“THE ROLE OF AUTOMOBILE INDUSTRY IN THE ECONOMY OF PAKISTAN ITS GROWTH. ITS IMPACTS NEGATIVE AS WELL AS POSITIVE.”

Syndicate # 3

Syndicate Adviser: Dr. Shagufta Zareen

Members:

Muhammad Naeem

Arshad Abbasi

Ghazala Nasir

Romana Alam

Naveed Akhtar

Khurram Mangi

Mahmood Alam

Directorate General of Training & Research,

Federal Board of Revenue, Lahore

Outline:

- Introduction
- Literature Review
- Evolution of Automobile Industry with special reference to Pakistan
- Automobile Industry in Pakistan and comparison with the Indian counterpart
- Automobile Industry and the Allied industries
  - Workshops
  - Spare parts markets
- Impact on economy
- Contribution to the GDP
- Impacts
  - Positive impacts
    - Economic impacts
    - Social impacts
  - Negative impacts
    - Economic impacts
    - Social impacts

- SWOT Analysis
- Conclusion
- Bibliography

Introduction

Since ages man is trying hard to cover the distances between different places in the shortest possible time. In order to fulfill this dream man invented the automobile and within years the automobiles became a common mode to travelling to different places and replaced the traditional means of using animals . With this increasing demand for the newly invented automobiles its production also increased many folds. This industry also gave rise to many allied industries and provided jobs to millions of people all over the world. This industry also contributed its due share in the GDP of the country via import duties, sales tax, federal excise duties etc. However the increasing number of automobiles also had different impacts which affected human lives, atmosphere, social fabric etc.

Literature review

The group studied variety of literature to gather in depth knowledge of the assigned topic of research study which includes periodicals, articles, research reports, case studies, economic analysis, financial data of major companies, economic survey of Pakistan , websites and newspapers.

Mr. Zahoor Sheikh Sarwar (CASE), Mr. Azam Ishaque, (CASE), Mr. Nadeem Ehsan, (Center For Advance Studies in Engineering), Mr. Danial Saeed Pirzada, (Center For Advanced Studies in Engineering), and Mr. Zafar Moeen Nasir, (CASE) in their report published in International Journal of Productivity and Performance Management, has identified that automobile sector has huge economic potential and the study identified the prevalent condition of productivity in automotive manufacturing industry of Pakistan and indicated the possible areas for enhancing productivity. The findings of this research have revealed that effective utilization of role of technology can enhance the productivity of Pakistani manufacturing firms drastically.

Pakistan Auto Industry Development Program (AIDP-2006), an study conducted by Ministry of Industries and Production, Government of Pakistan states that the Pakistan Auto Industry has become a leading industrial sector to steer the growth in large scale manufacturing sector. The high economic and job multiplier effect of this industry and its deep forward and backward linkages in allied industries, make the auto industry a key player in the national economy.

The report further elaborates that Pakistan is amongst a few countries of the world which manufacture all kinds of vehicles i.e. 2/3 wheelers, motorcars, LCVs, tractors, prime-movers &

trucks and buses. The total country requirements are generally met from the local production except the import of certain categories of trucks & prime-movers. Import of used cars is allowed to the bonafide ex- patriate Pakistani's and travelers only under the baggage scheme. The presence of few of world acclaimed brands and multinationals in the manufacturing of vehicles for the last 2 to 3 decades and their regular expansion plans speak of their confidence on the market, government policies and economic potential of the country. Pakistan auto industry turnover during the year 2005-06 crossed US $ 3.6 billion which comes to 2.8% of GDP (2005-06), thus saving substantial foreign exchange on imports. The job contribution by auto industry comes to nearly 1.392 million which includes direct jobs of nearly 192,000. The auto industry remains second largest tax payer in terms of its contribution to customs duty, sales tax and withholding tax. The export contribution however, is marginal and growing slowly, which otherwise has high potential to grow in the coming years. AIDP envisage to achieve a critical mass of production, double the contribution of auto industry to GDP from the existing 2.8%, by the year 2011-12 with high focus on investment, technology up gradation, increasing its exports to US$ 650 million, enhancement in jobs alongside the development of critical components to further increase the competitiveness of domestically produced vehicles. the group also come across financial information of the leading manufacturers which formed the basis of our opinion that the benefits of reduction in sales tax and the removing of Federal Excise Duty from the sector has not been shifted to end consumers which shows marginal economic benefits to the manufacturer of the automobiles only.

The Board of Investment, Government of Pakistan quoted the newspaper Pakistan Observer that contrary to huge Indian automobile industry in spite of offering discounts and attractive sops, is suffering from depressed sales, the nationwide auto sales increased by 3.4 percent in

Pakistan. The sales of locally assembled passenger cars (PC) and light commercial vehicles (LCV) in the country increased by around 3.4% over the previous year to 146,497 units as compared to 141,654 units sold in 2009-10. Production in the industry also increased to 153,997 units for the period ended June 30, 11, an increase of 11% over 138,587 units last year. Punjab government's offer of green cabs has also contributed in growth of sales and the next quarter is likely to be stronger even going forward.

