

# Automobiles Industry (case of Pakistan) 2001-2010

## (The Driver of Economy)

---

<sup>1</sup>Yasir Hassan

<sup>1</sup>Lecturer: Lahore Business School,  
[Yasir.uol@hotmail.com](mailto:Yasir.uol@hotmail.com)

the University of Lahore, Pakistan

<sup>2</sup>Kashif-ud-din

<sup>2</sup>Dean: Lahore Business School,  
the University of Lahore, Pakistan

<sup>3</sup>Fawad Waheed, Muhammad Azeem mushtaq,  
Hassan Razzaq, Shagafat Ali and Muhammad Binyameen

<sup>3</sup> Lahore Business School, the University of Lahore, Pakistan

---

### **Abstract**

This study examines economic condition of Automobiles Industry of Pakistan (2001-2010). The Automobile industry has evolved miraculously over the time and now the automobile is a multi-billion dollar industry and it contributes to the economies of the many nations. The study is also aimed at finding out the performance of Automobiles industry in Pakistan over the decade. The objective of this research is to understand the advantages attained by Pakistani automobile car assemblers and vendors, during last 10 years through mutual collaboration and technology acquisition from global automobile manufacturers. This study finds out that how much Paid-up-capital, Total numbers of Shares and Equity will explain the change in Total Sales of Automobiles industry. Same is repeated for Total Asset, that to what extent Total Asset regressed by Paid-up-capital, Total numbers of Shares, Sales and Equity. Through different graph and charts we determine the actual position of the industry. And which variable have positive effect on Profit After Tax as well as Sales.

**Keywords : Mannheim, CKD, PACO, Kandawalla**

---

### **Introduction**

The first practical automobile with a petrol engine was built by Karl Benz in 1885 in Mannheim, Germany. One of the viral industry of the world, it effects both economy and culture, give Jobs to thousands of people, produce millions of dollars in globally revenues. Help other Industries to sustain, Revolutionized the approach of transportation.

Automobiles enabled people and merchandise to travel farther than and more rapidly. It gives chance to manufacture a huge quantity of commodities and services. So, Mother of the entire Industries is the most suitable explanation to describe its importance.

### **Pakistan Automobile Industry**

Pakistan is a very favorable place for the foreign investment. The foreign automobile manufacturers are also expressing their interest to invest there. So the need is to attract players from Germany and other developed countries to excel in this field.

Pakistan is a very good market for motor vehicle and its parts and accessories specially imported used cars, buses and trucks.

Recently this sector had experienced very dynamic changes because the previous local government had allowed used cars and other vehicles and exempted them in CKD (Completely Knocked Down) condition from custom duty. The automobile sector had developed more than half during the last fiscal years and its main causes are the improving living standards and the development of banking sector in the country. In

Pakistan the core 32 manufacturers

and assembled vehicle industry are supported by four hundreds automotive parts and accessories manufacturers. Only five of these companies manufacture or assemble heavy duty vehicles. The drastic and very dynamic changes, growth and improvement in the automobile sector are mainly caused by the growing banking, credit and investments.

Environmental Standards related to the air noise and water pollution. Soon of the cause of increasing demand of vehicles in the region is CNG Segment. After Argentina and Brazil, Pakistan had become the highest consumer of CNG. 9 plants were in process when the industry was national in 1972 and Pakistan Automobile Corporation (PACO) established. It was merely after 1979 that PACO was finally capable to put into action its programs to grow the automobile industry. To meet local desires, PACO launched the Project Suzuki, which started making in 1984. And in 1991, Suzuki produced 40,846 cars per year and the deletion rate reached was above 50 percent. For moving of lesser loads, PACO units started the assembly of Mazda pickups, coasters and Suzuki, Isuzu, jeeps and vans. To meet the orders for heavier trucks and buses, Isuzu and Hino manufacturing was undertaken at National Motors and Republic Motors. After some time Hinopak Motors was merged in the private sector.

Ghandara Nissan Diesel Ltd in 1987. a mutual project business of Ghandara Nissan (Pvt) Limited, Nissan of Japan and Toyo Menka Kaisha of Japan started profitable manufacturing.

