2016 Top Markets Report Automotive Parts

Overview and Key Findings

Introduction

The U.S. automotive parts industry has nearly doubled since 2009 in terms of exports. Today, there are large domestic automakers in countries around the world, including China, India and Russia--not to mention, legacy manufacturers in the United States, Europe and Japan. Each manufacturer produces their own parts, such as engines, transmissions, frames and body parts. But, increasingly, many large manufacturers are turning to first-tier suppliers for the design and production of most components and even large sub-assemblies. In fact, large first tier suppliers are now as global as the vehicle manufacturers.

The first tier suppliers get subcomponents from second tier and third tier suppliers, and this chain continues down to raw material suppliers. To limit exposure to currency fluctuations, reduce transportation costs, minimize risks of damage in transit, avoid adverse political results and take advantage of local incentives, automakers tend to produce in the market/region where the vehicle will be sold. Mass-produced vehicles are generally only exported to countries where the economies of scale do not support local assembly. The major exception is limited-production luxury, sports or other special-use vehicles.

Similarly, parts and vehicle manufacturers seek to produce OE parts as close to the assembly plants as possible. They do it in part to address the factors pushing towards vehicle assembly localization. Modern auto plants are built for just-in-time delivery of components, making long overseas supply chains costlier and riskier. Exceptions tend to be high-tech, high-cost and light-weight components, such as computer modules. As another example, exports of light-weight alloy wheels are more likely to be shipped long distances than heavy and inexpensive, basic steel wheels.

The situation is similar for aftermarket parts but not to the same degree. An aftermarket replacement part, such as a shock absorber or brake assembly, could be the exact same part, built by the same OE supplier. But this would be less true for expensive and/or high-tech specialty components used at the discretion of the purchaser to enhance the appearance or performance of a vehicle.

As a result of these factors, there is massive intra-regional trade between the United States, Canada and Mexico in both OE and aftermarket parts, while imports from the United States are smaller in countries such as Japan and Korea. On the other hand, there are relatively large trades in aftermarket parts, including specialty aftermarket parts to countries such as the UAE and Saudi Arabia, which do not have local vehicle or parts production.

While the global automotive industry is fiercely competitive, there are other factors that limit or even distort trade. For decades, various governments around the world have used trade distorting policies to support the creation and expansion of domestic automotive industries that were not otherwise economically feasible. This has been accomplished through combinations of subsidies, tariffs and non-tariff barriers.

A prime example is India, which has a large and rapidly growing automotive industry made up of indigenous manufacturers and foreign companies forced to produce there by prohibitive tariffs. Brazil

has a large industry made up of foreign manufacturers facing high localization requirements. Similarly, the Malaysian national automobile industry makes noncompetitive vehicles but is highly subsidized and protected by barriers.

Another particularly important and rapidly growing impediment for U.S. automotive exporters is the development or acceptance of safety and environmental standards or regulations that differ from the United States. This is a major problem whether these differences were created as a purposeful barrier to trade, or not. The bottom line is that exporting auto parts from the United States to various markets can be challenging, even for the most competitive suppliers.

Key Findings: Top Markets and Methodology

There are some similarities in the results of both the OE and aftermarket, yet distinctions emerge in both the rankings and the relative values for many countries (full results can be found in Attachment 1). While Canada, Mexico and China are the top three markets in both the OE and aftermarket rankings, they receive these scores for varying reasons in each analysis. In regards to OE, China had the highest average vehicle production (17.8 million) between 2012 and 2014, more than doubling the second largest vehicle producer in this analysis during the same time period (Japan produced 8.3 million vehicles on average). China is also projected to produce over 27 million vehicles by 2020. In addition, it is the third largest market for U.S. automotive parts. Combined, given the weight assigned to these factors in this analysis, China is a strong prospect market for American-made OE auto parts. For the aftermarket, again due largely to the sheer size of the market in China and the recent growth of U.S. auto exports there, China is a market with large potential.