The liberalization of used car policy saw an increase of 87% in the number of used vehicle imports to 6,793 units in the fiscal period. If such policy continues it will impede the growth of auto industry. The sales and production of Indus Motor's Toyota and Daihatsu brands for the year ended June 30, 2011 has posted sales revenue increased to Rs 61.7 billion, up by 2.7% over Rs. 60.1 billion of last year; and the after tax profit decreased to Rs 2.7 billion, low by 21% of Rs 3.4 billion of last year. Earnings per share also decreased to Rs 34.90, as compared to Rs.43.81 in the previous year.

The economic survey of Pakistan 2010-11(Finance Division Government of Pakistan) in its report states that the growth in automobile industry across the world depends heavily on economic growth and availability of financing from financial institution at favorable terms. The sector recorded positive growth in cars, LCVs/Jeeps and two/three wheelers during July-March-2010-11 as compared to same period of the preceding year whereas the Buses, trucks and tractors witnessed a decline in their production as compared to the previous year. The automotive sector has explored the export market, such as 7563 motorcycles and 64 auto rickshaws were exported in the last financial year. However, 9022 motorcycles and 72 auto rickshaws have been exported up to (July- March) 2010-11. The Car/LCV sector has also exported 359 vehicles & parts worth US $ 1.58

million in the last financial year and 397 vehicles and parts worth US $ 1.66 million in the current year up to (July-March) 2010-11. According to economic survey in spite of marginal growth of 0.5% points the performance of the automobile industry is affected by the factors like weakening of demand in the international and domestic market, inflation, high input costs, high government sector borrowing crowding out availability of credit to the private sector and acute energy shortages.

However, events like the unprecedented floods and destruction in supply chain due to earthquake and tsunami in Japan, compounded with a general slow down in the economic environment, lower GDP growth, rising interest rates, limited credit availability for auto financing, depreciation of the Pak Rupee against major currencies, unprecedented rise in prices steel and other inputs, inflation, etc impacted the demand negatively.

The History of Automobile Industry

European engineers started tinkering with motor powered vehicles since late 1700's. Steam, combustion, and electrical motors had all been tried by the mid 1800's. By the 1900's, it was unsure which type of engine would power the automobile. At first, the electric car was the most accepted, but at the time a battery did not exist that would allow a car to be in motion with much speed or over a long distance. Although some of the earlier speed records were set by electric cars, they did not stay in manufacture past the first decade of the 20th century. The automobiles with steam lasted into 1920's. However, the price on steam-driven engines, either to build or maintain was unparalleled to the gas powered engines. Not only was the cost a problem, but the danger of a boiler explosion also kept the steam engine from becoming popular. The combustion engine constantly beat out the competition, and the early American automobile pioneers like Ransom E. Olds and Henry Ford built reliable combustion engines refusing the ideas of steam or electrical power from the start.

Automotive manufacturing on a commercial scale started in France in 1890. Commercial production in the United States started at the beginning of the 1900's and was equivalent to that of Europe's. In those days, the European industry comprised of small independent firms that would turn out a few cars by means of precise engineering and handicraft processes.

At the start of the century the automobile entered the transportation market as a toy for the rich. However, it became increasingly popular among the general public because it gave travelers the freedom to travel when they wanted to and where they wanted. As a result, in North America and Europe the price of automobile decreased and they became easily accessible to the middle class. This was facilitated by Henry Ford

who did two important things. First he set price of his car to be as affordable as possible and second, he paid his workers enough to be able to buy the cars they were manufacturing. This helped increase wages and auto sales. The convenience of the automobile freed people from the binding to live near rail lines or stations; they could choose locations almost anywhere in city area as long as roads were available to connect them to other places.

Popularity of the automobile has moved side by side with the state of the economy, growing during the boom period after World War I and decreasing abruptly during the Great Depression, when unemployment was at most. World War II saw a large increase in mass transit because employment was high and automobiles were lesser. The rapid growth of car owners after World War II demonstrated the people's favor towards automobiles. During the war, there was a shortage of automobile motors, fuel, and tires. There was an increased demand when the war ended and plenty of production capacity as factories turned off the war machine. Many people had enough money in store because there was little to buy, beyond necessities, in the war years. Workers relied heavily on mass transportation during the war and wanted the freedom and flexibility of the automobile.

A historian has said that Henry Ford freed common people from the boundaries of their geography. The automobile brought mobility on a scale never known before, and the total effect on living habits and social customs is endless. In the times of horse-drawn transportation, the practical limit of wagon travel was 10 to 15 miles, so that meant any community or individual farm more than 15 miles from a city, a railroad, or a navigable waterway was isolated from the rest of economic and social life. Motor vehicles and paved roads have shortened the gap between rural and urban life. Farmers can ship easily and economically by truck and can drive to town when it is feasible. In addition, such

institutions as regional schools and hospitals are now approachable by bus and car.

Yet, the effect on urban life has been, if anything, more prominent than the effect on the farms. The automobile has completely changed city life by accelerating the outward expansion of population into the suburbs. The suburban trend is emphasized by the fact that highway transportation supports business and industry to move outward to sites where land is cheaper, where access by car and truck is easier than in richly populated cities, and where space is available for their one or two story structures. Better roads were constructed, which further improved travel throughout the nation.

