

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

**Foreign Trade of the United States of America – case
study of automobile industry**

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et Ph.D.**

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Barbora Mandrysz

Economics and Management

Thesis title

Foreign Trade of the United States of America – case study of automobile industry

Objectives of thesis

The aim of the thesis is to conduct the analysis of Foreign Trade of the United States of America – case study of automobile industry. The thesis will perform the analysis of trade balance of the USA and will attempt to determine the main factors that determine the competitiveness of trade in this sector. In addition, the thesis will attempt to present the impact of this sector and its competitiveness on employment in the USA.

Methodology

Comparative and descriptive methods of analysis will be used in the thesis. The first part will include trade theories based on available scientific resources. In describing the particular theories of foreign trade, will be used the method of description. In the second empirical part there will be analyzed development of import and export and performed by tables and graphs that are processed in MS Office.

The proposed extent of the thesis

40 – 60 pages

Keywords

The United States of America, automobile industry, export, import, foreign trade, GDP

Recommended information sources

Maitah, M. Macroeconomics, 2009, ISBN 978-80-213-1904-2; Místo vydání: Praha, Počet stran: 181.
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Pavelka, T.: Makroekonomie. Základní kurz. 2. vydání. Praha, Melandrium 2007. ISBN 978-80-86175-52-2
Rusmichová, L.; Soukup J.: Makroekonomie: základní kurs. Vyd. 5. Slaný: Melandrium, 2002, 167 s. ISBN
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Declaration

I declare that I have worked on my bachelor thesis titled "Foreign Trade of the United States of America – case study of automobile industry" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any third person.

In Prague on 9.3.2016

Barbora Mandrysz

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Zahraníční obchod Spojených států amerických – případová studie automobilového průmyslu

Foreign Trade of the United States of America – case study of automobile industry

Souhrn

Bakalářská práce je zaměřena na zahraniční obchod Spojených států amerických, konkrétně na automobilový průmysl. Hlavním cílem práce je analýza zahraničního obchodu ve Spojených státech se zaměřením na automobilový průmysl. Tato práce se dělí na teoretickou a praktickou část. Teoretická část práce se zprvu zabývá významem zahraničního obchodu a následně je popsán jeho vývoj v rámci ekonomické teorie. V práci byly použity komparativní a deskriptivní metody zkoumání. Praktická část je zaměřena na analýzu automobilového průmyslu ve Spojených státech. Zpočátku je podrobněji rozebrán vývoz a dovoz USA. V rámci analýzy automobilového průmyslu se práce blíže zabývá faktory ovlivňující konkurenceschopnost automobilového průmyslu v USA a dále se věnuje vlivu tohoto sektoru na zaměstnanost ve Spojených Státech. V práci bylo zjištěno, že automobilový průmysl je jeden z nejvýznamnějších odvětví ve Spojených státech a hraje významnou roli v ekonomice a zaměstnanosti Spojených států amerických.

Summary

The bachelor thesis is focused on foreign trade of the United States of America, concretely on automobile industry. Main goal of the thesis is to analyze foreign trade in the United States with the intention of automobile industry. This thesis is divided into theoretical and practical part. Theoretical part of the thesis firstly deals with a significance of foreign trade and consequently there is described development of foreign trade in terms of economic theories. In the thesis there were used comparative and descriptive methods. Practical part is focused on the analysis of automobile industry in the United States. At the beginning, there are more detailly described exports and imports of the U.S. Within the frame of analysis of automobile industry, the thesis is more closely focused on factors determining the competitiveness in automobile industry in the United States and furthermore it investigates the influence of this sector on employment in the U.S.

The research has found that the automobile industry is considered to be one of the most significant industries within the United States because of its economic impact, large employment and geographic reach.

Klíčová slova: Spojené státy americké, automobilový průmysl, vývoz, dovoz, zahraniční obchod, HDP

Keywords: The United States of America, automobile industry, export, import, foreign trade, GDP

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Introduction

Foreign trade plays a dominant role in the economy of most of the countries around the world and forms a large part of a country's Gross Domestic Product. Moreover, foreign trade contributes to the economic growth of a country.

In theoretical part of the thesis there is mainly described the development of foreign trade and foreign trade theories that were developed over time in order to understand why countries trade with each other. In addition, there is a review of international institutions connected with foreign trade whose aims are to remove trade barriers and support fair trade and trade expansion.

The practical part examines a significance of foreign trade to the United States. There are analyses of data to describe both exports and imports in the U.S. Moreover, it describes automobile industry in the United States, defines the largest automobile producers in the U.S. market and shows its impacts on the U.S. economy. In addition, the practical part reflects the evolution of total automobile production, sales, and employment in selected years based on available statistical data. Furthermore, there is described the influence of automobile sector on employment in the United States.

Objectives and methodology

The main aim of the thesis is to conduct analyses of foreign trade of the United States Of America and its automobile industry. The partial aim is to analyze trade balance of the United States according to available statistics and other web resources. Other goals are to assess factors determining competitiveness in automobile sector in the United States and determine the impact of this sector on employment in the United States. In the thesis there are used descriptive and comparative methods.

In case of the theoretical part, the descriptive method is used to describe theories of foreign trade, trade policies and international institutions associated with foreign trade. The theoretical part is elaborated on the basis of available literature and internet articles.

In the practical part of the thesis there are used both descriptive and comparative methods. Descriptive method is primarily used to describe the significance of trade to the United States and to describe selected automobile producers in the United States.

In addition, there are analyses of exports and imports, which are performed through time series analyses. This part of the thesis is elaborated on the basis of selected literature, annual reports and other available internet resources which are listed at the end of the thesis.

1. Theoretical part

This part of the thesis deals with the development of trade, impact of foreign trade on the economy and there are briefly described foreign trade theories. Furthermore, there are mentioned different types of trade barriers and pointed out some of the international organizations associated with foreign trade.

1.2. The significance of foreign trade

Trade as a human activity has existed since the beginning of civilization. In prehistoric times, each community was taking care of all needs of its members by itself, leaders were producing and obtaining food, clothing, habitation, fuel or instruments without the need of cooperation with other groups, they were completely self-sufficient. Trade thus began to develop when people came to the first division of labor: separation of artisans from farmers. Their specialization forced them to exchange their products for others, because they focused on a specific segment and were unable to cover all the needs separately. (Mulačová, Mulač, 2013)

On the other hand, this specialization brought significant streamlining of the activities. People found out that a meaningful division of labor is an opportunity for development and economic growth. At the beginning, trade was realized directly between manufacturers. Initially, it was done through the barter system.

The principle of this method consisted in getting what people wanted by giving others something with a similar value. However, in many cases, this caused problems because such a situation is rare and therefore there had to be multiple complex transactions. The consequence of that was the creation and implementation of a universal currency, i.e. money. (Mulačová, Mulač, 2013) With the invention of money, trade became simpler.

Trade can be either domestic or foreign. Domestic trade is based on transactions occurring in the territory of the given country. Foreign trade, also called international trade, occurs when country exchanges goods and services across the borders. The foreign trade plays a dominant role in the economy in most of the countries around the world.

An export occurs when goods are produced in one country and eventually shipped into another country. In case of import, the goods are brought into certain country from another one. As mentioned previously, the foreign trade makes up a big part of a country's GDP (Gross domestic product). GDP includes consumption (C), investment (I), government spending (G) and total net exports (X) – calculated as total exports (Ex) minus imports (Im). The resulting formula is following: $GDP = C + I + G + X$ ¹

Foreign trade is a wide field in economics, which uses microeconomic models and techniques in order to simplify understanding of the international economy. Among these belong supply and demand analysis, behavior of firms and consumers, understanding of market structures and many other economic techniques.²

1.3. Reasons of doing foreign trade

Foreign trade increases a world's economy, in which demand, supply and also prices are influenced by global events. In most of the countries, this kind of trade represents an important share of GDP. If the foreign trade did not exist, countries would be limited only with goods and services they produce within their borders.

A significant role in the development of foreign trade plays industrialization, globalization, advanced technology and transportation. Furthermore, countries with a strong foreign trade are prosperous and they have also higher power to control the world economy.³ An increase in the foreign trade is fundamental for the growth of globalization. For the last half of the 20th century, the advantages of foreign trade have been the key drivers of economic growth. Moreover, the global trade can lead to the reduction of poverty. Besides these, other benefits from foreign trade may also include: stabilization of the seasonal market fluctuations, rise in sales and revenues, better potential for the extension of the businesses and increase in domestic competitiveness.⁴

¹ Economics, 17th Edition, Paul A. Samuelson & William D. Nordhaus (n.d.), *Chapter 30 Summary / A. Foreign Trade and Economic Activity*. [online] Available at: <http://www.mhhe.com/economics/samuelson17/students/summ30.mhtml> [Accessed 22 Oct. 2015]

² International trade theory and policy, by Steven M. Suranovic (n.d.), *What is International Economics?* [online] Available at: <http://internationalecon.com/Trade/Tch5/T5-2.php> [Accessed 12 Nov. 2015]

³ biblioteca.regielive.ro, (n.d.). *International Trade* [online] Available at: <http://biblioteca.regielive.ro/seminarii/economie/international-trade-333507.html> [Accessed 14 Nov. 2015]

⁴ economywatch.com, (2010). *Benefits of International Trade*. [online] Available at: <http://www.economywatch.com/international-trade/benefit.html> [Accessed 14 Nov. 2015]

1.4. Foreign trade theories

It is important to understand how countries traded with each other in the past in order to understand the development of modern global trade. As time went by, economists came up with theories to explain the principle of global trade. Fundamental historical theories are country-based, called classical. These theories include: Mercantilism, Adam Smith's theory of Absolute Advantage, Ricardian theory of Comparative Advantage and Heckscher-Ohlin theory. On the other hand, there are theories called neo-classical. These theories consist of: The Heckscher-Ohlin Theory, Leontief Paradox and Porter's National Competitive Advantage. (Mason, Sanjyot, 2011) The classical trade theory states that a value of a product consists of the cost of materials and the cost of labor whereas the neo-classical trade theory states that trade among regions is dependent on comparative advantage and factor endowments.

1.4.1. Mercantilism

Mercantilism dominated economic thinking in Western Europe approximately from the end of the 16th century to the second half of the 18th century. Mercantilists sought ways how to create a stronger position of the state in the competition between countries. According to them, the wealth of a nation is measured by the supply of precious metals that the country gathered. Besides mining was foreign trade seen as another source of increase in reserves of precious metals. (Neumann, Žamberský, Jiráňková, 2010)

An active foreign trade balance contributes to a net inflow of those precious metals into domestic economy and according to mercantilists, this led to an increase of the nation's wealth. In other words, a nation could become richer at the expense of other nations, and thus the country should support exports and limit imports. (Neumann, Žamberský, Jiráňková, 2010)

During the mercantilist stage, there was a significant relationship between mercantile classes and the governments of the nation states, which induced the government to set up policies which would defend their business interests against competition abroad. These policies included quotas, tariffs and prohibitions on imported goods that could be in competition with local producers.

