of the Four Metro Areas within PTR, 2010-2016<sup>10</sup>

There is very little information available on GDP at a county level, but the data on GDP per capita shows continual growth in the PTR between 2010 and 2015, as shown below in Figure 5. As mentioned earlier in the demographic section, the population in the region has shown consistent growth between 2010 through 2015, indicating the GDP within

<sup>10</sup> “Gross Domestic Product by Metropolitan Area, 2016,” Regional, the Bureau of Economic Analysis. 20 Sep, 2017, web. 28 Nov, 2017.

<sup>11</sup> U.S. Cluster Mapping Project (<http://clustermapping.us/>), Institute for Strategy

the region grew faster than the growth of population within the region. The increase in the graph reflects healthy economic growth and a promising future for the businesses in the region because they have potential to expand their international markets.

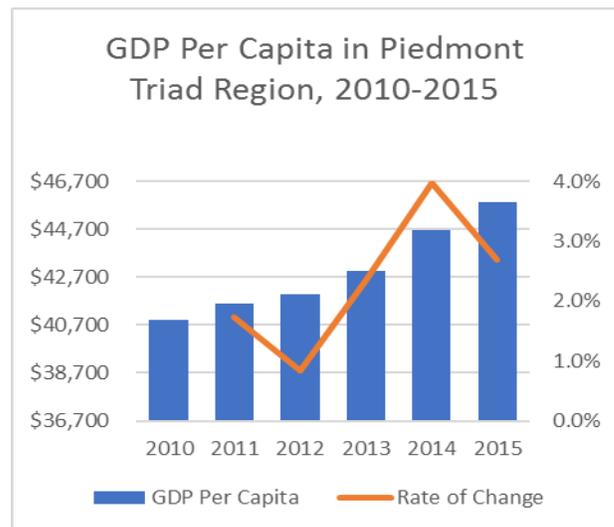


Figure 5 GDP per Capita in Piedmont Triad Region, 2010-2015<sup>11</sup>

## LABOR FORCE

The regional labor force fell slightly from 2012 to 2014, however, this decrease

and Competitiveness, Harvard Business School. Data Sources (<http://clustermapping.us/content/data-sources-and-limitations>). 28 Dec, 2017.

recovered quickly after 2014, as shown in Figure 6.

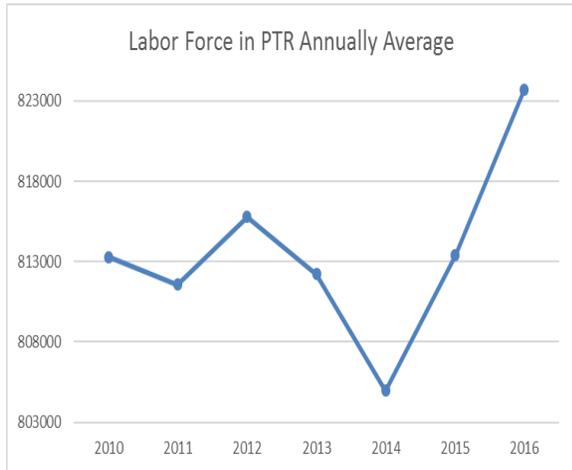


Figure 6 Labor Force in Piedmont Triad Region, 2010-2016<sup>12</sup>

## EMPLOYMENT

Although the regional labor force that is prepared to work has not fluctuated significantly over the past seven years, the overall employment numbers have increased at a constant rate, as shown in Figure 7. This indicates that the economy in the PTR region had been growing within the past seven years, especially during the period when the region was proactively reacting to the recession.