Canada and Mexico, however, are the top two prospective markets for a different set of reasons. Although they do not produce nearly as many vehicles as China (Canada–973,041; Mexico–1.8 million), they have historically been the largest market for the export of U.S. automotive parts, accounting for almost 75 percent of U.S. exports in 2014. In addition, given the integration of the auto industry among Canada, Mexico and the United States, the close proximity in terms of distance, and the sharing of a border, these markets will continue to be strong prospect markets for the U.S. auto parts exporters going forward.

Looking further at the OE model, Japan, Germany and Korea round out the top six potential markets. This makes sense as these three countries were also the largest producers of vehicles following China. Japan produced 8.3 vehicles on average, Germany produced 5.5 million vehicles, and Korea produced 4.2 million vehicles. In addition, Germany is the fourth largest market for U.S. auto parts, Japan is fifth and Korea is ninth. All of this confirms that these will likely be strong prospect markets going forward.

There are also similarities in rankings for the top markets of the 2015 and 2016 versions of the Top Markets Report. In both cases, Canada, Mexico and China, in that order, were identified as the top three markets for both the OE equipment and aftermarket rankings. For the OE rankings, once again Japan, Germany and Belgium were in the top 10 prospective markets in 2015 and 2016. If Singapore and Hong Kong are removed from the top 10 on the assumption that they are trans-shipment hubs, then the Netherlands and Chile also rise to the top ten, meaning that eight of the top 10 markets from the 2015 report are still in the top 10 in the 2016 report. Korea rose from 12 to 6 in the new rankings, which can be partially attributed to the rise in auto parts

Figure 1: Automotive Parts Export Market Rankings

Original Equipment Parts		Aftermarket Parts	
Country	**Ranking**	**Country**	**Ranking**
Canada	1	Canada	1
Mexico	2	Mexico	2
China	3	China	3
Japan	4	Hong Kong	4
Germany	5	Singapore	5
Korea	6	Chile	6
Belgium	7	Peru	7
Hong Kong	8	Belgium	8
Singapore	9	Netherlands	9
France	10	Germany	10

exports to Korea since the implementation of the KORUS FTA.

In regards to the aftermarket rankings, even more consistency resulted in the rankings between 2015 and 2016. Nine of the top 10 countries were the same for both years. In both years for the aftermarket rankings, the U.S. parts exports variable was expected to be the largest predictor of future success of exports. As a result, past exports are a driving force in predicting future success, and our largest export markets (Mexico, Canada, China, etc.) are likely to be leading markets for aftermarket parts in the future.

In 2009, the United States exported approximately $43 billion worth of automotive parts. The top five markets, in order, were Canada, Mexico, Germany, China and Japan. By 2015, the value of automotive parts exports from the United States was almost $81 billion. The order of the top five markets by 2015 had changed to Mexico, Canada, China, Germany and Japan. See Attachment 3 for a full list of the top 30 export markets for U.S. automotive parts between 2009 and 2015. Trade data related to auto parts does not distinguish between OE and aftermarket parts, which is a limitation for this analysis.

Of the nearly $81 billion of U.S. automotive exports in 2015, Mexico accounted for about $30 billion of these exports, and Canada accounted for $29 billion. Combined, these NAFTA partners accounted for almost 75 percent of all U.S. automotive parts exports. Exports to both of these markets grew substantially over the same time period, with exports to Mexico more than doubling from $12.1 billion in 2009 to over $30 billion in 2015. Exports to Canada rose from $19.6 billion in 2009 to $29.4 billion in 2015. It should, however, be noted that exports to Canada peaked in 2012 with $31.8 billion and has subsequently declined slightly each year since to just under $30 billion in 2015. As a result of NAFTA, the U.S. auto parts industry is highly integrated in the North American supply chain, contributing to the flow of goods among the three markets. The third leading market for U.S. exports in 2015, China, steadily grew as a market for U.S. exports from 2009 to 2014 but declined slightly from $2.6 billion in 2014 to $2.4 billion in 2015. U.S. automotive exports to Japan nearly doubled from $835 million in 2009 to $1.5 billion in 2015.

