



ECONOMIC DEVELOPMENT
PARTNERSHIP OF NORTH CAROLINA

2015

PORT OF WILMINGTON

INTERNATIONAL TRADE REPORT

NORTH CAROLINA

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MESSAGE FROM THE DIRECTOR: 2016 NORTH CAROLINA STATE OF TRADE

As we close the books on 2015, I am pleased to share our annual report. This report highlights our top trading partners, our healthy export sectors, and brings insight to our global economy. Looking forward to 2016, this report also considers what the future may look like for North Carolina companies trading abroad.

Overall exports from N.C. reached \$30 billion, a 4% decrease from 2014 in nominal terms, but in real terms (adjusted to 2015 dollars) the state achieved 3% annualized growth. Long-term growth shows a 20% increase in the past five years and 33% in the last ten years. North Carolina continues to show persistent and robust growth across all major export sectors.

In 2015, as our economy here at home continued its recovery, we began to see a notable level of global economic disruption. As economic growth slowed with many of our trading partners, we watched our dollar strengthen against a variety of foreign currencies. Our top trading partners Canada and Mexico both experienced depreciation of their currency against the dollar, Canada 14% and Mexico 16%, yet exports from N.C. continued to rise, Canada with a 7% increase and Mexico 13%.

Looking ahead to 2016, slow economic growth globally and our strengthening dollar could potentially have a negative impact on exports. For this reason it is important to engage with the Economic Development Partnership of North Carolina's (EDPNC) International Trade Division. With the changing conditions abroad for state exporters, the mission of the EDPNC International Trade Division is critically important. We are committed to helping North Carolina companies enter foreign markets and grow exports. Our international trade experts – headquartered in North Carolina and with offices in Canada, China, Japan, Mexico, Europe and a new office in Korea – help businesses navigate how best to both enter and increase their presence in global markets.

The International Trade Division remains committed to assisting businesses with risk mitigation, especially as world economies experience increasing levels of volatility. Despite the very real challenges ahead, the opportunities for state exporters are vast. The International Trade Division of EDPNC looks forward to continued growth and expansion in our international markets. To learn more about collaborative opportunities, I encourage you to contact me directly.



Rick Hill, MBA

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Economic Development
Partnership of North Carolina
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COLLABORATING TO PROMOTE EXPORTS

In a constantly changing global market, the EDPNC collaborates with companies across the state to promote exports and increase the visibility of North Carolina in international trade. EDPNC understands that trade in global markets come with a certain degree of risk. We can provide assistance to help you minimize and mitigate that risk. Whether your business is new to foreign markets or has been exporting for decades, we offer services that can assist you. The companies below offer just a few examples of how EDPNC can help you tap into international markets:

THROUGH THE SUPPORT OF THE EDPNC, ENSOLVE WAS PROVIDED A STEP REIMBURSEMENT TO ATTEND THE BIOMARINE CONFERENCE IN HALIFAX. AHEAD OF THAT CONFERENCE, NANCY WARD OF THE EDPNC ARRANGED A BUSINESS MEETING BETWEEN ENSOLVE BIOSYSTEMS AND JASTRAM TECHNOLOGIES... THIS LED TO THE EXECUTION OF A SALES REPRESENTATIVE AGREEMENT AND ULTIMATELY SALES OF ENSOLVE'S PRODUCTS THROUGH JASTRAM'S CUSTOMERS.

— JASON A. CAPLAN, PHD
PRESIDENT & CEO, ENSOLVE BIOSYSTEMS, INC.

FOR OUR COMPANY, THE ABILITY TO LEVERAGE THE PROGRAMS ADMINISTERED BY EDPNC AT FOREIGN TRADE SHOWS HAS OFFERED A WAY TO GROW OUR EXPORT BUSINESS... THE SUPPORT PROVIDED BY NORTH CAROLINA'S FOREIGN OFFICES HAS BEEN VITAL TO OUR SUCCESS ABROAD.

— JIMMIE LEE
PRESIDENT, TIDES AND TIMES GROUP USA, INC

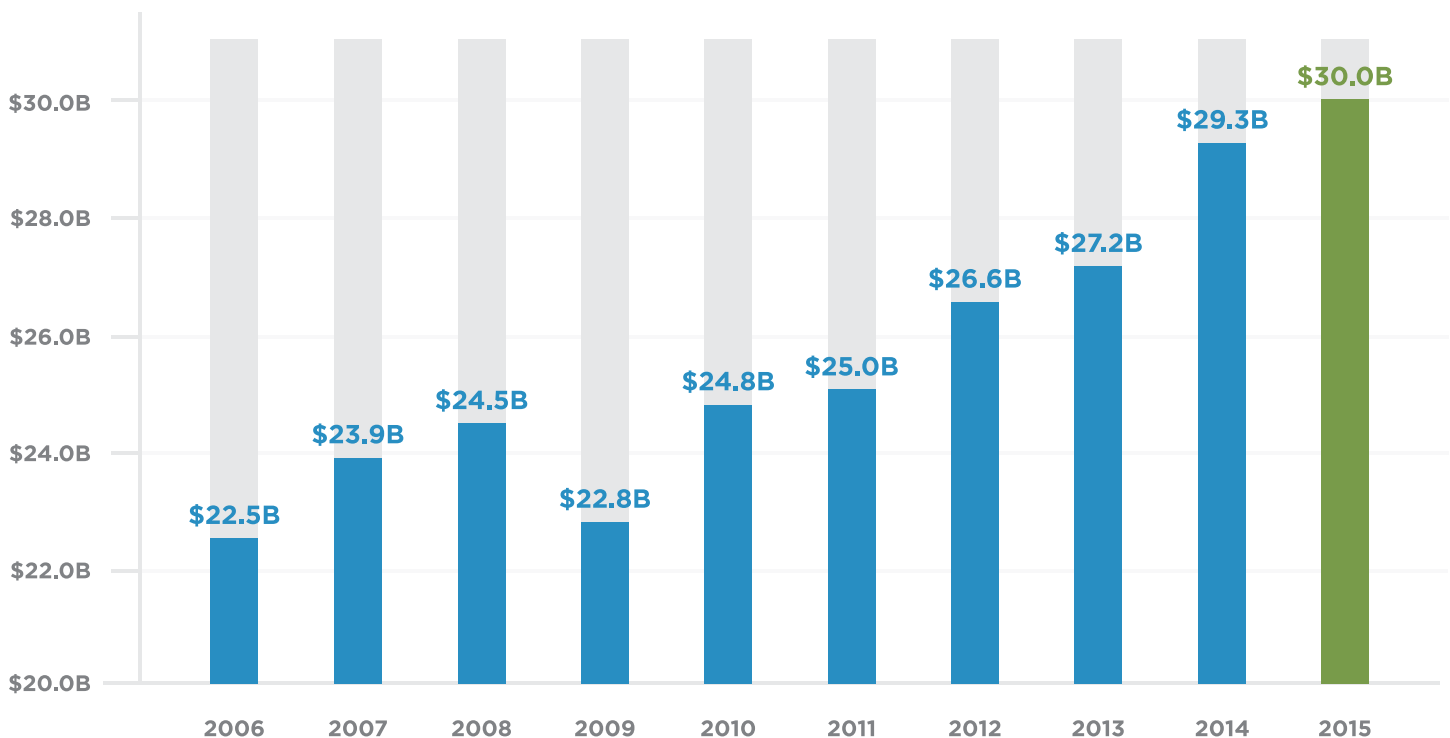
I WANT TO THANK YOU AND YOUR COLLEAGUES IN THE STATE OF NORTH CAROLINA JAPAN OFFICE FOR YOUR ONGOING SUPPORT OF KBI EFFORTS TO EXPAND OUR BUSINESS... I REALLY APPRECIATE THE STRONG SUPPORT PROVIDED BY THE EDPNC AND THE STATE.

— THOMAS JUNG
VP BUSINESS DEVELOPMENT, KBI BIOPHARMA

TOTAL EXPORTS GROW 3% IN REAL TERMS

In 2015, global markets experienced a notable level of macroeconomic disruption. In spite of this turmoil, North Carolina exports reached \$30 billion.¹ This is a decrease of 4% from 2014 in nominal terms, but in real terms (adjusted to 2015 dollars), the state achieved 3% annualized export growth.²

North Carolina Global Exports
(in 2015 dollars)



TRENDS IN TOTAL EXPORTS

North Carolina's export volume has shown resiliency during periods of economic contraction and strong growth during economic expansions. In the midst of the Great Recession, percentage decreases in exports were much lower in the state (-7%) than the region (-9%) and nation (-12%). For the past two years, statewide growth has exceeded regional and national export growth trends.

Percent Change in Yearly Total Exports
(in 2015 dollars)

Year	NC Change Year Over Year	NC % Change	SE Change Year Over Year	SE % Change	US Change Year Over Year	US % Change
2011	229M	↑ 0.9%	27.0B	↑ 10.1%	98.4B	↑ 7.7%
2012	1526M	↑ 6.1%	19.6B	↑ 6.6%	52.5B	↑ 3.8%
2013	608M	↑ 2.3%	0.6B	↑ 0.2%	37.8B	↑ 2.7%
2014	2090M	↑ 7.7%	10.4B	↑ 3.3%	49.6B	↑ 3.4%
2015	763M	↑ 2.6%	-2.8B	↓ -0.8%	-6.3B	↓ -0.4%

A DECADE OF GROWTH

In 2015, North Carolina's export growth (+3%) outpaced both regional (-1%) and national (<+1%) trends. This is consistent with long-term growth trends. Statewide exports have grown 20% in the last 5 years and 33% in the last 10 years. Over the past 5 years, North Carolina's export growth has been double both regional (+9%) and national (+10%) growth levels.



+3%
2015
1 YR



+20%
2011-2015
5 YR

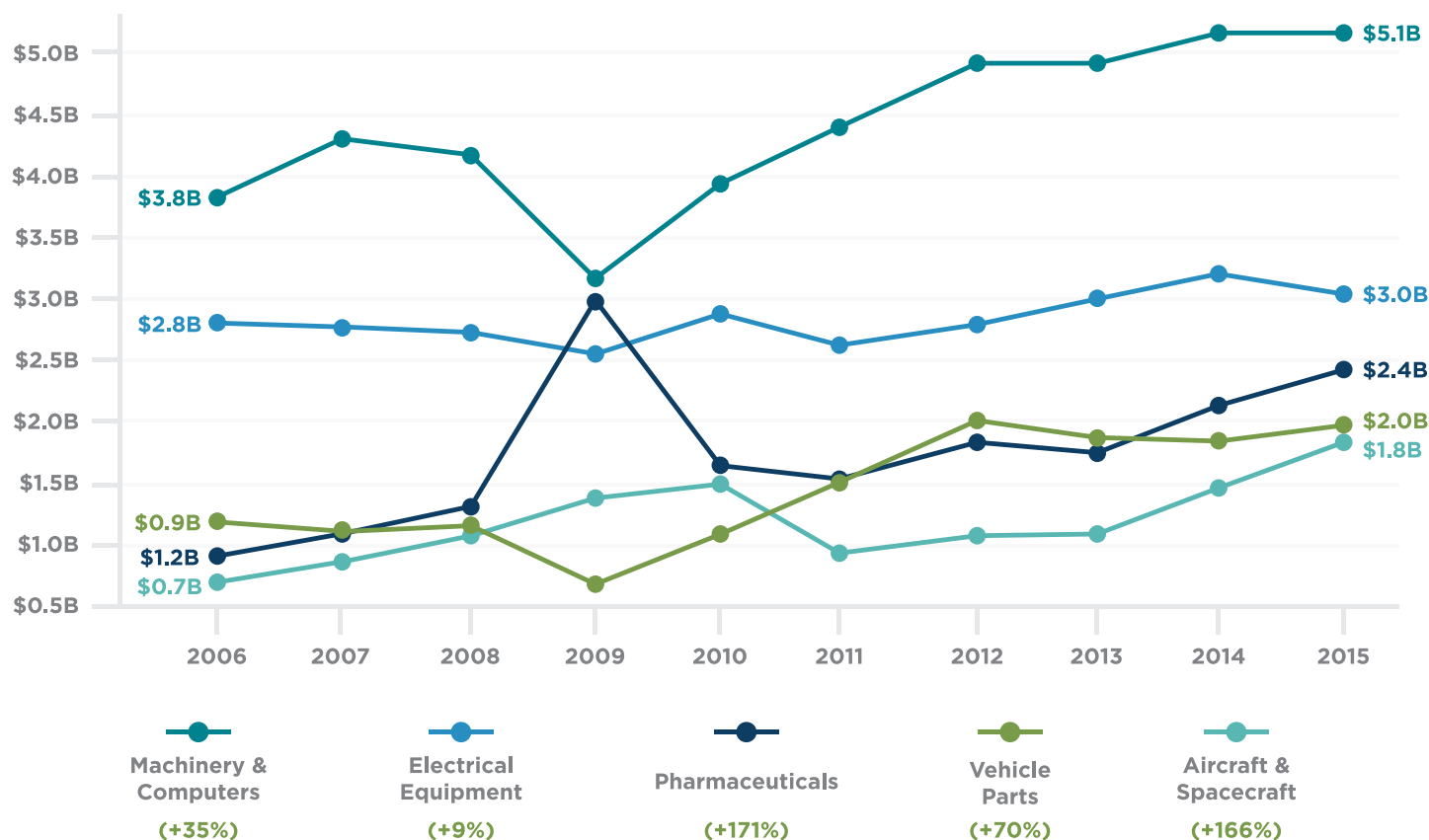


+33%
2006-2015
10 YR

TOP 5 EXPORT CATEGORIES

Machinery and computers are North Carolina's largest export category. This category, which has shown remarkable growth since 2010, totaled over \$5.1 billion in 2015. The second largest category is electrical equipment. Electrical equipment totaled \$3.0 billion and has shown steady volume over the past decade. All other top categories are also growing quickly, including pharmaceuticals (+171%) and aircraft (+166%).