Before the automobile, people both resided in the city and worked in the city, or lived in the country and worked on a farm. Because of the automobile, the growth of suburbs has rendered people to live on the outskirts of the city and be able to work in the city by commuting. New jobs due to the impact of the automobile such as fast food, city/highway construction, state patrol/police, convenience stores, gas stations, auto repair shops, auto shops, etc. allow more work for the world's growing population.

The Automotive industry has been an active and growing field in Pakistan for a long time, however not as much established to figure in the prominent list of the top automotive industries. Despite significant production volumes, transfer of technology and localization of vehicle components remains low. Most cars in the country have dual fuel options and run on CNG which is more affordable and cheaper than petrol in the country.

Pakistan produced its first automobile in 1953 and from 1953 to 2011 the journey of auto industry has been rough, tough and sometime very

smooth. Car industry saw boom in 2006-2007 when sales touched record peak of 180,834 thanks to rising car financing up to 70-80 per cent by banks due to low interest rates and rising rural buying. Since then the industry has been surviving hard to reach the same sales level amid high interest rates and Yen appreciation against the rupee but high farm income is giving much support to car sales.

Automobile Industry in Pakistan and comparison with the Indian counterpart

Automobile Industry in India

The Automotive industry in India is one of the largest in the world and one of the fastest growing globally. India's passenger car and commercial vehicle manufacturing industry is the seventh largest in the world, with an annual production of more than 3.7 million units in 2010. According to latest reports, India is near to become the sixth largest passenger vehicle producer in the world, growing 16-18 % and to sell around three million units in the course of 2011-2012. In 2009, India became Asia's fourth largest exporter of passenger cars, after Japan, South Korea, and Thailand. During 2010, India has made progress to 40 million passenger vehicles and more than 3.7 million automotive vehicles (an increase of 33.9%), making country the second fastest growing automobile market in the world. According to the Society of Indian Automobile Manufacturers, annual car sales will increase up to 5 million vehicles by 2015 and more than 9 million by 2020. By 2050, the country is expected to be on the top of the list in the world, in car volumes , with approximately 611 million vehicles on the roads of India.

The largest car manufacturing industry of India is established in Chennai, also known as the "Detroit of India" with the operations of Ford, Hyundai, Renault and Nissan headquartered in the city and BMW having an assembly plant on the outskirts. Chennai accounts for 60 % of the country's automotive exports. Gurgaon and Manesar are hubs and all of the Maruti Suzuki cars in India are manufactured in Haryana. The Chakan corridor near Pune, Maharashtra is another vehicular production hub with companies like General Motors, Volkswagen, Skoda, Mahindra and Mahindra, Tata Motors, Mercedes Benz, Land Rover, Fiat and Force

Motors, having assembly plants in the area, Ahmedabad with the Tata Nano plant and planned Ford and Peugeot-Citroen plants Halol again with General Motors, Aurangabad with Audi, Skoda and Volkswagen, Kolkatta with Hindustan Motors, Noida with Honda and Bangalore with Toyota are some of the other automotive manufacturing localities around the country. Every year Indian Automobile Industry is manufacturing over 11 million and exporting about 1.5 million vehicles. The prominent and dominant products of the industry are two wheelers with a market share of over 75% and passenger cars with a market share of about 16%. Commercial vehicles and three wheelers share about 9% of the market. Households use about 91% of the vehicles sold and only about 9% are for commercial purposes. The industry has attained a turnover of more than $US 35 billion and provided employment to more than 13 million people.

The supply chain of the industry in India is very similar to that of automotive industry in Europe and America. This may present its own set of opportunities and threats. The order of the industry arises from the consumers and goes through the automakers and until to the third tier of suppliers. However the products, like every traditional automotive industry, flow from the top of the supply chain to reach the consumers. Interestingly, in India the level of trade exports in this sector has been medium and imports have been low. However, now this is changing and both exports and imports are increasing. The demand determinants of the industry are factors like affordability, product innovation, infrastructure and fuel price. Also, the competition in this sector is high and increasing. All the advantages of this sector in India are yet to be leveraged with a rapidly growing middle class. Due to high cost of developing production facilities, limited access to new technology and tough competition, the obstacles to enter Indian Automotive sector are high. India has a well-developed tax structure. The power to impose taxes and duties is

distributed among the three tiers of government. The cost structure of the industry is fairly traditional, but the profitability of motor vehicle manufacturers has been rising over the past five years. Major companies like Tata Motors and Maruti Suzuki have material cost of about 80% but earning profits after tax of about 6% to 11%.

The level of change in technology in the Motor vehicle Industry has been high but the rate of change in technology has been medium. Investment in technology by the producers has been high but further investment in new technologies will help the industry to be more competitive. Over the last few years, the industry has been volatile. Recently, India's growing per capita income which is expected to rise by 2015 with the growth in exports and competitiveness of the industry. Tata Motors is leading the commercial vehicle segment with a market share of about 64%. Maruti Suzuki is leading the passenger vehicle segment with a market share of 46%. Hyundai Motor India and Mahindra and Mahindra are expanding their footprint in the overseas market. Hero Honda Motors is occupying over 41% and sharing 26% of the two wheeler market in India with Bajaj Auto. Bajaj Auto in itself is occupying about 58% of the three wheeler market.