The company produced Nissan trucks and buses in Pakistan and is about to launch passenger cars soon. In 1991, Indus Motor Company started operations with a 21,000 unit capability plant to produced Toyota cars in Pakistan.

In 1992, under the privatization program, many PACO units were privatized. Since then, the government policies in respect to the vehicle producing industry remain unpredictable its pain to manage the financial statement arrears have also slowed down expansion actions resulting in a decline of economic activities. The economic decline at a standstill prevails, sales tax and other budgetary measures over the last years have verified to be unfavorable for the local automobile industry.

### *International situation*

The Japanese, Europeans and Americans are pouring millions into Asian assembly plants and parts industries. They are calculating on politically linked local partners, setting up authorizations, conducting market research and creating marketing movements. Automobile sales in Asia are predicted to exceed the size in North America and Europe by the year 2005, when they are predicted to hit nearly 1.9 billion a year. By traditional estimations, Asians will buy seven to eight percent extra vehicles every year, well into the next decade against two to three percent additional per year for North American and Europeans.

### *Pakistan, Potential Market*

Pakistan with an entire population of almost 130 million, with 35 percent living in metropolitan areas is a market with marvelous potential. Nevertheless, the level of economic growth is still short at 6 percent and GDP per capita is almost the same point as China and India. The citizens of Pakistan are without any good quality metropolitan transportation services.

The increasing population of Pakistan has prolonged the cities and enlarged distances. Travelling and transportation poses a main difficulty, to the level that survival without a car is extremely hard. There are approximately 4 million vehicles on the road as of today with an yearly market expansion rate of 8 percent. Unluckily, this yearly expansion rate does not give advantage to the local industry but still unmoving as a result of the Afghan Transit Trade and smuggling. Pakistan has the accurate target market and potential to match up new product development, revolution and global strategies of the world automobile makers for Asian markets. The necessity in Pakistan is to take optimistic step towards making a long-term industry friendly policy to inspire local production. Joint projects are captivating position between Pakistani, Korean and Singaporean companies to take on metropolitan planning and traffic troubles. The government approach in the building of a network of highways will deliver a motivation to local production.

### **List Pakistani automobile companies and their models:**

- Pak Suzuki Motor Company Ltd.  
Cars, L.C.Vs ,Pick-ups and Vans.
- Indus Motor Company Ltd.  
Cars and L.C.Vs.

- Dewan Automotive Engineering Ltd.  
Cars and Pick-Ups
- Master Motor Corporation Ltd.  
Trucks , Buses and Pick-ups.
- Honda Atlas Cars (Pakistan) Ltd.  
Cars and Bikes.
- Sigma Motors (Pvt) Ltd.  
L.C.Vs
- Cooperative Society Ltd.  
Motorcycles and Auto-Rickshaws
- Sind Engineering Ltd.  
Cars, Trucks , Bikes and Pick-ups.
- Hinopak Motors Ltd.  
Trucks and Buses.
- Ghandhara Nissan Ltd.  
Trucks, Buses and Cars.

## **Literature Review**

---

Javaid Iqbal Ahmed (Director of Honda Atlas Cars, Pakistan), said in a recent conference that an increase of 3 percent in sales tax, 2 to 15 percent additional CVT and 8 percent customs duty will result in dropping the government revenues by Rs.5 billion. Moreover, the production cost of the units would drive up, resulting in a further price increase. The effect of these taxes is so high on the price of the products that either the outcome will fall in the volume of sales or will soak up the profit margins of these units.

In recent years, we have witnessed that the industrialization of South East Asian countries greatly depend on the development of their automotive industry. Similarly, automotive industry acted as a catalyst in the overall growth of the industry in Japan and Korea and the consequent well being of their citizens.[Plunkett Research. 2008].

