Working paper

International Growth Centre

An Overview of Trends in the Automotive Sector and the Policy Framework

Automotive Sector in Pakistan Phase I Report

Hafiz Pasha
Zafar Ismail

January 2012

DIRECTED BY
LSE
UNIVERSITY OF OXFORD

FUNDED BY
UKaid
from the British people

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF CHARTS

LIST OF BOXES

LIST OF ACRONYMS

ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
AIDC	Auto Industry Development Committee
AIDP	Automotive Industry Development Programme
AIIP	Auto Industry Investment Policy
APMA	Association of Pakistan Motorcycle Assemblers
ASEAN	Association of South East Asian Nations
CBU	Completely Built-up
CCP	Competition Commission of Pakistan
CD	Custom Duty
CGOs	Customs General Orders
CIF	Cost, Insurance, Freight
CKD	Completely Knocked Down
CMI	Census of Manufacturing Industries
CNG	Compressed Natural Gas
CPI	Consumer Price Index
CSF	Competitiveness Support Fund
DFID	Department for International Development
EDB	Engineering Development Board
EPO	Export Policy Order
EPZs	Export Processing Zone
ERP	Effective Rate of Protection
ESCAP	Economic and Social Commission for Asia and the Pacific
FBR	Federal Board of Revenue
FDI	Foreign Direct Investment
FIAT	Fabbrica Italiana Automobili Torino
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GoP	Government of Pakistan
HHI	Herfindahl–Hirshman Index
HP	Horse Power
HRD	Human Resource Development
HS	Harmonised System
IPO	Import Policy Order
IPR	Investment Promotion Regulations
ISDP	Industry Specific Deletion Programme
JVs	Joint Ventures
LCVs	Light Commercial Vehicles
LUMS	Lahore University of Management Sciences

M/C	Motor Cycle
MFN	Most Favoured Nation
MNC	Multinational Company
MoIP	Ministry of Industries and Production
NEQS	National Environmental Quality Standards
OECD	Organisation for Economic Co-operation and Development
OEMs	Original Equipment Manufacturer
OICA	Organisation Internationale des Constructeurs d'Automobiles (International Organization of Motor Vehicle Manufacturers)
OLS	Ordinary Least Square
PAAPAM	Pakistan Association of Automotive Parts & Accessories Manufacturers
PACCS	Pakistan Automated Customs Clearance Systems
PACO	Pakistan Automobile Corporation
PAII	Productive Asset Investment Incentive
PAMA	Pakistan Automotive Manufacturers Association
PCT	Pakistan Customs Tariff
PES	Pakistan Economic Survey
POL	Pakistan Oilfields Limited
PSQCA	Pakistan Standard Quality Control Authority
R&D	Research and Development
SBP	State Bank of Pakistan
SKD	Semi-Knocked Down Units
SMEDA	Small and Medium Enterprise Development Authority
SMEs	Small and Medium Scale Enterprises
SPEL	Synthetic Products Enterprises Limited
SROs	Statutory Rules and Orders
ST	Sale Tax
TASS	Technology Acquisition Support Scheme
TBS	Tariff Based System
TEVTA	Technical Education & Vocational Training Authority
TIR	Transports Internationaux Routiers (International Road Transport)
TOR	Terms of Reference
TRIMs	Trade Related Investment Measures
TTA	Trade Adjustment Assistance
TTC	Telecommunication Technology Committee
UK	United Kingdom
USAID	United States Agency for International Development
VDTC	Vendor Development & Technical Cell
WDI	World Development Indicators
WTO	World Trade Organisation

CHAPTER 1
INTRODUCTION

Around the world and throughout history the well-being of people has been driven by breakthroughs in technology which range from the simple slingshot which helped David win freedom for his people to today's space ships which provide the engine for growth to a number of Industries. While the engineering sector is the bedrock of growth of economies, it is generally accepted that the automotive sector is at the forefront of growth. In fact, the ADB [2008] found that the sector is one of the major private sector industries in Pakistan, while Felipe (2007) considered it to be amongst the most protected sectors. The industry was earlier subject to physical indigenisation targets, but following the Uruguay Round it has made a transition to Trade Related Investment Measures (TRIMS).

We describe below in Section 1.1 the terms of reference for Phase I of this study on the automotive sector. Section 1.2 presents the history of development of the automotive sector in Pakistan. This is followed in Section 1.3 by a review of earlier studies on the sector in the country.

1.1. TERMS OF REFERENCE

The study is divided into three phases. The first phase of the Study will provide an overview of the automotive sector of Pakistan. It will examine the following critical key elements of the industry:

- What are the trends in the size and profile of the automotive sector?
- What is the contribution of the industry to tax revenues, employment and GDP?
- To what extent is the domestic market competitive?
- What is the extent of protection provided through the tariff policy, import and export policies in the sector and other regulatory mechanisms and policies?
- How effective is the Automotive Industry Development Programme (AIDP) in achieving the goals set therein, with particular reference to the deletion programme?
- Based on an analysis and current status of the industry, a set of recommendations on future policy framework for the industry would be formulated. This would be refined subsequent to the results of the analysis of the survey in Phase II and III.

1.2. HISTORY OF THE SECTOR

The first car ran on the roads of South Asia in 1897, and until the 1930s, cars were imported directly, but in very small numbers. They were used largely by the rich or the senior-most civil servants belonging to the elitist Indian Civil Service. This changed just after the start of the Second World War. In 1945 the brothers Mahindra began assembling the Jeep CJ-3A utility vehicles under license from Willys and soon branched out into the manufacture of light commercial vehicles (LCVs) and agricultural tractors. In Pakistan the history can be divided into several periods. The periods are 1947 until the assembly of trucks (the Bedford "Rocket") started. The next growth phase is from 1972 until the private sector was introduced. The third phase saw the introduction of tractor manufacturing. The fourth is when motor cycles began to be assembled. The fifth is when the private sector automobile assembly plants were established and the vendor industry began to make its presence felt. The latest phase is when exports have begun. A detailed chronological listing of the history of the industry is given in Appendix I.

Phase 1: 1947 to 1972

In the post independent years the first automobile plant was set up in May 1949 by the General Motors & Sales Co. this plant started on an experimental basis and grew rapidly into an assembly plant for the Bedford trucks and Vauxhall cars. After witnessing this rapid growth the other three leading automobile firms in the United States collaborated with Pakistani entrepreneurs and set up Ali Automobiles to assemble Ford products in 1955; Haroon Industries to assemble Chrysler's Dodge cars in 1956; and Kandawalla Industries to assemble American Motor products in 1962.

In addition to this, in 1963 Hyesons established the Mack Trucks plant. All these plants were restricted to semi-knocked down units (SKD) and only had assembly operations. Then in 1963, General Motors plant was sold to Ghandhara Industries Limited and in 1966 it was granted permission to undertake the progressive manufacture of Bedford trucks and buses.

In the absence of organised components' manufacturing facilities, the lack of technological know-how and without proper ancillary facilities for the design and development of tools, jigs and fixtures slowed down the process of localisation. Besides that there was not much effort made to improve the technology and develop skills. Also the management of most of the above mentioned industries lacked professionalism.

Phase 2: The Post Nationalisation Period from 1972

All industries including the automobile units were nationalised through the Economic Reform Order of 1972. The units were renamed and their functions were redefined. A Board of

Industrial Management was constituted to formulate national policy for industrialisation and also to oversee and coordinate the functions of the newly-nationalised units.

This was a huge task and to deal with it various corporations were established to look after each major industrial sector, such as, automobiles, cement, fertilisers and engineering. But the steps taken to formulate this policy lacked the required commitment as the corporations appeared to show that the public sector could only run the industries if it earned high profits.

Phase 3: Manufacturing of Tractors and the entrance of the Private Sector

It was realised in the 80s that it was absolutely necessary for the integration of the public and private sectors to get to the national objective of developments. A healthy competition was required so neither the consumers nor the national economy would suffer. This resulted in the reorganisation of several existing units along with the addition of new undertakings in the public and private sectors. The Awami Autos was renamed the Pak-Suzuki Motor Company Ltd, to commence the progressive manufacture of Suzuki vehicles, including the 800cc passenger cars. The manufacturing of Fiat was assigned to the new joint venture of company, the Al-Ghazi Tractors Ltd, under the management of the Habib Group Republic motors Co. It became a joint venture under private sector management. Another plant by the name Ghandhara-Nissan was sanctioned to undertake the progressive manufacture of trucks. Three new plants were set up in the private sector with two more units established, side by side under PACO to manufacture automotive castings and wheels. The two wheeler industry went through the same pattern of development.

Phase 4: Establishment of the private sector automobile assembly plants and the vendor industry

The need for another car manufacturer was felt in the mid-eighties. But sanction wasn't granted till 1989 because the Government was unable to take a firm decision. The sanction was granted to the House of Habib and Toyota Motor Corporation of Japan to set up a progressively modern plant to manufacture the best sellers of Toyota like the Corolla passenger cars and other such popular vehicles.

During this phase the vendor Industry established its very first assembly plant. The first Autoparts manufacturing unit was established in Lahore on 1942 for the purpose of providing after sales service. From 1950 to 1970, the initial focus of the industry was limited to tractors, buses and auto parts as well as to provide to the needs of the after sales market of different automobiles. However, in the 80s, the industry went through a major advancement when for the first time Suzuki commenced production in Pakistan. Other assemblers of cars and motorcycles,

following Suzuki's example, also established licenced vendors. This gave a boost to the local industry to enter the auto parts manufacturing.