For the European market, Germany is the top destination for U.S. automotive parts exports, followed by the United Kingdom, Italy, the Netherlands, Belgium, France and Spain. Brazil is the top destination for U.S. parts exports in South America with exports nearly doubling from $554 million in 2009 to $1 billion in 2015, although exports did decline from 2014 to 2015. The next largest markets in this region for U.S. parts are Chile, Colombia, Argentina, Venezuela and Peru.

Methodology

When trying to discern where the future growth markets will be for both OE parts and aftermarket parts, there are a number of potential variables to consider. One is the size of the domestic automotive market. This can be seen by the trends in vehicle sales in recent years, the number of vehicles on the road in the market, the relative wealth in the market, and the average age of the vehicles in the market, among others.

One complication in this analysis is that HTS codes do not offer a distinction between which parts are OE and which are aftermarket. In addition, the supplier itself may not know the intended use of its part as, for example, a supplier of brakes may not necessarily know whether its manufactured part will ultimately be used as an OE part by the automaker in its manufacturing facility or whether it will be used as a replacement part for a damaged or defective brake in the manufacturer's service network.

One way to distinguish this to some degree is by identifying whether or not the domestic market has a locally based vehicle production industry. Regions, like the UAE, that do not manufacture vehicles would be expected to be importing a large proportion of aftermarket parts to either replace damaged parts or to enhance performance. In addition, markets with an older fleet on the roads and with limited new sales would also likely be purchasing a larger share of aftermarket parts in order to keep these older fleets running and on the road rather than purchasing new vehicles. Given these constraints, the models we developed for OE and aftermarket are below:

OE Model: (Sales*.05) + (U.S. Parts Exports*.35)+(U.S. Import Share*.1)+(2020 Projected Production*.15)+(Distance*.05)+(Domestic Production*.2)+(Openness to Trade*.1)[i]

Aftermarket Model: (2019 Projected Sales*.1)+(U.S. Parts Exports*.35)+(U.S. Import Share*.2)+ (Age Proxy*.1)+(Distance*.05)+(Openness to trade* .2)

The variables and weights used in each of the models are shown above. For the OE model, the sales variable was calculated using Business Monitor International data and was the average sales within each market from 2012 to 2014. A three-year average was used to account for any anomalies, spikes, or decreases in sales in a given year. The U.S. parts exports variable also was a three-year average of the number of automotive parts exported to each market from 2012 to 2014 using the Schedule B codes in Attachment 1. This variable was given a fairly large weight under the assumption that recent past exports would be a good indicator of future exports as well. The import share variable was calculated using U.N. Merchandise Trade data and HS codes at the six-digit level. The import share variable calculates what percentage of automotive parts imported into a market were imported from the United States in relation to other countries. The 2020 projected production variable is a forecast of vehicle production levels calculated by Business Monitor International. The distance variable is a measure to account for the distance between two markets by measuring the distance, in kilometers, between the largest cities in a market and the United States. The domestic production variable accounts for the level of vehicle production in given markets based on Business Monitor International calculations. The variable was calculated again using a three-year average from 2012 to 2014. The openness to trade variable comes from the International Chamber of Commerce's third edition of the Open Markets Index released in September 2015. Each of these variables was then standardized to give each country a ranking between 0-1. The results of these rankings for each variable in each of the markets analyzed can be found in the table below.