Furthermore, prohibited was also the export of instruments, capital equipment and the possible emigration of skilled labor, because this would enable foreign countries to compete in the production of goods. In return for these policies, the mercantile classes supported the armies of the nation-states.⁵

1.4.2. Adam Smith's theory of Absolute Advantage

Adam Smith was a Scottish supporter of laissez-faire economics and was considered as the first free-market economist. Smith openly criticized mercantilist theory in his book *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776). This book is regarded as the foundation of modern economic theory. Smith pointed out that freely initiated trade can benefit from both sides. He also assumed that the collusive relation between manufacturers and government was damaging to population. According to Smith, the country should not focus only on exports, but rather on production of goods they are efficient at. Furthermore, goods can be exchanged for other goods produced in different countries more efficiently. (Neelankavil, Rai, 2010)

The idea of Smith's theory of absolute advantage was based on the production of goods with a lower cost per unit than any other country. If a country is able to manufacture particular product at lower cost, this country is a lot more productive and thus has an absolute advantage in that sphere than a different country producing exactly the same product but at higher cost. Then the country with absolute advantage will export products into countries with a higher cost of production and will import products which other countries are able to produce at lower cost. (Neumann, Žamborský, Jiráňková, 2010). Absolute advantage enables countries to maximize profits and minimize costs. Smith also assumed that there are some countries having no absolute advantage in any good.⁶

1.4.3. Ricardian Theory of Comparative Advantage

Ideas of Smith were developed into the principle of comparative advantage by a British political economist David Ricardo. In case of comparative advantage, there should be considered two important sources. A dominant role play natural resources.

⁵ Laura LaHaye. "Mercantilism". The Concise Encyclopedia of Economics. 2008. Library of Economics and Liberty. [online] Available at: <http://www.econlib.org/library/Enc/Mercantilism.html> [Accessed 15 Nov 2015]

⁶ internationalrelationsonline.com, (n.d.). *Absolute Advantage Theory*. [online] Available at: <https://internationalrelationsonline.com/international-trade-theories/absolute-advantage-theory/> [Accessed 15 Nov. 2015]

Some countries can benefit from having a certain natural resource in excess. Another significant source of comparative advantage is climate, which enables an export benefit.⁷ Ricardo is considered as an author of theory of comparative advantage, which proves that the foreign trade can be profitable even if the country has no absolute advantage. His most famous book is called *On the Principles of Political Economy and Taxation* and was firstly published in 1817. (Neumann, Žamborský, Jiráňková, 2010)

According to Ricardo, a country which trades for goods that can be obtained at lower cost from another country benefits more than if it manufactured the products itself. When two countries specialize and trade their own goods, both countries benefit. The reason why these benefits occur is because each country specializes in manufacturing the products for which its comparative cost is lower.⁸

„Under a system of perfectly free commerce, each country naturally devotes its capital and labour to such employments as are most beneficial to each... It is this principle which determines that wine shall be made in France and Portugal, that corn shall be grown in America and Poland, and that hardware and other goods shall be manufactured in England.” (Ricardo, 1817)

In order to identify a comparative advantage of a country, the country should compare the opportunity costs of manufacturing products among countries. Country should specialize on manufacturing goods in which it has the biggest benefit and the least weakness and for which is the relative advantage greater.⁹

Later, another English economist John Stuart Mill extended the law of comparative advantage. In his famous book *Principles of Political Economy* (1848), Mill was concerned with the question of the redistribution of benefits from trade. According to him, the country with the greatest benefit is the one that manufactures the most demanded products.

⁷ Robinson, R. (2015). Encyclopedia Britannica. *International trade*. [online] Available at: <http://www.britannica.com/topic/international-trade/Sources-of-comparative-advantage> [Accessed 18 Nov. 2015]

⁸ newworldencyclopedia.org, (2008). *David Ricardo*. [online] Available at: http://www.newworldencyclopedia.org/entry/David_Ricardo [Accessed 15 Nov. 2015]

⁹ Steven Suranovic, (2015). International Trade Theory and Policy. *The Theory of Comparative Advantage - Overview* [Online] Available at: <http://internationalecon.com/Trade/Tch40/T40-0.php> [Accessed 15 Nov. 2015]

1.4.4. The Heckscher-Ohlin Theory

Swedish neoclassical economists Eli Heckscher and Bertil Ohlin came up with theory whose principle was that each country should focus on exporting goods that they are able to manufacture most easily and in large quantity. Heckscher and Ohlin considered two factors of production: labor and capital. The Heckscher-Ohlin model points up that countries having comparative advantages should import products they are not able to produce as efficiently and export those goods requiring factors of production they have in excess.

In essence, Heckscher and Ohlin wanted to illustrate how should countries operate when resources are unequally divided among different countries. The model highlights how countries can profit from foreign trade by exporting what they have in excess.¹⁰

1.4.5. Leontief's Paradox

The Heckscher-Ohlin Theory was doubted by the results of research done by Russian-American economist. He investigated export and import of the USA in 1947 to find out (or confirm) if they export capital intensive products and import labor intensive products, as it was expected to be this way. The result was exactly opposite. (Kalínská, 2010) Based on his conclusions, the United States export goods that require a huge amount of labor and import capital intensive goods even though the United States have more capital than any other country. That is why this is known as a Leontief paradox.¹¹

1.4.6. Stolper-Samuelson theorem

Significant expansion of the Heckscher-Ohlin theorem was developed by two American economists Wolfgang Stolper and Paul Samuelson. This theorem describes a situation that occurs after change in price of factor of production or product manufactured through this production factor. (Kalínská, 2010) For example, if the price of capital intensive commodities increases, producers will attempt to increase the production. This will lead to increased demand for capital, which will result in increase of its price as a production factor. On the other hand, there will be decrease in demand for labor.

¹⁰ Investopedia, (n.d.). *Heckscher-Ohlin Model* [online] Available at: <http://www.investopedia.com/terms/h/heckscherohlin-model.asp> [Accessed 15 Nov. 2015]

¹¹ Encyclopedia Britannica, (2014). *Wassily Leontief / American economist*. [online] Available at: <http://www.britannica.com/biography/Wassily-Leontief#ref665696> [Accessed 18 Nov. 2015]

The consequence will be absolute and relative increase in income of owners of capital, no matter if it is a country focused on the production of capital or labor intensive goods. However, the situation will be different in case of owners of labor. If a country focuses on capital intensive products, it will result in relative decline, but if the country focuses on labor intensive products, this will result in absolute decline. Countries focusing on capital intensive goods will benefit more because there will be increase in the volume and price of exported products. Conversely, countries focused on labor intensive goods will experience a decline in both exports and imports. (Kalínská, 2010)

1.4.7. Porter's Five Forces Theory

American professor Michael Porter introduced the five forces model to help businesses with competitiveness and developing strategies. This model helps companies to focus on forces determining the profitability of a certain industry.¹² Porter pointed out five factors that influence all industries and markets. These factors determine the competitiveness in a market and profitability. Using strategies, the market will try to obtain a stronger position in the industry.

The Porter's five forces are following:

1. Competitive Rivalry – If there any other companies competing between each other.
2. Threat of new Entrants – If the market is profitable and attractive in the long term, later on it will be attractive to new companies.
3. Threat of Substitutes – The more substitutes that exist for a certain product, the bigger company's competitive environment and the lower potential profit.
4. Bargaining Power of Buyers – How strong is the power of buyers to influence prices in an industry.
5. Bargaining Power of Suppliers – How strong is the relationship with suppliers, how many potential customers the company has.

Most of the time, this model is used when evaluating company's position in its branch and in order to find out the level of competitiveness.¹³

¹² Mindtools.com, (n.d.). *Porter's Five Forces | Assessing the Balance of Power in a Business Situation* [online] Available at: https://www.mindtools.com/pages/article/newTMC_08.htm [Accessed 18 Nov. 2015]

¹³ cleverism.com, (2014). *Strategy frameworks | Porter's Five Forces Model* [online] Available at: <http://www.cleverism.com/porters-five-forces-model-strategy-framework/> [Accessed 18 Nov 2015]

1.4.8. The Theory of product life cycle

The main author of the theory of product life cycle is Raymond Vernon. Vernon published this theory within the frame of his publication *International Investment and International Trade in the Product Life Cycle* in 1966. Vernon's theory is based on the assumption that individual regions can be differently disposed for the production of a certain product depending on its life-cycle. Moreover, this theory assumes that during the cycle, the production will be moved into areas with the best conditions for a given production. (Blažek, Uhlíř, 2002) According to Vernon, each product goes through specific phase's cycle, including the following stages of development:

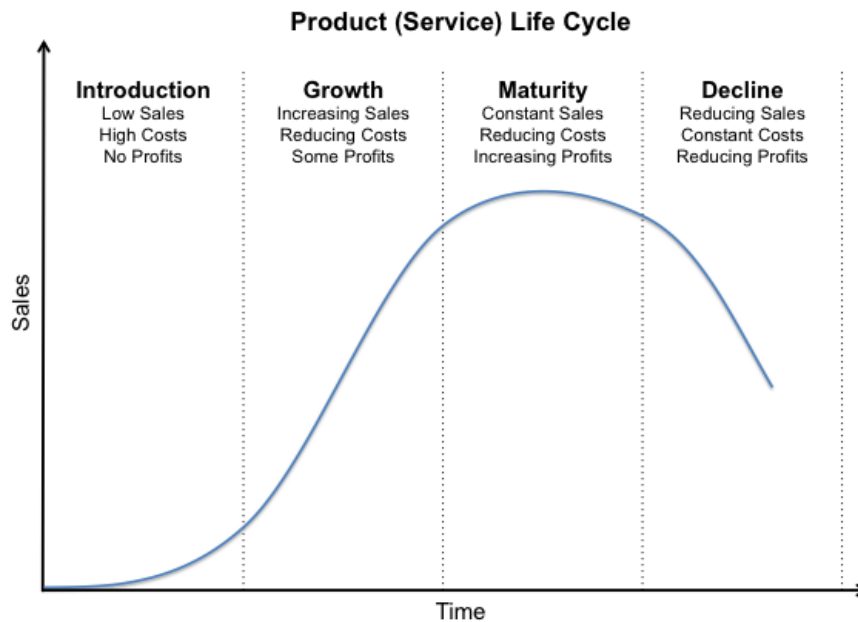
1. Introduction stage – The product is manufactured in the most developed regions, which have a comparative advantage in technology and highly skilled workforce. In developed regions there exists a large market easily receiving new things and in these regions there are usually situated corporate domiciles, which facilitate the intensive supervision of development of commencing production of a new product.
2. Growth stage – This stage is mainly characterized by a high growth in profits and sales. Moreover, at this point the company is able to benefit from economies of scale in production and the profit margins and thus the total profit rises.
3. Maturity stage – Initial issues of the production are solved, its volume gradually increases and begins the export of a certain product from the most developed regions. At the same time, the price of products decreases due to among others new competitors on the market. Companies may also consider possible modifications or improvements of products in order to obtain a competitive advantage.
4. Saturation stage – A period of stability. Developed region loses its comparative advantage and the fully standardized product is manufactured and exported from the less developed regions with lower costs. There are limitations of production and export from more developed region, eventually the given product is imported into that region.¹⁴
5. Decline stage – Over time, the market for a product will begin to decrease due to a multiple reasons. For instance, it can be due to the market saturation, meaning that all the customers who would be buying the product have already bought it before.