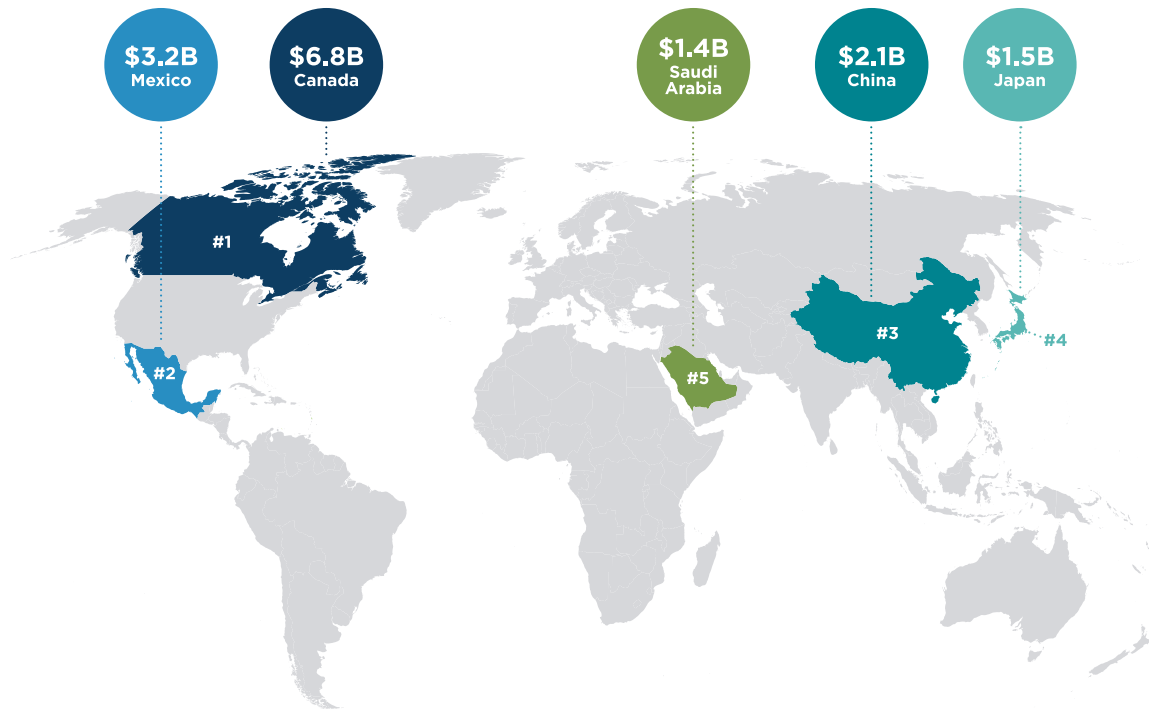
10 Year Growth of Top 5 Export Categories
(in 2015 dollars)



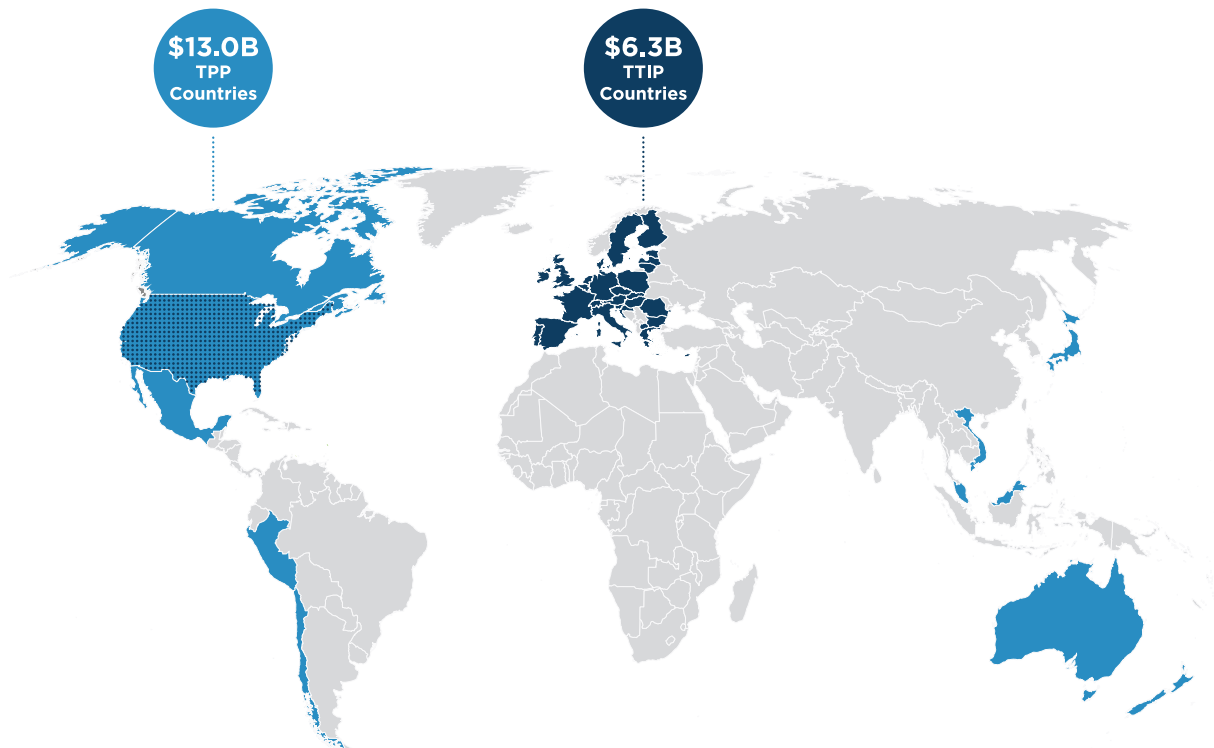
KEY COUNTRIES AND PROPOSED TRADE REGIONS

The top countries for North Carolina's exports are geographically and economically diverse. Combined, North Carolina exported nearly \$15 billion to the below five markets in 2015. Additionally, in the coming year, major progress is expected on two agreements: the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). The ultimate disposition of these agreements will be an important influence on future trade volumes.

Top Countries for North Carolina's 2015 Exports



Trade Agreement Negotiations In-Progress



United States, Japan, Malaysia, Vietnam, Singapore, Brunei, Australia, New Zealand, Canada, Mexico, Chile, Peru

United States and European Union Member Countries

EXPORT MARKET OVERVIEW

The table below indicates how North Carolina's export volume ranks against other states nationally and in the southeastern region. The state maintains a ranking near the top quartile for all major export markets. The second table below gives an overview of trade activity across North Carolina's top 20 markets. In 2015, over 83% of North Carolina's total export volume went to these markets. Most (14 out of 20) markets experienced annual increases, and on average these markets grew at 9%.

Top 5 Export Market Rankings

Rank	Country	2015 National Rank	2015 Southeast Rank
1	Canada	#13	#3
2	Mexico	#12	#4
3	China	#14	#6
4	Japan	#12	#4
5	Saudi Arabia	#3	#1

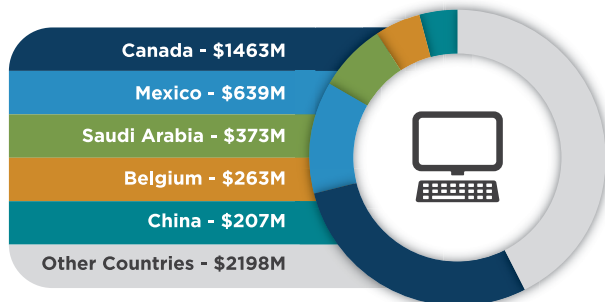
**Top 20 Export Market Summary
(in 2015 dollars)**

Rank	Country	2015 Exports	1 Year Change	5 Year Change	Top Specific Category
1	Canada	6803M	↑ 7%	↑ 16%	Compression Ignition Engines
2	Mexico	3186M	↑ 13%	↑ 73%	Compression Ignition Engines
3	China	2095M	↓ -16%	↓ -14%	Semiconductor Devices
4	Japan	1468M	↓ -10%	↓ -3%	Medicaments
5	Saudi Arabia	1435M	↑ 25%	↑ 337%	Aircraft Parts
6	France	1136M	↑ 7%	↑ 54%	Aircraft Engines
7	United Kingdom	1009M	↑ 7%	↑ 13%	Spark Ignition Engine
8	Germany	1005M	↑ 7%	↓ -3%	Spark Ignition Engine
9	Honduras	861M	↑ 10%	↓ -13%	Cotton Yarn
10	Belgium	785M	↓ -5%	↑ 55%	Assembly Machines
11	Hong Kong	772M	↓ -11%	↑ 11%	Semiconductor Devices
12	Netherlands	723M	↓ -2%	↑ 22%	Medicaments
13	South Korea	618M	↑ 2%	↑ 10%	Turbojets and Gas Turbines
14	Brazil	562M	↓ -9%	↓ -16%	Fork-Lift Trucks
15	Australia	482M	↑ 10%	↑ 7%	Bulldozers, Graders, Scrapers
16	Singapore	426M	↑ 18%	↑ 33%	Precious Metal Articles
17	India	414M	↑ 5%	↑ 87%	Diphosphours Pentaoxide
18	Ireland	380M	↑ 47%	↑ 210%	Human and Animal Blood
19	Dominican Republic	336M	↑ 6%	↑ 30%	Cotton Yarn
20	Spain	328M	↑ 60%	↑ 128%	Antisera and Blood Fractions

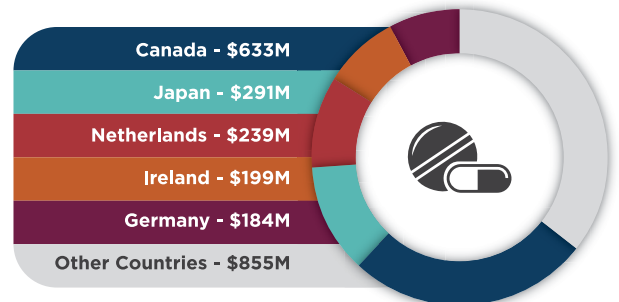
MAJOR EXPORT SECTORS

Canada, Mexico, China, Japan, and Saudi Arabia constitute 49% of the state's exports across North Carolina's top six merchandise categories. Beyond these countries, exports across top categories are also sent to a variety of other international markets