Impact of Automobile Industry on the economy of India

At present time, Indian automobile industry is making a major contribution in increasing the country's GDP by 9% every year. New heights has been scaled by the industry in the year 2010. In January 2010, total automobile sales in the domestic market reached 1114157 units, the figures shows an increment of 44.9% compared to the sales units of 7,68,698 of same period last year. Even for the month of April-October after a gap of 11 years, total automobile sales in India stood at 1,120,081 Units. Annually, the Indian automobile industry is growing at an average rate of 30% and marking itself as one of the fastest growing industries in India. According to the reports of Society of Indian Automobile Manufacturers, annual car sales are estimated to reach 5 million vehicles by 2015 and more than 9 million by 2020 To believe

New York Times reports, several automobile companies like Hyundai Motors, Nissan, Toyota, Volkswagen and Suzuki have expanded their manufacturing facilities owing to India's strong engineering base and expertise in the manufacturing of low-cost, fuel-efficient cars.

Market share of different vehicles in the Indian automobile Industry

Passenger Vehicles	15.86%
Commercial Vehicles	4.32%
Three Wheelers	3.58%
Two Wheelers	76.23%

The production of automobiles in India has greatly increased in the last decade. At present India is the largest tractor and three-wheel vehicle producer, second largest two-wheel vehicle producer, fourth largest commercial vehicle producer and eleventh largest passenger car producer. For the year 2003-2004 the production rate crossed 7,243,5648 and for the current year it has reached 14,049,830 in terms of total vehicles production. As a result of all this, the resultant annual turnover of the Indian automobile industry for the year is recorded to be 38,238 million USD by Society of Indian automobile Manufacturer (SIAM). For the year 2009-10, the production rate for different category of vehicles is as followed (As per SIAM)

Passenger Vehicles	2,351,240
Commercial Vehicles	566,608
Three Wheelers	619,093
Two Wheelers	10,512,889
Grand Total	14,049,830

Export Market Statistics

Last year, India's automobile exports had reached $4.5 billion and a consistent export growth rate can be estimated in the year 2010 also with the estimation that it will cross $12 billion by 2014. As per the SIAM records automobile exports have under gown a growth of 22.30 percent during the current financial year. United Kingdom is largest export market for India's automobile industry followed by Germany, Netherlands and South Africa. In the year 2009-10, India has made a huge profit by exporting 1,804,619 no. vehicles. Different brands are utilizing the Indian automobile engineering expertise to manufacture and export maximum no. of vehicles from their Indian plants. Nissan Motors plans to export 250,000 vehicles manufactured in its India plant by 2011. Similarly, General Motors announced its plans to export about 50,000 cars manufactured in India by 2011. Listed below is the statistics showcasing export sales rate of Indian automobile industry for the year 2009-10

Commercial Vehicles	45,007
Passenger Vehicles	446,146
Three Wheelers	173,282
Two Wheelers	1,140,184
Grand Total	1,804,619

Domestic Market Statistics

According to Society of Indian Automobile Manufacturers (SIAM), there has been a growth of 32.28% in the domestic car sales, justified from the January 2010 sales 145,905 units against the 2009 sales of 110,300 units. The Commercial Vehicles segment grew marginally at 4.07 percent. While Medium & Heavy Commercial Vehicles declined by 1.66 percent, Light Commercial Vehicles recorded a growth of 12.29 percent. Listed below is the statistics showcasing domestic market sales rate of Indian automobile industry for the year 2009-10.

Commercial Vehicles	531,395
Passenger Vehicles	1,949,776
Three Wheelers	440,368
Two Wheelers	9,371,231
Grand Total	12,292,770

Market Dynamics

For FY 2011, Maruti Suzuki held a reasonable market share of 48.74 per cent while that of Hyundai was around 18.10 per cent. Tata Motors' market share stood at 12.92 per cent for the period. General Motors India (GMI) and Honda Siel cars India (HSCI) had a market share of 4.40 per cent and 2.97 per cent respectively during FY2011.

According to the data released by the Society of Indian Automobile Manufacturers (SIAM), Maruti held 43 per cent of the total Indian passenger-car market in the six months ended September 2011 as against Hyundai's 20 per cent pie.

Key Statistics

- ✓ SIAM expects India's car sales to grow 2-4 per cent in the fiscal year ending March 2012 while a growth of 13-15 per cent is projected in commercial vehicles' sales segment.
- ✓ Car sales in September 2011 stood at 165,925 cars.
- ✓ Sales of commercial vehicles (a key indicator of the country's economic activity), increased by 18.05 percent to 70,634, while motorcycle sales rose 19.93 percent to 933,465 of them in September.
- ✓ Total sales of vehicles across categories witnessed a growth of 19.39 per cent to 1571,342 units in September 2011 from 1316,118 units in the corresponding period last year.
- ✓ The sales of scooters increased by 50.74 per cent to 231,710 units (from 153,716 units in September 2010) while that of three-wheelers stood at 49,255 units (from 48,814 units in September 2010) in September 2011.
- ✓ Overall automobile exports registered a growth rate of 32.31 per cent during April-December 2011. Passenger Vehicles registered growth at 21.01 percent in this period while two-wheelers, commercial vehicles and three wheelers segments recorded growth of 32.34 per cent, 35.91 per cent and 49.55 per cent respectively.