In 2010, China produces 18,264,664 different type of vehicles. China produced cars that no one competes with them. After that Japan produced 9,605,985 vehicles in 2010 the second largest country in producing vehicles. United State (USA) produces 7,761,443 vehicles in 2010 ranked in third largest country producing vehicles. Germany produced 5,905,985 in 2010. South Korea produced 4,271,941. Brazil produced 3,648,358. India produced 3,536,783. Spain Produced 2,387,900. Mexico Produced 2,345,124. France produces 2,227,742. Canada produces 2,071,026. Thailand Produced 1,644,513. Iran produced 1,599,454. Russia produced 1,403,244. United Kingdom(UK) produced 1,393,463. Turkey Produced 1,097,554. And Pakistan produced 5,368,990 ranked in 36th position according to the whole world. Total vehicles produced in 2010 77,743,862 in which 60,343,756cars, 13,370,432 Light Commercial Vehicles( LCV), 3,510,681 Heavy Commercial Vehicles(HCV), 518,993 Heavy Buses.[“Production Statistics”, OICA].

One of the biggest winners of today's highly competitive automobile market has been Korea, where Hyundai, along with its brand Kia, have enjoyed soaring global sales. Consumers are attracted to their reasonable prices, excellent warranties and world class manufacturing quality. Korean car makers are competing aggressively against the world's largest firms. Hyundais sales soared to 5.74 million units worldwide during 2010, placing it 4th below Toyota, GM and Volkswagen. [Plunkett Research. 2008].

From 1953 to 2011 the journey of auto industry has been rough, tough and sometime very smooth in Pakistan. Kandawalla Industries took the initiative(OICA). Industry of Pakistan operates under franchise and technical cooperation, agreement with China, Europe, Korea, and Japan.

Technology up gradation is also being established as a regular feature by Pakistani Automobile Vendor Industry. Establishment of new Core Shops under collaboration with foreign Foundries to make Binder Risin (chemical) for auto parts and installation of automated Fatling and Grinding Machines are a few examples of utilizing latest technology in auto parts manufacturing. [M.Sharukh Mirza, 2011].

According to high production Toyota is the biggest company in this whole world who produce a lot of vehicles in a year, in 2010 Toyota manufactured 8,557,351 units of different vehicles, General Motors(GM) produced 8,476,192 vehicles, Volkswagen manufactured 7,341,065, Hundai Motor manufactured 5,764,918, Ford produced 4,988,031, Nissan produced 3,982,162, Suzuki manufactured 2,892,945. BMW manufactured 1,481,253. [OICA, 2010].

It is forcefully recommended for Pakistani automobile industry to streamline manufacturing process by reducing, minimizing surplus time from systems (P<sub>MAX</sub>, H<sub>RATE</sub>), use time compression with more stretchy technologies (P<sub>VFLEX</sub>, M<sub>FLEX</sub>), incorporate optimized processes in their businesses (V<sub>FLEX</sub>), use quick product development solutions, using standard machines/equipments to reduce defects before rework (Y<sub>MIN</sub>, Y<sub>IMP</sub> and M<sub>RATE</sub>), use SMED and flexible fixtures (M<sub>H</sub>TIME, S<sub>U</sub>TIME) etc to meet needs of world market to become competitive. Pakistani discrete parts automobile manufacturing industry should focus on issues of competitiveness both at tactical and strategic level in the near future otherwise their future would be in jeopardy. [Jahanzaib, 2008].

To depress imports of auto mobiles and to promote localization of automobiles, high taxes are applied on imported automobiles through Tariff based system (TBS). Sometimes, Imports of automobiles are made when the demands are greater than total produced vehicles. Imports from India are relatively cheap. [Rohail, 2010].