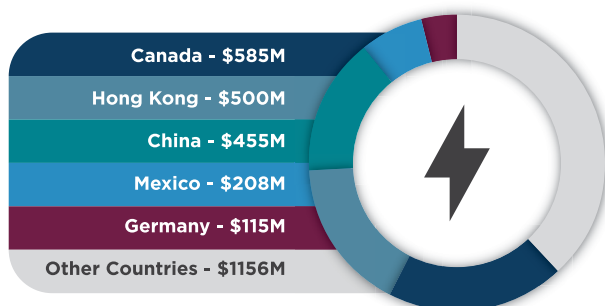
Machinery & Computers



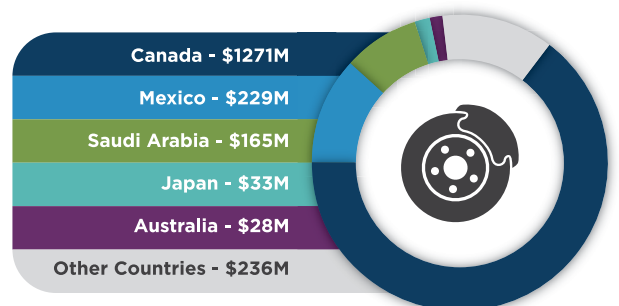
Pharmaceutical Products



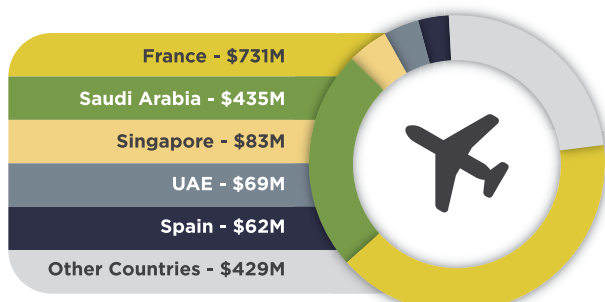
Electrical Equipment



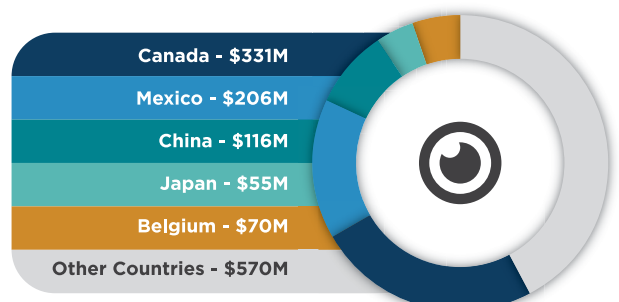
Vehicle Parts



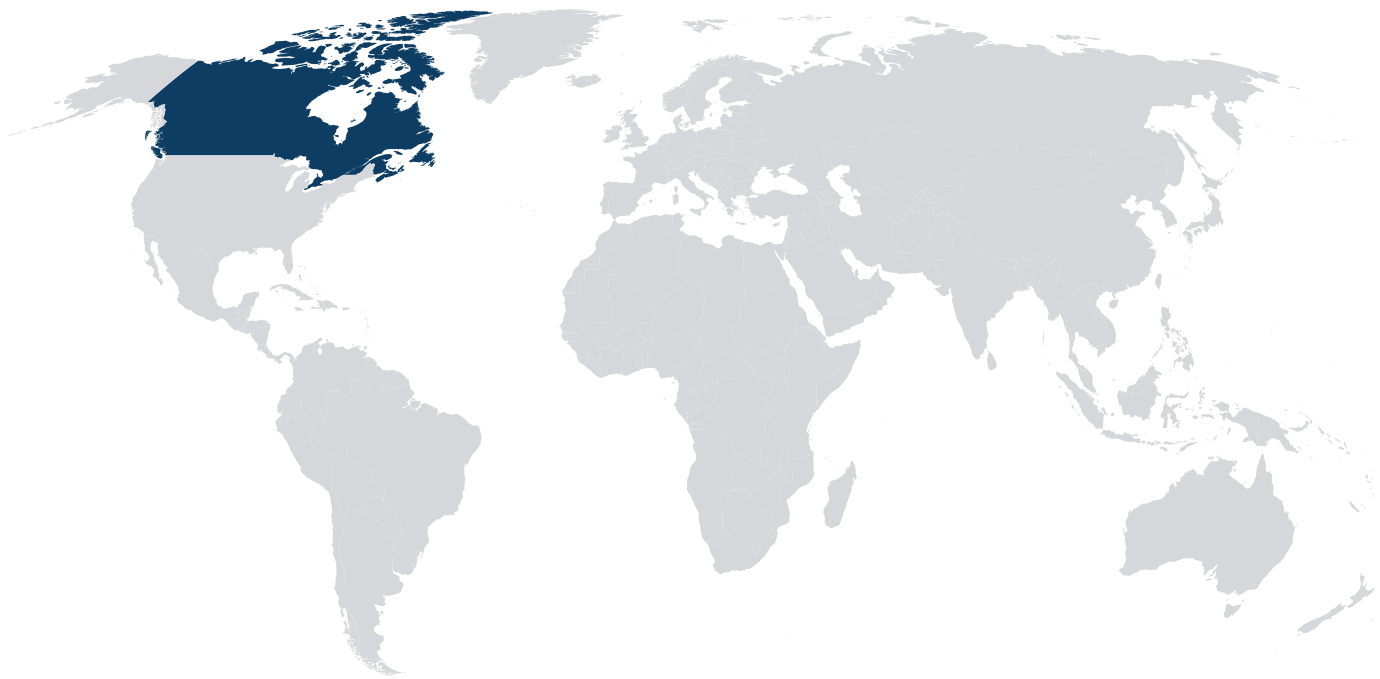
Aircraft & Spacecraft



Optical & Medical Instruments



COUNTRY OVERVIEW: CANADA

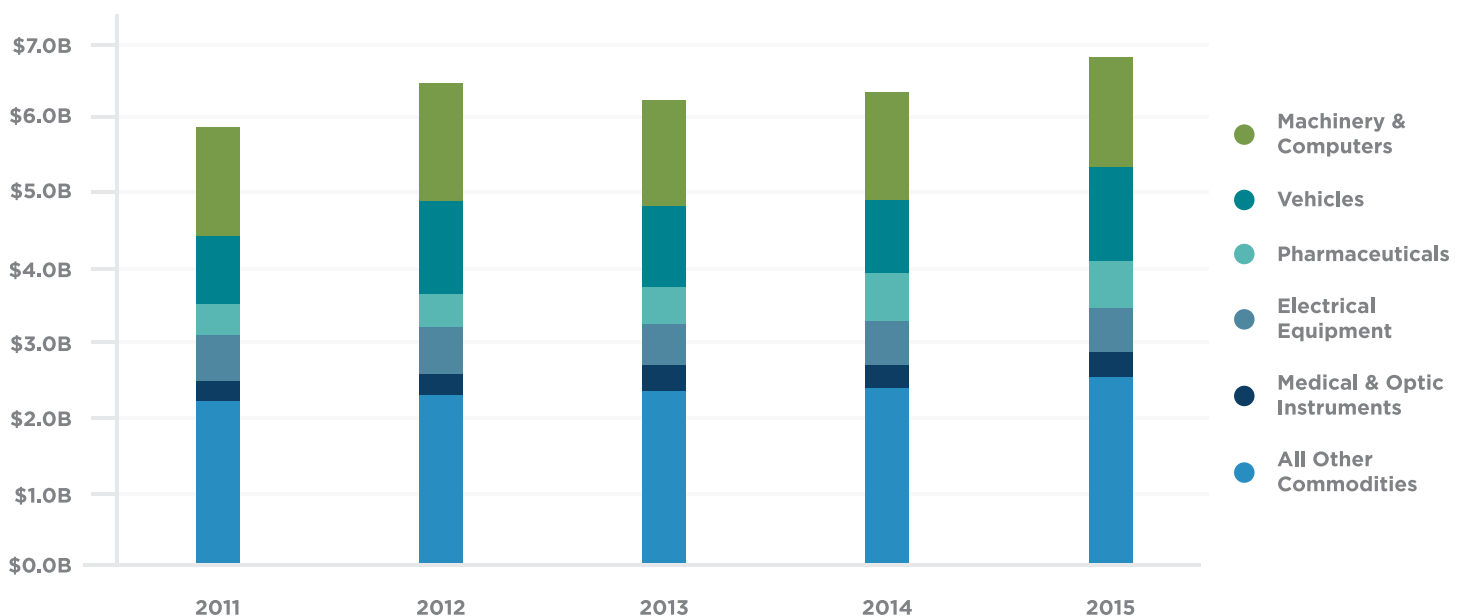


TRADE TRENDS: CANADA REMAINS TOP MARKET

In 2015, Canada continued to be the largest international market for North Carolina businesses. Merchandise sent to Canadian markets accounts for 23% of all state export activity. The value of the U.S. dollar against the Canadian dollar increased by 14% in 2015.³ However, despite a strengthening dollar, exports to Canada still experienced annualized real growth of over 7%.

In the past year, growth was mixed across the top 5 Canadian export categories. Exports increased slightly for machinery and computers (+1%), pharmaceuticals (+3%), and medical instruments (+4%). Growth in the vehicle sector was particularly notable. After declining by 13% in 2014, vehicle exports to Canada grew 30% in 2015. Only one category, electrical equipment (-6%), exhibited a decline in real export growth. Over the past 5 years, growth across Canada's top export sectors has remained mostly steady.

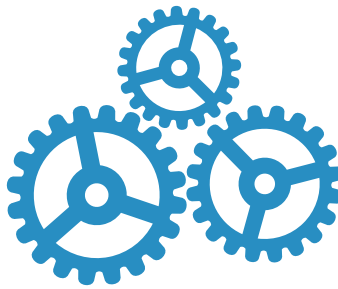
Top Export Categories to Canada
(in 2015 dollars)





#1

**Export Trade Partner
with North Carolina**



**Top Export Category:
Machinery & Computers**



\$6.8B

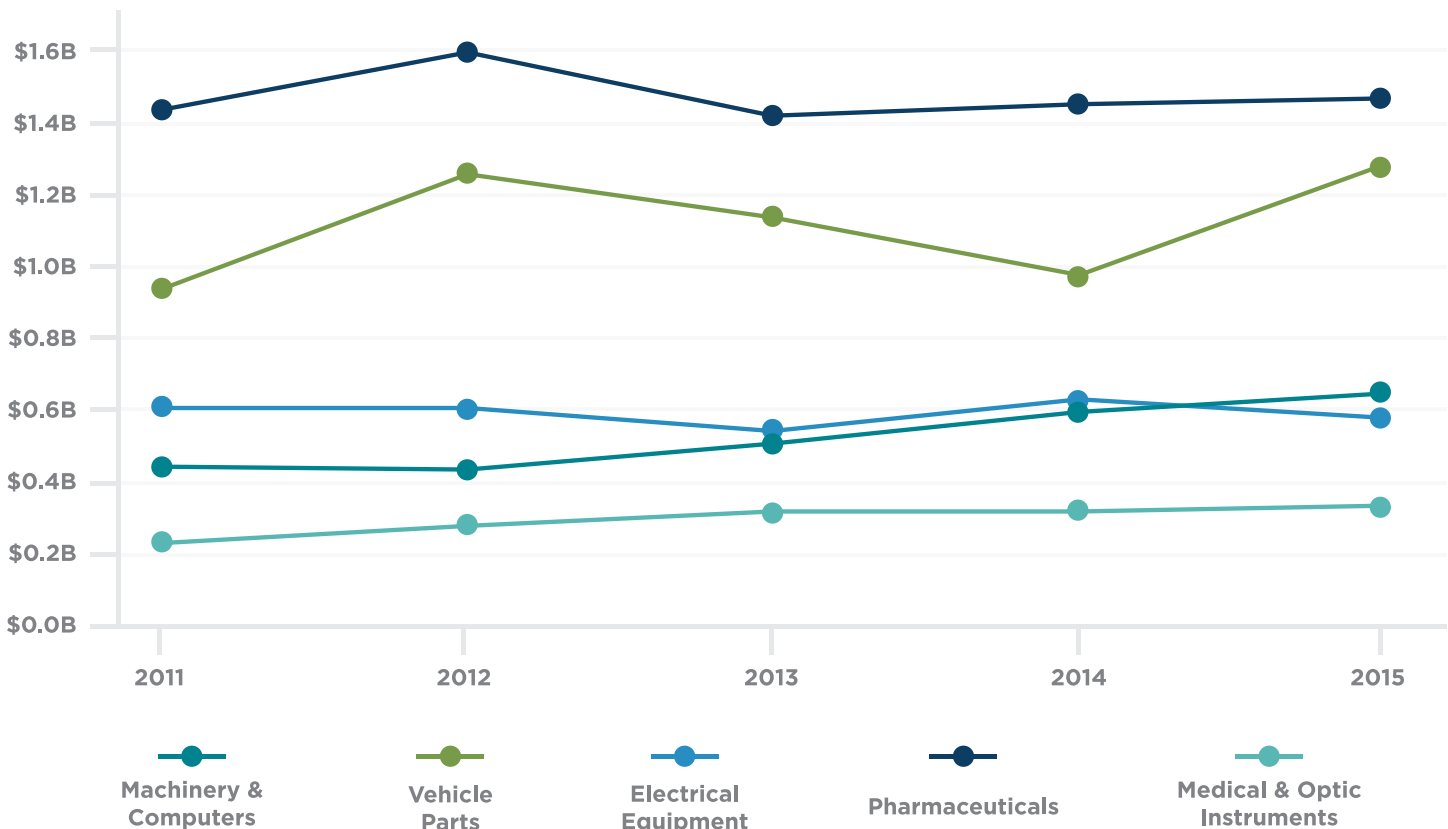
Total 2015 Exports

MACROECONOMIC OUTLOOK: CANADA EXITS RECESSION

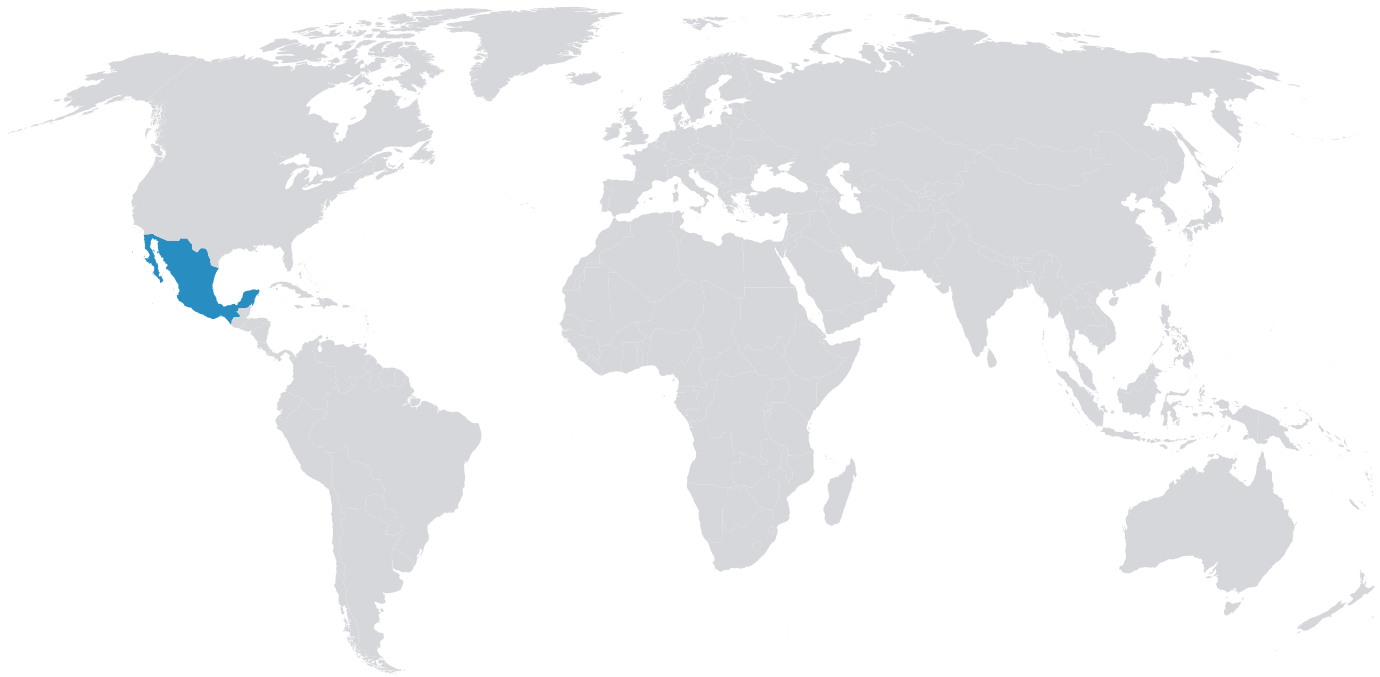
The Canadian market was in a recession for at least half of 2015, but the country started to recover the latter half of the year.⁴ In 2015 annualized GDP growth for the country was 1.2%. Economic forecasters believe that the rate of growth will be 1.4% in 2016.⁵ Canada's terms of trade (the ratio of export prices to import prices) are expected to decline as energy commodity prices remain low. Similarly, Canada's status as a net commodity exporter means the effective exchange rate for the Canadian dollar has declined through 2015 and is expected to decline further in 2016.

Canada's trade relationship with American states is strongly influenced by the North American Free Trade Agreement (NAFTA).⁶ The United States is expected to remain Canada's most important trading partner. However, economists believe emerging markets in Asia will continue to grow in prominence for the country, especially if Canada ratifies the TPP.⁷ Between 2015 and 2020, United States exports to Canada are expected to grow at about 5% per year. During the same time period, Canada's imports of industrial machinery are expected to grow 23%.⁸ Given that North Carolina's largest export category to Canada is machinery and computers, the state should maintain its strong trade relationship with the country.