¹⁴ is.mendelu.cz (n.d.). *Teorie regionálního rozvoje*. [online] Available at: <http://www.is.mendelu.cz/eknihovna/opory/index.pl?cast=46090;lang=sk> [Accessed 14 Dec. 2015]

Another reason can be that people would switch to a different product. Even though the decline stage may be unavoidable, the company can still make some profit by decreasing production costs and focus on cheaper markets.¹⁵

Stages of a product life cycle are shown in the Image 1.

Image 1: Stages in a product's life cycle



Source: [businesssetfree.com](http://www.businesssetfree.com), (2013). 4 Stages of the Small Business Product Life Cycle [image]. Available at: <http://www.businesssetfree.com/?s=product+life+cycle> [Accessed 14 Jan. 2016]

1.5. Types of trade barriers

Trade barriers are divided into tariff and non-tariff. Tariff (tax) barriers refer to a tax on imported goods. One of the main aims of implementing a tariff is to protect economy from import competition. It is considered to be one of the most common way of collecting revenue for governments. Custom duties are fees levied by the government on goods brought into one country from another. With changes in tariffs countries are able to either protect their economies or liberalize trade. Tariffs might be levied in two basic forms, either as ad valorem tariffs or specific tariffs. In case of ad valorem tariffs, taxes are levied as a percentage of the value of the imported good whereas specific tariffs are levied as a fixed sum of money per unit of the imported good. (Suranovic, 2010)

¹⁵ productlifecyclestages.com (n.d.). *Product Life Cycle Stages* [online] Available at: <http://productlifecyclestages.com/> [Accessed 14 Jan. 2016]

Besides tariffs, quotas, subsidies and embargoes can affect the trade flow between two countries. These belong to non-tariff barriers. It is a form of limitative trade in which the barriers are represented in a different form than a tariff.

Quotas are quantitative restrictions of goods imported usually expressed in means of units (100 shirts) or value (ad valorem). (Shenkar, Luo, 2008) The purpose of using quotas in a foreign trade is to regulate the volume of trade among countries. In some cases, quotas are imposed on certain goods in order to decrease imports, and thus raise domestic production.¹⁶

Subsidies are payments given by the government to domestic companies to be more competitive in comparison with foreign competitors at home or abroad or simply to support exports or protect from imports.

An embargo is the prohibition either of export of certain goods to another country or of complete trading with a specific country. (Shenkar, Luo, 2008)

1.6. International institutions associated with foreign trade

High importance of the development of the world economy led to the creation of the foreign community and regulation organizations, whose efforts are focused on the development of regulations. Multilateral agreements play a significant role in regulation of foreign trade.¹⁷

1.6.1. GATT

General Agreement on Tariffs and Trade (GATT) was signed as a first multilateral trade agreement including obligatory trade and political rules. It became a Protocol of Provisional Application of the General Agreement on Tariffs and Trade agreed in Geneva in 1947 during the second conference of the Preparatory Committee of the United Nations. (Fojtková, 2009) The Agreement was mainly intended to promote world trade by reducing the barriers of foreign trade through the reduction of quotas, tariffs and subsidies.¹⁸

¹⁶ Investopedia, (n.d.). *Quota* [online] Available at: <http://www.investopedia.com/terms/q/quota.asp> [Accessed 18 Jan. 2016]

¹⁷ Ereport.ru, (n.d.). *Mezhdunarodnaja trgovlja: teorii, razvitie, struktura regulirovanie.* [online] Available at: <http://www.ereport.ru/articles/mirecon/intrade.htm> [Accessed 19 Jan. 2016]

¹⁸ Investopedia, (n.d.). *General Agreement On Tariffs And Trade - GATT.* [online] Available at: <http://www.investopedia.com/terms/g/gatt.asp> [Accessed 15 Jan. 2016]

Most of this was attained through a series of multilateral negotiations known as trade rounds as in details described in Image 2.

Image 2: GATT trade rounds

The Rounds of GATT			
Year	Location	Number of Member Countries	Focus and Outcome
1946	London, England	50	50 nations meet to discuss creation of international trade organization; discussions failed.
1947	Havana, Cuba and Geneva, Switzerland	23	Nations meet first in Havana and then Geneva (first official meeting) to agree to reduce more than 45,000 tariffs and duties; agreement result in creating of GATT
1949	Annecy, France	13	Tariff Negotiations and agreements
1951	Torquay, England	38	Tariff Negotiations and agreements
1956	Geneva, Switzerland	26	Tariff Negotiations and agreements
1960–1961	Geneva, Switzerland "Dillion Round"	26	Tariff Negotiations and agreements
1964–1967	Geneva, Switzerland, "Kennedy Round"	62	Tariff and anti-dumping negotiations and agreements
1973–1979	Geneva, Switzerland, "Tokyo Round"	102	Tariff and non-tariff barriers negotiations and agreements
1986–1994	Uruguay "Uruguay Round"	123	Tariff and non-tariff barriers negotiations and agreements; added reviews of intellectual property, trade rules, services, textiles, agriculture and dispute settlement; resulted in information of the WTO in 1994

* Beginning with the 1960 Round in Geneva, GATT officially named each round rather than just use the name of the city and country

Source: new.edu (n.d.) International Economic Cooperation among Nations [image] Available at: http://images.flatworldknowledge.com/carpenteribus/carpenteribus-fig06_004.jpg [Accessed 15 Jan. 2016]

At the beginning, trade rounds of GATT were focused on reducing tariffs. Later on, the Kennedy Round (1964-1967) dealt with the problem of dumping (Anti-Dumping Agreement). The Tokyo round was the seventh session of General Agreement on Tariffs and Trade in mid-seventies and it was the first attempt to completely reform the trading system. This was followed by the eighth round called the Uruguay Round (1986-1994).

The Uruguay round was the most significant one in the framework of GATT and led to the creation of World Trade Organization (WTO) as well as to new agreements.¹⁹ The General Agreement on Tariffs and Trade was replaced by the WTO in 1995.

1.6.2. World Trade Organization

The system of the WTO consists of a set of agreements liberalizing world trade, which besides the Agreement establishing the WTO also includes various annexes, appendices and aspects of international trade. (Fojtíková, 2009) Among the most important annexes belong:

- Multilateral Agreements on trade in goods (including the General Agreement on Tariffs and Trade – GATT 1995).
- The General Agreement on Trade in Services (GATS).
- Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)

Main differences between the GATT and WTO are following:

- a) GATT represented a set of rules, it was a multilateral agreement without an institutional base whereas the WTO is a permanent institution, which is intended as a permanent organization.
- b) In case of the General Agreement there are parties, in the WTO there are members.
- c) The GATT rules referred to trade in goods, the WTO includes also trading of services and the trade aspects of intellectual property rights.
- d) Since the late seventies, there have been concluded a number of agreements within the scope of GATT, which has obliged only those states which were assigned to agreements. Agreements of the WTO system are almost exclusively multilateral and they represent commitments for all. (The only exceptions are 4 multilateral agreements.)
- e) Settling of disputes is compared with the GATT faster, as it has more features of auto progress in the proceedings. (Fojtíková, 2009)

¹⁹ Wto.org, (n.d.). *Understanding the WTO - The GATT years: from Havana to Marrakesh* [online] Available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact4_e.htm [Accessed 25 Jan. 2016]

The WTO system is based on several principles that connect the whole complex system of agreements and help to achieve the fundamental aim of the organization, which is the liberalization of the world trade. These principles include non-discrimination, manifested through the most-favored nation and national treatment, liberalization of trade (freer trade) attained by means of negotiation, predictability achieved through transparency, fair trade, higher competitiveness of the system and support of reforms and economic development.²⁰

Trade without discrimination is a key principle in WTO law. The concept of non-discrimination is considered to be so essential for the balance of rights and obligations in terms of World Trade Organization that it continues to generate legal effects even when dependent to certain exceptions. Regarding non-discrimination, the principle is based on two pillars: the most-favored nation (MFN) treatment and the national treatment.²¹ The MFN is a concept of treating people equally across countries. However, there are a few exceptions such as that countries can have a free trade agreement which is related only to goods traded within the scope of the group, discriminating against goods from other countries or the countries can give an opportunity of a unique access to their markets. Regarding exceptions in services, there is a possibility of discrimination, but under very strict conditions. Basically, the principle of the most-favored nation means that when a country decides to open up a market or lower a trade barrier, it must be applicable to all trading partners no matter if they are weak or strong, rich or poor.

The second pillar, national treatment, is related to treatment of foreigners and locals in the same way. There should be no difference in the treatment of a domestic or imported good. Exactly the same principle should be valid for domestic and foreign services as well as for their copyrights and trademarks.²²

The ninth round of multilateral trade negotiations was launched within the WTO in 2001 in Doha and is called Doha round (or the Doha Development Agenda – DDA). Doha round was preceded by the Uruguay Round.