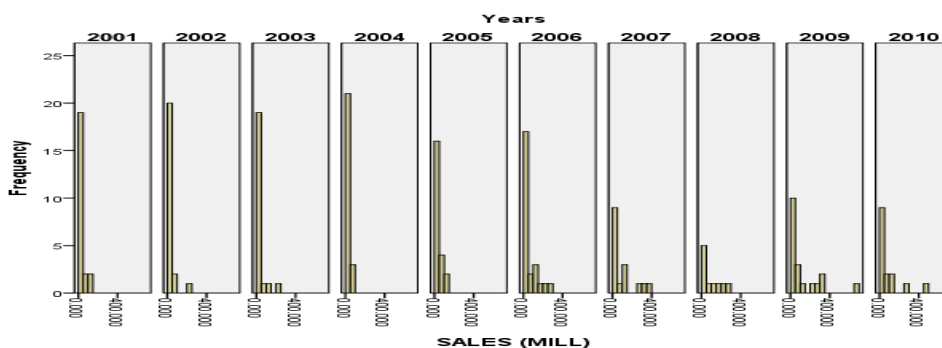
The automobile industry depends on economic uplift, availability of auto financing at satisfactory terms and sustainable consistent industry friendly policies. In the recent past, with the help of these factors, the automobile production surged four times from 39,167 units in the year 2002 to 1,64,340 units in 2007. Responding to the increasing demand and the government goal to produce 500,000 units by the year 2011, all OEMs expanded their production capacity to meet the goal set by the Government. The car industry has invested over Rs 36 billion in the last four to five years to meet growing demand. [scribd, automobiles industry in Pakistan].

## Methodology

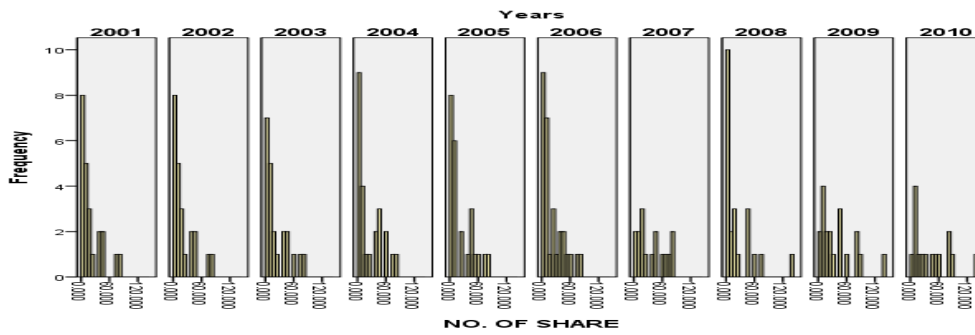
In this study we apply different type of tests; first one was for observing the performance of Automobile industry over the years and the other method for considering that which variable is more contributing for increasing the sales and Total Assets. In this study ANOVA is used for comparing the means of different variable from year 2001 to 2010. Least significance difference (LSD) test is applied for comparing the means of different years that it is significantly different from each other or not. Multiple linear regression can be help for predicting sales and total assets dependent variable by considering **paid-up capital, no. of share, equity, profit before tax and profit after tax** independent variables.

## Empirical Results

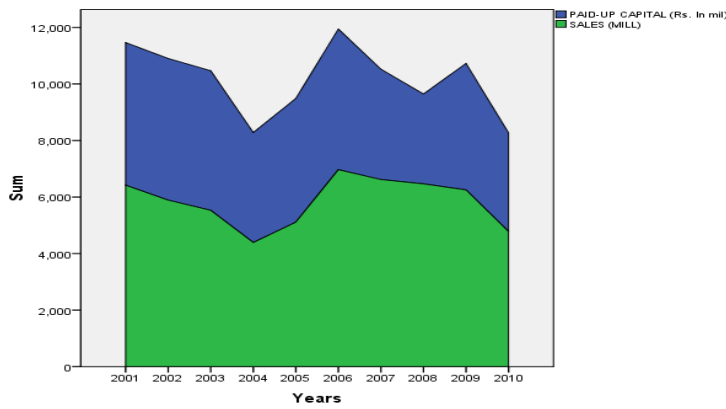
A histogram is one of the basic quality tools. It is used to graphically summarize and show the distribution and variation of a process data set.