**Annual Growth in Exports to Canada
(in 2015 dollars)**



COUNTRY OVERVIEW: MEXICO

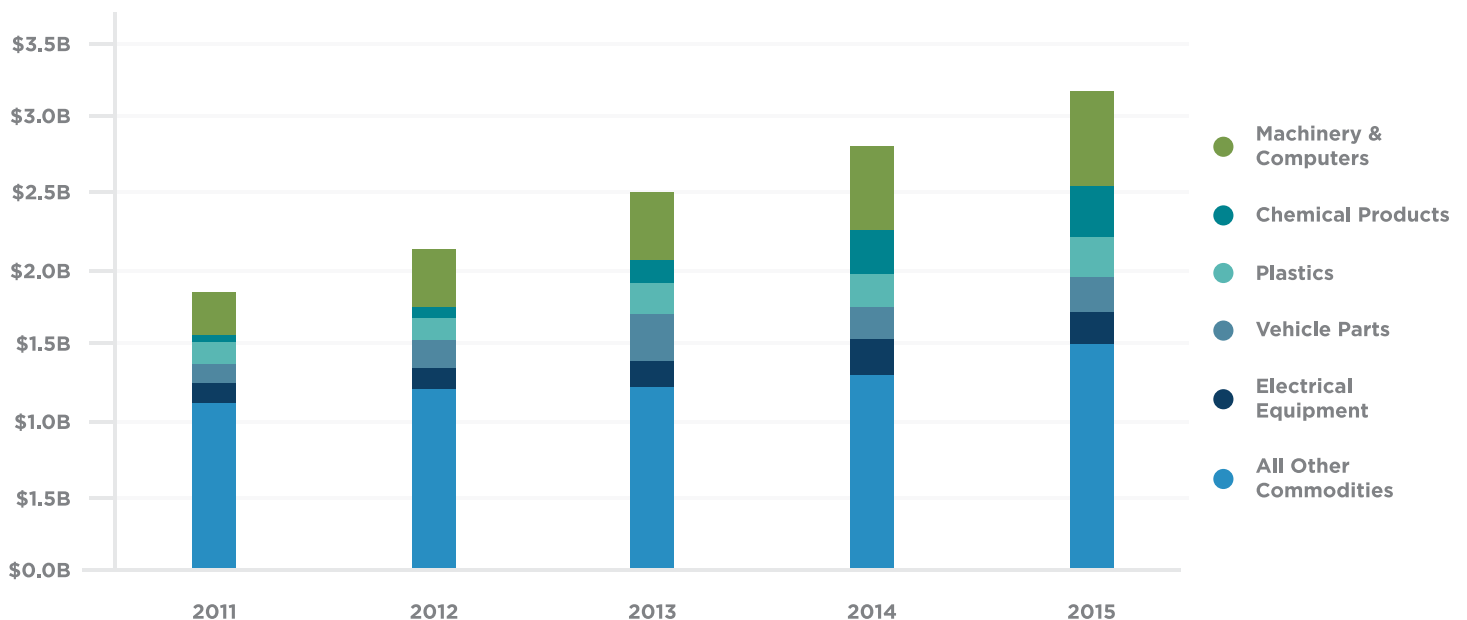


TRADE TRENDS: EXPORTS TO MEXICO EXHIBIT STRONG GROWTH

Exports to Mexico showed consistent growth across most categories in 2015. As North Carolina's second largest trading partner, merchandise sent to Mexico comprised 11% of all exports. Exports to Mexico increased 13% in real terms, even though the value of the U.S. dollar appreciated 16% against the Mexican peso during 2015.

Exports with notable growth include machinery and computers (+17%), chemical products (+21%), and plastics (+20%). Vehicle exports held steady (<+1%), while electrical equipment saw a modest decline (-7%). Strong growth across most categories is consistent with 5 year trends.

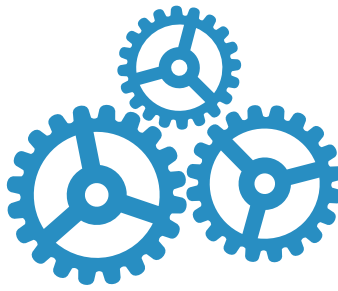
Top Export Categories to Mexico
(in 2015 dollars)





#2

**Export Trade Partner
with North Carolina**



**Top Export Category:
Machinery & Computers**



\$3.2B

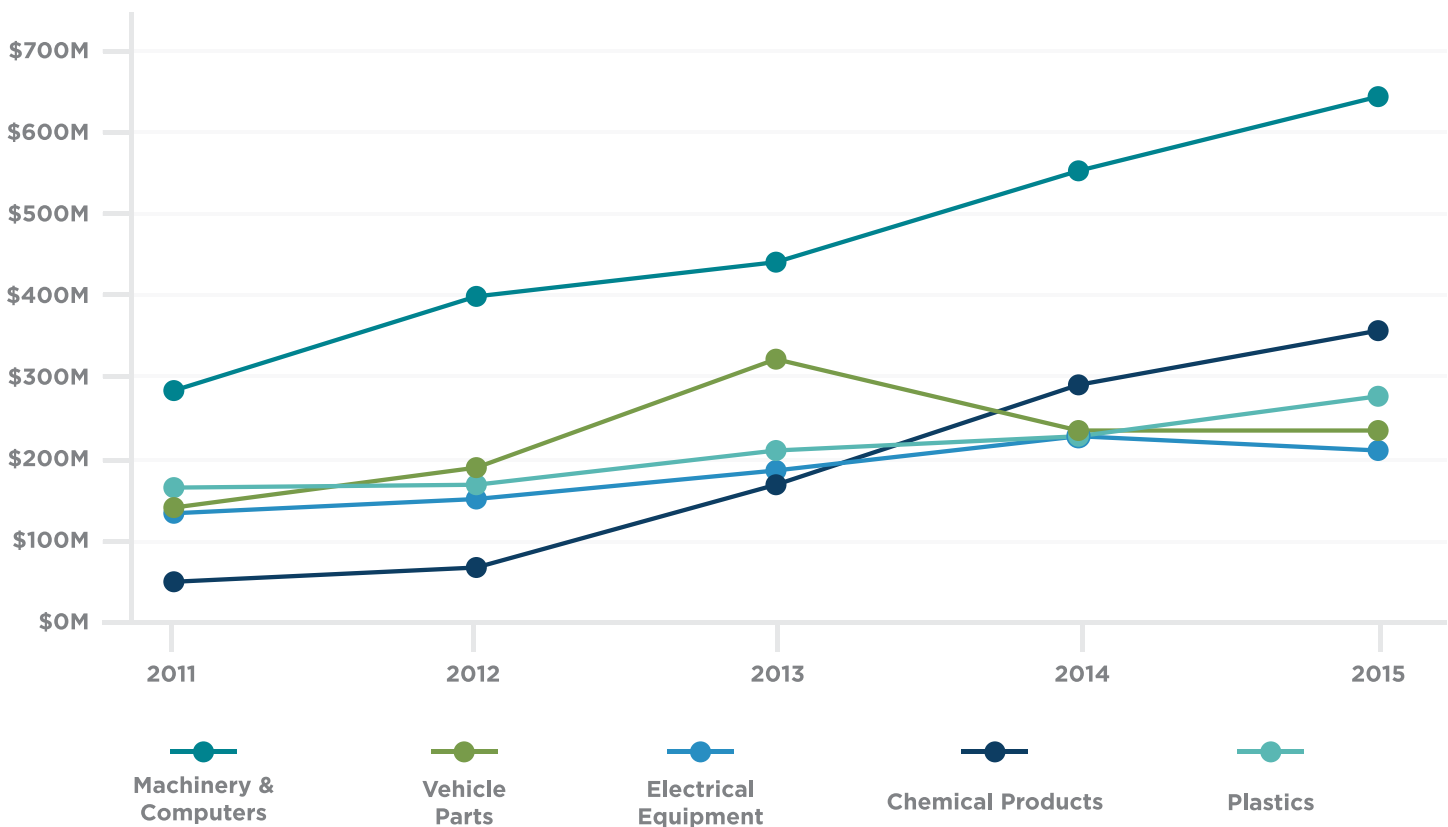
Total 2015 Exports

MACROECONOMIC OUTLOOK: STABLE GROWTH

Mexico's economy continues to exhibit relatively slow growth. Following GDP growth of 2.3% in 2015, the World Bank projects 2.8% growth in 2016.⁹ In the short-term, although Mexico's trade activity is expected to increase in the coming year, surveys of Mexican businesses indicate growing pessimism.¹⁰ In particular, Mexican businesses have shown concern about both volatility in the peso and government regulation. However, economists predict the overall composition of Mexico's imports and exports will remain stable in the long-term.

Mexico's trade relationship with the United States is largely viewed through the lens of NAFTA.¹¹ In the future, Mexico's international trade will be increasingly influenced by its participation in the TPP. Over the next 5 years, exports from the United States to Mexico are expected to grow 3% annually. Trade forecasts predict that Mexico's largest import sector will be industrial machinery through at least 2030.¹² Given that North Carolina's top export category to Mexico is machinery and computers, the state is well-positioned to remain an important trade partner.

**Annual Growth in Exports to Mexico
(in 2015 dollars)**



COUNTRY OVERVIEW: CHINA

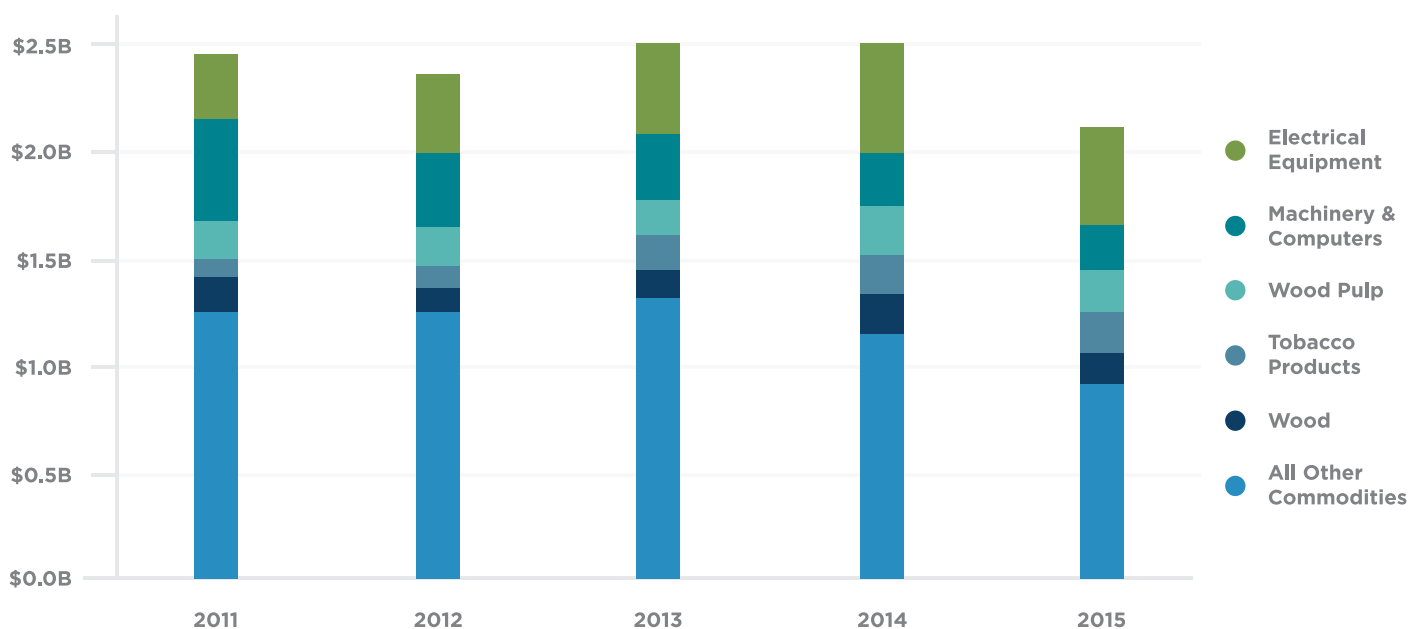


TRADE TRENDS: CHINESE EXPORTS DECLINE

The past year has been marked by global concerns over Chinese economic growth. North Carolina's exports to China declined by 15% in 2015. However, the market remains important. Exports to China equal over 7% of North Carolina's export activity. The U.S. dollar increased in value (5%) against the Chinese yuan during 2015, likely compounding pre-existing market forces to further decrease export volumes. United States investment banks have forecast that the dollar will continue to strengthen against the yuan, which could have large implications for exports to China in 2016.¹³

Most categories of Chinese exports decreased markedly in 2015, but some sectors were more resilient than others. Three of the top five sectors showed large declines (electrical equipment: -10%, machinery and computers: -18%, and wood: -23%). Other sectors like wood pulp (-7%) and tobacco products (-1%) showed more modest losses. However, if long-term trends hold, most sectors should return to incremental growth in the near future.