²⁰ Ovesná, Helena. *Právní režim obchodu ES s nečlenskými státy*. Brno: Masarykova univerzita, Právnická fakulta, Katedra mezinárodního a evropského práva, 2005. 76 s. Vedoucí diplomové práce prof. JUDr. Vladimír Týč, CSc. Available at: https://is.muni.cz/th/53728/pravf_m/DOHROMADY.pdf [Accessed 28 Jan. 2016]

²¹ legal.un.org (n.d.), *International Economic Law - World Trade Organization (WTO)* [online] Available at: http://legal.un.org/avl/ls/Mbengue_IEL.html [Accessed 28 Jan. 2016]

²² Wto.org, (n.d.). *Understanding the WTO - principles of the trading system*. [online] Available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact2_e.htm [Accessed 28 Jan. 2016]

The main objective is to eliminate trade barriers in order to facilitate growing world trade and improve the position of developing countries. DDA mainly includes issues of agriculture, services, technical barriers to trade, anti-dumping, intellectual property, trade rules and facilitation, Trade-related aspects of intellectual property rights (TRIPS), textiles and clothing.²³

1.6.3. The International Monetary Fund

The IMF is an international organization created in 1945 whose goals are to support international monetary collaboration and exchange rate stability, promote the economic development, decrease poverty across the world and also support the balanced growth of international trade and its expansion. The organization consists of 188 countries and is headquartered in Washington, D.C., USA. In order to achieve the stability of the international monetary system, DDA controls the global economy as well as the economies of its members by monitoring their financial and economic policies, offers financial help to countries having difficulties with balance of payments which allows them to re-make international reserves and stabilize currencies, and provides practical help to its members by planning economic policies and show them how to effectively manage finances.²⁴

²³ Wto.org, (n.d.). *Understanding the WTO - The Doha agenda*. [online] Available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/doha1_e.htm [Accessed 28 Jan. 2016]

²⁴ Imf.org, (n.d.). *About the IMF*. [online] Available at: <http://www.imf.org/external/about.htm> [Accessed 28 Jan. 2016]

2. Practical part

Practical part of the thesis explores trade balance of the United States and includes analyses of data to describe both exports and imports in the U.S. Moreover, it is focused on automobile industry in the United States and it shows impacts of this industry on the economy. In addition, this part defines the largest automobile producers within the U.S. market. Furthermore, the practical part reflects the evolution of the total automobile production, sales, and employment.

2.1. The significance of trade to the United States

Trade makes up a significant part of the United States economy. U.S. exports and imports have increased smoothly since the middle of the 20th century and trade represents an increasingly big share of the nation's economic activity. Total trade (exports + imports) represented 30% of GDP in 2013, up from 10.6% since the GATT was launched in 1947. (Baughman, Francois, 2014)

Besides the important impact of trade on the economy, trade has also positive effect on the employment in the United States since it promotes nearly 40 million jobs. Approximately one out of five jobs in the United States is related to international trade. (Baughman, Francois, 2014) Jobs can be found in agriculture, factories, big or small firms and also in the headquarters of globally engaged U.S. companies.²⁵ In addition, foreigners that own companies in the territory of the United States employ nearly 5.8 million workers which include: 718,900 workers employed by companies based in Japan, 962,900 workers employed by companies based in the United Kingdom, 620,200 workers employed by companies based in Germany, 555,600 workers employed by companies based in Canada and 534,400 workers employed by companies based in France.²⁶

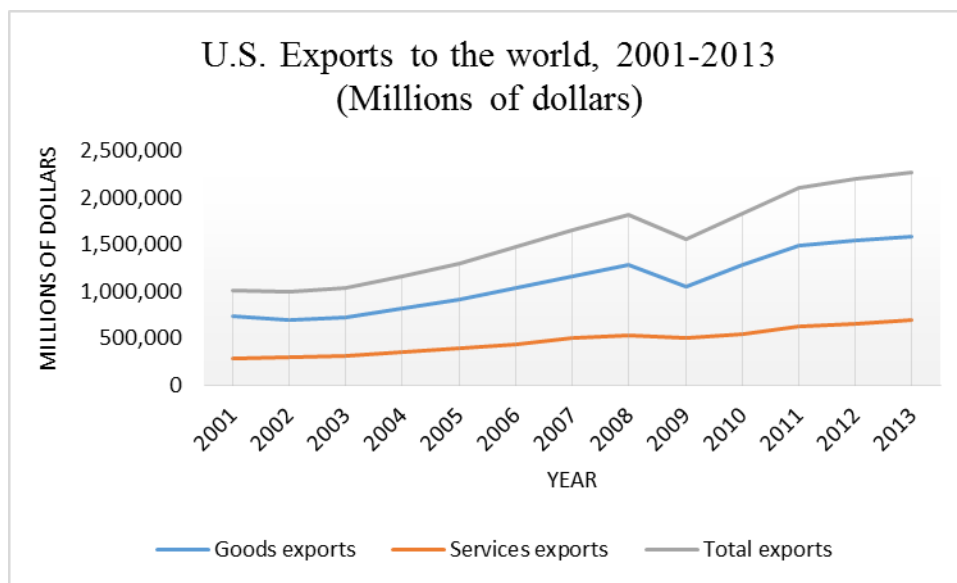
²⁵ tradepartnership.com (2015). *U.S. Jobs Depend on Two-Way Trade*. [online] Available at: http://tradepartnership.com/wp-content/uploads/2015/01/US_State_Study.pdf [Accessed 30 Jan. 2016]

²⁶ tradepartnership.com (2015). *Foreign Investment in the United States Creates Jobs*. [online] Available at: http://tradepartnership.com/wp-content/uploads/2015/01/US_State_Study.pdf [Accessed 30 Jan. 2016]

2.1.1. Exports of the United States

For over 20 years, the U.S. exports have jumped up at 6.6% of an average annual rate, despite the falls experienced during the recessions in 2001-2002 and 2008-2009. Exports constantly grow and since the last recession, the growth of export has went up to annual average of 9.4%. (Baughman, Francois, 2014) (Baughman, Francois, 2014) The Figure 1 shows U.S. exports from 2001 to 2013 (in millions of dollars).

Figure 1: U.S. Exports to the world, 2001-2013



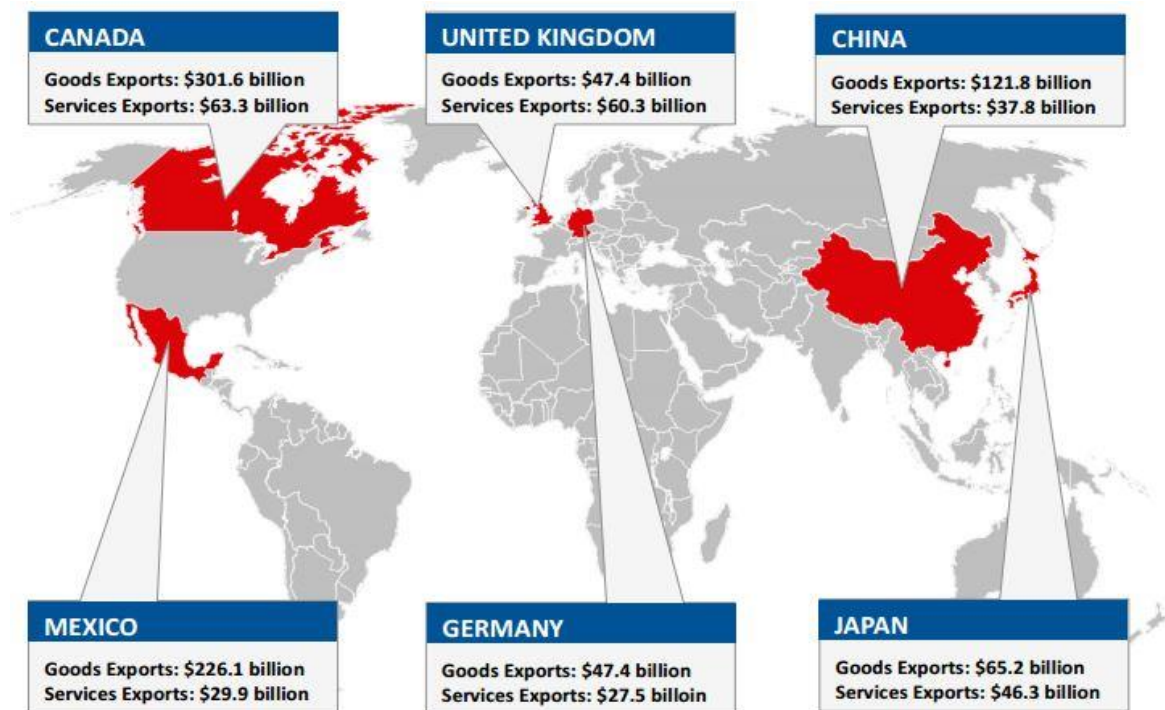
Source: Bureau of Economic Analysis, U.S. Department of Commerce, as detailed in Appendix Table A1.

The growth of export contributes to development of new businesses for producers, farmers and service providers and thus creates more jobs. (Baughman, Francois, 2014) In 2013, the United States exported \$1.6 trillion in goods and \$687.4 billion in services. Goods exports prevail total U.S. exports even though exports of services have also been growing during the last 20 years. Exports consist of coal products, petroleum, motor vehicles and their parts, computer software and travel services. Petroleum and coal products are one of the fastest growing U.S. goods export categories. Since 2003, exports of these products have increased by 33% each year and reached approximately \$120 billion in 2013. Regarding agriculture, fruits and tree nuts have been exported the most, the exports of those increased by 12% compared to 2003. In 2013, exports totally reached \$13.5 billion.

As regards export categories, consulting services and business management are considered as one of the fastest growing categories, whose exports have increased by 11% every year since the year 2003 and never experienced a single year decline. In 2013, its exports reached \$55.8 billion.²⁷

During the same year, customers in 234 countries all over the world were able to buy goods and services made in the United States. Each year there are hundreds of billions of dollars in exports to main markets such as China, Canada or Mexico and since 2003, United States goods exports increased by more than two times faster than GDP.²⁸ The Image 3 illustrates top export markets all over the world.

Image 3: Top export markets



Source: tradepartnership.com (2015). U.S. Companies Export throughout the World [image] Available at: http://tradepartnership.com/wp-content/uploads/2015/01/US_State_Study.pdf [Accessed 30 Jan. 2016]

Free trade agreements (FTAs) have contributed to faster growth of the U.S. export into partner countries. Especially in 2013, when partners of FTA got 46% of all U.S. goods exports, which meant a 107% increase since the year 2003.