Automobile industry in Pakistan

According to Ministry of Industries, Pakistan produced its first vehicle in 1953, at the National Motors Limited, established in Karachi to assemble Bedford Trucks, while buses, light trucks and cars were also assembled in the same plant. In early 1990's the industry was highly regulated but after deregulation, major Japanese manufacturers entered in the market, creating some competition in this sector. Assemblers of HINO Trucks, Suzuki Cars (1984), Mazda Trucks, Toyota (1993) and Honda (1994) in particular, entered when deregulation was introduced. Assembly of Daihatsu and Hyundai cars (1999) and various brands of LCVs and mini-trucks are commenced recently. After the tragedy of September 11, 2001, increase in the home remittances has resulted in greater liquidity in the market and at the same time profitable investment schemes are negligible, therefore, people started to invest cars. It becomes easy to purchase new cars due to car loans provided by banks. In order to fulfill rising demand the automobile industry has increased its production capacity. It has been observed that the domestic car engine technology lags years behind the world markets and that the people have not been allowed to have benefits of the new hybrid technology. The hybrid vehicles are more expensive than normal fuel vehicles. Usually, government organizations or companies for tax benefit buy these types of vehicles. Currently, about 102,000 units have been sold in the most advanced countries like Japan, USA and a small number of units in Europe. In Pakistan, environmentally friendly engines, improved braking system, reducing noise,fitting collapsible steering wheels, safety steel bar in doors, over dash drive in special models and fuel conservation apparatus hardly are the concern of car manufacturers. Whereas ,in actual, Honda Civic offers ABS and Toyota Corolla 4-Wheel Disc brakes with stabilizer bars. Safety bars are available in almost all products ranging from 850cc Cuore to Civic and Corolla

models. Moreover, Corolla offers Air Bags for added safety as well as Jam Protection door windows, while over drive has always been available in Corolla A/Ts. In the context of fuel conservation Honda offers V-Tec engine while Corolla is equipped with the latest fuel-efficient Twin-Cam engine with ECT. EFI engines by design are meant to be fuel-efficient. Toyota Corolla and Honda Civic have NVH dampening material inside the car which control noise and vibration ensuring a comfortable drive.

It is also stated that the car manufacturers are neither providing any information on car performance nor giving any viable warranty in terms of mileage and time frame and after sale service. As for quoting on-Road prices in India, the Indian rupee has a different rate against the US $ and duties are different. Besides, the volume production is higher in India, 640,000 cars versus 40,000 in Pakistan. Therefore, a comparison of India and Pakistani prices should be made after adjusting the exchange rates and duty factors.

Automobile industry has shown high progress from 2001-2007 and the government of Pakistan fixed a target of over half million units' production by the year 2011-2012 that now seems impossible. The industry fell short to achieve the goals of productions in 2006-2007 when 1, 95,688 cars were manufactured against a target of 2, 26,620 units. However, the growth in production was not up to the mark that year. In 2007-2008, the production declined to 1, 87,634 units against an estimated target of 2, 66,543 units. In the current fiscal year they said the production is expected to decline to 1, 50,107 units that are half the projected target of 3, 13,486 units. In spite of an additional levy of 5 per cent excise duty, the revenues from automobile sector would decline by over 25 per cent this year due to declining trend. The industry paid Rs.63 billion cumulative taxes that the government has levied on automobiles.

Automobile Industry and the Allied industries

The automobile industry has also strengthened many associated industries and allied industries. It has not only provided jobs to a large number of people but has also contributed significantly to the national exchequer. The most prominent allied industries are as follows.

1-CNG (compressed natural gas stations)
2-workshops
3-tyre shops
4-Automobile parts shops

Impact on economy

The car industry has invested over Rs 20 billion in the last four to five years to meet growing demand. The direct employment in car industry hovers between 5,500-6,000 persons. Motorcycle production hit the country's record level of over 1.5 million units in 2010-2011 by the effort of Pervaiz Musharraf Government's decision that opened bike market to low cost Chinese bikes. Auto sector now employs 192,000 people directly and around 1.2 million indirectly and has Rs 98 billion of investments and contributes Rs 63 billion as indirect tax in the national exchequer.