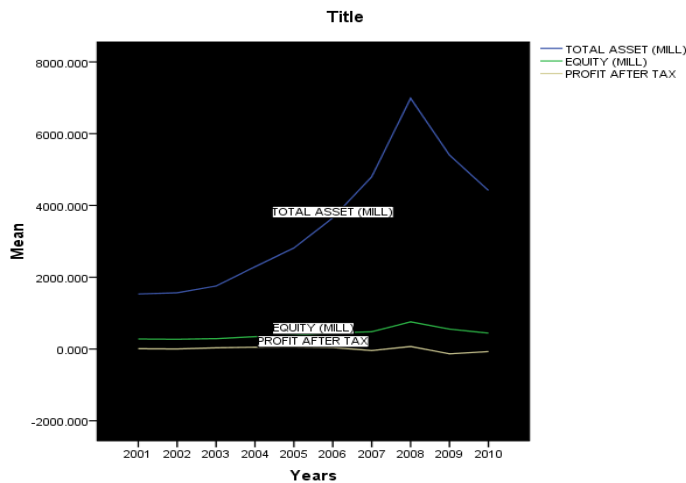
According to this graph the sale of 2004 is high but little bit difference between 2002-2004 sales. After that the sale decreased day by day. The sale declining that means it has minimum mean value.



This graph shows that the number of shares highly increased in 2008. But after that it declined.



The area chart shows that Paid-up-capital is slightly increasing from 2001 to 2003, 2004 was the most declined period then it increased and again decreased. sales is behaving same like paid up capital.



The line chart shows as you can see Total assets increased year by year but after 2008 it was declined. While Equity and PAT was constant over the decade but slightly increased in 2008.

### Paid Up Capital

Years	Standard Deviation	Mean	Coefficient of Variation
-------	--------------------	------	--------------------------

2001	222.440	194.556	114.3321203
2002	221.265	191.121	115.7722071
2003	237.875	226.458	105.041553
2004	243.88	236.914	102.9403075
2005	240.019	235.357	101.9808206
2006	224.534	251.422	89.30562958
<b>2007</b>	<b>287.27</b>	<b>360.55</b>	<b>79.67549577</b>
2008	358.472	306.913	116.7992232
2009	367.892	384.344	95.71945965
2010	399.5262786	441.646	90.46301305
<b>Total</b>	<b>280.317</b>	<b>282.9281</b>	<b>99.07723123</b>

Paid Up Capital was consistent in 2007. As we know Coefficient of Variation is applied for checking the consistency level.

Years	No. of Share		
	Standard Deviation	Mean	Coefficient of Variation
2001	22.554	20.826	108.2973207
2002	22.409	21.282	105.2955549
2003	23.889	24.078	99.21505108
2004	24.432	25.124	97.24566152
2005	24.176	24.93	96.97553149
2006	22.824	23.644	96.5318897
<b>2007</b>	<b>28.209</b>	<b>36.805</b>	<b>76.64447765</b>
2008	34.07	25.237	135.0001981
2009	36.165	40.322	89.69049154
2010	39.35488	45.125	87.21303047
<b>Total</b>	<b>27.808</b>	<b>28.7373</b>	<b>99.21092072</b>

No. of shares was most consistent in 2007 same as Paid Up Capital.

Years	Profit Before Tax		
	Standard Deviation	Mean	Coefficient of Variation
2001	234.354	118.466	197.8238482
2002	334.826	198.272	168.8720546
2003	652.075	418.821	155.6930049
<b>2004</b>	<b>675.677</b>	<b>447.437</b>	<b>151.0105333</b>
2005	884.528	527.198	167.7790887
2006	1301.325	718.668	181.0745713
2007	1410.529	758.745	185.9029055
2008	331.987	89.444	371.1674344
2009	954.245	278.802	342.2661961
2010	1399.538	498.312	280.8557691
<b>Total</b>	<b>817.908</b>	<b>405.4165</b>	<b>220.2445406</b>

Profit Before Tax was most consistent in 2004.

<b>Total Assets</b>			
<b>Years</b>	Standard Deviation	Mean	Coefficient of Variation
2001	1,215.536	1160.227	104.7670844
2002	2051.046	1518.404	135.0790699
2003	2933.535	2072.731	141.5299429
2004	3689.127	2811.104	131.2340988
2005	4976.831	3802.265	130.8912188
2006	5545.348	4013.235	138.1765085
2007	5871.788	5312.006	110.5380529
<b>2008</b>	<b>2802.852</b>	<b>2848.2</b>	<b>98.40783653</b>
2009	5717.068	5100.242	112.0940536
2010	7710.936	5764.377	133.7687663
<b>Total</b>	4,251.407	3440.279	123.6486632

Total Assets was consistent in 2008 like Equity.