Top Export Categories to China
(in 2015 dollars)





#3

**Export Trade Partner
with North Carolina**



**Top Export Category:
Electrical Equipment**



\$2.1B

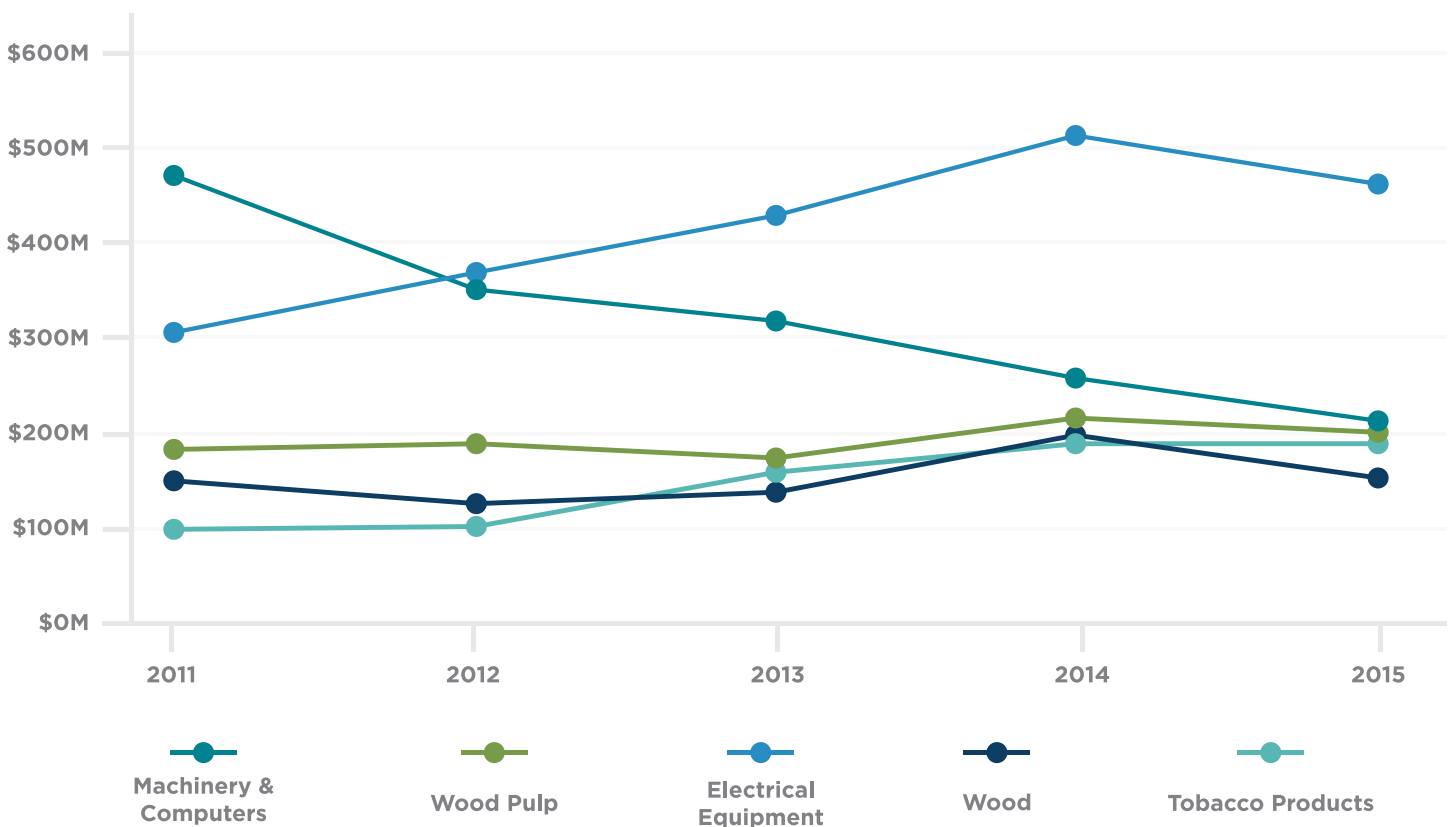
Total 2015 Exports

MACROECONOMIC OUTLOOK: CHINA'S ECONOMY DECELERATES

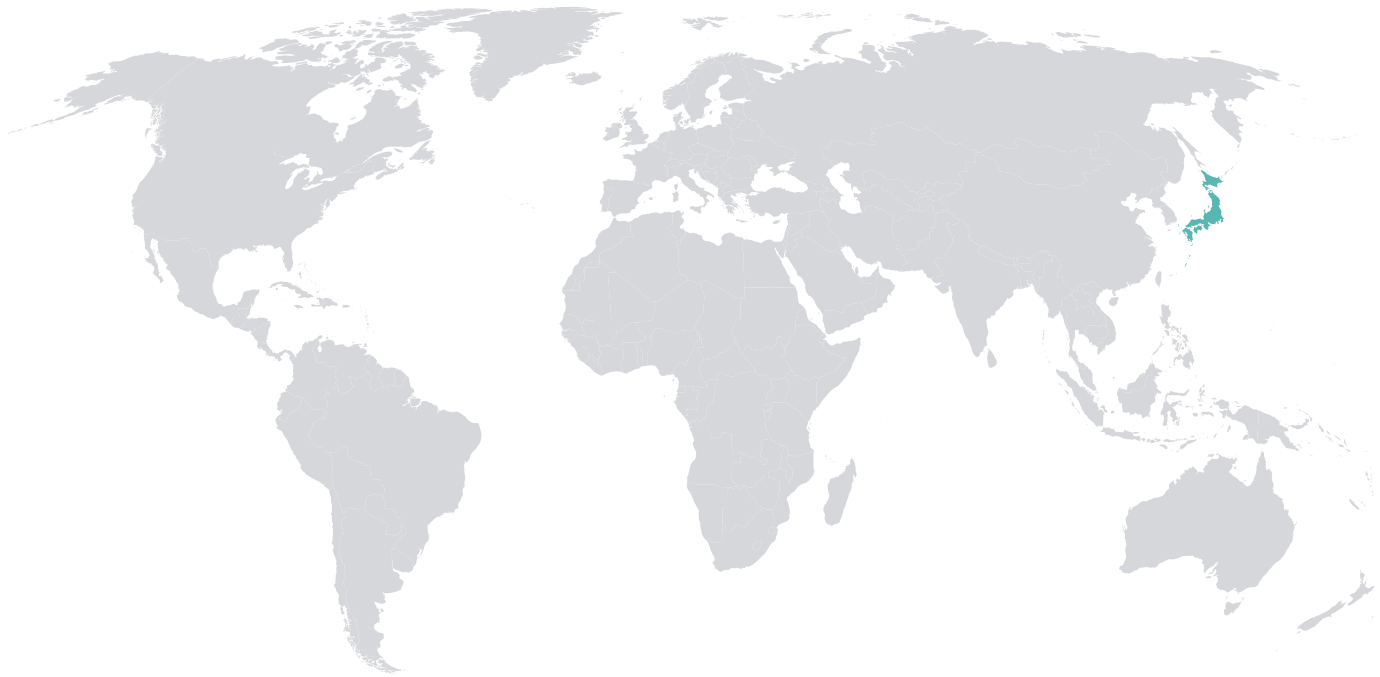
For the past few decades, rapid development has driven the Chinese economy. In 2015 the Chinese economy grew at a rate of 6.9%.¹⁴ However, this rate of growth is a 25 year low for China, and growth rates are forecast to decline again to 6.7% in 2016.¹⁵ Despite slowing GDP growth, the Asian Development Bank predicts that China's trade activity will recover due to robust domestic consumption and long-term global growth. Early data show mixed support for this forecast. Rates of decline in China's trade volume have been both lower (December 2015) and higher (January 2016) than consensus estimates.¹⁶ Surveys of Chinese businesses indicate most maintain an overall positive trade outlook - but positive sentiment is rapidly declining.¹⁷

In 2015, China declined to join the TPP, and the long-term trade impact of that decision is still unknown.¹⁸ For now, United States exports to China are expected to experience annualized growth of 5% through 2020.¹⁹ China's top growing import during the same time period is forecast to be industrial machinery (+30%). While machinery and computers are North Carolina's second largest export category to the Chinese market, that export category experienced rapid decline in the past year (-18%).

**Annual Growth in Exports to China
(in 2015 dollars)**



COUNTRY OVERVIEW: JAPAN

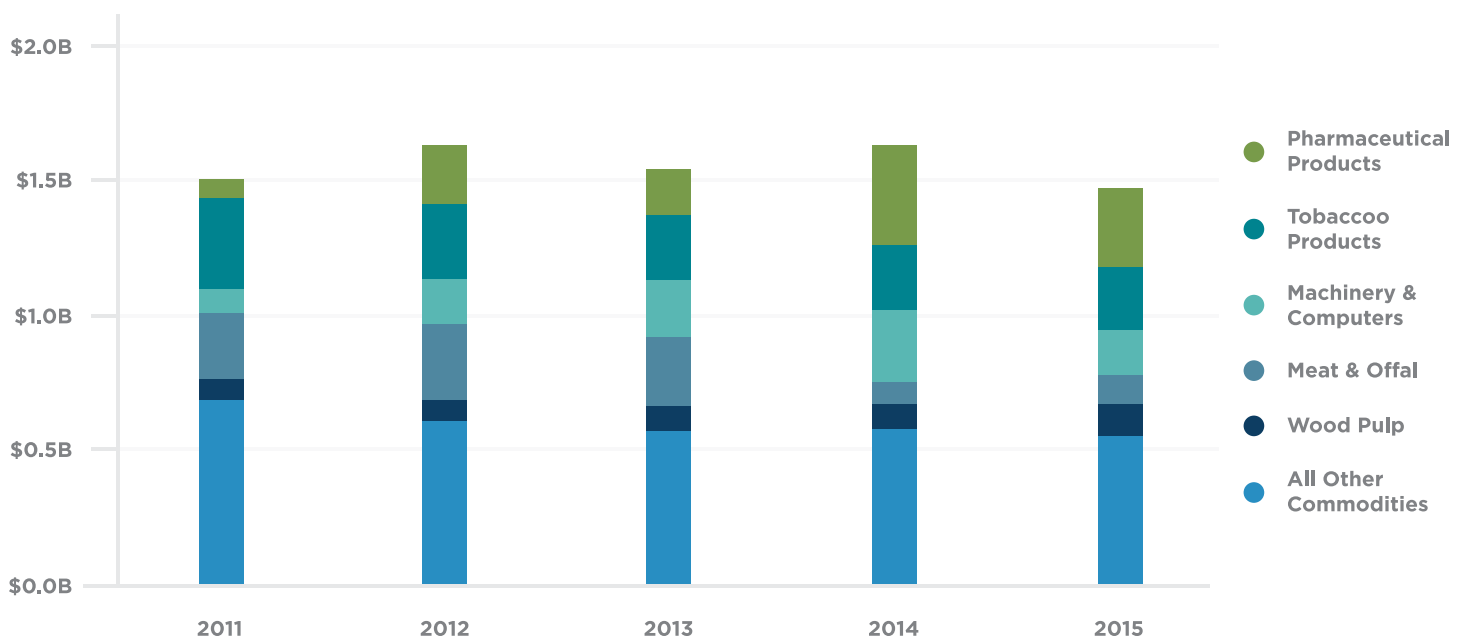


TRADE TRENDS: EXPORTS TO JAPAN FALL, BUT SOME SECTORS SHOW GROWTH

Japan remains North Carolina's 4th largest market with 5% of all 2015 exports. Exports to Japan decreased by 10% in 2015. This decline mirrors decreases with other trading partners in this region of the world. Given that exports to Japan have generally held steady over the past five years, the 2015 decline may be an anomaly. While the U.S. dollar did appreciate against the Japanese yen during 2015, the increase was modest (+3%).

Among top export categories to Japan, 2015 was characterized by a mix of rapid growth and decline. Exports of meat (+28%) and wood pulp (+18%) showed strong growth, while pharmaceuticals (-22%) and machinery (-40%) showed rapid declines. Tobacco products remained steady (<-1%).

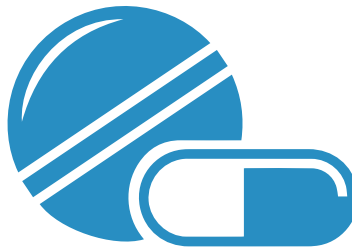
Top Export Categories to Japan
(in 2015 dollars)





#4

**Export Trade Partner
with North Carolina**



**Top Export Category:
Pharmaceutical Products**



\$1.5B

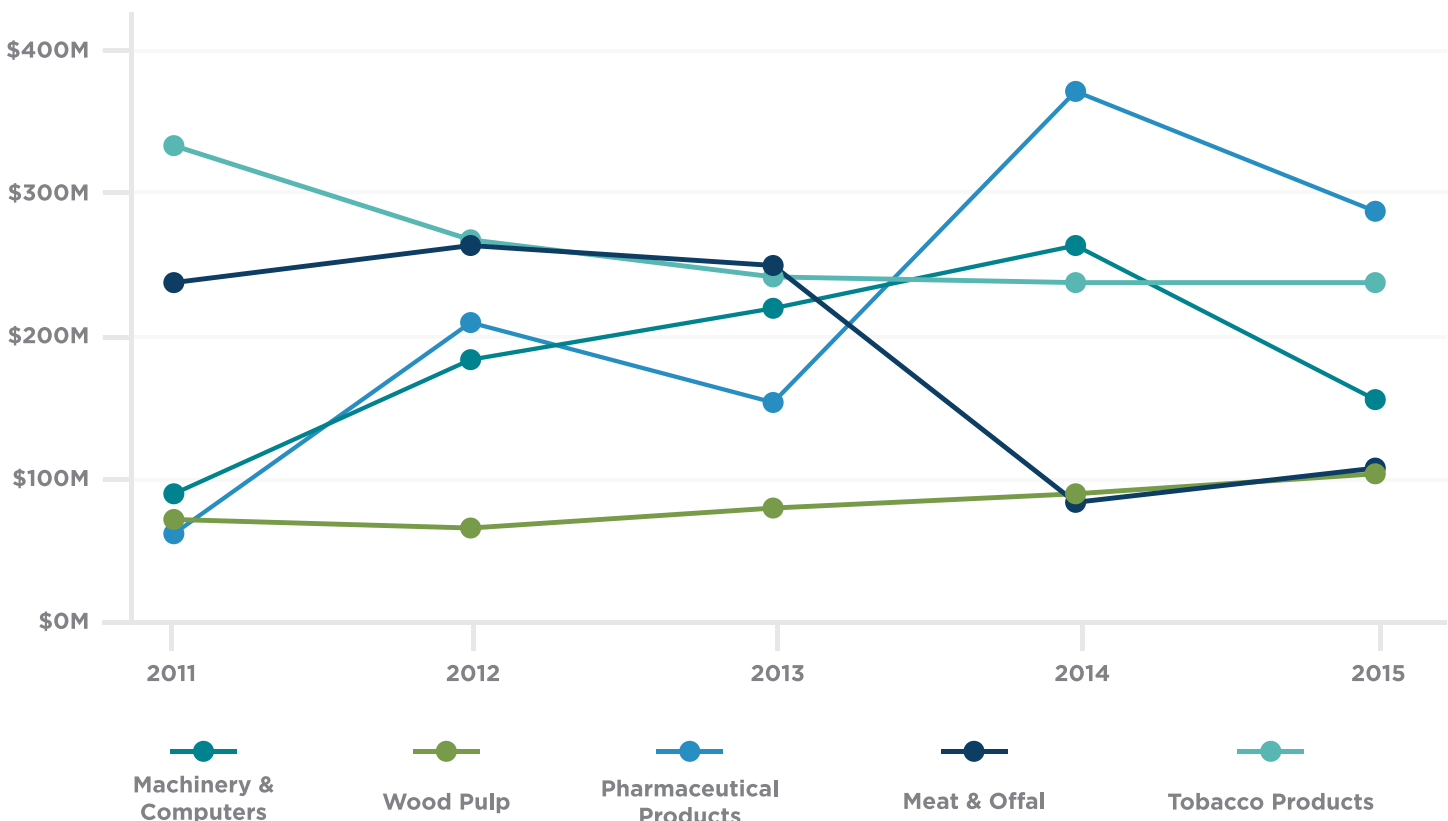
Total 2015 Exports

MACROECONOMIC OUTLOOK: JAPAN'S ECONOMY SLOWS

Japan's GDP increased 2.2% in 2015, well below consensus forecast estimates of 3.6%.²⁰ The World Bank's forecast for Japan predicts much slower growth with a 2016 GDP forecast of 1.3%.²¹ Surveys of Japanese businesses indicate most (64%) believe trade volumes will increase in the short-term. Like all countries in the region, Japan is feeling the negative reverberations of declines in the Chinese economy.²² In an unusual monetary policy move, the Bank of Japan adopted negative interest rates in January 2016.²³ In general, negative interest rate policies increase the price of imports and make Japanese exports more competitive.