Auto Sector remains the second largest payer of indirect taxes after the Petroleum Sector. In Pakistan's context there are 10 cars in 1,000 persons which is one of the lowest in the emerging economies which itself speaks of high potential of growth in the auto sector and more so in the car production. Rising per capita income with changing demographic distribution and an anticipated influx of 30 to 40 million young people in the economically active workforce in the next few years provides a stimulus to the industry to expand and grow. (Source AUTOMARK Magazine)

Government of Pakistan had undertaken two major initiatives in the form of National Trade Corridor Improvement Program (NTCIP) and Auto Industry Development Program (AIDP) for the development of the automotive industry in Pakistan. Engineering Development Board (EDB) is actively implementing the AIDP to increase the GDP contribution of the automotive sector to 5.6%, boost car production capacity to half a million units as well as attract an investment of US$ 3 billion and reach an auto export target of US$ 650 million. Automotive engineering is a driving force of large scale manufacturing, contributing

US$ 3.6 billion to the national economy and engaging over 192,000 people in direct employment. The Auto parts manufacturing is $ 0.96 billion per annum. The demand for auto parts is highest in the motor cycle industry which is 60%, then is for cars which constitutes to 22% and the rest 18% is consumed by trucks, buses & tractors. This demand is met by Imports which caters 22% while the remaining 78% is supplied by the local manufacturers in the fiscal year 2007-2008.

Due to the increase in demand for sophisticated machinery, the government has allowed duty free import of raw material, sub components, components assemblies for manufacturers & assemblers. Total import bill of machinery stands at $2.195 billion in the fiscal year of 2007-08 which is 12.77% higher than that of the preceding year. The impressive growth in the machine tools and automation sector is directly proportional to the growth of the automotive industry which has become the fastest growing industry of Pakistan and contributes $3.6 billion annually to the country's GDP. The aftermarket for spares has also witnessed immense expansion over the same period, with imported parts playing an important role in meeting local demand. The spare parts market is given further impetus by a total vehicle population of approximately 5.4 million. Pakistan has the second highest number of CNG-powered vehicles in the world with more than 1.55 million cars and passenger buses, constituting 24% of total vehicles in Pakistan with improved fuel efficiency and conforming to the latest environment regulations.

Contribution to the GDP

Today the automotive industry annually contributes over Rs 30 billion to Pakistan's GDP and is also paying approximately Rs 8 billion per year in the form of taxes and thereby playing a pivotal role in the development of Pakistan's economy. Presently the auto industry has the capacity to produce 120,000 cars annually on a double shift basis. Car manufacturers in Pakistan over the last decade have contributed considerably towards employment generation. Car manufacturers in Pakistan and vendors employ around 150,000 to 200,000, people directly and indirectly. The Original Equipment Manufacturers (OEMs) have also been instrumental for transfer of technology, value addition and manpower development. As a consequence of car manufacturing in Pakistan, a vibrant auto vendor industry has emerged that is now not only supplying parts to local OEMs like Toyota, Honda, Suzuki, Nissan, etc, but also exporting internationally.

Auto-part exports are approximately $20 million per annum. Due to the deletion policy, cars manufactured by OEMs now consist 50% to over 70% local components depending on the model. Over the year vehicles manufacturing has been among the few industries that has continued to attract local and foreign investment even when the investment climate in the country has not been very favorable. The development of the local car-manufacturing sector is a key element in the industrialization process. It must be remembered that the import of used cars as opposed to Complete Knock Down (CKD) parts would cause a major drain on Pakistan's foreign exchange and work towards retarding the overall growth of the engineering sector in Pakistan.

The auto manufacturers in Pakistan are playing a significant role in the exports of the country. From July 2001-March 2002 auto parts exports

have been to the tune of $27 million.. The deletion process is ongoing and every year a certain set number of locally manufactured car parts are incorporated. According to the deletion program car makers have to progressively increase quantum of locally made car parts till the maximum level is attained. Currently in small cars the deletion level is almost 75% and in larger cars it is close to 60%. A change in the shape has impact on the deletion program. A change in shape means an investment of anywhere from Rs 4-5 billion, which economically is not a viable proposition keeping in view low demand trend.

Pakistan is an emerging market for automobiles and automotive parts, offers immense business and investment opportunities. The total contribution of Auto industry to GDP in 2007 is 2.8% which is likely to increase up to 5.6% in the next 5 years. Total gross sales of automobiles in Pakistan were Rs.214 billion or $2.67 billion in 2006-2007. The industry paid Rs.63 billion cumulative taxes in 2007-2008 that the government has levied on automobiles. There are 500 auto-parts manufacturers in the country that supply parts to original equipment manufacturers (PAMA members). Auto sector presently, contributes 16% to the manufacturing sector which also is expected to increase 25% in the next 7 years, as compared to 6.7 percent during 2001-02.Vehicles' manufacturers directly employ over 192,000 people with a total investment of over $ 1.5 billion. Currently, there are around 82 vehicles' assemblers in the industry producing passengers cars, light commercial vehicles, trucks, buses, tractors and 2/3 wheelers. The auto policy is geared up to make an investment of $ 4.09 billion in the next five years thus, making a target of half a million cars per annum.

Impacts Of Automobile industry

Automobiles have revolutionized our lives. It has helped in reaching at our destination in less time. But this invention has many impacts, some are positive and some are negative. Some of the impacts are given below.

Impacts on Access and convenience

Worldwide the automobile has made easier access possible to remote places. However, average journey times to regularly visited areas have increased in large cities, especially in Latin America, as a result of widespread automobile adoption. This is due to traffic congestion and the increased distances between home and work brought about by urban expansion.

Deaths in Road Accidents

However the adverse effects of automobiles is in the form of accidents. Many people have lost their lives in these road accidents and a large number of people have become permanently paralysed in these accidents.