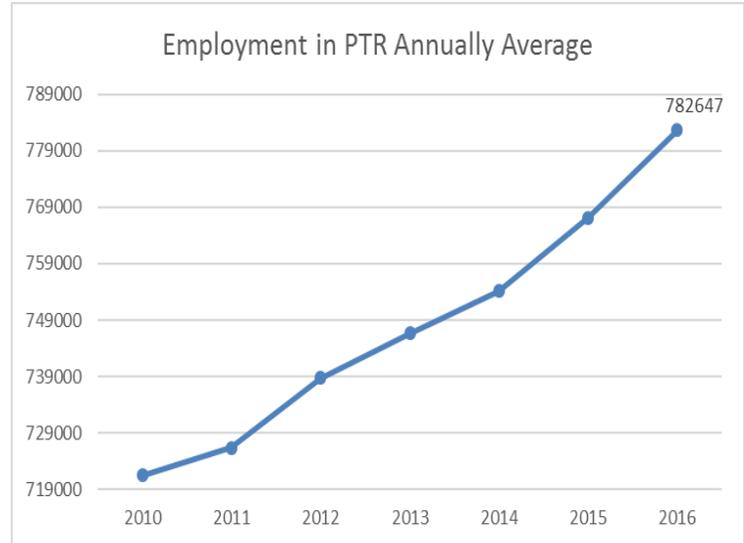


Figure 7 Employment in Piedmont Triad Region, 2010-2016<sup>13</sup>

## UNEMPLOYMENT

A conclusion can be made from the previous section that the unemployment rate has decreased between 2010 and 2016 due to employment rates increasing over the same years. This is true from the data as well as the fact that the unemployment rate decreased at a constant rate from more than 11% in 2010 to 5% in 2016. Compared to the national average unemployment rate, the unemployment rate in the region was higher, as shown in Figure 8. However, it has recently caught up with

<sup>12</sup> Labor force data by county, Bureau of Labor Statistics. 21 Apr, 2017, web. 31 Oct. 2017.

the pace of the national level. This suggests that the regional economy had been rapidly recovering, and provided

confidence that the economy possesses a promise for growth in the future.