Phase 6: 2000 to 2011

The first decade of the new millennium saw the automobile industry in Pakistan growing rapidly and making a sizeable contribution to the country's manufacturing sector, though it has a long way to go before it can establish itself in the international market. However, in 2008-09 it experienced a major downfall, with sales dropping by 47 percent. This sudden fall in demand can be attributed to the on-going economic recession, which saw high interest rates along with a sharp depreciation of the exchange rate. All this led to an increase in the prices of cars and the cost of components. During 2009-10, the recovery in sales helped to increase the production from 99,307 units in 2008-09 to 141,654 units. Yet the growth was far below the highest level achieved by the industry in 2006-07[1] of 204,212 units. Despite this, the overall growth in the automobile industry and potential for further growth is considerable.

1.3. REVIEW OF LITERATURE

The Asian Development Bank (2008) while conducting an assessment of the private sector's role and performance in manufacturing, infrastructure development and the services sectors observe that the automobile sector is, in the bulk, private sector owned, is moderately sized with 18 automobile assembling units set up as joint ventures. There are also 47 units producing motorcycles. Its contribution to GDP and employment is also moderate compared to other Asian economies who have exploited the catalytic role of the automobile industry in promoting broad based manufacturing sector growth. This is due to a variety of causes: one, it continues to remain protected with high import duties and can thus be seen to be a rent seeker; two, it limits entry; three it is uncompetitive; four, the deletion programme provides non-tariff based protection to both domestic assemblers and producers of parts and components. As a consequence, ADB concludes that "these policies discourage domestic and foreign competition and allow for small, inefficient yet profitable domestic automobile producers". The Bank further suggests that without structural change and the development of core competence and efficiencies to develop the value chain end-to-end, it might not be possible for an efficient Pakistani automobile sector to emerge at this stage. The Bank also proposes that a Technical Assistance effort should be mounted to help bring about the transformation needed for ensuring the exploitation of the potential catalytic role of the industry.

[1] See Nagao, Hirofumi (2007)

The **Niazi and Bhatty (**2011) study is based on a survey of a selected sample of assemblers and up-stream vendors. The study finds that the assemblers and parts vendors are unable to achieve capacity production for various reasons: one, institutional, technical and financial inability to adapt to frequent changes in body design; two, inconsistent and adverse government policies which dis-incentivise investment; three, non-competitiveness and the small volume of sales; four, power outages; five, insecurity of law and order; six, high rates of inflation and the decline in the dollar/yen parity with the Rupee. The study also finds that vendors can improve performance if the principals arranged: one, financing for diversification and growth; two, provided technical support; three, undertook rigorous quality control procedures; and, four, they were trained in computer aided design and development of new parts.

Mirza and Manarvi (2011) examine the technological aspects of the auto industry in Pakistan. They state that the challenges faced by the industry include, rapid changes in models, improved fuel efficiency, cutting costs and enhancing user comfort without compromising quality. In the developing world these are compounded by a dearth of necessary skills at all levels and the formal/informal structure of the productive infrastructure limits the absorptive capacity to change. The objective of this research was to review the progress attained by Pakistani automobile car assemblers and vendors, during last thirty years through mutual collaboration and technology acquisition from global automobile manufacturers. The paper also focuses on the deletion of spare parts of various locally assembled automobile cars by analysing those vendors who are generating maximum revenues through production of these spare parts under foreign technical assistance, cost effectiveness of these parts compared to imported parts and the manufacture of complex parts locally to determine the level of diffusion of technology in the economy.

They recommend that the industry needs to develop a strategy for increasing both productivity and quality. This should not be limited only to HRD, but should emphasize on technology infusion and diffusion. This should result in greater competitiveness through quality enhancement and user friendliness of vehicles. This should be linked to a vigorous development of the vendor market to benefit from economies of scale output and intra-vendor competitiveness. As a consequence vendor product diversification would occur and the technical skills of the engineering industry would improve generally.

They conclude that while joint ventures (JVs) have inducted basic technology, these have not resulted in self-reliance and adoption of state-of-the-art technologies and that the auto-industry is technologically non-competitive with a low threshold of technology diffusion.

The **CSF study** [2007] examines the protection provided to the motor-cycle industry in Pakistan and provides an insight into the reasons behind the rapid growth in the past 5 years and the problems being faced across the value-chain.

The study found that in 2007 there were 43 OEMs of which only 6 were members of PAMA. Installed capacity was the throughput ability of 1.3 million M/C of which nearly 72 per cent was for the low-end of the market (70 cc). The backward linkage chain includes 2,000 parts and component manufacturing units employing close to 50,000 persons. The industry has achieved critical mass which has resulted in a decline in average output prices by 30 per cent in the past 5 years. The study finds that in view of the very high levels of indigenisation, non-OEM manufacturers have cloned the 70 cc Honda and are making inroads into Honda's share, but they are also able to compete with the Chinese alternatives. M/C prices ranged from a low of Rs. 32,000 to Rs. 40,000 (quality dependent) for the non-OEM domestic production to Rs. 38,000 to Rs. 40,000 for a comparable Chinese make to the high mark of the Honda CD 70 OEM at Rs. 45,000.

The problems faced by the motorcycle assemblers were found to be: one, under-invoicing of importable inputs by Non-PAMA OEMs; two, sales tax evasion through non-declaration; three, using commercially imported inputs but declared as from the local component manufacturing industry; and four, fake Non-PAMA OEMs to avail of the industry-specific benefits. Compared to this the non-PAMA OEMs identified problems which included: one, over-valuation of China-origin imports; two, low quality and insufficient volume of output by the local component manufacturing industry; three, harassment by the Sales Tax Department; and four, absence of common die, design, tooling facilities.

SMEDA (2005) has undertaken an evaluation of the performance of the Auto Parts Cluster it had helped establish in Lahore and found that about 750 units had successfully established manufacturing facilities in the cluster. 100 of these were supplying exclusively to the OEMs under a "franchise" arrangement, 200 were catering to the OEMs and the retail market and the remainder were supplying exclusively to the replacement market. However, some also sold parts on the open market as the demand placed by the OEM concerned was below the break-even point. In addition the study estimates that about another 1,000 SMEs have also established themselves using their own resources and are flourishing and catering to the demand for replacement parts. The study concludes that the principal reason for success has been the Auto Deletion Programme – whereby all OEMs were required to attain a certain level of indigenously produced parts for availing of duty concessions and other benefits.

APPENDIX – CHAPTER 1

The following table gives the chronological history of the automobile industry.

GETTING THE WHEEL IN MOTION

1949 Vauxhall Cars introduced by General Motors & Sales. Bedford Trucks introduced by General Motors & Sales. Ford Trucks introduced by Ali Automobiles.

1953 Exide battery started production.

1956 Dodge Cars introduced by Haroon Industries

1958 Ford Angela Cars introduced by Ali Automobiles.

1959 Ford Pickups introduced by Ali Automobiles.

1960 Ford Combi introduced by Ali Automobiles

1961 Precision auto parts manufacturing started at Allwin Engineering.

1962 Lamberate Scooter introduced by Wazir Ali Engineering. Jeep CJ 5, 6, & 7 introduced by Kandawala Industries. Bedford Truck assembling started at Ghandara Motors.

1963 Mack Trucks introduced by Hye Sons. General Tyres & Rubber Company started production in Karachi.

1964 MF Tractors introduced by Rana Tractors. Vespa Scooter and Rickshaw introduced by Raja Auto Cars. Honda Motor Cycle introduced by Atlas Autos. Ghandara Industries launched Localisation Plant for Bedford Trucks.

1965 Specialised Vehicles Production at Jaffer Industries.

1967 Toyota vehicles introduced by Monnoo Motors.

CHANGING TRACKS

1972 Nationalisation, Pakistan Automobile Corporation (PACO) formed. Ali Autos renamed Awami Autos, Wazir Ali Engineering renamed Sindh Engineering, Haroon Industries Renamed Republic Motors, Ghandara Motors renamed National Motors, Kandawala Industries renamed NayaDaur Motors, Hye Sons renamed Mack Trucks, Jaffer Industries renamed Trailer Development Corporation, Rana Tractors renamed Millat Tractors, Tractor Corporation of Pakistan formed.

1974 Yamaha Motor Cycle launched by Dawood Yamaha, Diesel Engines manufacturing started at Bela Engineering.

1976 Suzuki Motor Cycle introduced by Sindh Engineering.

1977 Kawasaki Motor Cycle introduced by Saif Nadeem Kawasaki. Suzuki Jeep introduced by Naya Daur Motors.

1978 Plastic parts manufacturing at SPEL

1980 Suzuki Pickups introduced by Awami Autos, Mazda Truck introduced by Sindh Engineering, Project approved for production of wheel Rims at Balochistan Wheels under TAA with GKN-Sankey.

1981 Wire Harness production at Ayenbee, Production of Specialised Auto Parts at Agriauto Industries.

CHANGING GEARS

1982 Suzuki Cars production started by Pak Suzuki. Bolan Castings started production, Belarus Tractors introduced by Fecto Tractors

1983 Fiat Tractors introduced by Al-Ghazi Tractors, Vendor Development & Technical Cell (VDTC)

	formed.
1986	Hinopak Motors Limited formed as joint venture company between PACO, Al-Futtaim, Hino Motors & TTC.
1987	Production of Nissan Diesel Trucks by Ghandara Nissan.
1988	Pakistan Association of Auto Parts and Accessories Manufacturers (PAAPAM) formed.
1989	Second car plant sanctioned by the GoP (Indus Motor Company).
1992	Privatisation of Pak Suzuki Motor Co.
1993	Production of Toyota Corolla by Indus Motor Company Limited First export of Buses and Trailers by Hinopak Motors Limited.
	READY FOR TAKE-OFF
1994	Production of Honda Civic by Honda Atlas Cars Pak Ltd. Import of Vehicles under Yellow Cab Scheme. Pakistan Automotive Manufacturers Association (PAMA) formed.
1995	Engineering Development Board (EDB) formed First PAP Show in Islamabad.
1996	First Industry Specific Deletion Programme (ISSDP) printed for the period up to 2001.
1997	VDTC renamed AT & TC. Second PAP Show held in Lahore. Aircon Systems production starts at San pak Lahore. Production of Sohrab Motorcycle.
1998	Export of Light Commercial Vehicles by Pak Suzuki Motor Company. Saigol Quingqi starts production of motorcycles with Chinese collaboration.
1999	Dewan Farooque Motors starts production of Korean Pickup named Shahzore. Hinopak Motors Ltd. taken over by Hino Motors and TTC of Japan.
2000	3rd PAP Show in Karachi. Raja Motors starts production of UNO Cars. Production of Daihatsu vehicles by Indus Motor Company Ltd.
2001	Molded Interiors manufacturing starts at Procon Engineering.
2002	Adam Motors launches Chinese Truck named Zabardast. Revised and updated ISDP for the period up to 2005 finalised.
2003	Sindh Engineering launches range of Chinese Trucks. Economy of the country is at Take-off stage and so is the Auto Industry. 1st PAMA Auto Expo held in Islamabad (May 12, 13, 2003).