<b>Sales</b>			
<b>Years</b>	Standard Deviation	Mean	Coefficient of Variation
2001	31.887	27.248	117.0251028
2002	45.481	27.889	163.0786332
2003	48.204	28.229	170.7605654
2004	22.96	17.239	133.1863797
2005	40.077	30.255	132.4640555
2006	76.211	56.544	134.7817629
2007	118.777	99.879	118.9208943
<b>2008</b>	<b>95.345</b>	<b>95.65</b>	<b>99.68112912</b>
2009	172.049	122.428	140.5307609
2010	125.9219456	80.689	156.0583792
<b>Total</b>	77.691	58.605	136.6487663

Sales was most consistent in 2008.

<b>Profit After tax</b>			
<b>Years</b>	Standard Deviation	Mean	Coefficient of Variation
2001	158.188	71.883	220.0631582
2002	227.494	134.842	168.711529

2003	426.64	280.904	151.8810697
2004	437.961	300.725	145.6350486
2005	562.937	348.348	161.6019038
2006	849.885	465.624	182.5260296
2007	913.229	502.256	181.8254038
2008	237.666	53.597	443.4315353
2009	683.302	162.079	421.5857699
2010	942.947	281.605	334.8473926
<b>Total</b>	<b>544.025</b>	<b>260.1863</b>	<b>241.2108841</b>

After that Profit After Tax was most consistent in 2004 same as Profit Before Tax

Equity			
Years	Standard Deviation	Mean	Coefficient of Variation
2001	700.818	373.528	187.621276
2002	827.178	461.915	179.075804
2003	1089.289	683.942	159.2662828
2004	1,413	926.836	152.4881425
2005	1895.769	1241.412	152.7107036
2006	2507.972	1504.85	166.6592684
2007	3643.463	2416.771	150.7574776
2008	1343.485	1022.92	131.3382278
2009	3833.427	2458.144	155.9480242
2010	4581.745	2606.512	175.7806985
<b>Total</b>	<b>2,183.646</b>	<b>1369.683</b>	<b>161.1645905</b>

According to Coefficient of Variation Equity was most consistent in 2008.

## ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
PAID-UP CAPITAL (Rs. In mil)	Between Groups	1208066.711	9	134229.635	1.752	.080
	Within Groups	1.5257	199	76626.766		
	Total	1.6467	208			
NO. OF SHARE	Between Groups	12830.796	9	1425.644	1.881	.056
	Within Groups	156911.014	207	758.024		
	Total	169741.810	216			
EQUITY (MILL)	Between Groups	1.2658	9	1.406E7	2.424	.013
	Within Groups	1.0909	188	5798853.253		
	Total	1.2179	197			
TOTAL ASSET (MILL)	Between Groups	4.6668	9	5.184E7	2.539	.009
	Within Groups	3.8599	189	2.042E7		
	Total	4.3269	198			
SALES (MILL)	Between Groups	238243.430	9	26471.492	3.705	.000



	Within Groups	1350458.939	189	7145.285		
	Total	1588702.369	198			
PROFIT BEFORE TAX	Between Groups	1.0867	9	1206387.088	1.527	.141
	Within Groups	1.5418	195	790245.711		
	Total	1.6508	204			
PROFIT AFTER TAX	Between Groups	4585562.583	9	509506.954	1.493	.152
	Within Groups	6.7917	199	341250.801		
	Total	7.2497	208			

## Hypothesis:

### SALES

H0:  $\mu_{2001} = \mu_{2002} = \mu_{2003} = \mu_{2004} = \mu_{2005} = \mu_{2006} = \mu_{2007} = \mu_{2008} = \mu_{2009} = \mu_{2010}$

H1: At least one mean is significantly different

### PROFIT AFTER TAX

H0:  $\mu_{2001} = \mu_{2002} = \mu_{2003} = \mu_{2004} = \mu_{2005} = \mu_{2006} = \mu_{2007} = \mu_{2008} = \mu_{2009} = \mu_{2010}$

H1: At least one mean is significantly different

Since the p-value is less than 0.05 for sales, it means the null hypothesis will be rejected in the favour of alternative hypothesis. Similarly Sales, Equity, Total Assets and have the p-values which amount is less than 5%.