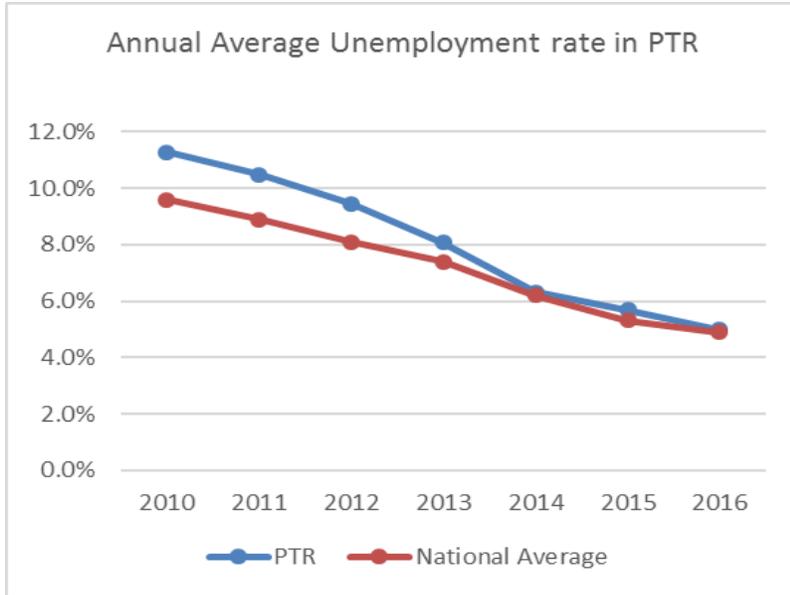


Figure 8 Unemployment Rate in Piedmont Triad Region, 2010-2016<sup>12</sup>

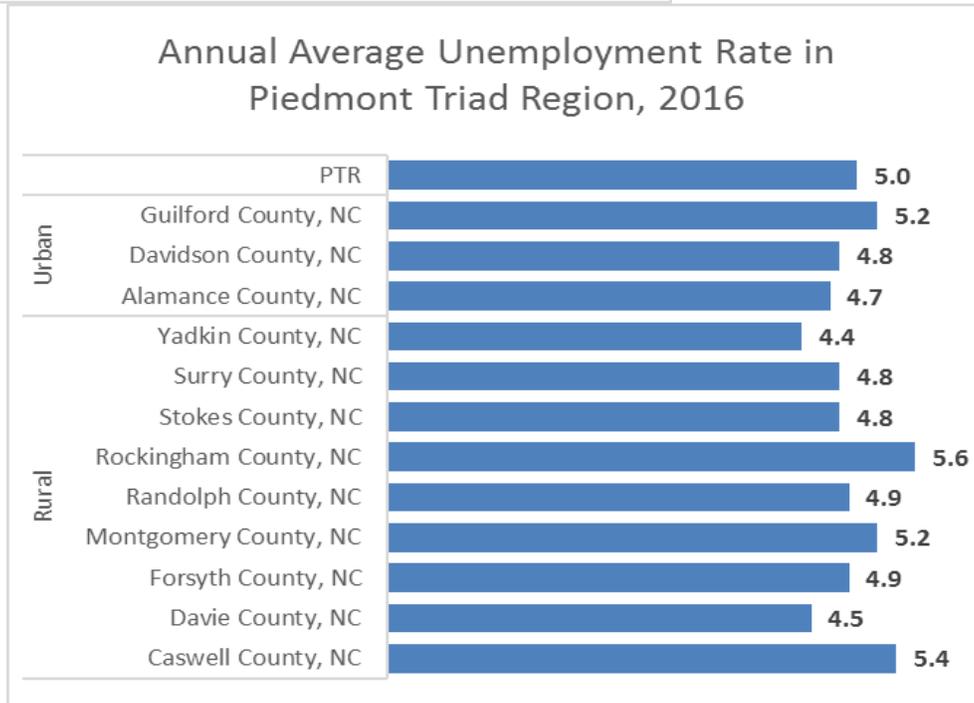


Figure 9 Unemployment Rate Breakdown in Piedmont Triad Region, 2016

## Industry Clusters

There are 49 traded clusters in the PTR region as shown in Figure 10. Business Services, Distribution and Electronic Commerce, and Education and Knowledge Creation were the top three traded clusters that employed the highest percentage of the labor force in 2015.

Employment in these three traded clusters were ranked within the top 50 nation-wide in the respective clusters. Business Services is the strongest traded cluster (Ranked #1) in the region with 41,668 employed, but has been ranking down since 2010 in the US from 53 to 46.

This cluster is followed by Distribution and Electronic Commerce, Education and Knowledge Creation, Textile Manufacturing, Transportation and Logistics, and Furniture clusters.

Even though employment in other traded clusters was one-third, or even a tenth, of the employment in Business

Services, there were still four traded clusters, Textile Manufacturing, Furniture, Tobacco, and Apparel that possess employment that ranked within the top 25 nation-wide in the according traded cluster.

There is a reason behind the fact that these four traded clusters were competent across the country but not comparable with the other clusters within the region—because all these four traded clusters were sectors that the PTR region has been historically famous for several decades. Owing to the established background of companies and the expertise of workers in these four traded clusters, these four traded clusters performed well in 2015.

The rank of Tobacco and Textile Manufacturing in the US has been the highest and the steadiest (rank #2 and #4 respectively) among all other clusters.