Figure 2: OE Rankings and Model Standardized Scores								
Country	Overall Ranking	Market Size (2012-2014)	U.S. Parts Exports (2012-2014)	U.S. Import Share Average 12-14	Production Projected 2020	Distance	Total Domestic Production (2012-2014)	Openness to Trade
Canada	1	0.0415	1.0000	1.0000	0.0291	1.0000	0.0545	0.59375
Mexico	2	0.0378	0.8484	0.9414	0.1040	0.8176	0.1027	0.25
China	3	1.0000	0.0651	0.0710	1.0000	0.3244	1.0000	0.21875
Japan	4	0.2592	0.0415	0.0967	0.2990	0.3333	0.4674	0.40625
Germany	5	0.1694	0.0513	0.0208	0.2145	0.6451	0.3070	0.625
Korea	6	0.0646	0.0219	0.1152	0.1608	0.3197	0.2322	0.46875
Belgium	7	0.0258	0.0114	0.0237	0.0176	0.6544	0.0272	0.78125
Hong Kong	8	0.0004	0.0121	0.1208	0.0000	0.1966	0.0000	1
Singapore	9	0.0000	0.0085	0.1683	0.0000	0.0426	0.0000	1
France	10	0.1017	0.0113	0.0241	0.0638	0.6579	0.0867	0.5
Netherlands	11	0.0230	0.0084	0.0304	0.0000	0.6560	0.0005	0.78125
Chile	12	0.0133	0.0139	0.2897	0.0002	0.5005	0.0002	0.5625
Spain	13	0.0413	0.0039	0.0000	0.0985	0.6622	0.0970	0.40625
Peru	14	0.0060	0.0033	0.2780	0.0000	0.6545	0.0000	0.46875
United Kingdom	15	0.1249	0.0323	0.0479	0.0691		0.0841	0.5625
Sweden	16	0.0144	0.0008	0.0120	0.0074	0.6265	0.0089	0.6875
Australia	17	0.0486	0.0479	0.2720	0.0000	0.0000	0.0000	0.5625
India	18	0.1448	0.0041	0.0728	0.1843	0.2747	0.1795	0.09375
Brazil	19	0.1671	0.0299	0.1065	0.0935	0.5378	0.1536	0
Russia	20	0.1364	0.0103	0.0509	0.0663	0.5492	0.1041	0.25
Colombia	21	0.0081	0.0060	0.2791	0.0032	0.7754	0.0040	0.25
Poland	22	0.0151	0.0008	0.0002	0.0236	0.5921	0.0278	0.53125
Italy	23	0.0750	0.0080	0.0236	0.0266	0.5895	0.0222	0.40625
United Arab Emirates	24	0.0187	0.0145	0.0623	0.0000		0.0000	0.75
Saudi Arabia	25	0.0412	0.0061	0.1216	0.0000	0.3545	0.0000	0.5
Turkey	26	0.0324	0.0000	0.0115	0.0393	0.5134	0.0363	0.28125
Thailand	27	0.0298	0.0066	0.0299	0.0331	0.1336	0.0515	0.375
Venezuela	28	0.0015	0.0162	0.5055	0.0003		0.0023	0.09375
South Africa	29	0.0234	0.0071	0.1280	0.0118	0.2217	0.0153	0.3125
Argentina	30	0	0.0020	0.0381	0.0175	0.4829	0	0.0625

The aftermarket model included a number of the same variables that were included in the OE model (U.S. parts exports, U.S. import share, distance and openness to trade). The 2020 projected sales variable in this model is also a forecast of vehicle sales developed by Business Monitor International. The vehicle age variable is a proxy variable derived by creating a measure using sales as a share of vehicles in operation. It is assumed that a country that has a lower share of new vehicles sales in relation to the number of vehicles in that market will have an older vehicle fleet. These results can be seen in the table below.