²⁷ tradepartnership.com (2015). *U.S. Businesses Grow with Exports*. [online] Available at: http://tradepartnership.com/wp-content/uploads/2015/01/US_State_Study.pdf [Accessed 30 Jan. 2016]

²⁸ tradepartnership.com (2015). *U.S. Companies Export throughout the World*. [online] Available at: http://tradepartnership.com/wp-content/uploads/2015/01/US_State_Study.pdf [Accessed 30 Jan. 2016]

The United States trade together with 20 FTA partner countries supports nearly 17.7 million U.S. jobs. Since the creation of North American Free Trade Agreement (NAFTA) in 1994, U.S. exports to Mexico and Canada have risen by \$385.9 billion. More detailed description of NAFTA is included in chapter *Openness of the U.S. economy*. In addition, exports of motor vehicles to Australia have grown up to \$1.8 billion when the FTA went into effect with Australia in 2005. In 2013, Canada and Mexico purchased 78.5% of the \$60.8 billion in U.S. exports of parts of motor vehicles.²⁹

2.1.2. Imports of the United States

Imports of the United States were during the last 20 years speeded up by periods of strong economic growth and slowed down due to recessions, but in general they keep increasing. Most of the goods imported consists of raw materials, industrial products and capital goods which U.S. producers use in order to make goods in the United States. (Baughman, Francois, 2014) Within the scope of services, imports include insurance services, technical services, travel services and business. All of these services are purchased by U.S. entities, such as for instance U.S. corporations using foreign legal services or by U.S. tourists that travel abroad. (Baughman, Francois, 2014)

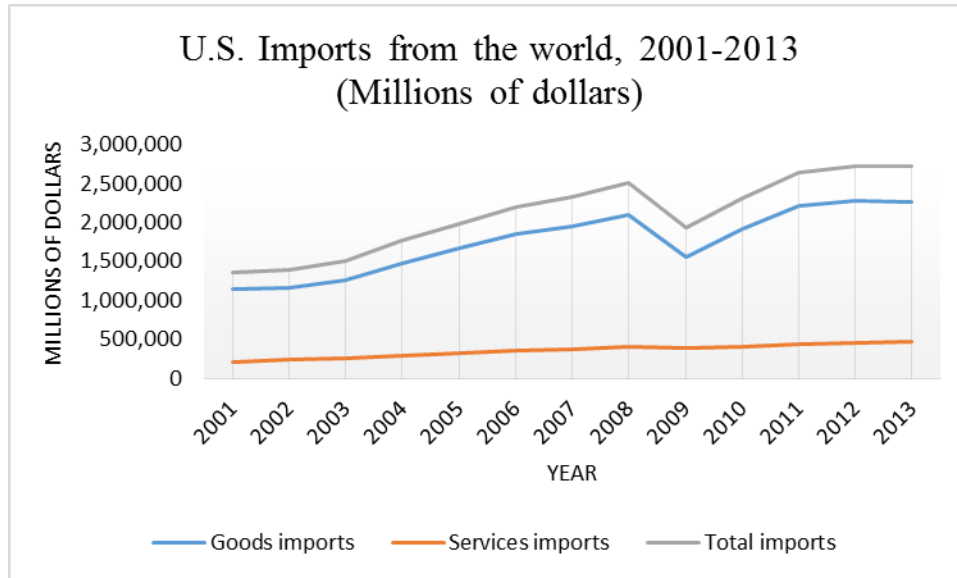
In 2013, 60% (\$1.3 trillion) of imported products into the U.S. represented services inputs (e.g. design) and components (e.g. semiconductors or cotton) used by U.S. producers. Lower cost inputs help U.S. companies to stay competitive within international markets. Prices of imported consumer goods tend to go down every year.³⁰

²⁹ tradepartnership.com (2015). *The United States Needs Trade Agreements to Grow*. [online] Available at: http://tradepartnership.com/wp-content/uploads/2015/01/US_State_Study.pdf [Accessed 30 Jan. 2016]

³⁰ tradepartnership.com (2015). *U.S. Companies & Workers Use Imports to Make Products and Compete in International Markets*. [online] Available at: http://tradepartnership.com/wp-content/uploads/2015/01/US_State_Study.pdf [Accessed 30 Jan. 2016]

The following Figure 2 illustrates U.S. imports from 2001 to 2013 (in millions of dollars).

Figure 2: U.S. Imports from the world, 2001-2013



Source: Bureau of Economic Analysis, U.S. Department of Commerce, as detailed in Appendix Table A2.

For over 20 years, the United States have been running a trade deficit, they import more than they export as it can be seen in comparison of Figure 2 with Figure 3. The economy of U.S. has been extending for a long time and many other nations have not been able to catch up in the sense that U.S. demand for goods as a nation is bigger than demand of other nations for U.S. goods.³¹ In 2015, the deficit of goods and services was USD 531.5 billion.³²

2.2. Openness of the U.S. economy

During the past two decades, trade agreement have positively contributed to the growth in trade. These agreements have largely removed foreign barriers to trade, created more opportunities for new markets and thus U.S. exports and they have also opened U.S. markets in order to rise imports from other countries. In 1994, there started reductions of trade barriers between the United States and Mexico with the North American Free Trade Agreement (NAFTA). (Baughman, Francois, 2014)

³¹ Investopedia, (n.d.). *Economic Indicators: Trade Balance Report*. [online] Available at: <http://www.investopedia.com/university/releases/tradebalance.asp> [Accessed 18 Feb. 2016]

³² tradingeconomics.com (2016) *United States Balance of Trade* [online] Available at: <http://www.tradingeconomics.com/united-states/balance-of-trade> [Accessed 4 Mar. 2016]

It is a trilateral agreement which was signed by U.S. president Bill Clinton, Mexican president Carlos Salinas, and Canadian Prime Minister Jean Chrétien. The main aim of the agreement is to remove most of the tariffs on products which are traded between the United States, Mexico, and Canada.³³ This agreement also included and extended FTA (Free Trade Agreement) between the U.S. and Canada.

Important global liberalization began between the members of the WTO and the United States with the Uruguay Round in 1995. Joining of China to the WTO in 2001 meant the significant expansion of U.S. goods and services exports into the Chinese markets. During years 2001-2012, FTAs have been implemented with: Australia, Morocco, Jordan, Colombia, Panama, Central America, Bahrain, Oman, Peru, South Korea, Chile and Singapore. All these implementations contributed to increase of total U.S. trade, including exports and imports. (Baughman, Francois, 2014)

2.3. Automobile industry in the United States

The automobile industry is seen as one of the most competitive industries in the world. This industry remains the biggest manufacturing industry within the United States with a huge impact on the country as it supports both state and government.

2.3.1. The geography of the U.S. automobile production

Geography of automobile production and development forms a significant aspect. Main three states of automobile production in the framework of the United States are considered Michigan, Ohio and Indiana.

³³ cfr.org (2014). *NAFTA's Economic Impact* [online] Available at: <http://www.cfr.org/trade/naftas-economic-impact/p15790> [Accessed 30 Jan. 2016]

Image 4 illustrates the establishment count of top 10 states in the U.S. and shows total establishment counts for the U.S., Canada and Mexico.

Image 4: North American Automotive Manufacturing Establishments, by State and Country

State / Country	Motor Vehicle Manufacturing (NAICS 3361)	Body and Trailer Manufacturing (NAICS 3362)	Parts Manufacturing (NAICS 3363)	All Establishments (NAICS 3361-3363)
Michigan	90	95	790	975
Ohio	24	96	479	599
Indiana	23	165	331	519
Texas	31	178	293	502
Illinois	24	55	292	371
Tennessee	9	53	218	280
Missouri	15	74	136	225
Kentucky	11	26	179	216
Alabama	10	41	149	200
Mississippi	8	22	55	85
All Other U.S.	221	1,183	2,659	4,063
United States	466	1,988	5,581	8,035
Canada	157	600	1,080	1,837
Mexico	23	61	670	754

Sources: Hill K., Menk D., Cregger J., and Schultz M. (2015). Contribution of the Automotive Industry to the Economies of All Fifty States and the United States, Center for Automotive Research. January 2015. [image] Online available at: <http://www.cargroup.org/?module=Publications&event=View&pubID=113> [Accessed 2 Feb. 2016].

The center of the automobile industry is situated in states of Midwestern, concretely Michigan, Ohio, Indiana, Illinois and Missouri. U.S. foreign direct investment simplified the extension of the auto industry behind the industrial Midwest, as foreign car producers are mostly situated in states such as Tennessee, Georgia, Alabama and Mississippi. Even though the expansion of automobile plants still continues, the biggest density of suppliers is to be found in Michigan with more automobile assembly plants than any other state. (Hill, Menk, Cregger, Schultz, 2015)

2.3.2. Selected automobile producers

Generally, within the frame of the United States there are 13 automakers with their own factories. There are also other producers who import their vehicles to the U.S. market. Automobile manufacturers can be divided into domestic and foreign. Domestic automobile companies are those established on the territory of the United States in the past but do not necessarily have to be owned by American owners today.

The U.S. automobile market is highly competitive environment with domestic and foreign manufacturers. The competition among automakers varies by segment. Japanese and Korean car makers compete with Detroit 3 (three major automobile companies, described more in details in the next chapter) in the segment of small and medium-size cars. German automakers mainly compete in luxury segment of a passenger cars and SUVs. Trucks are a segment where foreign automakers enter rarely and no foreign automaker imports this type of a car to the United States. (Coffin, 2013)

The specific rivalry in the field of passenger cars is caused by the development of market and also by customer's requirements. In the past were domestic automakers focused on the production of cars with a high fuel consumption due to long-term low prices of fuels. In contrast, foreign owners of automobile companies required a small, fuel-efficient vehicles, also because fuel prices were a lot higher within their home territory. (Carson, Bonk, 1999)

A crude oil crisis in the 1970s was a first opportunity for foreign makers to get into American market because this crisis caused the rise in prices of fuels and the change in consumer demand for more fuel efficient cars. Therefore there were still foreign automakers who competed with domestic ones in the production of large vehicles, such as SUVs or pick-up. (Rubenstein, 1992)

2.3.2.1. Domestic automobile manufacturers

Within the U.S. market operates a variety of domestic producers. The production in the United States is mainly represented by three largest U.S. automakers established in the United States known as Big Three. This group of automobile producers had been considered as the largest U.S. car sellers until 2006. The Big Three with headquarters in Detroit and their production greatly affects local and federal economy. The Big Three consists of General Motors, Chrysler and Ford. (Bennett, 2013)

General Motors (General Motors Company)

The General Motors Company was formed in 1908 by William Durant. At the beginning, General Motors was a holding company for Buick Motor Company. However, a few years later, it acquired more than 20 companies, ranging from small electric city cars to large strong trucks.