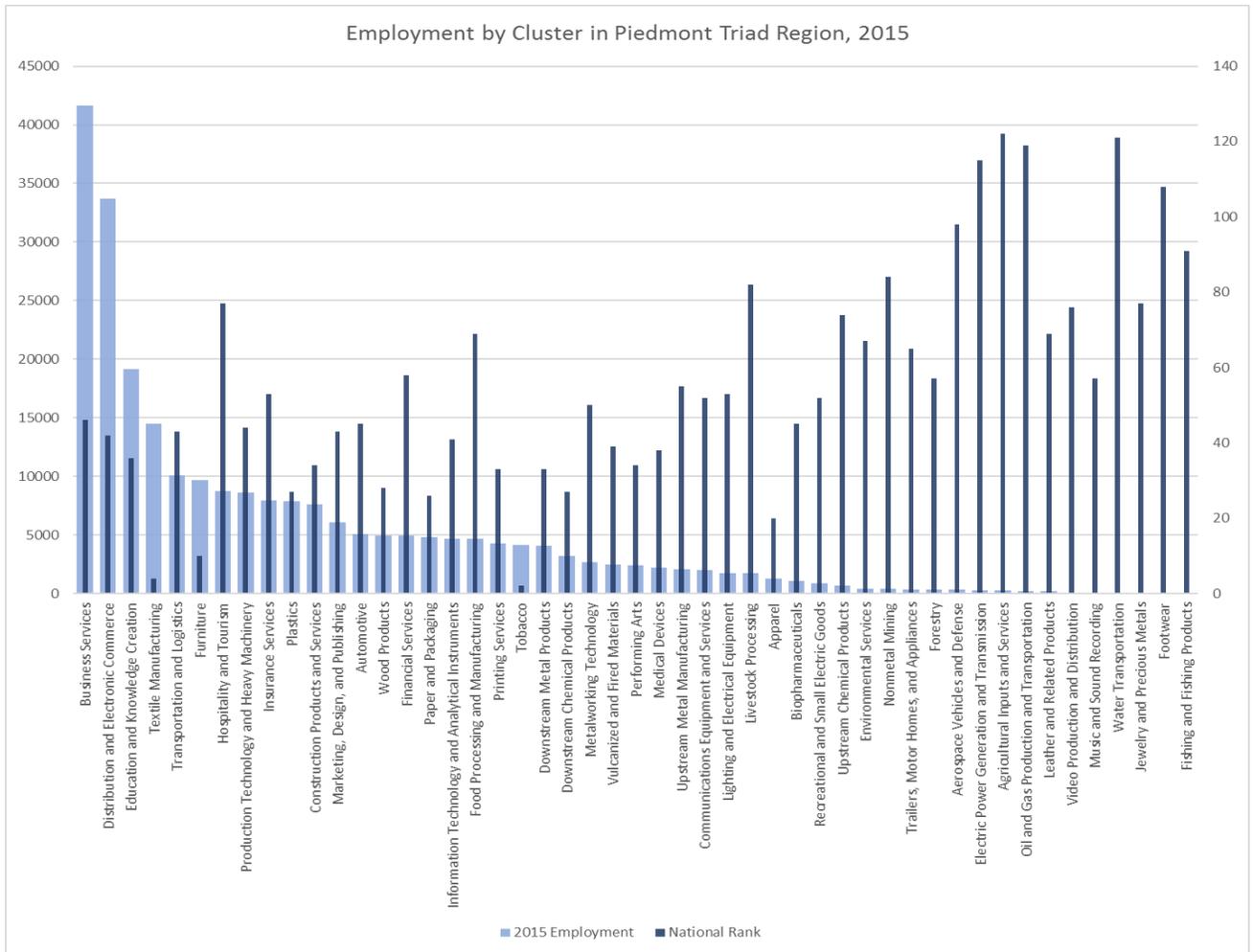
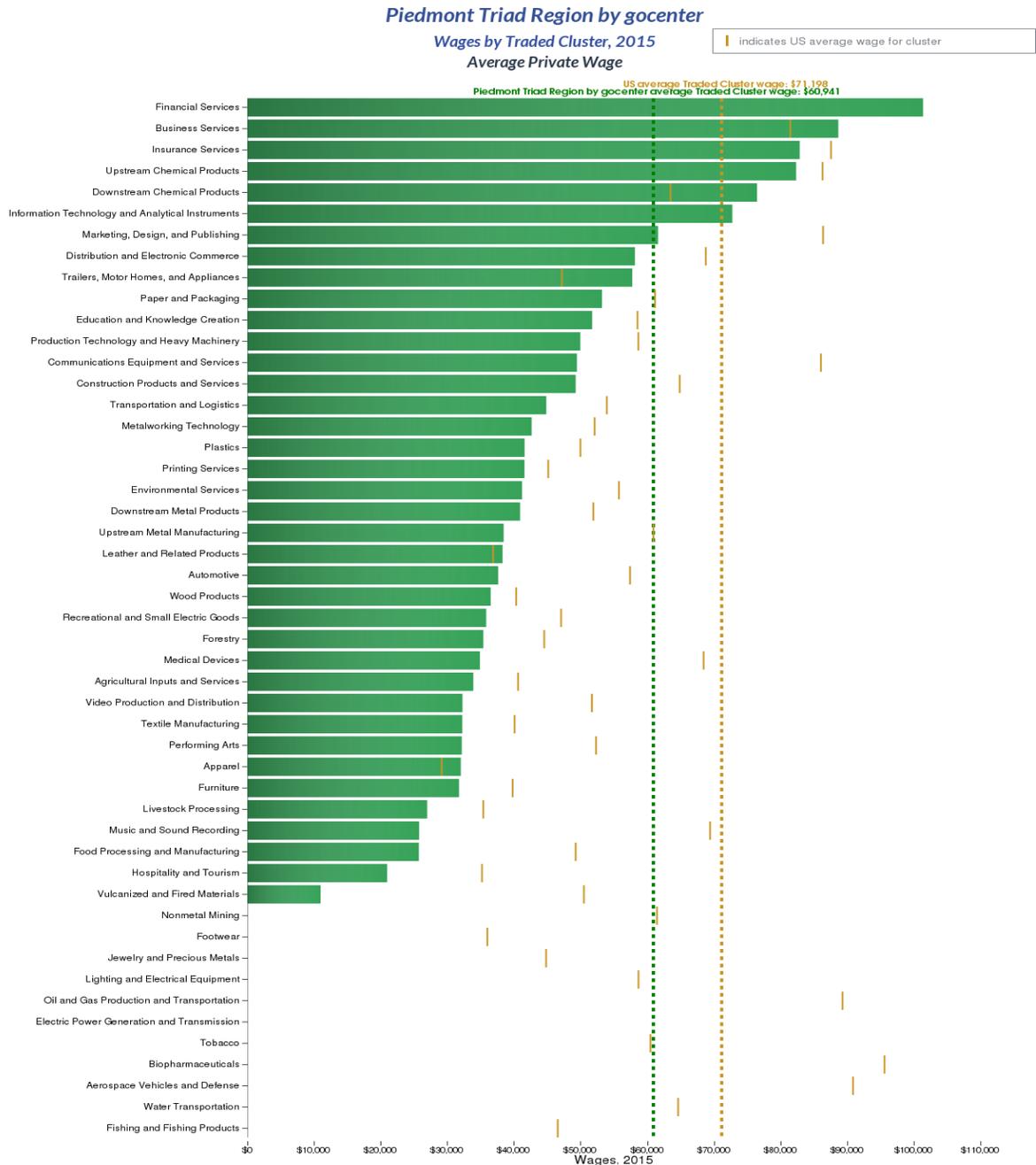