Source: PAMA

CHAPTER 2
THE AUTOMOTIVE SECTOR

The objective of this chapter is to quantify the size of the automotive sector in terms of the number of units in different sub-sectors, capacity, production, sales/turnover and international trade. This is followed by estimation of the contribution of the sector to investment, value added, employment, revenue and foreign exchange savings. Wherever possible international comparisons are made to highlight the stage of development of the automotive sector in Pakistan.

2.1. COVERAGE

According to the TOR for the study the automotive sector includes the following major sub-sectors: (a) automobiles/cars, (b) motorcycles/rickshaws, (c) tractors, and (d) trucks/buses/ trailers. Within each of these there are assemblers and parts manufacturers respectively. The study does not cover repair shops and retail outlets of automobiles.

The sector has both large-scale and small-scale components. OEMs mostly fall in the large-scale category whereas a large number of auto parts manufacturers fall in the small-scale/informal sector. Quantification of the size, in particular, of the latter is rendered difficult by the absence of data and different approaches have to be used to estimate their contribution.

However, there are a number of producer associations in the sector as follows:

PAMA: Pakistan Automotive Manufacturers Association

PAAPAM: Pakistan Association of Automotive Parts and Accessories Manufacturers

APMA: Association of Pakistan Motorcycle Assemblers

These associations provide basic information on their members, which is useful in the quantification exercise. In addition, the Engineering Development Board (EDB) maintains a data base on the automotive sector.

2.2. SIZING OF THE SECTOR

Before we proceed to quantify the size of the sector, we present some earlier estimates of the size and contribution of the sector. The first source is the Census of Manufacturing Industries (CMI) of 2005-06 carried out by the Pakistan Bureau of Statistics. This survey covers only units which fall under the ambit of the Factories Act and can, therefore, be considered as

large-scale units. Therefore, the CMI does not cover units which employ less than ten people. Also, the non-response rate in this census is high at 45 percent.

Table 2.1 gives the magnitude of indicators of size as revealed by the CMI. In 2005-06 value added by the sector was estimated at Rs 61 billion, equivalent to 6.0 percent of the value added in the large-scale manufacturing sector. Almost 82 percent is reported as value added by OEMs and only 18 percent by auto parts manufacturers. Clearly, the contribution by the latter is substantially understated because many of the units are relatively small. According to the Census employment in the sector was estimated at 28269 in 2005-06.

TABLE 2.1: INDICATORS OF SIZE OF THE AUTOMOTIVE SECTOR FROM THE CMI OF 2005-06

(Rs Million)

Industry Code		No. of Reporting Establishments	Employment (Nos.)	Value of Production at Producer Prices	Value Added at Factor Cost	Value of Fixed Assts
34102	Passenger cars, jeep etc	6	6,155	122,066	35,867	17,280
34103 & 34104	Motor vehicles for > or = 10 persons & Motor vehicles for transport of goods	6	2,003	13,387	2,577	2,454
342	Bodies for motor vehicles & trailers	4	413	419	230	57
34301	Parts of engines	10	1,403	2,108	532	752
34302	Other parts for motor vehicles	85	7,861	17,373	5,105	7,233
34303 & 34304	Safety seat belts, airbags etc & Assembly of motor vehicles parts n.e.c	18	1,911	3,484	1,500	478
34305	MR of motor vehicles	10	395	172	92	63
35911	Motorcycles & three wheelers	17	5,730	32,445	9,809	6,155
35919	Other motor-cycle & parts	17	1,132	1,032	316	226
29211	Agricultural tractors	9	1,266	19,160	5,062	472
	TOTAL	**182**	**28,269**	**211,654**	**61,039**	**35,170**
	As % of Manufacturing	2.8	3.1	7.2	6.0	3.1

Source: Census of Manufacturing Industries, 2005-06.

Other estimates of the size and contribution to the economy by the automotive sector include the claim by PAMA that turnover by its members, mostly OEMs, exceeds Rs 300 billion, while the foreign exchange savings realized by the sector are $1 billion. SMEDA (2005) estimates the contribution of the automotive sector of Pakistan as follows:

Total Investment	Rs 98 billion
Foreign Exchange Savings	US $1.2 billion
Revenues	Rs 51.50 billion
Contribution to GDP	Rs 153 billion
Employment Created	500,000

Therefore, earlier estimates indicate a significant contribution of the automotive sector to value added, employment, revenues and foreign exchange savings, although the bases for these estimates have not been indicated. We attempt a verification of these estimates below.

2.2.1 Number of Units

The current number of operative units in the automotive sector is given in Table 2.2. This information has been obtained from the producer associations. Accordingly, PAMA reports three active car manufacturers of the makes – Suzuki, Toyota and Honda. There are 68 manufacturers of motorcycles, 65 are members of APMA and three of PAMA. There are 6 units producing trucks/buses, four of which are members of PAMA.

TABLE 2.2: NUMBER OF UNITS* IN 2011 ACCORDING TO ASSOCIATIONS

	Member	Non Member	Total
Assemblers			
Cars	3[a]	-	3
Motorcycles/Rickshaws	68[b]	-	68
Tractors	2	4	6
Trucks/Buses	4	2	6
Part Manufacturers			
	292	1908	2200[c]

Sources: PAMA, APMA, PAAPAM
*Only active units
[a] All 3 are members of PAMA
[b] 65 are members of AMPA and 3 are members of PAMA
[c] Tier one units, 450; Tier 2 units 425; Unorganized and after market suppliers 1325

According to PAAPAM there are as many as 2200 parts manufacturers. 450 units are Tier 1 units; 425 units are Tier 2 units and units in the unorganized sector and after market suppliers are 1325. 292 units currently are members of PAAPAM.

2.2.2. Capacity

Data on capacity has been obtained from PAMA, APMA and EDB. Estimates of single-shift capacity in each sub-sector are presented in Table 2.3. The capacity for production of cars is over 279,000 annually, while the rate of capacity utilisation in 2010 was below 44 percent. Therefore, a significant margin of excess capacity exists in this sub-sector even on a single-shift basis and potential economies of scale do not appear to have been exploited sufficiently.

TABLE 2.3: REPORTED CAPACITY OF OEMS AND RATES OF UTILISATION

	Capacity (Units)	Rate of Utilisation (%)
Assemblers		
Cars	279,040	43.6
Motorcycles/Rickshaws	2,165,000	69.1
Tractors	67,000	110.2
Trucks/Buses	10,800	40.3

Sources: PAMA, APMA, EDB

The capacity for production of motorcycles/rickshaws exceeds 2.1 million. The estimated rate of capacity

utilisation is moderately high at 69 percent. The tractor sector is the only sub-sector characterised by a high rate of capacity utilisation at 110 percent, indicating that there is scope for expansion of capacity in this sector.

The capacity for production of trucks/buses is 10,800, with only 40 percent of the capacity being used currently. Given the diverse nature of output by auto parts manufacturers it is not possible to construct a measure of capacity for this sub-sector.

2.2.3. Production

A range of automobile products is potentially available in Pakistan, as shown in Chart 2.1. This includes makes by members of PAMA and APMA and by others. However, some of the makes are currently not under production.

Chart 2.1 RANGE OF AUTOMOBILE PRODUCTS IN PAKISTAN

Cars	LCVs	Tractors	Motorcycles	Trucks	Bus
Honda	Suzuki	Fiat	Honda	Master	Hino
Suzuki	Changan	Massey Ferguson	Yamaha	Isuzu	Nissan
Toyota/Daihatsu	Toyota	Universal	Suzuki	Hino	Dong Feng
Nissan	Hyundai	Hero	Qinqqi	Nissan	Isuzu
Chevrolet	Master	Farmall Technology	Pak Hero	Daewoo	Master
Hyundai	Kalash	Arzoo Tractors	Hero	Afzal Motors	Daewoo
		PM Auto Industries	Other Chinese Brands	Roma Motors Co	Afzal Motors Co
				Bibojee Services	

Source: EDB.

Japanese makes dominate the market with shares in cars of 100 percent, motorcycles, 45 percent; trucks, 100 percent; buses, 87 percent; tractors, zero percent; jeeps, zero percent and pickups, 98 percent.

Major joint ventures in the automotive sector are listed in Chart 2.2. Most of the collaboration in the car sub-sector is with Japanese multi-national companies. In recent years, joint venture agreements have been reached with Korean, Chinese and UK companies especially for the production of LCVs, buses and motorcycles.

Cars with different capacity are being produced in Pakistan ranging from 800cc to 1600cc. These include cars with manual or automatic transmission running either on diesel or petrol. The production of cars jumped more than fourfold from 2000-01 to 2005-06 due to

buoyant conditions in the economy as shown in Table 2.4. Production then plummeted by 29 percent by 2009-10 due to a slowdown in growth of incomes. In 2010-11, there has been a modest recovery in production of 10 percent. A similar pattern is observed in the case of Jeeps, Pickups and LCVs.