GM offers a wide range of vehicles in more than 120 countries around the world, including brands such as: Buick, Chevrolet, Cadillac, GMC, Baojun, Holden, Open, Wuling, Vauxhall, Isuzu and Jie-fang. Only the first four mentioned are intended for the U.S. market. General Motors employs over 215,000 employees all over the world.³⁴

Ford (Ford Motor Company)

Ford Motor Company was founded by Henry Ford in 1903. Only a few years after the establishment, Ford became the largest and most-earning company in the world. Nowadays, its portfolio consists of two brands: Ford and Lincoln. In the past, Ford also owned Jaguar, Land Rover, Aston Martin and Volvo. However, these brands were sold to other companies.³⁵ Ford employs approximately 175,000 employees in more than 65 countries.³⁶

Chrysler (Fiat Chrysler Automobiles)

Chrysler Group LLC is a fully-owned by a multinational company Fiat Chrysler Automobiles. In the past years, Chrysler's company had gone through many integrations. Origins of corporation go back to 1925 when a Chrysler Corporation was created from the Maxwell Motor Company. The name is based on its designer and later manager Walter P. Chrysler, who used his experience from automobile companies Buick and General Motors to establish his own company.³⁷

³⁴ General Motors, (2016). *Our company* [online] Available at: <http://www.gm.com/company/about-gm.html> [Accessed 6 Feb. 2016]

³⁵ Encyclopedia Britannica, (2014). *Ford Motor Company | American corporation*. [online] Available at: <http://www.britannica.com/topic/Ford-Motor-Company> [Accessed 7 Feb. 2016]

³⁶ Ford Motor Company, (2014). *Ford Around the World*. [online] Available at: <http://corporate.ford.com/microsites/sustainability-report-2013-14/world.html> [Accessed 7 Feb. 2016]

³⁷ chrysler-auto.cz (2016), *Historie Chrysler*. [online] Available at: <http://www.chrysler-auto.cz/o-spolecnosti/historie/>

Among the subsidiaries of Fiat Chrysler Automobiles belong Chrysler, Ram, Dodge, FIAT, Jeep and Mopar. It currently employs over 81,000 employees.³⁸

A landscape of automobile sector is continuously changing. Years ago, The Big Three was regarded as the prevalent industry force primarily in the Midwest of the United States, undeniable centre of the industry.

Nevertheless, with the arrival of international companies and their investments across states, the industry became more complex. (Hill, Menk, Cregger, Schultz, 2015)

2.3.2.2. Foreign automobile manufacturers

Ever since Honda (Japan) opened factory in the United States as the first one in 1982, almost every larger European, Korean and Japanese automobile manufacturer began with the production of vehicles in one or more car factories in the U.S.

Eventually, European automakers BMW, Mercedes-Benz, Volkswagen and Asian automakers Toyota, Mazda, Subaru, Nissan, Mitsubishi, Hyundai-Kia joined up with Honda and the Big Three. These foreign automakers have full production support within the United States. Other manufacturers construct only engines or other parts of vehicles in factories situated in the United States.³⁹ Among the most producing foreign car manufacturers in 2011 belonged Honda, Toyota and Nissan.⁴⁰

New assembly plants established by German and Japanese automobile manufacturers in the U.S. represented competitive challenges for The Big 3 and due to their location, they also changed the regional distribution of the automobile employment. These new facilities have been attended by the arrival of new suppliers from the home markets of these producers. The presence of those suppliers has contributed the new assemblers and also The Big 3 by developing additional competition into the supply of automobile parts. (Fine, Clair, Lafrance, Hillebrand, 1996) In order to maintain strong position in the market, The Big 3 dramatically improved productivity of operations as well as the quality of their products.

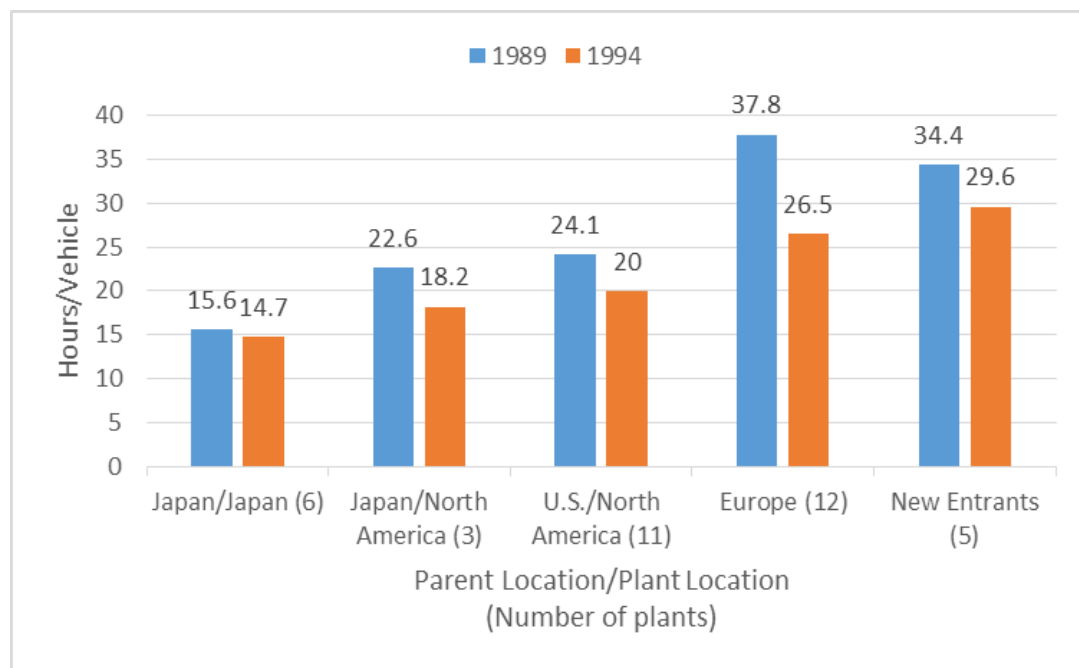
³⁸ FCA, (2015). *About Us – FCA US LLC*. [online] Available at: <http://www.fcanorthamerica.com/company/AboutUs/Pages/AboutUs.aspx> [Accessed 7 Feb. 2016]

³⁹ SelectUSA, (2016). *The Automotive Industry in the United States*. [online] Available at: <http://selectusa.commerce.gov/industry-snapshots/automotive-industry-united-states> [Accessed 8 Feb. 2016]

⁴⁰ Mays, K. (2012). *Which Foreign-Owned Carmakers Build the Most in America?* [online] Available at: <https://www.cars.com/articles/2012/04/which-foreign-owned-carmakers-build-the-most-in-america/>

Figure 3 shows comparison of average productivity of chosen plants between years 1989 and 1994.

Figure 3: Comparison of average productivity of selected plants, 1989 and 1994



Source: MacDuffie & Pill. (1996), [image] Available at: http://www.mne.psu.edu/simpson/courses/me546/projects/auto_industry.pdf

The graph above shows that plants of the Big 3 automakers improved their average productivity from 24.1 in 1989 to 20.7 direct labor hours/vehicle in 1994. Even though Japanese-owned plants in Japan did not improve that fast, they were still considered as the most efficient producers. (Fine, Clair, Lafrance, Hillebrand, 1996) Yet, from a wider perspective, the productivity data emphasize the need for future improvement in those areas as it shows the convergence of average production in the whole world. By almost 30% was improved the productivity of European plants and new entrants countries such as Korea and Mexico displayed important improvement, too. Human resource practices pose another significant determinant of the automobile industry's competitiveness.

There are many different ways, ranging from traditional labor management practices to unique and new structures of management. New practices in the U.S. are expanding slowly, but there are some changes implemented such as training investment, contingent compensation, rise in the use of teams, decrease in inventory buffers and other practices of human resources.

The management of supply chains is the last area of competitive response in which each member of the Big 3 develops its own approach. This is dependent on the relationship between auto producers and suppliers who produce and develop components.

The nature of the relationship might differ with the supplier's involvement in the development of components for the producer. Each company of the Big 3 provides a different approach in this area according to strengths and corporate experience. (Fine, Clair, Lafrance, Hillebrand, 1996) Due to increasing rivalry among car producers, higher quality of cars and more choices for customers have been implemented. Later on, both these changes contributed to new job opportunities and led to the expansion of production to new places. (Hill, Menk, Cregger, Schultz, 2015)

2.3.3. Development of automobile industry at the beginning of the 21st century

At the beginning of the millennium, the American automobile industry was producing the most vehicles in the world. However, the global recession and credit crisis caused declines in production and sales of vehicles during years 2008 and 2009. (Platzer, Harrison, 2009) During years before the crisis, with exception of annual growth between 2001 and 2002, the production of vehicles also mainly declined. The downward trend was in case of total sales curve as well and lasted until 2003, but after that, from 2003 to 2005, it turned into growth. According to Graham (2010), the sales growth before the economic crisis was caused by low interest rates and easy availability of credit.

The situation of the sale and production curves is shown on the following page in the Figure 4.

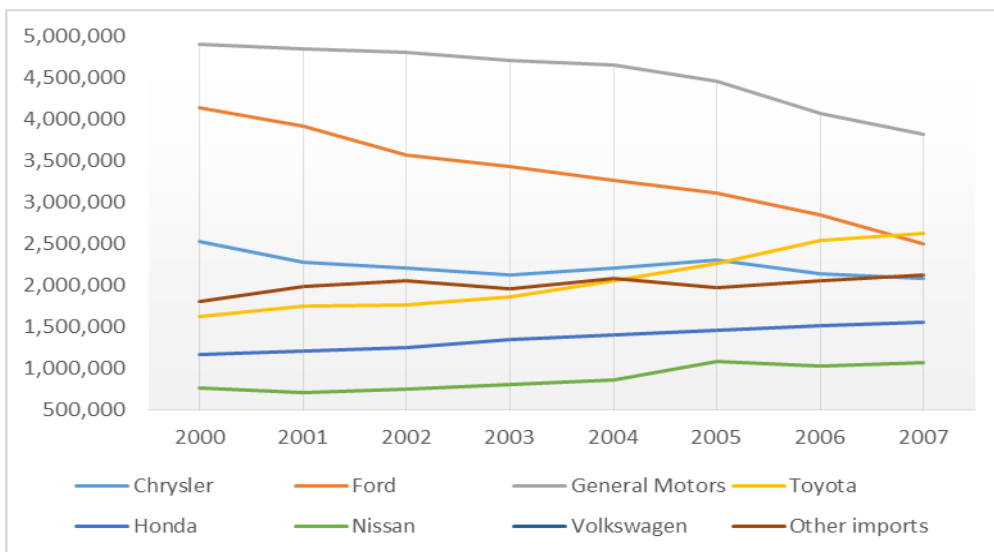
Figure 4: Total vehicle sales and total vehicle production from 2000-2007



Source: Johnson, E., DAVIS, H. *Auto and Truck Seasonal Adjustment*. Bu-reau of Economic Analysis (BEA) [online] Available at: http://www.bea.gov/national/xls/gap_hist.xlsx [Accessed 20 Feb. 2016]

Domestic automakers had at the beginning of the millennium a clear superiority on the U.S. market in the number of vehicles sold. Most of the vehicles from 2000 to 2007 were constantly sold by General Motors. Other most selling companies were Ford and Chrysler. Carmaker Chrysler was in 2006 overtaken by Japan's growing automaker Toyota. Development of sales of chosen automakers reflects Figure 5.