Figure 10 Employment by Cluster in Piedmont Triad Region, 2015<sup>13</sup>

<sup>13</sup> U.S. Cluster Mapping Project (<http://clustermapping.us/>), Institute for Strategy and Competitiveness, Harvard Business School. Data Sources (<http://clustermapping.us/content/data-sources-and-limitations>)

Employment never stands alone; it must be compared with wages in that traded cluster. In 2015, as shown in Figure 11, the top five traded clusters scoring the

highest wages in the region were Financial Services, Business Services, Insurance Services, Upstream Chemical Products, and Downstream Chemical Products.



Source: [U.S. Cluster Mapping Project](#), Institute for Strategy and Competitiveness, Harvard Business School. [Data Sources](#)

*Figure 11 Wages by Traded Clusters in  
Piedmont Triad Region, 2015*

Only two of these five clusters' wages exceeded the national level in those clusters—Business Services and Downstream Chemical Products. All of these five clusters had higher wages than the average national level wage across all clusters.

There were also three other traded clusters paid higher wages than national levels in their own clusters—Trailers, Motor Homes, and Appliance, Leather and Related Products, and Apparel. However, it is not easy to draw a conclusion of the comparison between the national level and the regional level since there are many discrepancies in different aspects, but the focus of the region can be observed through this delineation.

Figure 12 demonstrates job creation by traded clusters in the region and the expected job creation in the region in 2015, of which 21 traded clusters achieved greater job creation than expected.

Even though 24 traded clusters attained positive job creation, 20 traded clusters had negative job creation in 2015. Fortunately, the net job creation among all traded clusters was positive in 2015.