Impacts on Economy

The development of the automobile industry has contributed to shifts in employment distribution, shopping patterns, social interactions, manufacturing priorities and city planning; increased use of automobiles has decreased the roles of walking, horses and railroads. This development in automobile industry affected the economy in the following ways:

1. Promoted growth of other industries:

Gave rise to the development of other allied industries for example. petroleum, rubber, and steel industries etc.

2. Helped fuel the creation of a national system of highways:

Automobiles needed better roads. Therefore we have seen the development of long carpeted roads over the globe which is connecting almost all the parts of the world having population.

3. Created new service facilities:

Filling stations, garages, and roadside restaurants jumped up across the nation. Motels catering to the needs of motorists started replacing hotels. Thus not only increasing the government revenue but also providing jobs to a number of unemployed people.

Impacts on Infrastructure

Besides industries, one of the most visible effects the automobile has had on the world is the huge increase in the amount of surfaced and structured roads. For example, between 1921 and 1941, the United States spent US$40 billion on roads, increasing the amount of structured road from 387,000 miles (619,000 kilometers) to over 1,000,000 miles (1.6 million kilometers) which does not even take into account road widening.

Impacts on Environment

For much of the early history of the car, no attention was given to various environmental effects caused by the automobile.

1. **Air and Noise Pollution:**

Automobiles are a main cause of air pollution and noise pollution. The manufacture and use of automobiles emits 20 to 25 percent of the carbon

dioxide that cause global climate change. There are almost 600 million cars and light vehicles (excluding heavy trucks and buses) worldwide, The automobile adds significantly to noise pollution worldwide; in response to these impacts, an entire technology of noise barrier design and other noise mitigation has emerged. A typical car emits approximately 3.4 grams per mile of carbon monoxide.

2. **Negative Effects on Wildlife:**

Increased road-building brought negative effects on habitat for wildlife, primarily through habitat fragmentation and surface run off alteration. New roads paved through sensitive habitat can cause the loss or degradation of ecosystems, and the materials required for roads come from large-scale rock quarrying and gravel extraction, which sometimes results in sensitive ecological areas.

3. **Effecting the Water table:**

Road construction also affects the water table, increases surface runoff, and increases the risk of flooding.

Impacts on Culture

Prior to the advent of the automobile, horses, walking and streetcars were the major means of transportation within cities. Horses need a large amount of care, and were therefore kept in public facilities that were usually far from residences. The manure they excrete on the streets also created a sanitation problem.

The automobile made regular medium-distance travel more easy and affordable, especially in areas with no railways. Because automobiles did not rest, and were faster than horse-drawn conveyances, people were regularly able to travel farther than in earlier times. The development of highways half a century later continued this revolution in mobility.

Some experts are of the view that many of these changes started during the Golden age of the bicycle, the preceding era from 1880—1915.

Impacts on Society

1. Created a more mobile society:

Cars broke down the difference between urban and rural society. The automobile brought the new tradition of the "Sunday drive," and many city folks got their first chance to tour the rural areas. Rural people, on the other hand, drove into cities to shop and to be entertained.

2. Broke down the stability of family life:

Now it is much easier for individual family members to go their own way. They are now less dependent on each other especially the women.

3. Broke down traditional morality:

Children could be freed from parental supervision as cars became a sort of "bedroom on wheels." Now they can freely move on their own accord.

4. Changes to urban society:

In the start of 1940s, most urban environments lost their streetcars, cable cars, and other forms of light rail, to be substituted by diesel-burning motor coaches or buses. Many of these have never returned, though some urban communities alternatively installed subways.

Another change caused by the automobile is that modern urban pedestrians must be more alert than their ancestors. In the past, a pedestrian had to come across relatively slow-moving streetcars or other obstacles of travel. With the multiplication of the automobile, a

pedestrian has to anticipate safety risks of automobiles at high speeds because cars may cause serious damage to a human.

5. Advent of suburban society:

Because of the automobile, the outward growth of cities increased, and the development of suburbs in automobile intensive cultures was accelerated.[7] Until the start of the automobile, factory workers lived either close to the factory or in high density communities farther away, linked to the factory by street car or rail. The automobile and the federal subsidies for roads and suburban development that supported car culture made people to live in low density areas far from the city center and integrated city neighborhoods.

6. Car culture:

The car had a significant influence on the culture of the middle class. Automobiles were incorporated into all fields of life from music to books to movies. Between 1905 and 1908, more than 120 songs were based on the automobile.

Since the start of the automobile, car manufacturers and petroleum fuel suppliers successfully lobbied governments to build public roads. Road building was sometimes also affected by Keynesian-style political ideologies. In Europe, massive freeway building programs were started by a number of social democratic governments after World War II, in an attempt to create jobs and make the automobile available to the working classes.

SWOT Analysis

Strengths:

Increasing Demand for Cars:

In Pakistan context there are 9 cars in 1,000 persons which is one of the lowest in the emerging economies which itself speaks of high potential of growth in the auto sector and more so in the car production. Moreover rising per capita income over the years will also stimulate this demand.