Figure 3: Aftermarket Rankings and Model Standardized Scores							
Country	**Overall Ranking**	**2020 Projected Sales**	**U.S. Parts Exports (2012-2014)**	**U.S. Import Share 2012-2014**	**Vehicle Age Proxy**	**Distance**	**Openness to Trade**
Canada	1	0.0271	1.0000	1.0000	0.15652	1.0000	0.59375
Mexico	2	0.0405	0.8484	0.9414	0.06289	0.8176	0.25
China	3	1.0000	0.0651	0.0710	1.00000	0.3244	0.21875
Hong Kong	4	0.0013	0.0121	0.1208	0.18543	0.1966	1
Singapore	5	0.0061	0.0085	0.1683	0.10922	0.0426	1
Chile	6	0.0093	0.0139	0.2897	0.36291	0.5005	0.5625
Peru	7	0.0069	0.0033	0.2780	0.45979	0.6545	0.46875
Belgium	8	0.0231	0.0114	0.0237	0.22306	0.6544	0.78125
Netherlands	9	0.0157	0.0084	0.0304	0.12613	0.6560	0.78125
Germany	10	0.1525	0.0513	0.0208	0.15011	0.6451	0.625
United Arab Emirates	11	0.0202	0.0145	0.0623	0.36144		0.75
Australia	12	0.0370	0.0479	0.2720	0.16954	0.0000	0.5625
Saudi Arabia	13	0.0368	0.0061	0.1216	0.42339	0.3545	0.5
Sweden	14	0.0180	0.0008	0.0120	0.14165	0.6265	0.6875
Colombia	15	0.0077	0.0060	0.2791	0.25669	0.7754	0.25
Korea	16	0.0522	0.0219	0.1152	0.22469	0.3197	0.46875
Japan	17	0.1642	0.0415	0.0967	0.16505	0.3333	0.40625
France	18	0.0817	0.0113	0.0241	0.14511	0.6579	0.5
United Kingdom	19	0.0978	0.0323	0.0479	0.14449		0.5625
Thailand	20	0.0098	0.0066	0.0299	0.49070	0.1336	0.375
Poland	21	0.0150	0.0008	0.0002	0.00000	0.5921	0.53125
Venezuela	22	0.0000	0.0162	0.5055	0.08256		0.09375
Italy	23	0.0700	0.0080	0.0236	0.06385	0.5895	0.40625
South Africa	24	0.0162	0.0071	0.1280	0.22507	0.2217	0.3125
Spain	25	0.0412	0.0039	0.0000	0.04916	0.6622	0.40625
Russia	26	0.0694	0.0103	0.0509	0.14939	0.5492	0.25
India	27	0.1362	0.0041	0.0728	0.46835	0.2747	0.09375
Turkey	28	0.0313	0.0000	0.0115	0.21504	0.5134	0.28125
Brazil	29	0.0957	0.0299	0.1065	0.28142	0.5378	0
Argentina	30	0.0232	0.0020	0.0381	0.20891	0.4829	0.0625

Industry Overview and Competitiveness

The automotive parts manufacturing industry is comprised primarily of two segments: original equipment (OE) suppliers and aftermarket suppliers. OE suppliers design and manufacture parts required for the assembly of passenger cars and trucks. OE production accounts for an estimated two-thirds to three-fourths of the total automotive parts production. Thus, automotive parts consumption is heavily linked to the demand for new vehicles. If vehicle production goes up or down in a given market, then demand for OE parts will correspondingly go up or down, as well. Conversely, if a market has little, or no, domestic vehicle production, demand for OE parts will be limited or nonexistent.

Aftermarket parts are automotive parts built or remanufactured to replace OE parts as they become worn or damaged. Automotive aftermarket buyers include retailers, repair or service facilities, do-it-yourself consumers, and wholesalers or distributors. This segment provides parts and equipment for maintenance, repair and enhancement of vehicles. Related to this is specialty equipment, which are the parts and tools for consumer preference vehicle modifications. Specialty equipment refers to parts made for comfort, convenience, performance, safety or customization and are designed for add-on after the original assembly of the motor vehicle.

Automotive parts include, but are not limited to, the following:

- bodies and parts
- windshields
- chassis and drivetrain parts
- electrical and electric components (fans, compressors, storage batteries, signaling equipment, etc.)
- engines and parts
- miscellaneous parts (brake fluid, anti-freeze, lifting machinery, etc.)
- automotive tires and parts

See Attachment 2 for the 10 digit Schedule B codes of the automotive parts covered in this report.