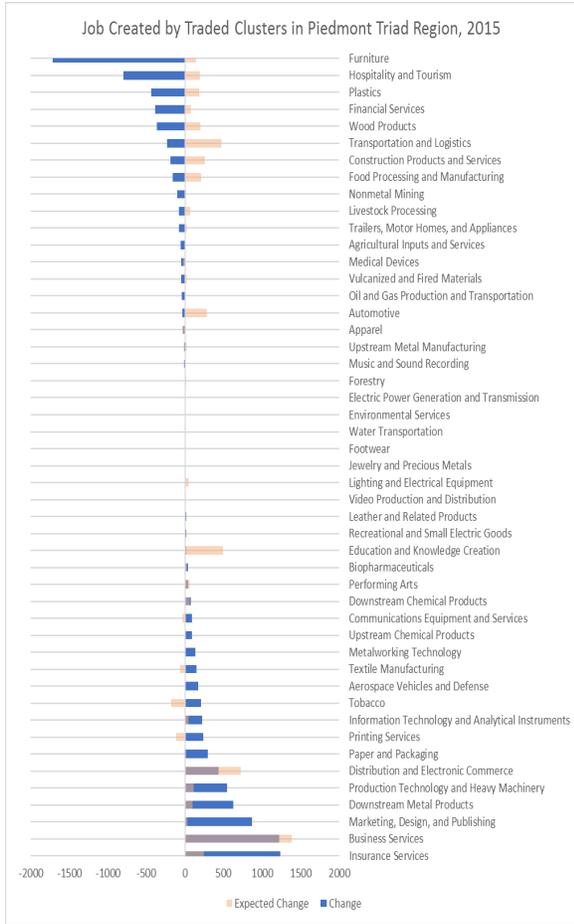


Figure 12 Job Creation by Traded Clusters in Piedmont Triad Region, 2015<sup>15</sup>

## US and GLOBAL EXPORT TRENDS 2016

The US economy has been increasing at a rate of about 4% annually with some fluctuation since 2010. Export revenues increased steadily until 2014 at 13.8%, at which time the trend shifted to a decrease in exports since 2015, as

shown in Figure 13. In data for 2016, the export rate dropped to 12%. Figure 14 demonstrates the present share of the export of goods, services, and income receipts. Export of goods made up the most significant portion, at around 50% of total U.S. exports.

However, the exportation of goods has been decreasing since 2013, leading to a decrease in total exports out of the US in the previous few years. Fortunately, both the export of services and income receipts has been increasing, although not yet at a rate significant enough to offset overall decreasing rates of export intensity.