It is surprising that the biggest share in production is accounted for by large cars with capacity of 1300 – 1600cc. This is in contrast to India, for example, where the share of small cars exceeds 50 percent. This is probably a reflection of, first, inequality in household incomes and, second, higher profitability in large cars due to greater effective protection.

Chart 2.2: MAJOR JOINT VENTURES FOR AUTOMOBILE

COMPANY	JOINT VENTURE	PRODUCT
Indus Motor Co.	Toyota & Daihatsu, Japan	Corolla & Cuore Cars
Atlas Honda Ltd.	Honda, Japan	Honda Cars/ Motorcycle
Pak Suzuki Motor Co.	Suzuki, Japan	Cars, Van, Jeep, Pickup
Suzuki Motorcycle	Suzuki, Japan	Suzuki Motorcycle
Ghandhara Nissan Ltd.	Nissan, Japan	Cars & Truck
Dewan Farooq Motors	Kia & Hyundai, Korea	Cars & LCVs
Master Motor Corp.	Yuejin & Faw, China	LCVs, Buses
Sind Engineering Ltd.	Dong Feng, China	LCVs, Bus
Sigma Motors Ltd.	Land Rover, UK	Jeeps
Afzal Motors	Daewoo, Korea	Buses
Karakoram Motors	Changan, China	LCVs
Nexus Motors	GM Daewoo, Korea	Chevrolet Cars

Source: EDB

There has been a phenomenal jump in the production of motorcycles, which has increased fourteen fold, from 118,000 in 2000-01 to over 1.7 million in 2010-11. This is truly a success story and is a reflection of the rapid entry of new manufacturers, with relatively low priced makes, which has increased competition and prevented large price increases by the established manufacturers.

Production of tractors has held up well in recent years, unlike the case of cars. This has been the consequence of large increase in rural incomes due primarily to the jump in prices of wheat and cotton. As opposed to this, production of buses and trucks has declined by 51 percent and 36 percent respectively during the last five years. This reflects the stagnation in the transport sector.

Table 2.4: ESTIMATED LEVELS OF PRODUCTION OF DIFFERENT TYPES OF VEHICLES, 2000-01 to 2010-11

Type of Vehicle	2000-01	2005-06	2009-10	2010-11
Cars	**41,556**	**170,487**	**121,647**	**133,972**
1300-1800cc	17,664	69,283	60,360	62,111
1000cc	14,716	47,459	23,330	25,287
800cc	9,176	53,745	37,957	46,574
Jeeps, Pickups, LCVs	**5,441**	**21,624**	**16,940**	**20,025**
Motorcycles, Rickshaws				
Motorcycles	117,858	817,387	1,481,111	1,710,841
Rickshaws		2,166	14,676	17,259
Tractors	**32,533**	**50,257**	**73,844**	**72,303**
Buses		**1,073**	**661**	**526**
Trucks		**4,593**	**3,691**	**2,932**

Sources: PAMA, APMA, PES, EDB

Data on the volume of production of autoparts is not available. However, Box 2.1 describes the technological capacity of the sub-sector and the range of products. While some examples of technical collaboration are presented in Chart 2.3.

Box 2.1: THE AUTOVENDING INDUSTRY OF PAKISTAN

- The autovending industry has gradually developed strong capabilities in casting, forging machining, plastic injection moulding, rubber die casting and rubber extrusion. A medium level of technological sophistication has been attained.
- Vendor industry has managed to localize a large number of automotive parts, including sheet metal parts, rubber and plastic parts, aluminium parts such as radiators, wire harnesses, chassis, tyres, tubes, car seats, lights gaskets, engine valve, camshaft, oil pump gears, pistons, radiators, dashboard, interior trims, etc.
- The Auto Industry Development Programme (AIDP) envisages to go for local development of high tech./value added components and assemblies This includes alternator, starter motor, water pump, fuel pump, fuel filter, seat reclining, power steering, engines, transmissions for car and LCVs and regulator rectifiers, ignition coils, piston, fuel cock, clutch assembly, sprocket cam, drum gear shift, magneto and oil pump.
- The Autoparts industry has significant export potential and opportunity to become part of the global supply chain by
  - ~ exploring 'niche' markets and markets for labour-intensive parts
  - ~ entering global spares market of discontinued vehicles
  - ~ entering other third world markets
- Already 24 autoparts manufacturers are in the export business.

Source: EDB.

Chart 2.3: VENDOR INDUSTRY TECHNICAL COLLABORATION

Components	Vendors in Pakistan	Collaborating Partners
Shock absorbers	M/s Honda Atlas Ltd M/s Agri Auto Ind	Showa, Japan, Kayaba
Radiators	M/s Alwin Engg. M/s Loads Pvt. Ltd	U.E. Radiators, Japan Toyo Radiator Japan
Car A/C	M/s Sanpak, M/s Thal Engg	Sanden, Japan, Denso
Radio Cassette Player	M/s Automate Ind	Panasonic Thailand
Lamps	M/s Techno Pak	Koito, Japan
Spart Plugs	M/s Shaigan Electric	NGK, Japan
Glass	M/s NGS Pak	NGS, Japan
Steering Case set	M/s Polymer & Precision	I.S. Seiseki, Japan
Brake Drum Assembly	M/s Alsons Auto Ltd	Nissin Kogyo, Japan

Source: EDB

An international comparison of production of vehicles per 1000 persons is presented in Table 2.5. Out of the twelve developing countries listed, Pakistan has the lowest level of production of cars at 0.7 vehicles per 1000 population, as compared to 2.4 in India, 2.1 in Indonesia, 1.1 in Egypt, 8.0 in Thailand and 8.3 in Turkey. Therefore, while the automotive sector has shown impressive growth during the last decade, it is still relatively small and at an early stage of development in Pakistan.

TABLE 2.5: INTERNATIONAL COMPARISON OF PRODUCTION OF VEHICLES

(per 1000 people)

Country Name	Cars	Commercial Vehicles	Total
Argentina	12.6	5.1	17.7
Brazil	14.5	4.2	18.7
China	10.4	3.3	13.6
Egypt, Arab Rep.	1.1	0.4	1.5
India	2.4	0.6	3.0
Indonesia	2.1	0.9	2.9
Iran, Islamic Rep.	18.5	3.1	21.6
Malaysia	18.4	1.6	20.0
Mexico	12.3	8.4	20.7
Pakistan	0.7	1.0	1.7
Thailand	8.0	15.8	23.8
Turkey	8.3	6.7	15.0

Source: OICA

2.2.4. Sales

The level of sales is determined both by the quantity sold and prices. The former corresponds closely to the production levels. Recent trends in car prices are indicated in Table 2.5. A wide variation is observed in the extent of cumulative price increase by make over the last four years. The largest increase of 82 percent is Cuore of 82 percent followed by Corolla at 63 percent. At the other extreme is Civic with an increase of 22 percent.

TABLE 2.6: RECENT TRENDS IN PRICES OF CARS, 2008 TO 2012

(Thousand Rupees)

Model	March-June 2008 (Range)	January 2012 (Range)	Percentage Increase of Mid-Values
Mehran	444 – 352	625 – 510	42.6
Alto	554 – 505	796 – 727	43.8
Cultus	677 – NA	990 – 925	41.4
Liana	900 – 836	1351 – 1,282	51.7
Swift	-	1,156 – 1056	-
Corolla	1,020 – 930	1,739 – 1,444	63.2
Altis	1,390 – 1,300	1,879 – 1,789	36.4
Cuore	554 – 412	935 – 824	82.1
Civic	1,589 – 1,549	2,048 – 1,778	21.9
City	959 – 899	1,550 – 1,409	59.3

Source: EDB.

Car manufacturers frequently justify their price increase on the grounds of appreciation of yen, which makes CKD vehicles and parts more expensive. During the last four years, the value of the yen with respect to the rupee has increased by as much as 87 percent, while the cost of domestic inputs is estimated to have risen by 64 percent. Therefore, in real terms car prices have fallen significantly, reflecting the depressed demand conditions since 2008, and profit margins have been squeezed.

The sales/turnover of most OEMs, who are members of PAMA, is generally available from their annual financial statements. Problems arise in the estimation of turnover of units who are not members of producer associations and/or are in the small-scale/informal sector. These problems are particularly severe in the case of the auto parts sub-sector. For this sub-sector, the following methodology has been adopted:

(i) for input of auto parts into manufacture of new vehicles by OEMs, input-output ratios for domestic and imported parts have been derived from the data on industrial costs given in the CMI 2005-06.

(ii) from data on vehicle user costs provided by Ismail (2011) the consumption of parts has been estimated for the repairs and maintenance of the existing stock of vehicles.

(iii) from the total demand of parts estimated from (i) and (ii) combined imports of parts have been deducted to get an overall estimate of the turnover of domestic parts.

Accordingly, the estimates for 2009-10 are as follows:

		(Rs in Million)
	Consumption of Parts for New Vehicles	**160,864**
plus	**Replacement Demand for Parts**	**68,232**
less	**Imports of Parts**	**61,294**
equal	**Turnover of Domestic Parts Manufacturers***	**167,802**

* excluding tyres and batteries

Similarly, estimates of turnover of non-PAMA or APMA manufacturers of motorcycles are not available. The prices of motorcycles of such manufacturers are estimated at 37 percent less than that charged by Atlas Honda. Given numbers sold from APMA data this has enabled determination of the sales of motorcycles.

Overall, the estimated turnover in 2009-10 in different sub-sectors is given in Table 2.7. The turnover of OEMs aggregates to Rs 234 billion, with car sales having a share of 52 percent, followed by motorcycles at 25 percent, tractors at 26 percent and buses/trucks at 7 percent. Sales of imported CBUs are not included in these magnitudes. Total sales by assemblers in 2009-10 are equivalent to almost $3 billion. As opposed to this, the turnover by domestic auto parts is derived as Rs 168 billion, equivalent to $2 billion.