According to some analysts, Japan will accrue large trade benefits from the TPP.²⁴ The World Bank estimates Japan's economy will see an additional 2.7% economic growth due to the agreement by 2030. Over the long-term, United States businesses benefit because the trade agreement lifts barriers to electronic commerce exports. Beyond the TPP, in the short-term, the biggest issue for United States exporters are currency related. Most economists have forecast that the yen will continue to weaken against the dollar due to Japan's negative interest rates.²⁵

**Annual Growth in Exports to Japan
(in 2015 dollars)**



COUNTRY OVERVIEW: SAUDI ARABIA

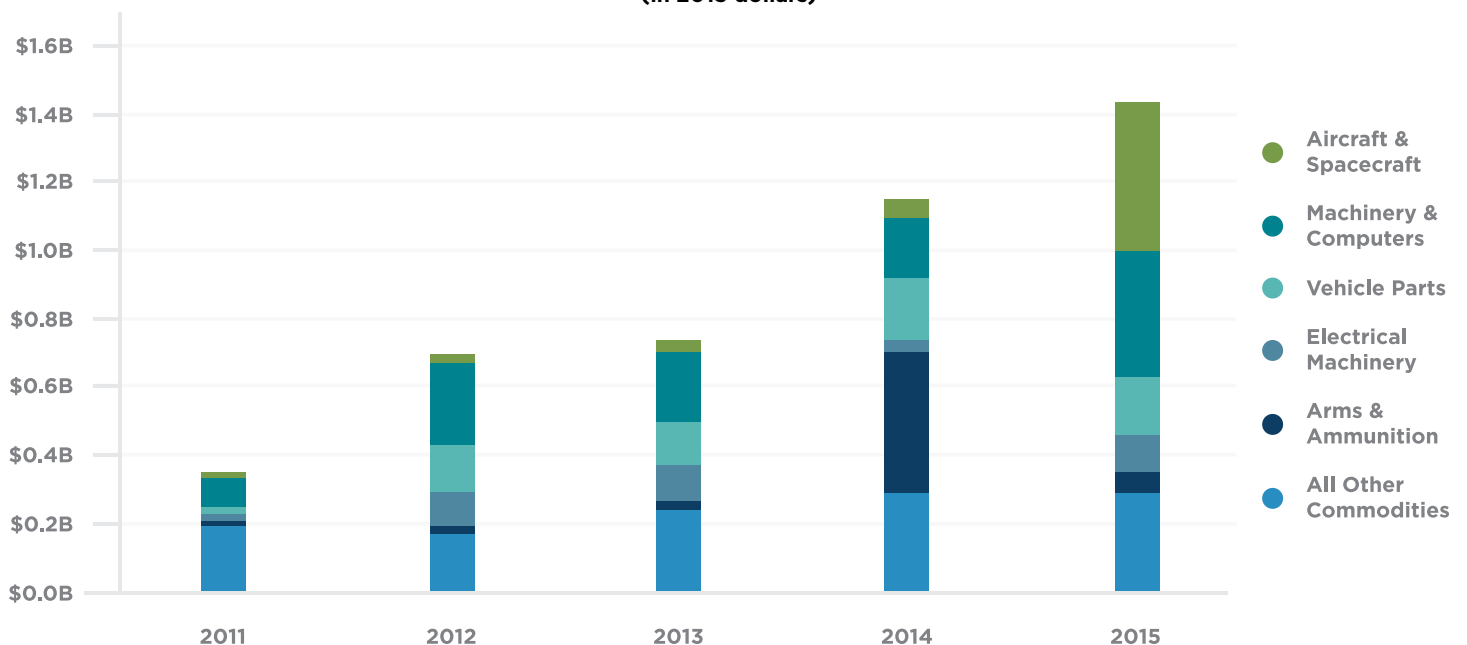


TRADE TRENDS: SAUDI ARABIA EXPORTS SURGE

Merchandise exported to Saudi Arabia grew over 25% in 2015, one of the largest increases among North Carolina's top 20 markets. If current trends continue, the Kingdom could replace Japan as North Carolina's 4th largest trading partner. Almost 5% of North Carolina's exports are sent to Saudi Arabia. Growth in exports to this country are largely unrelated to currency fluctuations. The Saudi Arabia riyal is pegged to the U.S. dollar, so there is little material change in the exchange rate over time.

Saudi Arabia's overall export growth is attributable largely to increases in aircraft (+696%), machinery (+124%), and electrical machinery (+178%). However, growth in these categories is tempered by notable declines in vehicles (-10%) and arms (-86%). Declines in arms and ammunition may be the category returning to more incremental growth, as exports in this category for 2014 were far above normal levels.

Top Export Categories to Saudi Arabia
(in 2015 dollars)





#5

**Export Trade Partner
with North Carolina**



**Top Export Category:
Aircraft & Spacecraft**



\$1.4B

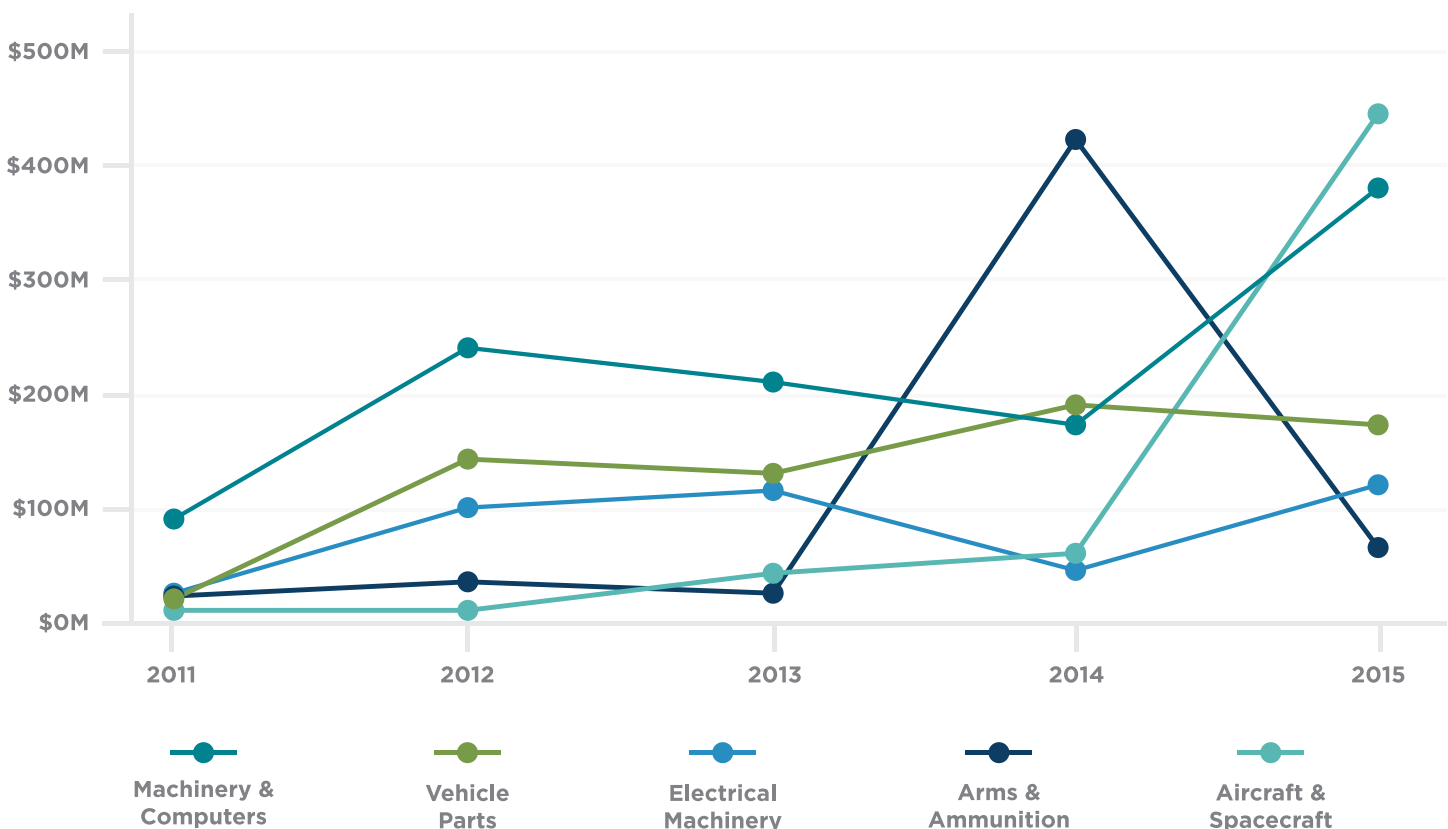
Total 2015 Exports

MACROECONOMIC OUTLOOK: LOW OIL PRICES SLOW GROWTH

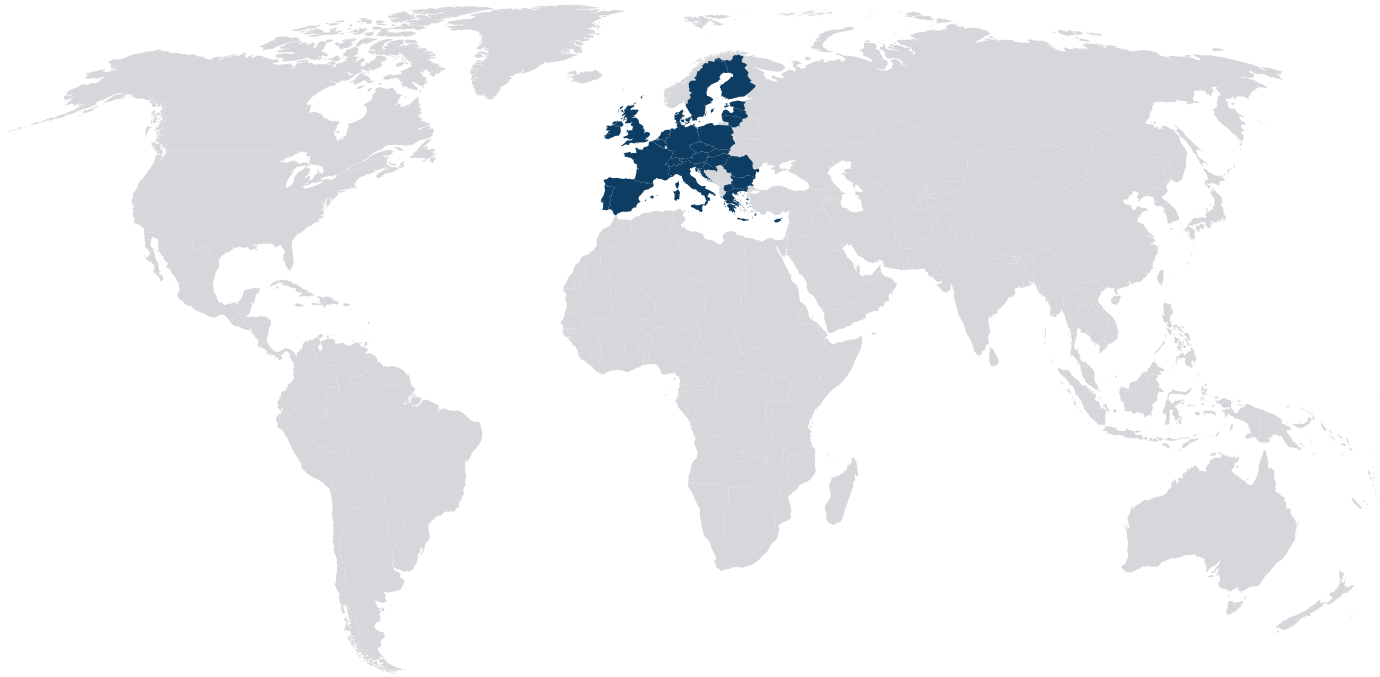
Saudi Arabia's economic growth has held stable for the past few years. The country's GDP grew at an annualized rate of 2.8% in 2015, and the World Bank has forecast a decline in growth to 2.4% in 2016.²⁶ As the de facto leader in the Organization of Petroleum Exporting countries (OPEC), the country has had a large effect on global markets by declining to cut oil supplies. This decision has created historically low energy prices. For now low energy prices are having little impact on the Kingdom's economy, but growth could decline sharply if oil prices remain low for extended periods of time.

Despite lower oil prices, most Saudi businesses (63%) believe trade volumes will increase in the short term.²⁷ There are several reasons for this. First, the International Monetary Fund has recently noted that Saudi Arabia's business environment is improving. Second, the country's trade-related infrastructure is one of the strongest in the region.²⁸ United States exports to Saudi Arabia are expected to increase by 7% per year through 2020. The Kingdom's largest growing import category through this time period is forecast to be industrial machinery (+26% annual growth). North Carolina's second largest export category to Saudi Arabia is machinery and computers, which increased 124% in the past year. Thus, North Carolina is well-positioned to remain a leading trade partner with Saudi Arabia.