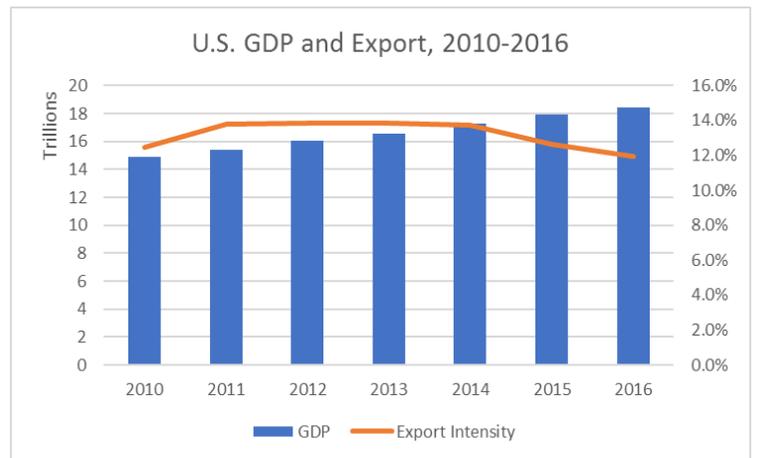


Figure 13 GDP and Export Intensity in the U.S., 2010 - 2016<sup>1</sup>

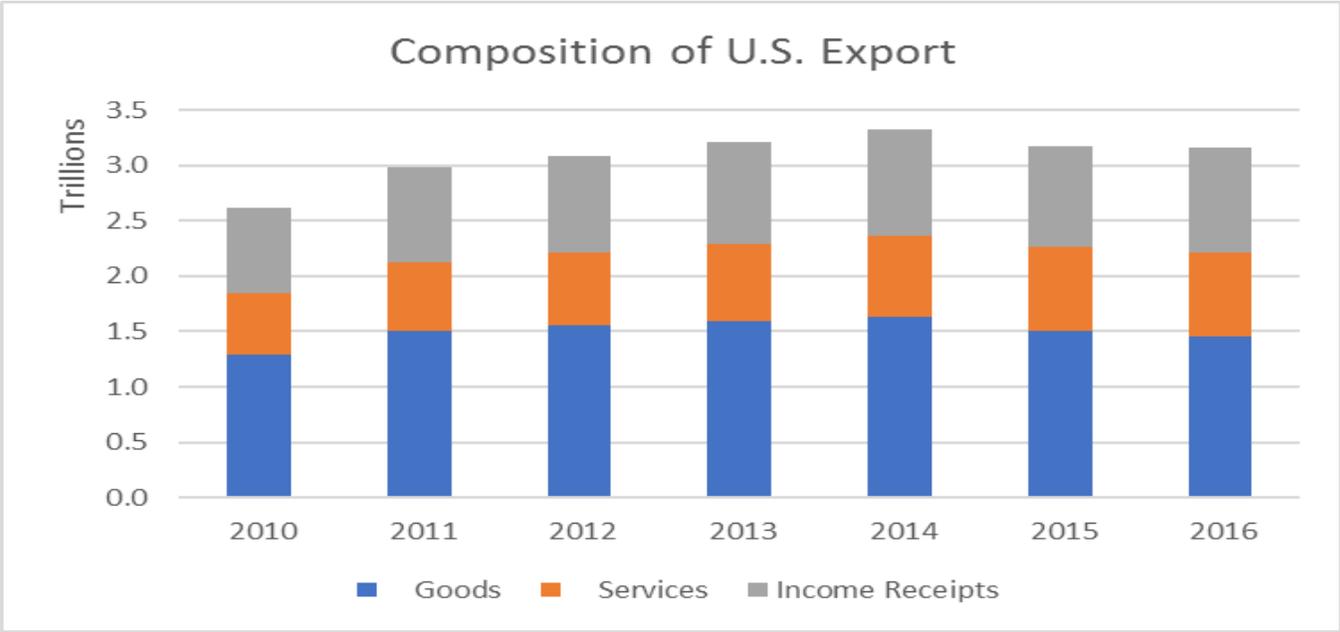


Figure 14 Composition of U.S. Export, 2010-2016<sup>16</sup>

**TOP TEN EXPORT MARKETS IN 2016**

In recent history, the two largest export markets for the US have been our bordering neighbors, Canada (US \$266.76B in 2016) and Mexico (US \$229.7B in 2016). The combined export value of these two markets is twice that of the next closest market, China, which had an export value of US \$115.6B in 2016, as shown in Table 1.

One of the most important reasons for these two markets comprising 34.23% of the total US export value is the North American Free Trade Agreement (NAFTA). NAFTA has allowed for an easier and more cost-effective transfer of goods between Canada, the US, and Mexico. The overall value of exports in the top 10 US markets has been decreasing since 2010, particularly the export value to Japan and Canada.

Trends show that exports to Mexico and China have increased overall since 2012, and should be noted that in the two most recent years, the data reflects a decrease in exports to these two markets, a trend that could continue in the future. France appears to be an emerging export market for the US, with an overall increase of 2.17% since 2012, but a higher rate of 3.61% since 2015.

RANK 2016	COUNTRY	Total Export (Billion USD)	SHARE (%) 2016	% CHANGE	
				2012-2016	2015-2016
1	Canada	266.76	18.39	-8.82	-4.92
2	Mexico	229.7	15.84	6.4	-2.56
3	China	115.6	7.97	4.6	-0.4
4	Japan	63.23	4.36	-9.63	1.27
5	United Kingdom	55.28	3.81	0.78	-1.47
6	Germany	49.16	3.39	1.64	-0.96
7	Korea	42.31	2.92	0.06	-2.62
8	Netherlands	39.68	2.74	-2.3	-1.25
9	Hong Kong	34.87	2.4	-6.85	-6.07
10	France	32.62	2.25	2.17	3.61

*Table 1 US Top 10 Market by Total Export<sup>14</sup>*

Table 2 shows small and medium-sized enterprises (SME) share 33.4% of the total export value of the 97.7% of exporters at the national level in 2014. It is predicted that these enterprises are going to be an emerging presence, and increasingly prominent piece in future U.S. exports.

State	SME Value	SME Pct. of Exports	SME Pct. of Exporters
U.S.	4.82E+11	33.4	97.7
North Carolina	7.033E+09	23.3	88.2

*Table 2 SME Share of Export in the U.S., 2014<sup>15</sup>*

<sup>14</sup> "Top Trading Partners for United States," TPIS, International Trade Administration, U.S. Department of Commerce, n.d., web. 04 Dec, 2017.