PAID-UP CAPITAL, NO. OF SHARE, PROFIR BEFORE TAX and PROFIT AFTER TAX showing no differences in their means since 2001 to 2010.

The least significance difference test (LSD) is applied for checking that which year's mean is significantly different from each other.

### Equity (MILL)

#### LSD

Years	Years	Mean Differences	Sig.
2001	2008	-478.0871166666667	.011
2002	2008	-485.08639285714287	.010
2003	2008	-469.13275000000004	.013
2004	2008	-413.3663815789474	.036
2008	2001	478.0871166666667	.011
	2002	485.08639285714287	.010
	2003	469.13275000000004	.013
	2004	413.3663815789474	.036

According to LSD test it can be observed that the mean value of year 2001 and 2010 is significantly different. It verifies with p-value which is less than 0.05.

Multiple regression analysis has applied; in ANOVA table the p-value tells us that the overall model is significant.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	571481.223	6	95246.870	17.921	.000 <sup>a</sup>
	Residual	1015118.493	191	5314.757		
	Total	1586599.715	197			
2	Regression	571417.559	5	114283.512	21.614	.000 <sup>b</sup>
	Residual	1015182.156	192	5287.407		
	Total	1586599.715	197			
3	Regression	564743.362	4	141185.840	26.666	.000 <sup>c</sup>
	Residual	1021856.354	193	5294.593		
	Total	1586599.715	197			

a. Predictors: (Constant), PROFIT AFTER TAX, PAID-UP CAPITAL (Rs. In mil), EQUITY (MILL), TOTAL ASSET (MILL), NO. OF SHARE, PROFIT BEFORE TAX

b. Predictors: (Constant), PROFIT AFTER TAX, PAID-UP CAPITAL (Rs. In mil), EQUITY (MILL), TOTAL ASSET (MILL), PROFIT BEFORE TAX

c. Predictors: (Constant), PAID-UP CAPITAL (Rs. In mil), EQUITY (MILL), TOTAL ASSET (MILL), PROFIT BEFORE TAX

d. Dependent Variable: SALES (MILL)

Sales is considered as a dependent variable while Equity, Total Asset, Paid-Up Capital and No. of Share, Profit After Tax are independent/explanatory variables.

In results, Sales (dependent) and Bank / Financial Charges, Equity, Profit After Tax, Total Asset, Paid-Up Capital and No. of Share are independent variables, with the help of backward method sales is best described by (Bank) / Financial Charges, No. of Shares, Equity, Profit After Tax. And these have positive effect on Sales.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	12.221	7.525		1.624	.106

	PAID-UP CAPITAL (Rs. In mil)	-.046	.125	-.149	-.365	.715
	NO. OF SHARE	1.362	1.206	.442	1.130	.260
	EQUITY (MILL)	-.027	.006	-.785	-4.566	.000
	TOTAL ASSET (MILL)	.004	.005	.213	.757	.450
	PROFIT AFTER TAX	-.079	.017	-.551	-4.579	.000
	(BANK) / FINANCIAL CHARGES	.010	.003	1.089	3.713	.000
2	(Constant)	12.588	7.440		1.692	.092
	NO. OF SHARE	.932	.264	.302	3.536	.001
	EQUITY (MILL)	-.027	.006	-.764	-4.733	.000
	TOTAL ASSET (MILL)	.004	.005	.208	.742	.459
	PROFIT AFTER TAX	-.076	.015	-.531	-5.011	.000
	(BANK) / FINANCIAL CHARGES	.009	.002	1.052	3.832	.000
3	(Constant)	13.223	7.382		1.791	.075
	NO. OF SHARE	1.024	.232	.332	4.407	.000
	EQUITY (MILL)	-.025	.005	-.726	-4.747	.000
	PROFIT AFTER TAX	-.076	.015	-.527	-4.991	.000
	(BANK) / FINANCIAL CHARGES	.011	.002	1.199	6.316	.000

a. Dependent Variable: SALES (MILL)

Now the model can be written as:

$$\text{Sales} = b_0 + b_1(\text{Bank}) / \text{Financial Charges} + b_2\text{Profit After Tax} + b_3 \text{Equity} + b_4 \text{No. of Shares}$$

After that, Profit After Tax is considered as a dependent variable while Equity, Total Asset, Paid-Up Capital and No. of Share, Sales are independent/explanatory variables.