Resale of Local Assembled Cars:

Resale of locally assembled cars is better due to availability of spare parts and after sales services and warranty e.g. Suzaki, Honda, Toyota are classic examples in this regard. Used imported cars have been selling below their cost at the showrooms but consumers are not inclined to buy because of their low re-sale value and problems in parts availability.

Quality of local cars:

Initially when the import of cars was liberalized the quality of local assembled cars was unsatisfactory so the people of high income level group started buying imported cars and the sales of the local assembled cars started decreasing so the local assemblers started enhancing the quality of their vehicles so we can say that the quality of local cars is becoming the strength of the auto industry. Moreover the competition from the imported cars will also be a stimulus for the local assemblers to update their quality of cars.

OEM:

The local OEM of Pakistan is well equipped with enough advance technology and skilled labor to produce parts according to the desired quality of any foreign company.

CNG kit:

The advantage of buying local assembled cars is that they comes with factory fitted CNG kits at the times when the prices of fuel rising at higher pace internationally.

Mechanics:

For local assembled cars mechanics are readily available in market and much cheaper so the buyer has not to worry about any problem that can occur in the car in long term whereas the availability for imported cars is a bigger issue for the owners and if somehow they are able to find one then the mechanics charges much higher than actually it should be charged.
higher than actually it should be charged.

Weakness:

Input Cost:

In Pakistan as the inflation is increasing so as the input costs and for manufacturers it is becoming harder to produce at lower cost.

Increasing cost of energy and its unreliable and inconsistent supply adds up the cost of manufacturing and wastage of resources. It is estimated that by the year 2012, auto industry consumption of electricity will cross 500 – 600 MW from around 250 - 300 MW, as of now.

Protection level:

Before the TBS was introduced the auto industry was well protected by the government but now as the import of CKD and CBU is liberalized the protection level to industry by government is decreased.

Lack of skilled manpower for modern machinery:

In Pakistan conventional machines are not able to meet the precision manufacturing and the available labor is not familiar with modern technology it caused by lack of coordination and linkages with Government/Semi Government Supporting Bodies and Technical Training Institutes

Scarcity of raw material especially steel:

Through previous years the world prices are rising and causing costly inputs and Pakistan has left with scarce Steel and Iron left, so manufacturers are facing difficulties in producing cars with low prices

Opportunities:

Import German technology and skills:

Pakistan-German automotive supply network is to be build, providing opportunities to Pakistani automotive vendor enterprises to benefit from the German know-how and technology to improve quality, productivity, developing and marketing of value-added products.

Foreign Investment and setup production facilities:

China National Heavy Duty Truck Corporation (CNHDTC), one of the largest heavy duty truck manufacturers in China, has shown interest for investment in the automobile sector of Pakistan.

Ethanol Fuel:

As the fuel prices are rising in world Pakistan should switch to Ethanol Fuel as Brazil is using. Ethanol Fuel is produced by Molasses. Pakistan is one of the country which produces good quantity of molasses but the engines of the local cars do not support ethanol so Pakistan should acquire the Technology to produce ethanol compatible cars. In Brazil they use 90% Ethanol and 10% petroleum whereas Pakistani cars with default engines can afford only 3% Ethanol.

Global spare part market:

The annual gross sales turnover of the auto industry, at present, stands at Rs210billion while export of auto parts are estimated at $35 million. As such, the increase in production turnover is projected to increase by 185 per cent while the exports of auto parts would make quantum jump

Threats:

WTO Regime:

The auto industry is generally faced by multiplicity of taxes; the presumptive tax regime has led to increase in prices of imported inputs and the finished goods. Component manufacturers are struggling to compete with under-invoicing, miss declaration and smuggling. Import of used parts is still continuing at a large scale.

Competition from import cars:

Auto industry is facing a threat from the import of cars which is already liberalized further it is said that government will cut about 15% of duties till 2011

Fuel prices:

According to the authorities the fuel prices which currently are currently high will see an upward surge in the days to come.

Conclusion

Therefore we can conclude that the automobile sector has revolutionized the life of common people. The automobiles are now the part and parcel of our lives without which its nearly impossible to survive. This sector has contributed to the national exchequer as well as increased the economic activities as well in the form of providing jobs to the people as we have discusses earlier and also gave rise to other allied industries. However the automobile sector of Pakistan is lacking behind the automobile sector of the developed world in terms of the reliability of its products , competitive prices , safety concerns etc. Moreover the current energy crises has also hampered this industry as well . Due to this factor the government also losses its considerable chunk of revenue which it would have otherwise collected.

Bibliography

1. Kay, Jane, Asphalt Nation: how the automobile took over America, and how we can take it back, 1998
2. Gilbert, Alan, The mega-city in Latin America, 1996
3. Jackson, Kenneth, Crabgrass Frontier: The Suburbanization of the United States, 1987
4. Jakle, John, Sculle, Keith, Lots of Parking: Land Use in a Car Culture, 2004
5. Strasser, Susan, Waste and Want: A Social History of Trash, 1999
6. Smith, Robert, A Social History of the Bicycle, its Early Life and Times in America, 1972
7. Graves, Brown, From Highway to Superhighway: The Sustainability, Symbolism and Situated Practices of Car Culture, 1997