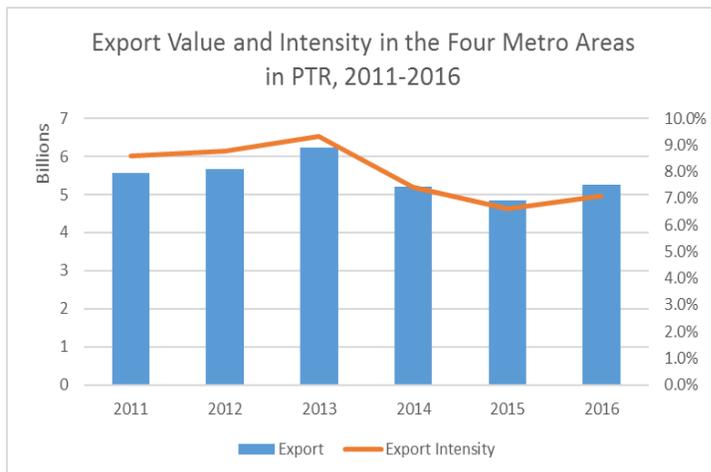
<sup>15</sup> "2014 SME Exports," the Office of Trade and Economic Analysis (OTE), Industry and Analysis, International Trade Administration, U.S. Department of Commerce. N.d., web. 08 Nov, 2017.

In 2016, export of goods and services supported approximately 10.7 million jobs in the US, however, this number was estimated 100,000 less than jobs supported by exports in 2015.<sup>19</sup>

## REGIONAL EXPORT ECONOMY

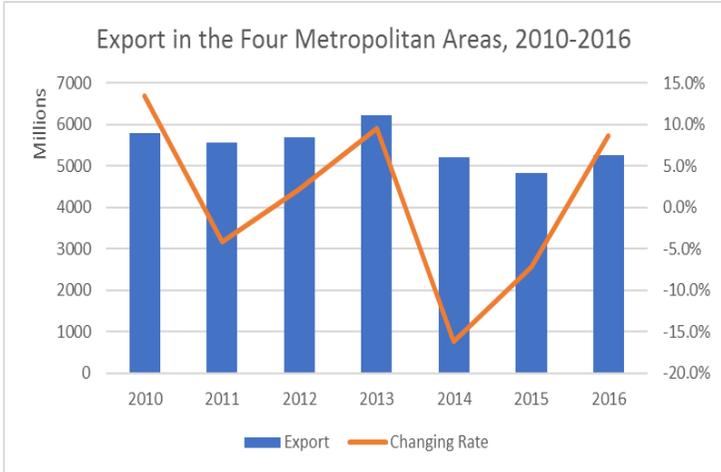
### Overview

There are three major metropolitan areas comprised of four different cities within the Piedmont Triad Region (PTR): Burlington Area, Greensboro-High Point Area, and Winston-Salem Area. The total export intensity (percentage share) of Gross Metropolitan Product (GMP) reflects a decreasing trend; however, the value of exports within these metro areas has been fluctuating since 2010.



*Figure 15 Export Value and Intensity in the Four Metro Areas in Piedmont Triad Region, 2011-2016<sup>16</sup>*

<sup>19</sup> “Jobs Supported by State Exports 2016,” International Trade Administration, U.S. Department of Commerce, Dec 2017, web. 04 Dec, 2017.



*Figure 16 Export in the Four Metropolitan Areas in Piedmont Triad Region, 2010-2016<sup>16</sup>*

**OVERALL EXPORT VALUE, INTENSITY AND GROWTH**

The overall export value of the PTR’s metropolitan areas decreased by 9.4% between 2010 and 2016. Although the export share of GMP suggests an overall decreasing trend, exports increased between 2011 and 2013, and in 2013 the export intensity reached a peak of 9.3% between 2010 and 2016. As shown in Figure 16, in 2016 we see a slight increase in export value, although given the fluctuating rates since 2010, it is difficult to predict if this increase will continue.

The goal of the Triad Regional Export Initiative is to support an increase in this trend in the coming years.

**CONCLUSION**

As the Triad Export Initiative team collected data from various sources for this report, the region has been in a steady growing stage. Although the PTR indicators are not as strong as the average US level, the region has been proactively catching up. Many

<sup>16</sup> “MSA 2016 (Full Year) Exports,” the Office of Trade and Economic Analysis (OTEA), Industry and Analysis, International Trade Administration, U.S. Department of Commerce. N.d., web. 08 Nov, 2017.

companies that already have export and international business experience are located within the region. Their output is a plus to the regional economy. Increased exports from the PTR will help the economy in the region to become more resistant to any future unpredicted economic crisis. Rural SME companies that hold the potential to increase or begin selling their products in a global market need opportunities and resources that enable them to learn from experts.

The Global Opportunities Center's Triad Regional Export Initiative will serve as a powerful resource for supporting rural export companies located in the PTR.