TABLE 2.7: ESTIMATED TURNOVER IN 2009-10 IN DIFFERENT SUB-SECTORS

(Rs. Million)

	Turnover
Cars	120,843
Motor Cycles & Rickshaws	57,848
Buses/Trucks	16,979
Tractors	38,157
Total of Assemblers	**233,827 ($2.8 billion)**
Total of Domestic Parts Manufacturer	**167,802 ($2.0 billion)**
TOTAL OF THE AUTOMOTIVE SECTOR	**401,629 ($4.8 billion)**

Sources: Authors' Calculation using numbers from PAMA, EDB, PAAPAM, SBP and CMI.

The TOR requires cross-verification of production and sales of vehicles with data on vehicles registered and/or road. As an example, this is undertaken for motorcycles in Table 2.8. Significant differences are revealed. The divergence has tended to increase over the years.

TABLE 2.8: INCREASE IN NUMBER OF MOTOR CYCLES ON ROAD AND ANNUAL SALES

(000)

	Increase in Number of Motorcycles on Road (1)	Annual Sales of Motor Vehicles* (2)	Difference (2) – (1)
2000-01	410	220	-190
2001-02	484	264	-220
2002-03	423	300	-123
2003-04	492	559	67
2004-05	469	731	262
2005-06	1034	915	-119
2006-07	1052	1049	-3
2007-08	1020	1255	235
2008-09	835	1215	380
2009-10	581	1580	999

Source: PES

* Includes imports of CBUs.

Clearly, there are many leakages in the registration process by the Provincial Excise and Taxation Departments. A similar conclusion is reached in the case of other vehicles. Clearly, the increase in the number of vehicles registered or on road cannot be used as an effective proxy for sales.

2.2.5 Trade

Substantial imports are made by the automotive sector as highlighted in Table 2.9, although they demonstrate a somewhat declining trend after 2005-06. Within imports, bulk, almost 90 percent, are of CKD units and parts. CBU units reached a peak in 2007-08 and have since fallen by 47 percent. Imports of parts have risen sharply during the last two years.

TABLE 2.9: IMPORTS BY THE AUTOMOTIVE SECTOR, 2005-06 TO 2010-11

($ Million)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Road Motor Vehicles	**925**	**854**	**823**	**554**	**704**	**757**
CBU	39	139	250	97	93	74
CKD	886	715	573	457	611	683
Parts	**87**	**71**	**79**	**66**	**121**	**148**
Total	**1,012**	**925**	**902**	**620**	**825**	**905**

Source: SBP.

The process of import substitution of CBU units appears to have gone further in the case of cars and motorcycles than in the case of trucks. This is possibly due to difference in the rate of protection. This issue is examined in Chapter 5.

Turning to exports, these are limited in magnitude given the nascent nature of the industry, although they have shown promising growth in recent years as shown in Table 2.10, reaching $126 million by 2010-11.

TABLE 2.10: TOTAL EXPORTS BY AUTOMOTIVE SECTOR, 2005-06 TO 2010-11

($ Million)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Transport Equipment	56.2	51.5	78.4	63.6	78.8	107.6
Auto Parts	12.5	15.2	16.9	14.1	10.3	18.1
TOTAL BY THE AUTOMOTIVE SECTOR	**68.7**	**66.7**	**95.3**	**77.6**	**89.0**	**125.7**

Source: SBP.

2.3. CONTRIBUTION TO THE ECONOMY

We now quantify the contribution of the automotive sector to the national economy.

2.3.1 Investment

Data on investment in the automotive sector is available only for publicly quoted companies or for units which make their financial statements available on the internet. Investment during a particular year is measured as the change in fixed assets at cost (prior to provision for depreciation). We have been able to collect this information for units which account for 52 percent of the turnover in the sector. Therefore, a blow up factor has been applied of 1.923 to our estimates.

TABLE 2.11: ESTIMATED INVESTMENT IN THE AUTOMOTIVE SECTOR, 2000-01 TO 2009-10

	Fixed Assets (Rs. Million)	Investment (Rs. Million)	Value in $ million
2001	31,614		1474[a]
2002	29,768	-1,846	-31
2003	35,988	6,220	108
2004	42,798	6,810	117
2005	54,406	11,608	195
2006	71,306	16,900	281
2007	88,758	17,452	289
2008	100,802	12,044	177
2009	96,718	-4,084	-50
2010	107,924	11,206	131
		TOTAL	**2,690**

Source: SBP

[a] estimated by backward extrapolation of the investment series.

The resulting estimates are presented in table 2.11. There is evidence of a business cycle of investment in the sector. Investment expanded rapidly from 2003 to 2007, during the period when there was very rapid growth in sales. Thereafter, investment has fallen simultaneously with the down turn in the economy. Cumulatively, the total investment in the

sector is about $2.7 billion. The motivation for new investment has been limited by the presence of excess capacity in most sub-sectors.

2.3.2. Value Added

The value added by the sector has been estimated on the basis of the share of value added in value of production of different sub-sectors derived from the CMI of 2005-06. These shares have been adjusted downwards to allow for the decline in profitability (as percentage of sales) between 2005-06 and 2009-10.

The resulting estimates of value added by different sub-sectors in 2009-10 are presented in Table 2.12. Overall, the sectoral value added is Rs 108 billion. The largest sub-sector is auto parts with a share of 42 percent, followed by cars with share of 31 percent, and motorcycles with a share of 15 percent.

The estimated value added by the sector appears to about 5 percent of the total value added in the manufacturing sector of Pakistan. This share places the sector as one of the larger industries of Pakistan after textiles, petroleum refining, iron and steel products, fertilizers and cement. In fact, the automotive sector is larger than the sugar, vegetable ghee and pharmaceutical industries. About 13 percent of the double-digit growth in the large-scale manufacturing sector between 2002-03 and 2006-07 is attributable to the dynamism of the automotive sector.

TABLE 2.12: ESTIMATED VALUE ADDED BY THE AUTOMOTIVE SECTOR, 2009-10

	Value Added to Value of Production Ratio*	**Value of Sales (Rs in Million)**	**Value Added (Rs in Million)**
Motor Cars	(0.277)	120,843	33,474
Motor Cycles & Rickshaws	(0.285)	57,848	16,486
Buses/Trucks	(0.176)	16,979	2,988
Tractors	(0.247)	38,157	9,425
Autoparts	(0.272)	167,802	45,642
TOTAL			**108,015** ($1.3 billion)
Total Value Added in Manufacturing			2,259,400
% Share of Manufacturing			**4.8%**
% of GDP			**0.7%**

Sources: Author's Calculation using numbers from PAMA, EDB, PAAPAM, SBP and CMI.

* Adjusted downward by 1.7% points in relation to the CMI 2005-06 data.

2.3.3. Employment

Employment data is directly available for members of PAMA and for some members of PAAPAM. On the basis of labour productivity estimates for these units, sub-sectoral estimates of employment have been generated. A downward adjustment of 20 percent has been made to allow for higher labour-intensity in small-scale/informal units, especially in the auto parts sub-sector.

The resulting estimates for employment by the sector are given in Table 2.13. Bulk of the employment, 89 percent, is in the production of auto parts. The remainder, 11 percent, is in the assemblers, with motorcycles being the largest sub-sector. The estimated employment is very close to the estimate of 215,000 given in the TOR provided for the study by IGC. It appears that the automotive sector accounts for about 4 percent of the total employment in the manufacturing sector.

TABLE 2.13: ESTIMATED EMPLOYMENT IN THE AUTOMOTIVE SECTOR, 2009-10

	Employment (Nos.)
OEMs	**22,254**
Motor Cars, etc.	5,440
Motor Cycles	12,220
Buses/Trucks	1,453
Tractors	3,141
Domestic Part Manufacturers	**187,070**
TOTAL SECTORAL EMPLOYMENT	**209,324**

Sources: Author's Calculation using numbers from PAMA, EDB, PAAPAM and CMI.

2.3.4 Revenue

The automotive sector is one of the largest contributors to revenue in Pakistan. A large part of the revenue accrues at the import stage. As shown in Table 2.14, customs duties and sales tax on imports by the sector yielded Rs 49 billion in 2009-10. In addition, tax provisions for corporate income tax made by the auto companies are estimated at close to Rs 9 billion. There is also a withholding tax which is collected at the point of registration of vehicle, with revenue of above Rs 4 billion.

The combined revenue collection from the sector of FBR taxes is Rs 62 billion in 2009-10. This is equivalent to about 5 percent of total FBR revenues. With this contribution, the automotive sector emerges as the third largest sector after POL products and telecommunications.

TABLE 2.14: ESTIMATED REVENUE CONTRIBUTION BY THE AUTOMOTIVE SECTOR, 2009-10

(Rs. Million)

Custom Duties	25,234
Federal Excise	119
Sales Tax	23,414
Domestic	*7,325*
Imported	*16,089*
Total Indirect Taxes	**48,767**
Direct Tax	**12,990**
Income	8,775
Withholding Tax	4,215
Total Automobile Sector	**61,757**
Tax Revenues	1,329,000
Tax Contribution as Percentage of Tax Revenues	**4.6**
Automotive Sector is the third largest contributor to Federal Tax Revenues in 2009-10.	

Source: Annual Report, Federal Board of Revenue.
Financial Statements Analysis of Companies (Non-Financial) Listed at Karachi Stock Exchange (2005-10) of State Bank of Pakistan.

2.3.5 Foreign Exchange Savings

Derivation of foreign exchange savings is based on the comparison of a counter-factual scenario, in which there is no capacity for assembly of cars and other vehicles and demand is catered for fully with imported CBU units, with actual outcome when there is a substantial degree of import substitution.