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-11.127	9.518		-1.169	.244
	PAID-UP CAPITAL (Rs. In mil)	.392	.149	.576	2.638	.009

	NO. OF SHARE	-6.512	1.474	-1.002	-4.419	.000
	EQUITY (MILL)	.363	.044	1.484	8.297	.000
	TOTAL ASSET (MILL)	-.004	.006	-.183	-.662	.509
	(BANK) / FINANCIAL CHARGES	-.481	.073	-1.577	-6.572	.000
	SALES (MILL)	.181	.062	.952	2.901	.004
2	(Constant)	-10.044	9.361		-1.073	.285
	PAID-UP CAPITAL (Rs. In mil)	.363	.142	.534	2.560	.011
	NO. OF SHARE	-6.220	1.404	-.957	-4.431	.000
	EQUITY (MILL)	.347	.037	1.420	9.436	.000
	(BANK) / FINANCIAL CHARGES	-.495	.070	-1.624	-7.097	.000
	SALES (MILL)	.166	.058	.877	2.854	.005

a. Dependent Variable: PROFIT AFTER TAX

Results shows, Profit After Tax (dependent) and Bank / Financial Charges, Equity, Sales, Total Asset, Paid-Up Capital and No. of Share are independent variables, with the help of backward method Profit After Tax is best described by (Bank) / Financial Charges, No. of Shares, Equity, Sales and Paid Up Capital. And these have positive effect on Profit After Tax.

Now the model can be written as:

Profit After Tax =  $b_0 + b_1$  (Bank) / Financial Charges +  $b_2$  Sales +  $b_3$  Equity +  $b_4$  No. of Shares +  $b_5$  Paid Up Capital

## Conclusion

In this research sales highly increased in 2001-2006, obviously manufactures generate a lot of revenue due to this foreign investors wants to put their industry in Pakistan. The automobile sector is one of the key segments in the world's economy. The automobile export comprises of more than US\$ 600billion, which normally constitute to 10% of the world export. More and more advancements, cost reductions and increasing efficiencies are the most important challenges of the automobile industry in the modern globalized world. But the need that are demanding is to develop fuel efficient, acceptable costs and attractive outlook and designed automobiles. The joint ventures and technology tie-ups had increased the business manifold.

According to our research Asian market will ultimately be the world's largest that is the main reason foreign automobile manufacturers are also expressing their interest to invest there. Automobiles Industry effect both economy and culture. Local automobile industry stands behind the vehicle industries of neighboring countries. Imports of vehicle effect local auto industry. The automobile industry has experienced turn down in its manufacturing and sales values. Car prices are comparatively high, Low production ability, insufficient export of automobiles, Unorganized Industries.

## References

---

1. Georgano, G. N. *Cars: Early and Vintage, 1886–1930*. (London: Grange-Universal, 1985).
2. Irfan Anjum Manarvi, M.Sharukh Mirza. Analysis of technological advancements in Pakistani automobile car industry.11, 2011. ISSN 0975-5861.
3. Engr. Mirza Jahanzaib. Coping with medium volume-low variety manufacturing environment in automobile industry of Pakistan. page 219, 2008.
4. Mirza Rohail. Automobile Industry. economicpakistan.wordpress.2010
5. "Automobile Industry Introduction". Plunkett Research. 2008.
6. Mr. javaid Iqbal Ahmed, Director of Honda Atlas Cars,(Pakistan).
7. "World Motor Vehicle Production: World Ranking of Manufacturers Year 2010" (PDF).OICA.
8. <http://www.scribd.com/doc/50682139/Automobile-industry-in-Pakistan>.
9. [www.wikipedia.com](http://www.wikipedia.com)