**Annual Growth in Exports to Saudi Arabia
(in 2015 dollars)**



REGION SPOTLIGHT: EUROPEAN UNION

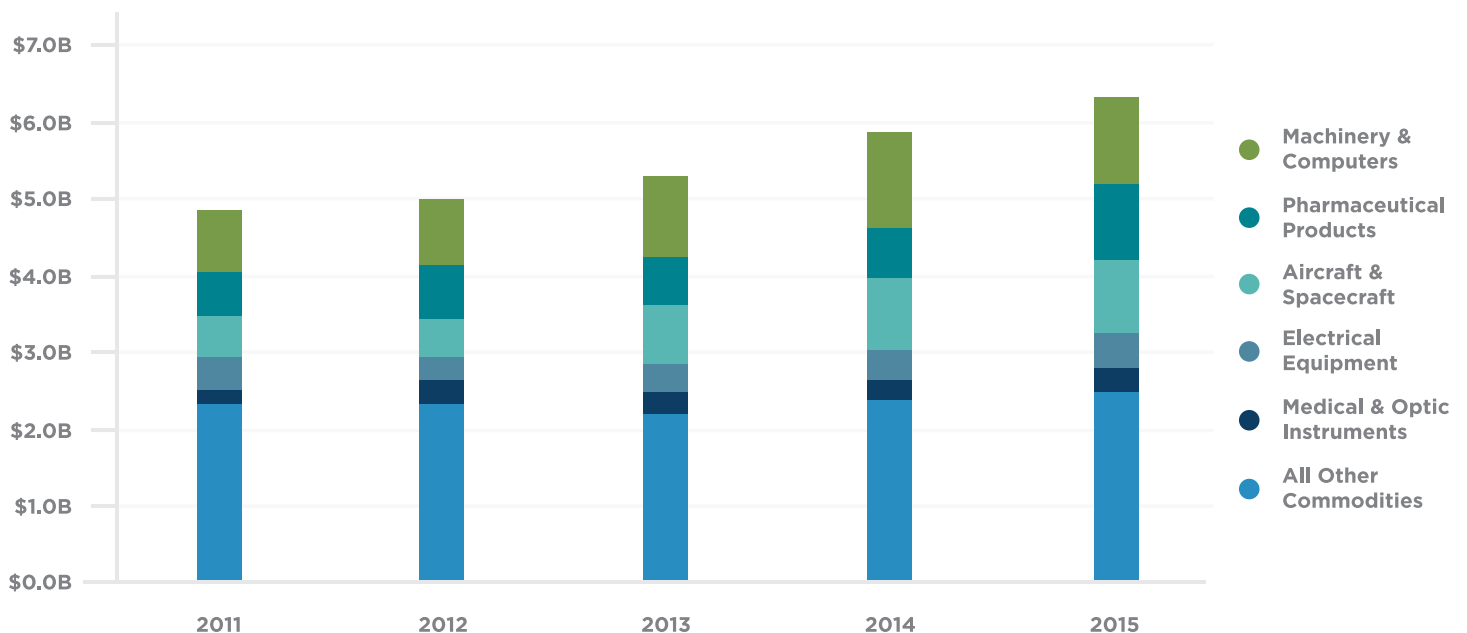


TRADE TRENDS: STEADY EXPORT GROWTH

The 28-member European Union represents a robust trade area for North Carolina businesses. Over 21% of the state's exports are sent to this region. Trade to these countries has increased an average of 7% in 2015. Countries in the European Union use either a sovereign currency (for example, the British pound) or the euro. The U.S. dollar appreciated by about 7% against the euro during 2015. Despite this appreciation, exports to this region remained strong.

Most top export categories for the European Union grew during 2015. In particular, pharmaceutical products (+46%) experienced a surge in growth. Aircraft (+7%), electrical equipment (+7%), and optical/medical instruments (+5%) also exhibited notable growth. Machinery and computers (-11%) was the only sector to decline during the year. Over the past 5 years, growth across most top export categories has been steady.

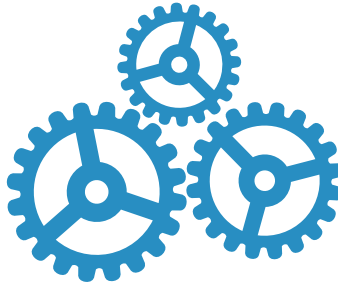
Top Export Categories to European Union
(in 2015 dollars)





+7%

Annualized Real Growth



**Top Export Category:
Machinery & Computers**



\$6.3B

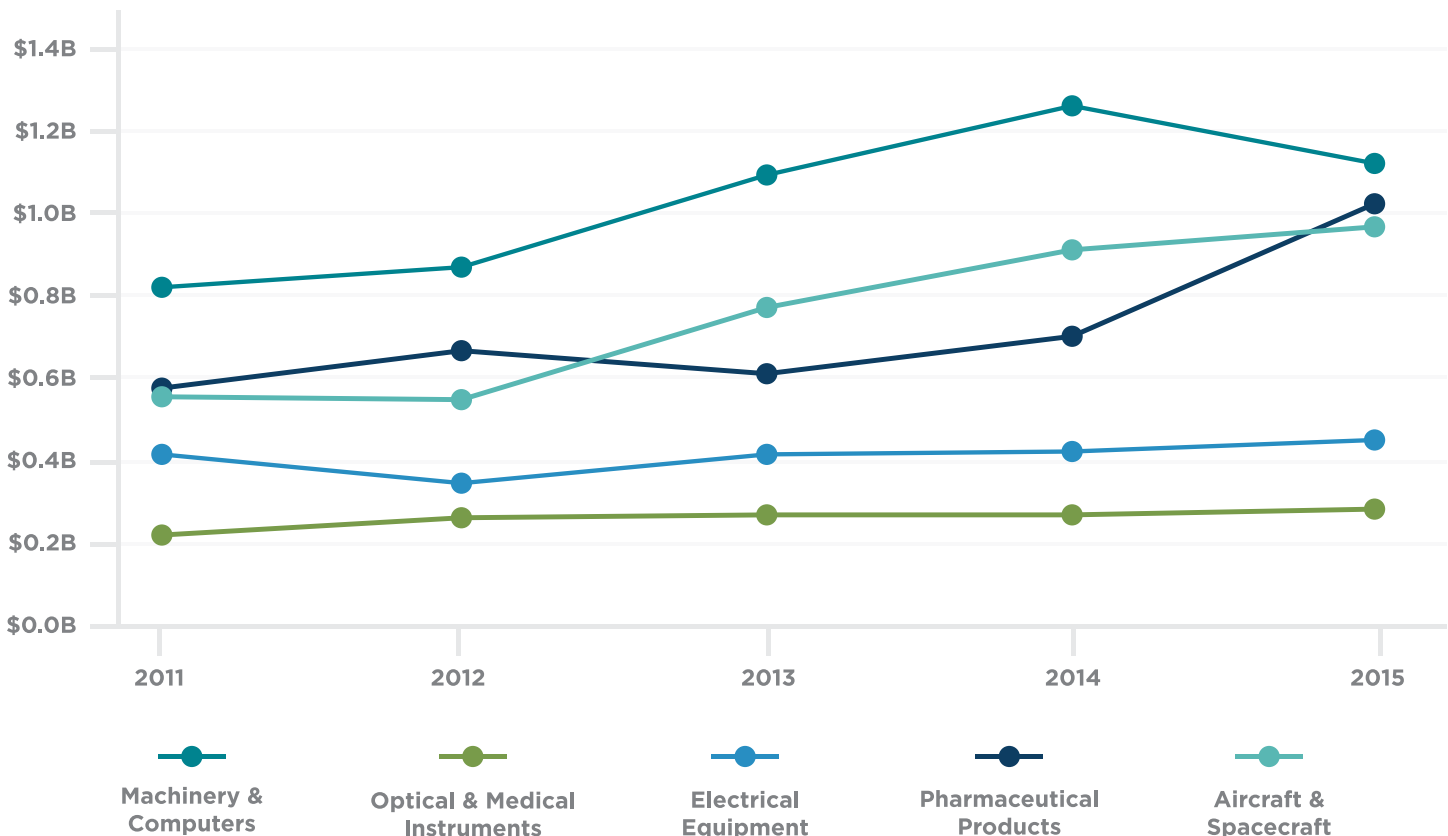
Total 2015 Exports

MACROECONOMIC OUTLOOK: TIMID REGIONAL RECOVERY

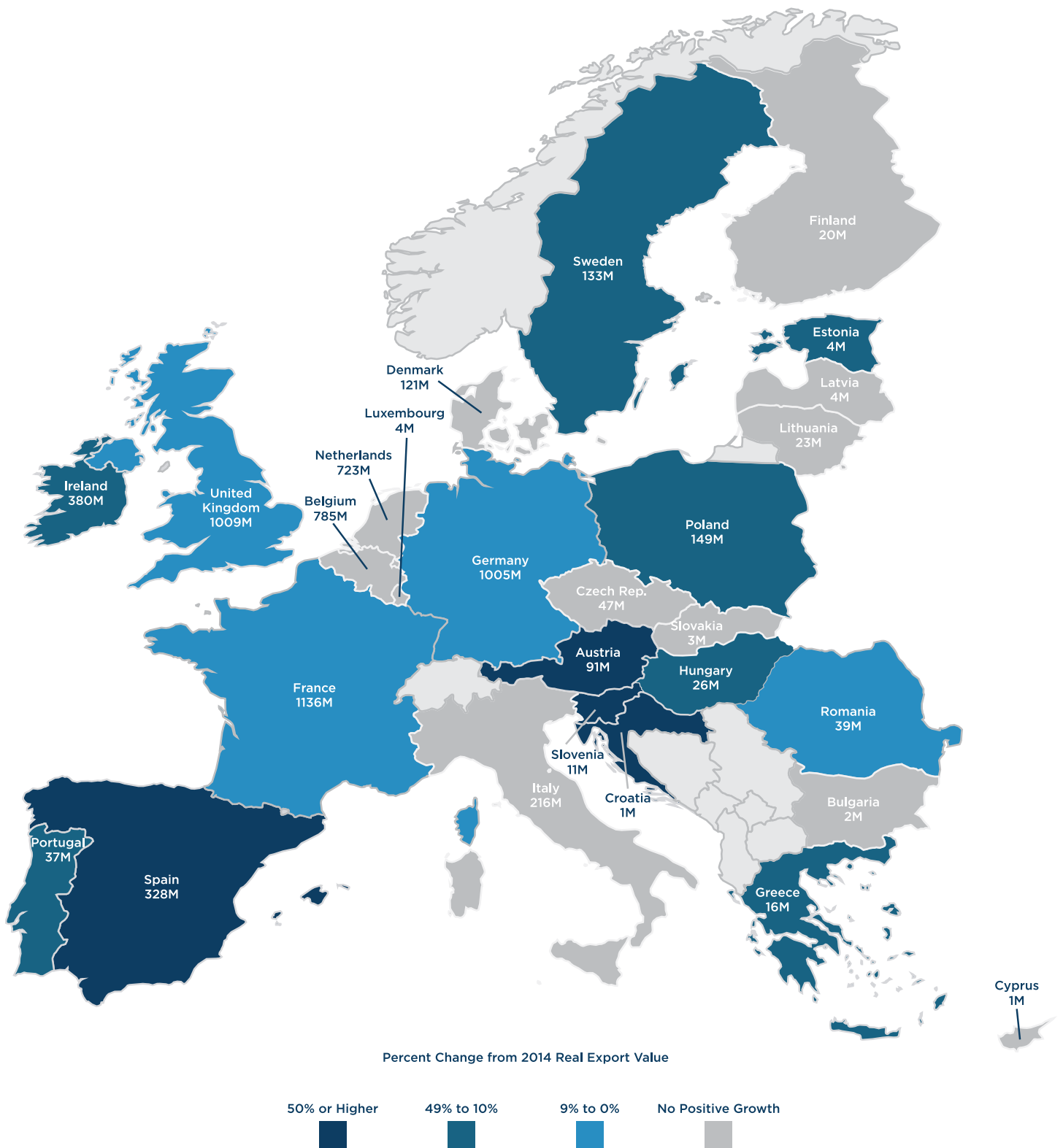
The European Union's GDP increased 1.9% in 2015. The European Commission has forecast the area will grow at the same rate in 2016.²⁹ Economists expect the region will continue to experience a mild recovery. However, there are several large-scale political issues facing member countries. Of note, the United Kingdom is currently considering whether it will exit the bloc ('brexit'). British citizens will vote on whether to remain bloc members in June 2016.³⁰

Beyond political changes, the region also faces challenges due to low energy prices. Historically low oil prices are putting pressure on commodity-exporting member countries. Finally, it is important to note that many member states face persistent long-term unemployment and high levels of sovereign debt. These factors will continue to weigh negatively on regional growth in the long-term.