Vehicle manufacturers are large companies that historically like to build where they sell. Companies, including Volkswagen, Ford, GM, Honda, Hyundai, etc., have established manufacturing facilities throughout the world. Given these manufacturers' large, international marketing and manufacturing operations, they have already tapped into most of the markets, both large and small. These companies also already have established business connections with their Tier 1 suppliers and rely heavily on just-in-time delivery from these suppliers in order to maintain optimal productivity throughout the manufacturing process. In addition, vehicle manufacturers have very sophisticated plans in place when making sourcing and investment decisions.

Automakers deliver vehicles either through established assembly plants in the markets or through complex export operations to smaller markets. For example, BMW manufactures products at 30 sites in 14 countries on four continents. Likewise, BMW has used its Spartanburg, South Carolina plant as a base for exports since the mid-1990s, and this is the sole location for exclusive production of its X-3, X-5 and X-6 models. In 2013, almost 300,000 vehicles were manufactured at this facility, and 70 percent of the plant's production volume was exported to 140 markets around the world. Similarly, the 2015 Mustang, assembled in Flat Rock, Michigan, will be available in more than 100 markets.

Some suppliers are similar to the vehicle producers in that they are large, complex operations with investments throughout the world. For example, Magna has over 130,000 employees with 312 manufacturing operations and 83 product development, engineering and sales centers in 29 countries. Denso has approximately 140,000 employees and operates in 35 countries, with global sales totaling $39.8 billion for the fiscal year that ended on March 31, 2014. In contrast, many Tier 2 (and lower tier) manufacturers of automotive parts are small and medium-size enterprises (SMEs).

Most U.S. SME auto suppliers do not export. Those that do export do so primarily to Canada and/or Mexico. This demonstrates untapped potential to introduce U.S. suppliers to foreign markets, particularly for the aftermarket. These SMEs do not have the marketing departments, international operations and vast resources to readily expand their operations to new markets throughout the

world in the same capacity as the vehicle manufacturers and many of the Tier 1 suppliers.

A factor that can make exporting difficult is the ever-increasing competiveness of the automotive industry worldwide. There are more and more parts suppliers entering the market that offer lower price points, quality products and/or advanced technologies. In addition, some of these suppliers receive or have received subsidies provided by their local governments.

U.S. manufacturers with aftermarket products that are easy to produce and fairly low-tech will face the greatest challenges. The U.S. Department of Commerce's International Trade Administration can provide counseling to determine the export potential for U.S. auto parts suppliers' products on a micro level. In addition, U.S. suppliers will benefit from Commerce's market intelligence and business matchmaking services. If problems arise, commercial advocacy can also be offered.

This Top Markets Report aims to identify the best markets going forward for these companies to focus their efforts in identifying export opportunities. By focusing on automotive parts, this study provides helpful market information to assist companies in identifying promising markets to expand their business, grow exports and remain competitive on a global scale.

Global Industry Landscape

While U.S. automotive exports have nearly doubled since 2009, U.S. exports declined slightly in 2015 from $81.1 billion in 2014 to $80.8 billion in 2015. Exports to Canada dropped slightly to $29.4 billion in 2015, while exports to Mexico rose to $30.1 billion. As a result, Mexico supplanted Canada for the first time as the largest export market for U.S. automotive parts. Given the continued expansion of vehicle production in Mexico, potentially exceeding 5 million units by the end of the decade, it is logical to expect that Mexico will continue being the largest export market for U.S. auto parts. Exports to China also decreased from $2.5 billion in 2014 to $2.4 billion in 2015.

Combined, U.S. exports of automotive parts to the European Union countries have shown steady growth since 2012, increasing from $5 billion in 2012 to $7.2 billion in 2015. Between 2014 and 2015 alone, exports grew from $6.3 billion in 2014 to $7.2 billion in 2015. This correlates to the resurgence in the new car market in the EU. New passenger vehicles registrations grew 9.3 percent in 2015 to 12.6 million units. Automotive parts exports to each of the top European markets (Germany, United Kingdom, Italy, the Netherlands and Belgium) also grew.