As such, foreign exchange savings can be computed as follows:

Foreign exchange savings = Value of imports of CBU vehicles[2] - value of imports of CKD units and parts – value of imported inputs into domestic parts – investment – remittance of profits + exports of vehicles and parts ..... (1)

The above magnitudes have been estimated for 2009-10. Determination of the c.i.f. prices of vehicles is based on, first the assumption that the level of import tariffs are effective in determining the domestic price. Therefore, in this case the domestic price is equivalent to the cif price + customs duty + general sales tax. The validity of this assumption is discussed in Chapter 5. In the high case, the domestic price is assumed to be lower and the cif component is correspondingly larger.

Table 2.15 presents the magnitudes in equation (1). In the counter-factual scenario imports would have aggregated to between $1.7 billion and $1.9 billion. As opposed to this,

[2] At the actual level of sales, estimated at world prices in $.

actual imports, investment and repatriation of profits in 2009-10 are estimated at $1.2 billion. Inclusive of exports, the foreign exchange savings by the sector are estimated at between $607 million and $859 million. Therefore, the sector contributes significantly to foreign exchange savings.

TABLE 2.15: ESTIMATED FOREIGN EXCHANGE SAVINGS DUE TO THE AUTOMOTIVE SECTOR, 2009-10

($ Million)

	Low*	High**
A. If Imports of CBU and no domestic production	**1,677**	**1,929**
c.i.f. value of imports:		
cars	770	886
buses, trucks	142	162
motorcycles	310	357
tractors	455	523
B. With Import Substitution	**1,196**	
Imported CKD Units and Parts	732	s
Imported inputs for domestic parts	320	a
Investment	131	m
Remittance of Profits	13	e
C. Exports of Vehicles and Parts	**126**	
Foreign Exchange Saving (A – B + C)	**607**	**859**

* with cif prices equal to domestic price – the statutory customs duty – sales tax

** 15% higher than in the low case.

An overall summary of the key magnitudes of the sector as derived above is presented in Table 2.16. The automotive sector has begun to acquire a prominent role in the industrial structure of Pakistan. It accounts for almost 5 percent of the value added in the manufacturing sector, which implies that it is already larger than industries like sugar, pharmaceuticals and vegetable ghee. It has also made a major contribution to the double-digit growth of the manufacturing sector in the peak of the Musharraf era.

However, our estimates of the size and contribution of the automotive sector are somewhat more modest than earlier estimates. SMEDA (2005), for example, estimates employment in the sector at 500,000 while our estimate is closer to 209,000. Similarly, the value added by the sector is reported at Rs 153 billion whereas our estimate is Rs 108 billion.

Further, there is need to recognise that while the automotive sector is beginning to make a significant contribution to the economy of Pakistan, it is still relatively small by international standards. Table 2.17 makes a comparison of the contribution of the automotive

sector in eleven developing countries. Pakistan ranks relatively low in the indicators. However, in the indicator, sector turnover as percentage of the GDP, Pakistan ranks higher than four countries, including India and Indonesia.

TABLE 2.16: SUMMARY OF THE KEY INDICATORS OF THE SIZE AND CONTRIBUTION TO THE ECONOMY BY THE AUTOMOTIVE SECTOR

Turnover		
	Assemblers	Rs. 234 billion
	Domestic Parts	Rs. 168 billion
	Total	**Rs. 402 billion**
Production		
	Cars	121,647
	Jeeps, etc.	16,940
	Motorcycle	1,481,111
	Rickshaws	14,676
	Tractors	73,844
	Buses	661
	Trucks	3,691
Employment		
	Assemblers	22,254
	Domestic Parts	187,070
	Manf	
	Total	**209,324**
Value Added		
	Rs. 108 billion	
	4.8% of Manufacturing	
	0.7% of GDP	
Trade		
	Exports	$89 million
	Imports	$835 million
Value of Cumulative Investment		$2.8 – $3.0 billion
Foreign Exchange Saving		$704 million
Contribution to Revenue		Rs. 61,757 million

Source: Derived from earlier tables.

TABLE 2.17: INTERNATIONAL COMPARISON OF THE CONTRIBUTION TO THE ECONOMY BY THE AUTOMOTIVE SECTOR*, 2010

Country	As % of GDP			Employment as % of Industrial Employment
	Turnover	Investment	Revenue	
Argentina	1.2	-	0.3	0.3
Brazil	1.6	0.1	-	1.4
China	1.9	0.1	-	0.8
Egypt, Arab Rep.	1.7	1.0	1.1	1.4
India	1.2	0.1	0.8	0.3
Indonesia	0.7	0.2	-	0.3
Malaysia	3.3	0.7	-	1.5
Mexico	0.4	-	-	1.2
Thailand	4.7	0.2	1.1	2.4
Turkey	4.9	0.1	1.8	4.3
Pakistan	1.6	0.1	0.4	0.2

Source: OICA
WDI
* excluding autoparts

2.4. DEMAND ANALYSIS

The automotive sector is prone to business cycles with a fairly large amplitude. In the 80s the sector showed high growth starting from a low base, but showed only modest growth in the 90s. Between 2002-03 and 2007-08 it experienced explosive growth. Thereafter, the sales of cars, in particular, have shown a sharp decline. What factors explain the variation in the growth rate of the sector as measured by the volume of sales of different types of vehicles?

Results of OLS estimation of the demand equations for three types of vehicles, viz., cars motorcycles and tractors, are presented in Table 2.18. The results indicate the following:

(i) The short-term income elasticities are generally high, ranging from 2.75 to almost 4. This implies that fluctuations in the growth of real per capita income in the economy have a magnified effect on demand for vehicles.

(ii) The elasticities with respect to relative price of vehicles are low. This could explain the aggressive pricing policy, especially in the case of cars.

(iii) The elasticities with respect to interest rate are significant and moderately high. The explosive growth of sales in the middle of the last decade can be partly attributed to the steep fall in interest rates on advances from over 14 percent to just over 7 percent and the increased availability of consumer financing by banks.

The issue is what the implications are of the propensity of the automotive sector to sharp fluctuations in the growth of sales. This may justify, for example, the presence of

significant excess capacity to take advantage of a sharp upturn or the need for maintaining liquidity in the form of reserves to take care of downturns.

TABLE 2.18: SHORT-RUN ELASTICITIES OF DIFFERENT TYPES OF VEHICLES
(DEPENDENT VARIABLE IS THE DEMAND OF THE VEHICLE TYPE)

Variable[a]	Cars	Motorcycles	Tractors
Per Capita Income	2.750*	3.423**	3.929*
Price of Vehicle relative to Consumer Price Index[b]	-0.218***	-0.274**	-0.315*
Rate of Interest	-0.679*	-0.624*	-0.518*

[a] All variables are measured in natural logs.

b Import price is measured by the Unit value Index of Machinery and Transport Equipment Group and domestic price is measured by CPI of Transport and Communication Group.

*, **, *** denote that the coefficients are significant at the 1, 5 and 10 percent level of significance.

CHAPTER 3
POLICY AND REGULATORY FRAMEWORK

The automobile industry is governed by a set of regulations based on both domestic legislation and on international treaties/conventions to which Pakistan is a treaty partner or has agreed to adhere to the conventions. The international commitments supersede the local legislation wherever there is a conflict. They include the General Agreement on Tariffs and Trade (GATT) and the Trade-Related Investment Measures (TRIMs). GATT was signed in 1947 and lasted until 1993, when it was replaced by the World Trade Organisation (WTO) in 1995. The original GATT text (GATT 1947) is still in effect under the WTO framework, subject to the modifications of GATT 1994. GATT's purpose was to promote a substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis.

3.1. TRIMS

TRIMs came into force in 1995, as part of the Uruguay Round negotiations with the same objectives, in effect carrying on where GATT left. The TRIMs Agreement did not define prohibited TRIMs, but its illustrative list included the following 8 components (see Box 3.1):

BOX 3.1: TRIMS CONTENT

Local Content Requirements (LCRs): Impose the use of a certain amount of local inputs in production.
Trade-Balancing Requirements: Oblige imports to be equivalent to a certain proportion of exports.
Foreign Exchange Balancing Requirements: Stipulate that the foreign exchange made available for imports should be a certain proportion of the value of foreign exchange brought in by the firm from exports and other sources.
Exchange Restrictions: Restrict access to foreign exchange and hence restrict imports.
Domestic Sales Requirements: Require a company to sell a certain proportion of its output locally, which amounts to a restriction on exportation.
Manufacturing Requirements: Require certain products to be manufactured locally.
Export Performance Requirements (EPRs): Stipulate that a certain proportion of production should be exported.
Product Mandating Requirements: Oblige an investor to supply certain markets with a designated product or products manufactured from a specified facility or operation.
Manufacturing Limitations: Prevent companies from manufacturing certain products or product lines in the host country.
Technology Transfer Requirements: Require specified technologies to be transferred on non-commercial terms and/or specific levels and types of Research and Development (R & D) to be conducted locally.
Licensing Requirements: Oblige the investor to license technologies similar or unrelated to those it uses in the home country to host country firms.
Remittance Restrictions: Restrict the right of a foreign investor to repatriate returns from an investment.
Local Equity Requirements: Specify that a certain percentage of a firm's equity should be held by local investors.

Member States were given 90days to notify WTO of any existing non-conforming measures[3].

Pakistan was one of the countries that notified investment measures under the agreement. Following Pakistan's request, the initial five-year transition period was further extended to December 2002. During that time, Pakistan made an effort to eliminate all remaining TRIMs. About 85 per cent of the measures covered by the so-called deletion programmes had been abolished by then, Pakistan' request for a further extension, mainly in response to the automotive sector's demands, was turned down by the WTO.