**Annual Growth in Exports to European Union
(in 2015 dollars)**



EXPORTS TO EUROPEAN UNION MEMBER COUNTRIES IN 2015

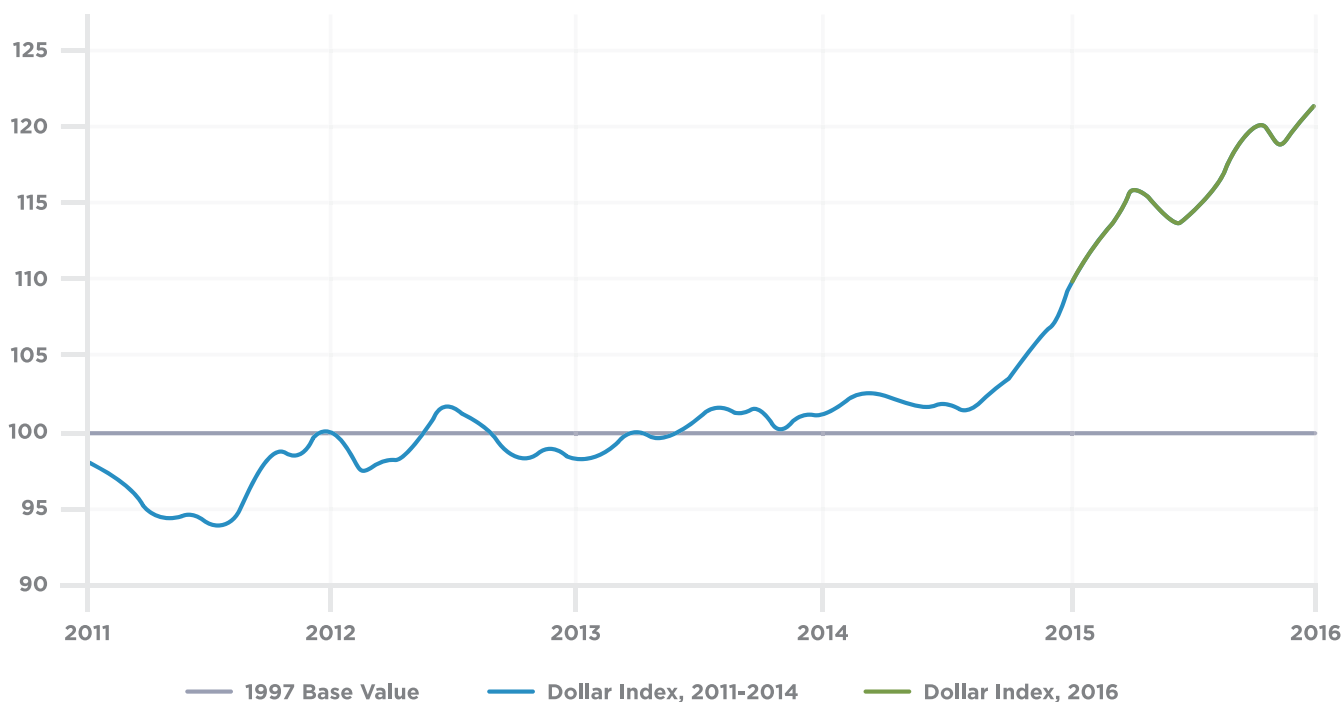


2016 TRADE OUTLOOK

As we continue into 2016, slow global economic growth will remain to be a negative influence on trade volumes. Consensus estimates of 2016 GDP levels in most developed countries reflect timid growth or, in some cases, contraction.³¹ Concurrently, the U.S. dollar has continued to gain strength against a variety of other currencies. A strengthening dollar will continue to make the price of exports to other countries more expensive. The below table charts the U.S. dollar's gains against a basket of global currencies over the past five years. The strength of the dollar began rising notably in 2014, and that trend has continued through the present. Both decelerating growth and the relative strength of the dollar will act as a negative force on exports. If current trends continue, 2016 may be characterized by smaller real increases (or nominal decreases) in export volumes.

On the political front, a few major events stand out for state exporters. First, in October 2015, the United States and 12 other Pacific Rim nations agreed to the TPP. The agreement, which has been in the making for years, was formally signed by member countries in February 2016. However, the path to ratification of the TPP in the United States and several other countries may be challenging.³² Second, work continues on the TTIP – a trade agreement between the United States and European Union member countries. Several meetings between the United States and the European Commission are scheduled for the coming year, and the agreement could be finalized by the end of 2016.³³ Third and finally, the Export-Import Bank program was re-authorized by the federal government in late 2015.³⁴ In the long-term, the Bank's future is unclear – it has become a frequent target of criticism in the current political environment. The outcome of TPP ratification, TTIP negotiations, and the reauthorization of the Export-Import bank could all have a large impact on international trade in the coming years.

**Relative Dollar Strength Over Time: Trade Weighted Dollar Index
(1997 Base Year = 100)**





CASE STUDY: ALLIANCE MOCVD, LLC IN CHAPEL HILL, NORTH CAROLINA

EDPNC's International Trade Division can help North Carolina businesses navigate an increasingly complex globalized marketplace. One of the many companies we have helped recently is Alliance MOCVD. Alliance MOCVD is a worldwide provider of high quality MOCVD parts, servicing, and system upgrades. MOCVD systems are used for a variety of purposes including research and the production of LEDs, solar cells, lasers, and power electronics. Alliance MOCVD was founded by engineers who have worked with, and for, the world's leading MOCVD manufactures. Their engineers specialize in custom design, manufacturing, process development, and servicing. "We are driven by customer care and the quality of our products and services," says Jeremy Cloud, Chief Operations Officer.

In 2014, Alliance MOCVD launched a focused effort to increase international sales. As part of that initiative, employees from the company participated in the EDPNC sponsored booth at SEMICON 2015, the world's largest semiconductor trade show. While at the show in Taiwan, Alliance MOCVD met with several interested customers, developed sales leads, and signed a contract with a new distributor. As a result of attending the trade show, the company increased sales by \$830,000. This was a 181.53% international sales increase between 2014 and 2015.

According to CEO of Alliance MOCVD Sara Cloud, "I believe that engaging in these types of international trade events is beneficial for small businesses. It gave us an opportunity to showcase our products and meet face-to-face with potential customers in a new market." Alliance MOCVD received assistance from the STEP Grant Program, one of the services EDPNC's International Trade Division makes available to North Carolina small businesses. For Alliance MOCVD's CEO, EDPNC's assistance made the trade show more accessible: "...We've benefitted tremendously from the experience. We never would have met our new distributor in Taiwan, had we not attended the SEMICON Trade Show....the guidance and support we receive from EDPNC's staff is a critical component of our growth overseas."



METHODOLOGY ADDENDUM: WHY WE USE REAL EXPORT VALUES

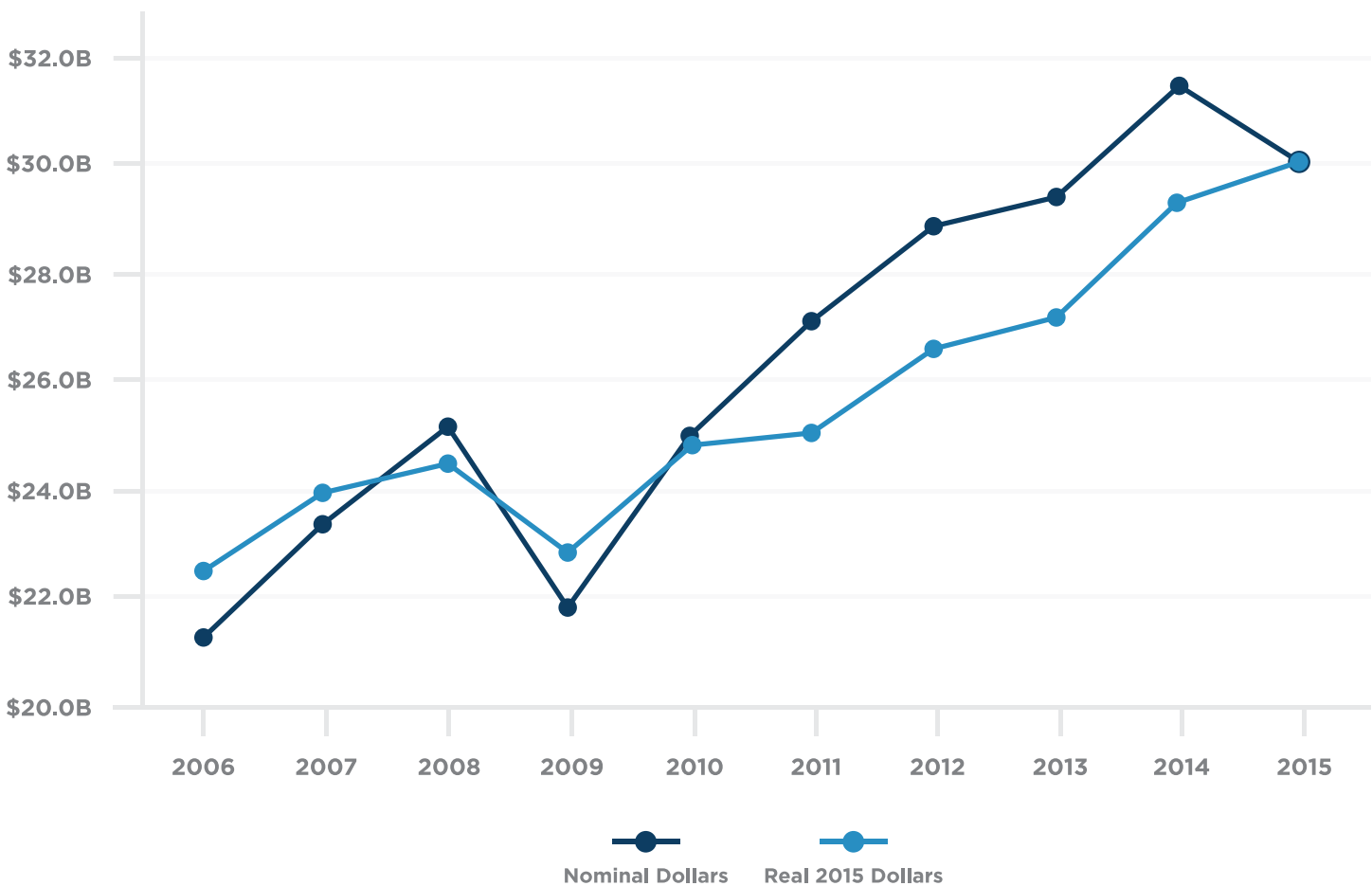
All export values for this analysis have been adjusted to ensure dollar amounts can be compared across time. Unless otherwise indicated, the data is reported in '2015 dollars,' or real dollars. This means that the export numbers for each year are expressed in terms of the equivalent value of those goods in 2015. The process ensures that changes in export values from year to year reflect real value or quantity changes in exports. In other words, the method removes increases in exports due to a variety of macroeconomic forces unrelated to real value change.

This is in contrast to nominal dollars, which is the value of exports without adjustment. Nominal export values measure the dollar amount of exports at a single point in time. However, nominal values make it challenging to determine whether export volume increases are due to substantive trade activity or fluctuations in purchasing power. Thus, we adjust nominal export values to real export values. The real export value removes the effects of general price level changes over time.

CALCULATING REAL EXPORT VALUES

To express nominal export values for each year in 2015 real dollars, we adjusted export values using the Bureau of Economic Analysis' exports price deflator. This method allows us to eliminate the change in export dollar amounts caused by forces like inflation, thus making the value of the dollar equivalent across time. The deflator is applied to nominal dollars for each year, and the result is the real 2015 dollars value. The implicit price deflator is by default expressed in 2009 dollars, but to present a more up-to-date picture of export values we have re-calculated the statistic to 2015 dollars.

North Carolina's Yearly Exports: Nominal and Real Values



REFERENCES

¹ This report only presents data on exports of goods. All data presented on exports of goods is from [WISERTrade](#), an aggregator of the U.S. census [origin of movement data series](#). Origin of movement data do not indicate where goods are produced, only their transportation origin. For example, goods manufactured in North Carolina but shipped through South Carolina ports would not be credited as a North Carolina export. For that reason, figures in this report should be viewed as approximations of state export activity.

² Unless otherwise indicated, all export amounts have been adjusted to constant 2015 dollars using the Bureau of Economic Analysis yearly average [implicit export price deflator](#). Please see the methodology section for more details on this adjustment.

³ Statistics on currency were obtained using Oanda.com's [historical exchange rates database](#). Reported percent changes are the difference between the midpoint of the bid/ask spread between January 1, 2015 and December 31, 2015.

⁴ CBC News, [Canada's GDP Expanded at 0.8% Pace in Fourth Quarter of 2015](#), March 1, 2016.

⁵ Bank of Canada, [Monetary Policy Report](#), January 20, 2016.

⁶ Toronto-Dominion Bank, [NAFTA: The Partnerships That Keeps Giving](#), February 9, 2015

⁷ HSBC Global Research, [Canada Trade Forecast](#), November 2015.

⁸ Oxford Economics and HSBC Global Research, [Canada Trade Forecast Tool](#), May 2015.

⁹ OECD, [Mexico Economic Forecast Summary](#), November 2015; World Bank, [Global Economic Prospects](#), January 2016.

¹⁰ HSBC Global Research, [Mexico Trade Forecast](#), November 2015.

¹¹ Council on Foreign Relations, [NAFTA Economic Impact](#), February 14, 2014.

¹² Oxford Economics and HSBC Global Research, [Mexico Trade Forecast Tool](#), May 2015.

¹³ Reuters, [Morgan Stanley is 2nd Big Bank to Cut Chinese Yuan Forecast](#), January 11, 2016.

¹⁴ CNBC, [China's Economy Grew 6.9% in 2015, a 25 Year Low](#), January 18, 2016.

¹⁵ Asian Development Bank, [People's Republic of China: Economy](#).

¹⁶ Reuters, China December Exports, [Imports Fall Much Less Than Expected After Yuan Slides](#), January 13, 2016; CNBC, [China Exports Fall 11.2% in January](#), Imports Down 18.8%, February 14, 2016.

¹⁷ HSBC Global Research, [China Trade Forecast](#), November 2015.

¹⁸ The Diplomat, [China and the Trans-Pacific Partnership](#), October 14, 2015.

¹⁹ Oxford Economics and HSBNC Global Research, [China Trade Forecast Tool](#), May 2015.

²⁰ Wall Street Journal, [Japan Escapes Recession But Growth Misses Forecasts](#), February 16, 2015.

²¹ World Bank, [Global Economic Prospects](#), January 2016.

²² HSBC Global Research, [Japan Trade Forecast](#), November 2015.

²³ The Economists, [Negative Interest Rates Arrive in Japan](#), January 29, 2016.

²⁴ World Bank, [Potential Implications of the Trans-Pacific Partnership Agreement](#), October 4, 2015.

²⁵ Bloomberg Business, [Nomura Sees Yen Falling More Than 10% on Negative Rates](#), February 18, 2016.

²⁶ World Bank, [Global Economic Prospects](#), January 2016.

²⁷ HSBC Global Research, [Saudi Arabia Trade Forecast](#), November 2015.

²⁸ International Monetary Fund, [Saudi Arabia: Tackling Emerging Economic Challenges to Sustain Growth](#), 2015.

²⁹ European Commission, [Winter 2016 Economic Forecast](#), February 4, 2016.

³⁰ The New York Times, [What's at Stake as Britain and E.U. Discuss How to Maintain a Union](#), February 18, 2016..

³¹ The Economist, [Poll of GDP Forecasters – February Averages](#), February 4, 2016.

³² Los Angeles Times, [Signing of Trans-Pacific Partnership Trade Deal Opens Up Tough Battle](#), February 4, 2016.

³³ Reuters, [EU Trade Chief: U.S. Campaign Rhetoric Won't Stop TTIP Trade Talks](#), March 10, 2016.

³⁴ New York Times, [Ex-Im Bank is Reopened, but Big Loans are Stalled](#), December 7, 2015.