Challenges and Barriers for U.S. Automotive Parts Exporters

One of the greatest challenges facing U.S. auto parts exporters is the global regulatory environment. Lack of harmonization, coherence and transparency of regulations and standards deeply affect the competitiveness of U.S. vehicle and automotive parts manufacturers worldwide. Conforming to two different standards is costly and time-consuming. Until recently, most developing countries have had only limited regulatory requirements, and thus, they accepted virtually any vehicles built at minimal safety and emissions levels. This has made it possible for American companies to export U.S.-compliant vehicles and products to these markets.

Unfortunately, many countries are now choosing to make their requirements more stringent and are frequently turning to sole acceptance of regulatory standards developed by the European Union. Because of this, they are no longer allowing the sale of U.S.-compliant products in their markets. It is ironic that many of the countries that are adopting EU standards have existing regulatory systems more similar to the U.S. system (e.g., Chile, Colombia, Russia, etc.).

Countries moving to sole acceptance of EU regulatory requirements have been doing this largely because the EU has been aggressive in marketing its regulatory system and also appears to be including requirements for adopting its regulations in its trade agreements. In addition to the barriers cropping up from the move toward EU standards, there are recent hints that emerging markets, such as China or India, are developing their own separate regulations. Having even more sets of regulatory standards will only make it harder to export to other markets and certainly raise the cost of doing business. This is one

of the many reasons why it is in the interest of European and U.S. policy makers to push for regulatory convergence in the ongoing Transatlantic Trade and Investment Partnership (TTIP) negotiations. Regulatory harmonization is important for manufacturers and consumers globally.

Another barrier to trade for auto parts manufacturers (especially small to medium-sized companies) is the push by foreign governments for localization. In an effort to increase investment in their local economy, some countries encourage localization and offer incentives to build a manufacturing facility and/or partner with a local firm. China, for example, pressures companies to produce in-country and partner with local vehicle manufacturers and suppliers in order to build up its indigenous industry.

Many markets with a fairly large domestic industry impose high tariffs and excise taxes in order to drive up the costs of imports. In Thailand, ad valorem tariffs can be as high as 80 percent for imports that compete with domestically produced automobiles and parts. Excise taxes on automobiles are usually based on various vehicle characteristics, such as engine size, weight and wheelbase, which make the tax calculations complex.

Exporting automotive parts to the EU can amount to tariffs of 2 to 5 percent of total costs, and for already assembled parts, tariffs may even account for 15 to 20 percent of overall costs. Where there are low margins, tariff costs can result in missed business opportunities overseas.

In addition, some government policies attempt to close the market for outside competitors by forcing consumers to work within an established network of local companies. These policies regulate and restrict foreign companies from competing by creating restrictions on investment and distribution and by regulating purchasing decisions by consumers.

Furthermore, the conclusion of a number of our trade agreements will hopefully create better opportunities for U.S. parts suppliers and lower the cost of doing business. These trade agreements aim to increase harmonization, lower tariffs, reduce barriers and address issues, such as counterfeiting and intellectual property protection.

Opportunities for U.S. Automotive Parts Exporters

Trans-Pacific Partnership

The Trans-Pacific Partnership (TPP) is a great opportunity for U.S. automotive parts exporters. TPP unlocks new opportunities for exports of 'Made-in-America' auto parts. Historically, U.S. auto exporters have faced a broad range of formidable barriers to export in TPP countries. The TPP will reduce the cost of exporting, increase the competitiveness of U.S. firms and promote fairness and transparency.

The United States exported over $63 billion in auto parts to TPP markets in 2015. These exports currently face tariffs as high as 40 percent in Malaysia and 32 percent in Vietnam. At the same time, competing auto parts made in China face lower, or even zero, tariffs in Malaysia and Vietnam as a result of trade agreements China has with those countries. Under TPP, 98.1 percent of U.S. auto parts exports to the TPP countries will be eligible for immediate duty-free treatment.

In addition to eliminating tariffs, the TPP agreement offers a range of new tools to open markets for U.S. automotive exports. The U.S.-Japan bilateral agreement addresses a wide range of non-tariff measures in Japan that have served as barriers to American-made autos, trucks and parts, including transparency in regulations, standards, certification, financial incentives and distribution.