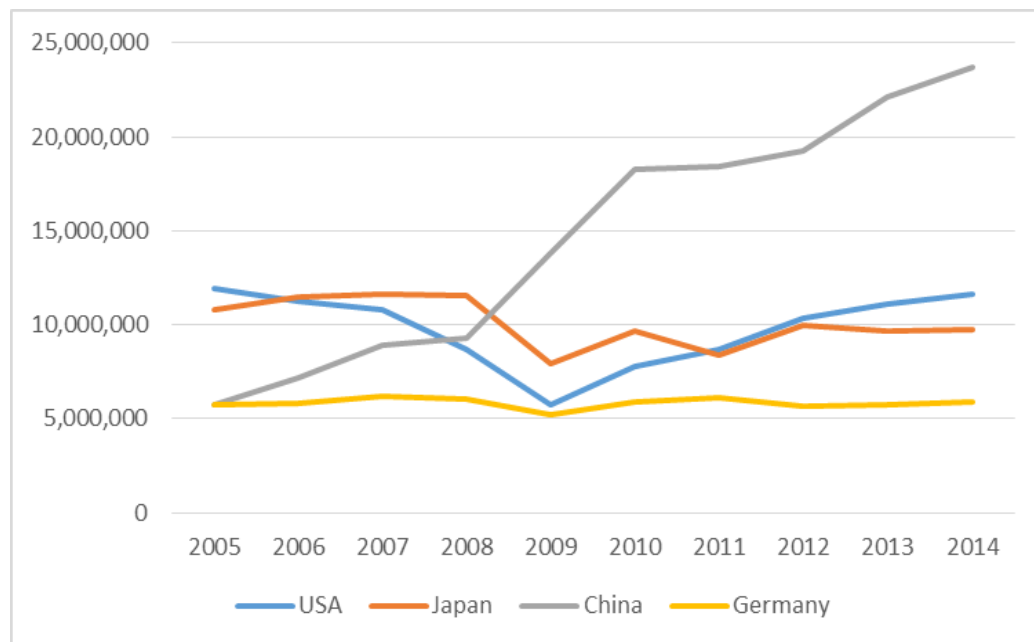
Figure 5: Number of vehicles sold in the United States from 2000 - 2007, by company



Source: State of the Industry Report 2008: The annual financial profile of America's fran-chised new-car dealerships. In: NADA [online] Available at: <http://big.assets.huffingtonpost.com/NADADData.pdf> [Accessed 21 Feb. 2016]

As mentioned above, the United States lost its primacy in the number of vehicles produced and were overtaken by Japan in 2006. American producers have been affected a lot more by the recession than foreign companies operating within the United States. (Platzer, Harrison, 2009) Japan was the world's largest producer of cars until 2008. After that, rapidly growing China overtook Japan in 2009 and became the largest automobile producer in the world in terms of vehicles' production and sales. Figure 6 reflects vehicle production of the top 4 countries from 2005 to 2014.

Figure 6: Vehicle production of the top 4 countries from 2005 to 2014



Source: OICA - Organisation Internationale des Constructeurs d'Automobiles: 2005-2014 Production statistics. [image]
 Available at: <http://www.oica.net/category/production-statistics/2014-statistics/> [Accessed 5 Mar. 2016]

2.3.4. Benefits of the automobile industry to the U.S. economy

Since the worst recession in the United States in 1930s, the economy of the United States has been improving slowly, and the automobile industry has been significantly contributing to the recovery. Automobiles producers, dealers and suppliers employ about 1.5 million people and provide another 5.7 million of new jobs. (Hill, Menk, Cregger, Schultz, 2015) According to Center for Automotive Research (CAR) analysis, the automobile industry is involved in 7.25 million private sector jobs.

The Center for Automotive Research is a non-profit organization in Michigan whose aims are among others to create research on important issues incidental to the future of automobile industry and to maintain industry relationships.⁴¹ Except the number of jobs created, the entire industry contributes to state, local and partly federal tax revenues and provides almost \$200 billion to the state and federal governments. Taxes come from different parts of automobile product lifecycle.

For example, besides the sales taxes created with the purchase of vehicles, government entities collect taxes from other spheres, such as: fuel taxes from gas stations, license and registration taxes from owners of vehicles, corporate income taxes as well as licence fees from the car producers, automobile suppliers and dealerships and payroll taxes from people working in the automobile sector. Every state in the nation makes tax revenues in relation to the automobile industry. (Hill, Menk, Cregger, Schultz, 2015) Researchers of CAR found out that the tons of employees whose jobs are supported by the automobile industry collect in annual compensation roughly \$500 billion and deliver to government entities circa \$65 billion in personal tax revenues. A different recent study of CAR has showed that use of motor vehicle and its production brought more than \$110 billion in state government tax revenue, representing about 13% of the state government revenues⁴² and \$95.5 billion in federal government tax revenue. (Hill, Menk, Cregger, Schultz, 2015) Since 2010, the industry has invested approximately \$46 billion into expansion of facilities and equipment. (Hill, Menk, Cregger, Schultz, 2015) Automobile companies have many facilities in the U.S., some of the companies support operations in the country such as development, research, design, manufacturing operations, engineering etc.

As mentioned earlier, the automobile industry has created and promoted millions of jobs. Improvement of the economic performance and expansion of the industry more widely is necessary for future development and growth of regional and national economies. Production and automobile industry trends might be indicators of the state economy, with stages of growth in automobile production closely linked to stages of growth in the economy as a whole. (Hill, Menk, Cregger, Schultz, 2015) The economic importance of the automobile industry's activities is more than people directly employed in this sector.

⁴¹ CAR (2016) *About CAR - Overview* [online] Available at: <http://www.cargroup.org/?module=Page&SID=about> [Accessed 2 Feb. 2016]

⁴² Total state revenues for 2013 were approximately \$847 billion. See Census. (2013). "State Government Tax Collections: 2013." United States Census Bureau. Online available at: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=STC_2013_STC003&prodType=table [Accessed 2 Feb. 2016]

Industries promoted by automobile manufacturing include motor vehicle parts, fabricated metal, plastics and rubber products. Exclusive of manufacturing, auto industry supports jobs in administration and services, transportation, insurance, management of companies and technical services. (Hill, Menk, Cregger, Schultz, 2015)

Economic forecasts indicate that automobile sales, employment and production of the U.S. will rise in the future as the industry and economy maintain to recover. (Hill, Menk, Cregger, Schultz, 2015)

2.3.5. Influence of automobile industry on employment

Declines of production and sales in automobile industry during crisis were closely connected with the decline in total employment in the sector. As a result of that, the automobile sector has eliminated over 435 000 jobs. (Platzer, Harrison, 2009)

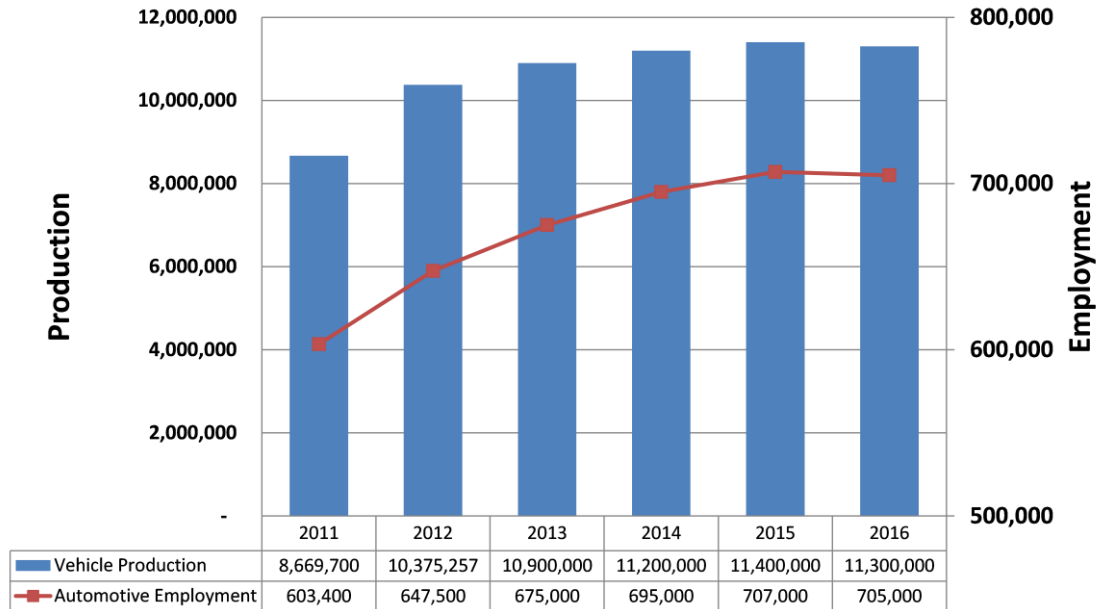
During the following years, employment in the United States auto industry has slowly increased. As it was previously mentioned, the automobile industry currently employs over 1.5 million people that are connected with processes such as manufacturing, engineering, designing, supplying components and parts to assemble, selling and service of new motor vehicles. According to CAR, vehicle producers known as original equipment manufacturers (OEMs) directly employ around 322 000 people in the United States. The OEM is a manufacturer whose product is marketed and promoted under a different brand name. OEMs parts are used by many renowned brands when they have some of the parts produced in factories situated in a different country. Parts are manufactured in countries with lower production costs and with cheaper labor force such as China. Manufacturers subsequently sell those products under their own brand name. The advantage of OEMs producers is that they specialize on a certain product and thus are able to manufacture it in a better quality and at lower costs than if the product was manufactured by the final producer.⁴³

Moreover, there are another 521 000 people employed in the automobile parts segment, involving workers in aftermarkets, export of parts and additionally there are 710 000 people who service new vehicles and work in the dealer network selling. Jobs included in the automobile sector are not only about projecting, constructing and selling vehicles.

⁴³ Investopedia, (n.d.). *What is an Original Equipment Manufacturer (OEM) in the automotive sector?* [online] Available at: <http://www.investopedia.com/ask/answers/041515/what-original-equipment-manufacturer-oem-automotive-sector.asp> [Accessed 2 Feb 2016]

Car producers in the United States also belong among the largest buyers of iron, aluminum, copper, plastics, rubber, steel, textiles and lead. Figure 7 displays the forecast of vehicle production and automotive employment for the year 2016.

Figure 7: U.S. Automobile Manufacturing Employment Forecast



Source: CAR (2014), CAR's 2014 First Quarter U.S. Sales, Production, and Employment Outlook [online] Available at: <http://www.cargroup.org/?module=News&event=View&newsID=76> [Accessed 18 Feb. 2016]

U.S. automobile production industry employment significantly increased from 603,400 in 2011 to almost 647,500 in 2012. The employment went up by 44, 100 workers.⁴⁴ The automobile sector includes in addition to automobile manufacturers also small medium-sized as well as large companies that produce, distribute, sell, assemble and repair motor vehicle parts, accessories and its exterior products. The goal of those companies is to ensure the quality and provide affordable prices of accessories including services which is required by the vehicle owners.