On the domestic front Pakistan had been following the indigenisation policy in engineering industries through the stakeholder agreed deletion programmes since 1987.Up to 1995, the deletion cell of Ministry of Industry and Production (MoIP) was formulating and monitoring the deletion programmes[4].In 1995, the Government set up the Engineering Development Board for providing policy direction and impetus for growth of the engineering sector. The Board used an integrated approach by focusing on the overall development of all the subsectors of the engineering industry and acted as a bridge between the Government and the entrepreneurs/investors to ensure achievement of set objectives. The Board principally agreed to remove all the TRIMs in industry generally to make it more competitive, and recommended a plan to phase out the deletion programmes by 2000. Slow implementation stretched the plan slightly and the programmes in 86products were phased out from the purview of deletion policy between 30 June 2002 and31 December 2003. Since then, there is no deletion programme for the engineering industry.

However, in 2003 the Board set up the Industry Specific Deletion Programme () for the Automobile Industry consisting of 18 components, and the targets achieved at that time were as follows:

Sr. No.& Product	**Category**	**Achieved (%)**	**ISDP Targets**
1. Car	Cat-1, Upto 800cc		70.00
2. Car	Cat-2, Above 800cc upto 1200cc		58.00
3. Car	Cat-3, Above 1200cc		53.00
4. Tractor	Cat-2, Above 40 &upto 55 HP(2X2)		85.00
5. Tractor	Cat-3, Above 55 &upto 80 HP(2X2)		62.50
6. Tractor	Cat-4, Above 55 &upto 80 HP (4X4)		50.00

[3] See United Nations Conference on Trade and Development (2007).
[4] For detail see Saeed, Muhammad (2004).

Sr. No.& Product	Category	Achieved (%)	ISDP Targets
7. Motorcycles	Cat-1, Upto 100cc		85.00
8. Motorcycles	Cat-2, Above 100cc upto 175cc		83.00
9. Commercial Vehicle	Cat-1, Pickup 2 Ton GVW		65.00
10. Commercial Vehicle	Cat-2, Pickup S/C, 4X2 Above1500cc upto 2999cc GVW above2 ton upto 5 ton		50.00
11. Commercial Vehicle	Cat-3, Rigid Truck 4X2, 5 tonto 8 ton		50.00
12. Commercial Vehicle	Cat-4, Rigid Truck, 4X2,above 8 ton		54.00
13. Commercial Vehicle	Cat-5(A), Rigid Truck, 6X2, above 8 ton upto 30 ton		51.00
14. Commercial Vehicle	Cat-5(C), Truck, Tractor/Prime Mover 4X4, GCWupto 30tons		42.70
15. Bus	Cat-1, Minibus upto 30passengers		45.80
16. Bus	Cat-2, Above 75 passengers		47.50
17. Sports Utility Vehicle	SUV4X4		40.00
18. All Terrain Vehicle	4X4 Off Road		40.00

These programmes were also abandoned to ensure compliance with TRIMs requirements for competitiveness and transparency. The sector today operates within the rubric of several policies: the Industrial Policy,1977;the Privatisation Policy, 2000; the Trade Policies, 2009; the Finance Acts which modify the fiscal and tariff regime backed by the Statutory Rules and Orders (SROs) and the Customs General Orders (CGOs) which are modified from time to time; the Auto Industry Development Programme (AIDP); the Tariff Based Scheme (TBS) which ensures compliance to the WTO-TRIMs; the Pakistan Standards governing the sector and implemented through the Pakistan Standard Quality Control Authority (PSQCA); and the National Environmental Quality Standards (NEQS) which governs vehicular exhaust emissions.

3.2. INVESTMENT POLICY

The general Investment Policy announced by the Government's Board of Investment is very liberal, especially for foreign investors. There is no bar to remitting profits, licensing fees,

patent payments, technology transfer fees and charges. Also, 100 percent of the equity can be owned by the foreign investor.

Specifically, the government has notified incentives for new entrants in automobile sector under the Auto Industry Development Program (AIDP) to create a competitive environment and availability of vehicles at affordable price. An amended SRO issued recently by FBR says that additional customs-duty leviable under earlier SRO issued in 2006 shall not be charged on sub-components, imported in any kit form by an assembler or manufacturer declared to be a new entrant by the Engineering Development Board (EDB), for a period of three years from the start of assembly or manufacturing of respective vehicles, subject to certain conditions.

However, it has been made imperative for the new entrants that they shall chalk out a plan for progressive manufacturing of the vehicles spreading over a maximum period of three years within which they shall catch up with the localization or indigenization level of respective vehicles, as approved by Auto Industry Development Committee (AIDC) of the EDB; and continued non-levy of additional customs duty shall be contingent upon the achievement of progressive annual indigenization as determined by the committee.

Earlier in another notification issued by the Ministry of Industries entitled 'Auto Industry in 'Auto Industry Investment Policy' (AIIP), it was said that potential entrants with a global presence of 100,000 units per year production in case of cars, 25000 trucks and buses separately, and 5000 agriculture tractors shall be entitled to import 100 percent CKD kits, whether or not locally manufactured, at the leviable customs duty for a period of 3 years for the start of assembly or manufacturing.

In 2007, ECC set the following conditions for the new entrants: (i) have a plan for the progressive manufacturing for vehicles; (ii) have serious and demonstrable intention to develop parts locally; (iii) clearly identify the destinations in its plan or in agreement with its partners for export of vehicles and parts manufactured in Pakistan; (iv) produce road worthy vehicles complying to environment standards, with the EDB and the Ministry of Industries; (v) have proof of land acquisition in the case of green field project or an agreement with owner, in the case of existing assembly facilities; (vi) be required to submit a detailed business plan to EDB, which shall verify the complete in-house assembly or manufacturing facilities and (vii) AIDC, constituted vide Ministry of Industries, Production and Special Initiative's Notification No 2-4/2006/Tech-I dated 18.12.2007, shall assess the business plan and other to qualify the potential new entrant for entitlement of benefits under AIIP or otherwise.

Under clause 9.3 of AIDP, there will be two regimes in the absence of SRO 693, ie (i) existing OEMs on which SRO 693 and Customs General Order (CGO) 11 & 12 are applicable and (ii) new entrant which imports all the CKD on the basis of SROs 655 & 656.

3.3 TRADE POLICIES

The assemblers and vendors need to import vehicles as completely knock-down vehicles, raw materials, components and assemblies and some of them also export the products they manufacture. The international trade in these commodities [(Chapter 87) of the Harmonised System (HS) of Classification of Commodities] in Pakistan is governed by the Import Policy Order (IPO) and the Export Policy Order (EPO) which are issued periodically and then modified over their life span until the next edition of the IPO/EPO is issued by the Ministry of Commerce. The Orders contain lists of items which may not be imported/exported and the conditions governing such prohibition, or lists of importable and exportable commodities which originate from or are destined to (respectively) specific countries. The currently operational IP/EP Orders were last issued in 2009, and the one previous to that in fiscal year 2006/07. The IPO 2009 was last amended on 28 December 2011.

Alongside the trade policies the government announces the tariffs through the Finance Acts. These are and modified this over the ensuing fiscal year through the Customs General Orders (CGOs)[5] and the Statutory Rules and Orders (SROs)[6] issued under clauses 16 of the Customs Act 1969. Thus the IPO, the EPO, the current Finance Act and the updated Customs Act form the main body of legislation which govern the International trade of Pakistan. Others of minor significance which rule the trade, include, but are not limited to, are the Carriage of Goods by Sea Act, the Insurance Act, the Foreign Exchange Regulations Manual

3.3.1. IPO 2009

The IPO 2009 governs the import of goods into Pakistan. Article 5 Clause A prohibits commercial import of defence materials, goods from Israel, goods infected by disease or covered by international agreements and second hand goods of all kinds unless exempted by those mentioned in Appendix C and restricts goods from India and Transit Trade Agreements to certain condition.

[5] Which generally set out standard operating procedures
[6] Which generally set out terms and conditions of trade, permissions, prohibitions and restrictions on what may or may not be imported/exported, and the rates and duties payable

Appendix C allows import of second hand dumpers in CBU state of 5-ton capacity or over, specialised con-defence security vehicles, a "limited" number of CBU cars for each industry located in EPZs.

Appendix E (para 15 of the IPO 2009) allows, under personal baggage, gifts and transfer of residence rules, for the import of second hand/used (5 years old or less) vehicle "*means passenger car, bus, van, trucks, pickups including 4X4 vehicles*".

Appendix G of the Order is the "positive" list of tradable commodities with India which does not include automobiles or parts etc. Appendix I lists the Machinery/Specialised Vehicles allowed for import in second-hand/used condition by the construction, petroleum and mining sector companies.

3.3.2. EPO 2009

The EPOs generally set out the framework for export promotion and identify areas where a concerted effort is required to penetrate into new markets and consolidate the ones into which the initial penetration has established the possibilities for growth and expansion. The EPO also includes an elaborate list of commodities which cannot be traded and the countries where specific commodities cannot and should not be exported to. The EPO 2009 is silent on the automotive sector.

3.4. TARIFF POLICY

On 1st July 2006, the Deletion Programme for the automotive industry was replaced by the Tariff Based Scheme to ensure compliance with TRIMs and issued the basic SROs which would regulate the sector, namely, SRO 655(I)/2006 (Vendors) and SRO 656(I)/2006 (OEMs)[7] (issued on 22nd June 2006). The basic framework of Tariff Based System is as under:

1. Imports in CKD condition would be allowed only to assemblers having adequate assembly facilities and registered as such by the concerned Federal Government Agency.
2. Parts/ components indigenized by June 2004 have been placed at higher rate of Customs Duty
3. Parts not indigenised would be allowed at CKD rate of Custom Duty.

The present tariff structure in the automotive sector is presented in Table 4.1 of the next chapter where rates of effective protection are quantified.