Japan's Non-Tariff Measures (NTMs) have historically limited market access for U.S. motor vehicle exports through opaque regulatory regimes, restrictions of distribution of U.S. vehicles, and onerous standards and technical regulations. This, in turn, has also limited U.S. parts exports to Japan. The United States addressed these automotive barriers through bilateral negotiations with Japan in parallel with the broader TPP negotiations.

For example, TPP will ensure Japan's opaque auto regulation committees are administered in a transparent and open manner with timely and public notice of their formation and of meetings. The agreement also provides an opportunity for interested persons to participate in those meetings and make information on proposals publicly

available. TPP also requires a 12-month period before new regulations requiring a substantial change to motor vehicle design or technology come into effect.

Japan's unique standards currently impose excessive costs on U.S. automakers. To lower these costs, Japan will accept certain U.S. motor vehicle standards. Additionally, TPP requires that the introduction of vehicles that include new technologies not be unduly delayed for release in the Japanese market, as is often the case today.

Japan's Preferential Handling Procedure (PHP) allows U.S. producers to sell cars in Japan using faster, less costly certification procedures. Under TPP, Japan agreed that it will not make the PHP program more costly or complex and that motor vehicles certified using the PHP program will continue to be eligible for financial incentives available to Japanese vehicles. As part of its entry to the TPP negotiations, Japan agreed to double the size of the PHP program.

TPP reinforces strong rules of origin, allowing benefits to fall on inputs produced in any of the member countries. This concept, called cumulation, strengthens incentives for TPP businesses to integrate production and supply chains within the TPP region. This makes it more attractive to do business with producers in the United States and other TPP countries than with producers outside the TPP region.

TPP creates strong protections for patents, trademarks and copyrights. This Agreement goes beyond past trade agreements to require Parties to criminalize the theft, including cyber theft, of trade secrets. Given the high level of research and development costs made by the U.S. automotive industry, these steps should help to further protect U.S. companies' intellectual property.

Finally, TPP includes strong rules of origin for cars, trucks and parts. These rules ensure that TPP benefits will only go to the United States and the other TPP countries and will expand the auto industry's potential export opportunities. These rules of origin are more accurate, more easily verifiable and more enforceable than those of previous agreements.

For more detailed information, please visit: www.trade.gov/fta/TPP.

Figure 4: U.S. Automotive Parts Exports to TPP Countries, 2009-2015 (in USD Millions)							
Country	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
TPP Region	$33,860.3	$46,688.9	$53,890.8	$60,899.0	$62,467.5	$63,906.7	$63,320.5
Mexico	$12,088.5	$17,456.1	$21,474.9	$24,341.3	$26,584.7	$29,118.2	$30,059.0
Canada	$19,551.9	$25,896.7	$28,417.3	$31,837.6	$31,780.0	$30,664.4	$29,369.9
Japan	$835.2	$1,310.0	$1,439.4	$1,488.0	$1,343.7	$1,429.1	$1,509.9
Australia	$687.4	$1,084.7	$1,392.4	$1,935.3	$1,488.1	$1,436.5	$1,291.5
Chile	$288.9	$408.5	$508.3	$565.3	$561.8	$542.0	$447.9
Singapore	$253.9	$347.1	$422.8	$435.5	$377.0	$348.0	$291.5
Peru	$96.7	$115.0	$157.7	$209.6	$224.9	$237.6	$214.7
New Zealand	$21.3	$30.2	$35.6	$39.9	$43.5	$49.5	$54.3
Malaysia	$20.4	$25.2	$25.9	$26.6	$37.5	$55.1	$48.9
Vietnam	$15.8	$15.0	$16.2	$19.0	$24.2	$25.5	$31.7
Brunei	$0.2	$0.4	$0.4	$0.9	$2.2	$0.7	$1.2

[i] Australia assumed no domestic production and zero projected production.