⁴⁴ CAR (2014), CAR's 2014 First Quarter U.S. Sales, Production, and Employment Outlook [online] Available at: <http://www.cargroup.org/?module=News&event=View&newsID=76> [Accessed 18 Feb. 2016]

2.3.6. Motor vehicle standards

The automotive industry operates within the United States under two sets of federal regulations. These regulations have an important effect on a lot of aspects of the sold vehicles in the U.S. The first set is Federal Motor Vehicle Safety Standards (FMVSS) and is managed by the U.S. Department of Transportation's National Highway Traffic Safety Administration. The NHTSA was created in 1970 in terms of the Highway Safety Act. Main goal of NHTSA is to protect the public against the danger caused by motor vehicle crashes through implementation of rules (standards) for motor vehicles and its equipment.⁴⁵

The second set is called the Corporate Average Fuel Economy (CAFE) and was established by the U.S. Congress in 1975. CAFE is managed by NHTSA as well and also by Environmental Protection Agency (EPA). CAFE aims to improve the average fuel efficiency (economy) and vehicle emissions. (Coffin, 2013) EPA regulates greenhouse gases and thus attempts to protect both environment and human health.⁴⁶ Due to increasing fuel consumption in the United States, above mentioned state regulators (NHTSA and EPA) agreed in 2009 on a strict programme, which would in the future lead to economically saving and environmentally friendlier vehicles. The result of this negotiation was a National Program for reduction of greenhouse gas emissions and fuel efficiency improvements.⁴⁷

With respects to international standards, the U.S. car makers act under the Federal Motor Vehicle Safety Standards whereas European producers must follow standards of Economic Commission for Europe (ECE). The ECE aims to have high safety and positive environmental impacts as well as FMVSS does. By receiving those sets of standards, United States, European Union and other states could reach more effectivity and competitiveness of the industry by decreasing the number of prototypes necessary for evaluation and testing, eliminating excessive testing and calibration with no beneficial value to the customer or environment, decreasing the administration fees for customers that

⁴⁵ NHTSA (n.d.). *Who We Are and What We Do*. [online] Available at: <http://www.nhtsa.gov/About+NHTSA/Who+We+Are+and+What+We+Do> [Accessed 24 Feb. 2016]

⁴⁶ Union of Concerned Scientists (n.d.) *Fuel Economy Basics*. [online] Available at: <http://www.ucsusa.org/clean-vehicles/fuel-efficiency/fuel-economy-basics.html#.VJ72114A5> [Accessed 24 February 2016]

⁴⁷ <http://www3.epa.gov/> (2016), *Regulations & Standards: Light-Duty*. [online] Available at: <http://www3.epa.gov/otaq/climate/regs-light-duty.htm>

moved somewhere else and by moving transportation of cars and its parts more effectively to a foreign countries.⁴⁸

2.3.7. Research and development of automobiles

Every year, car manufacturers invest millions of dollars into research and development of new technologies and vehicles in order to maintain the competitiveness and prestige among their customers. These represent for instance more efficient use of fuel or safety requirements. The developing process of new types of passenger cars usually takes nearly three years. (Coffin, 2013) Automobile research and development is focused on development of products and technologies not only for actual production, but it is also aimed at future products since it takes a relatively long time to develop certain technologies. (Coffin, 2013) Producers of vehicles in the United States use technical centers for designing cars for the U.S. market, or they at least modify cars in a way that it fits the U.S. regulations and customer preferences. (Coffin, 2013) The production of passenger cars is evolved constantly every year. New technologies are often presented in expensive luxury models and then subsequently added to cheaper vehicles.⁴⁹

The current and very demanded developmental aim of many automobile producers is to improve alternative sources of energy and motors driven by them. Examples of alternative sources include electric, hybrid or bio fuel vehicles. These kinds of vehicles form approximately 3 percent of annual sales in the U.S. and have been on the market since the end of 1990s.⁵⁰ According to Coffin (2013), spendings on research and development of Big Three for the year 2012 reached a total of 14 billion US dollars and 80 percent of the expenditures was spent by automobile manufacturers operating in the U.S.

According to Automotive News, General Motors has invested over \$6.9 billion into improving and expanding operations in 12 states since June 2009, which led to the creation of nearly 17,600 jobs.⁵¹

⁴⁸ State of the U.S. Automotive Industry (2014). *Investment, Innovation, Jobs and America's Economic Competitiveness*. [online] Available at: [http://www.americanautocouncil.org/sites/default/files/2015-AAPC-Economic-Contribution-Report\(FINAL\).pdf](http://www.americanautocouncil.org/sites/default/files/2015-AAPC-Economic-Contribution-Report(FINAL).pdf) [Accessed 2 Feb. 2016]

⁴⁹ Ohanessian, K., (2007). *How Luxury Cars Drive Innovation*. Fast Company. [online] Available at: <http://www.fastcompany.com/76692/how-luxury-cars-drive-innovation> [Accessed 21 Feb. 2016]

⁵⁰ Hybridcars (2012), *May 2012 Dashboard* [online] Available at: <http://www.hybridcars.com/may-2012-dashboard-46746/> [Accessed 21 Feb. 2016]

⁵¹ Automotive News (2012). *GM, Honda to increase U.S. manufacturing*. [online] Available at: <http://www.autonews.com/apps/pbcs.dll/article?AID=/20120206/OEM01/302069935/1424> [Accessed 24 Feb. 2016]

Conclusion

The thesis presented the significance of foreign trade to the United States and analysis of automobile industry in the U.S. Trade forms an important part of the United States economy. Besides the important impact of trade on the economy, trade has also positive effect on the employment in the United States since it promotes millions of jobs. U.S. jobs have been even more dependent on trade as the United States economy has become more open and along with this exports and imports have increased.

During the past two decades, trade agreement have positively contributed to the growth in trade. In 1994, there started reductions of trade barriers between the United States and Mexico with the North American Free Trade Agreement (NAFTA). Later on this agreement was extended upon the United States and Canada free trade agreement. With the implementation of Uruguay Round in 1995, there began important global liberalization between members of the WTO and the United States. Moreover, when China joined the WTO in 2001, the process of opening China's market to U.S. exports of goods and services started. Besides these, each of the Free Trade Agreements (FTAs) contributed to increase of total U.S. trade (exports and imports). Free trade agreements (FTAs) have contributed to faster growth of the U.S. export into partner countries.

The automobile industry is considered to be one of the most significant industries within the United States because of its economic impact, large employment and geographic reach. In the U.S. there operate both domestic and foreign automobile producers, but also auto manufacturers that only import vehicles into the United States. The automobile industry is closely linked to the U.S. economic cycle. Government plays major role in shaping the automobile industry even though private companies dominate a lot of aspects of the industry. The government of the United States has significantly affected the economy, emissions and safety features of cars.

The first goal of the thesis was to analyze trade balance of the United States. Comparison of exports and imports of the U.S. proves that the United States have been running deficit. Recessions in 2001-2002 and 2008-2009 caused falls in exports and exports. It was discovered that main exports of goods include motor vehicles and parts, pharmaceuticals and medicines, aerospace products and parts, and nonferrous metals and products. Services exports include business, financial services, technical services.

U.S. imports were during last years speeded up by periods of strong economic growth and slowed down because of recessions, but generally they keep increasing. Most of the goods imported create raw materials, industrial products and capital goods which U.S. producers use in order to make goods in the United States. In terms of services, imports include insurance services, technical services, travel services and business

Another aim was to explore factors that determine the competitiveness in the automobile trade. The U.S. automobile market is highly competitive environment with domestic and foreign manufacturers. Car manufacturers annually invest millions of dollars into development of new technologies for the purpose of maintaining the competitiveness and prestige among their customers. These include efficient use of fuel or safety requirements, improving alternative sources of energy and motors driven by them. In case of competitive responses of the Big 3, it was discovered that in order to maintain strong position on the market, the automobile producers of the Big 3 attempt to improve productivity of operations, quality of products, human resource practices and management of supply chains. The management of supply chains is the last area of competitive response in which each member of the Big 3 develops its own approach.

The third objective of the thesis was to detect the impact of automobile sector on employment in the United States. The global recession and credit crisis represented negative consequences for employment in the United States. However, during the following years, employment in the United States auto industry has slowly increased. The industry employs over million people straightly connected with manufacturing, engineering, designing, supplying components and parts to assemble, selling and service of a new motor vehicles. In addition, there is another million of people employed in the automobile parts segment, involving workers in aftermarkets, export of parts and people who service new vehicles and work in the dealer network selling. Thanks to investments into expanding operations, there were also created new job opportunities. These numbers prove that the industry as a whole is a major employer of producing workers within the U.S and thus shows a positive impact on employment in the United States.

To summarize all the results, it can be said that the entire automobile industry has a strong position in the United States and will continue to recover from recessions. American automakers should continue in the development of innovations and new technologies in order to maintain the strong position in the market. Expansion of facilities into new areas

in the United States would lead to creation of job opportunities and thus it would have positive effect on employment. Continued improvement of the economic performance and expansion of the industry is important for the future development and growth.

Appendix: Trade data

Trade Data

Table A1

U.S. Exports to the world, 2001-2013

(Millions of dollars)

Year	Goods exports	Services exports	Total exports
2001	729,100	279,260	1,008,360
2002	693,103	294,854	987,957
2003	724,771	309,146	1,033,917
2004	818,775	343,912	1,162,687
2005	905,978	389,122	1,295,100
2006	1,036,635	433,905	1,470,540
2007	1,162,479	497,245	1,659,724
2008	1,287,442	535,183	1,822,625
2009	1,056,043	505,547	1,561,590
2010	1,278,263	548,878	1,827,141
2011	1,482,508	627,781	2,110,289
2012	1,545,703	654,850	2,200,553
2013	1,579,593	687,410	2,267,003

Source: U.S. Department of Commerce, Bureau of Economic Analysis, using Census "Census basis" trade data for goods

Table B1
U.S. Imports from the world, 2001-2013
(Millions of dollars)

Year	Goods imports	Services imports	Total imports
2001	1,140,999	210,385	1,351,384
2002	1,161,366	233,737	1,395,103
2003	1,257,121	256,664	1,513,785
2004	1,469,704	296,105	1,765,809
2005	1,673,455	313,540	1,986,995
2006	1,853,938	348,918	2,202,856
2007	1,956,962	378,130	2,335,092
2008	2,103,641	403,413	2,507,054
2009	1,559,625	380,909	1,940,534
2010	1,913,160	403,048	2,316,208
2011	2,207,954	435,761	2,643,715
2012	2,276,302	450,360	2,726,662
2013	2,268,321	462,134	2,730,455

Source: U.S. Department of Commerce, Bureau of Economic Analysis, using Census
“Census basis” trade data for goods

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