[7] Separately for the OEMs and the Vendors

The TBS is equally applicable to the OEMs and the Licensed Vendors – the latter are required to prove their arrangement with the former. Each is required to have a minimum manufacturing capability, to be inspected by the EDB initially for acceptance of status as OEM or Licensed Vendor and for renewal each year. Since this provides an opportunity for delaying approval for the slightest infringement (paras (i), (ia) and (ib) of the SROs), the possibility of rent-seeking cannot be set aside. The procedure set forth in obtaining the relief is in itself cumbersome and requires details to be provided on each occasion. The EDB is the first step in the process. It is required to forward the applications, but the supplicant has to follow this through physically. Even one unintentionally mislaid document does jam-up the flow.

The use of SROs to encourage indigenisation and provide the nascent engineering industry some protection from international competition started in 1988. The industry-specific and later product-specific indigenisation programmes were initially drawn up and managed by a wing the MoIP and post-1995 by EDB. These were agreed to by firms to establish the mandated, but rising, shares of "local[8] content". In return EDB would agree to and input/-output ration permitting import of specified parts and components at zero or much reduced Customs tariffs which then be sent to FBR and routinely notified through modifying SROs amending the CDs. This meant that EDB had and still has:

- discretionary control over which of the materials and components used in the industry could be imported, as otherwise these would have to be produced domestically, in effect creating a non-tariff barrier to imports and amount to a *de facto* continuation of the old "Import License Raj",
- considerable discretion as to the level and content allowed for import, and
- discretionary control over new entrants to the industry.

However, the WTO's Uruguay Round required removal of all non-tariff barriers to trade and comply with the TRIMS agreement. As a consequence all auto sector programmes were formally removed in July 2006. However, industry pressure and vested interests within bureaucracy and government discovered alternate routes to "income": using escalated tariff structures combined with the continued use of tariff concessions[9] and partial exemptions for specified lists of raw materials and other intermediate inputs.

The day-to-day operations of the IPO2009 and the EPO2009 and the control of imports and exports are governed by the Customs Act. This is done largely through publication of CGOs

[8] Including in-house and contracted out vendor units

[9] In SRO-speak, "concessions" means that all the CD in excess of a specified level is exempted. Only if the specified level is zero is the CD zero. So the actual CD could be zero or any other rate that is lower than the statutory duty.

and SROs. Chapter 87 of the Customs Tariff covers the automotive sector which is modified annually through the money bill. Finance Bills are presented each year before the National Assembly and approved by it as the Finance Act of the fiscal year for which it has been designed. This is the instrument which is used to provide protection to the local automotive industry.

The levels of the "concessionary" rates are very low in comparison to the statutory rates and the EDB is required to update the list mandatorily. In principle, none of the CD concessions are available if components or parts are locally manufactured. To facilitate observance of this condition at Customs clearance, EDB "*in consultation with stakeholders*" has compiled and regularly updates a list of locally manufactured products. If there is a dispute as to local availability, this is decided by EDB after consultation with "the renowned local manufacturers" of the same or similar products. These modified lists, which deleted the relevant Chapter of the Customs Act, spanning the spectrum of the manufacturing sector, were notified in CGO 11/2007. This is not specific to the automotive sector.

The automotive sector lists are transferred electronically to the Customs Department which maintains these both as hard copies and also on the servers of the Pakistan Automated Customs Clearance System (PACCS) or its successor(s).

Two CGOs, specific to the sector, have been issued for assessing the value of used motor vehicles. The first is CGO 14 of 2005 and the second is CGO 02 of 2011 which actually modifies the former. The "determined" value is based on the manufacturers' (or agents') certification of the FOB price to which are added on all costs incurred for importing the vehicle to arrive at the landed cost. This value is then depreciated by a monthly rate for the period from its first registration abroad.

As indicated earlier there are three specific SROs which govern the sector. They are described briefly in Table 3.2 and a more detailed analysis follows.

TABLE 3.1: GOVERNING SROs

SRO No.	Date	Description
SRO 655(I)/2006	22.06.2006	For vendors: Partial exemption from customs duty on import of raw materials, sub-components, components, sub-assemblies and assemblies not manufactured locally
SRO 656(I)/2006	22.06.2006	For OEMs: Partial exemption from customs duty on components (which include sub-components, components, sub-assemblies and assemblies but excludes consumable) and direct materials
SRO 693(I)/2006	01.07.2006	Levy of additional customs duty on import of goods for assembly/manufacture of vehicles.

Source: EDB.

SRO 655(I)/2006 was issued on the 22nd of June 2006 with the sole objective of providing relief from so much of the customs duty as was in excess of the concessionary and the statutory rates specified in the Customs Act for the Vendors only. SRO 656(I)/2006 was also issued simultaneously and for the same purpose, except that its beneficiary was the OEM category of the sector. Both SROs require the "new entrants" and those wishing to the benefits conferred shall make an application for the same both, respectively, initially and annually thereafter which will contain the following information:

1. Proof that he is/will be registered as a Sales Tax Payer
2. List of equipment installed complying with the requirements specified
3. Submit hard and soft copy of list of components with parts numbers along with respective PCT headings intended to be imported
4. the input output ratio of the items to be manufactured and total annual requirements of materials

These are then verified by the EDB and forwarded to the FBR as described above. At the time of importing the inputs the "licensed" OEM/Vendor is required to certify that the import complies with his annual entitlement.

Through SRO 693(I)/2007 the additional duties levied are as shown in Table 3.2.

TABLE 3.2: SRO 693 - LEVY OF ADDITIONAL DUTY ON AUTOMOTIVE SECTOR

Sr. No.	PCT Headings	Rate of additional customs-duty
(1)	(2)	(3)
1	87.01 (Agricultural Tractors)	35% ad val.
2	8701.2090 and 8701.9060	35% ad val.
3.	87.01 (Tractors other than mentioned at Sr. No.1 and 2 above).	25% ad val.
4	87.02 (CNG dedicated buses)	35% ad val.
5	87.02 (Non-CNG buses)	30% ad val.
6	87.03 [6][excluding 4-stoke auto rickshaw of PCT heading 8703.2115]	17.5%ad val.
[6][6a	4-stroke auto rickshaw of PCT heading 8703.2115	30% ad val.
7	87.04 (vehicles of g.v.w exceeding 5 tons).	25% ad val.
8	87.04 (vehicles of g.v.w not exceeding 5 tons)	30% ad val.
9	87.11	32.5% ad val.

Source: EDB.

The system discriminates between "licensed" OEMs/Vendors and commercial importers. The former pay WHT at a 3 per cent adjustable rate on CIF+CD value; the latter pay a non-adjustable rate of 6 per cent on CIF+CD+ST. Sales Tax in 19 per cent in the case of the latter and 16 per cent in the case of the former. Thus, the effective incidence of all taxes paid by the commercial importer is significantly higher. This encourages the "licensed" OEM/Vendors to

have the approved input-output ratios skewed in their favour. This could have grave consequences: one, commercial imports are discouraged; the small back-end assemblers and vendors cannot get access to the economies of scale prices obtained by the commercial importers; the SME sector faces "monopolistic" prices set by the "licensed" players; and encourage these also to take over the commercial import market to the detriment of the SMEs, commercial importers and the general consuming public. Therefore, a level playing field should be provided, by removing the distinction between industrial and commercial importers.

3.5. AUTO INDUSTRY DEVELOPMENT PROGRAMME (AIDP)

In 2005 the EDB initiated preparations for the future development of the automotive sector. After a lengthy series of stakeholder discussions, the Auto Industry Development Programme was announced in January 2008. Its objectives were to ensure sustained growth, increase competitiveness, absorb and diffuse technology, develop the human resources needed and comply with standards, safety and environmental regulations. Within the overall rubric of the sector's development it contained the following sub-programmes:

- Auto Industry Investment Policy (AIIP)
  - Reduced the threshold of investment required by new entrants
    - However the definition excluded all those who had attempted to enter or had exited, e.g., FIAT, General Motors, Mack Trucks. Chevrolet's Joy thus lost the opportunity
  - The one-window operation foreseen in the policy does not exist
- Productive Asset Investment Incentive (PAII)
  - Designed as a customs duty credit on the value of investment in new productive assets, e.g., dies, tools, jigs to be claimed against certified investment. The Ministry of Finance did not agree to the proposal.
- Five Year Tariff Plan
  - Designed and implemented in the first year. Subsequent reflections in the budgets did not materialise. The Plan is attached as Appendix 3.1
- Technology Acquisition Support Scheme (TASS)
  - Was designed as a matching grant to be funded from the Science and Technology Ministry's pool of R&D funds. However, since such funds were never allocated the Scheme remained non-operational.
- Auto Cluster Development

- The Auto Parts Cluster in Lahore developed by SMEDA proved to be a success. The Trailer/Bus Body Park is being proposed for Faisalabad. No other plans have come to light.

- Human Resource Development (HRD)
  - Will be based on existing public sector resources through the TEVTAs and the Engineering Universities to develop the requisite skills.

An overall assessment would tend to suggest that the programme was well-conceived, but was under-resourced and the political will to take it off the ground withered away with the change in government. Even though the AIDP 2008 achieved only partial success, the MOIP and EDB are in the throes of preparing its successor.

3.6. POLICY AND STANDARDS

The quality of manufactured goods is supposed to be set by the Pakistan Standards Quality Control Authority (PSQCA) is an arm of the Ministry of Science and Technology and is mandated to establish and monitor adherence to standards of all commodities manufactured locally. In the engineering sector it has established some standards and certifies products and monitors adherence. However, there are no known standards for the automotive sector. These need to be developed to ensure an acceptable level of quality. Owing to a lack of human resources available with PSQCA, it could approach the Corps of Engineers of the Pakistan Army to help establish these, certify adherence and monitor compliance annually through quality and Standards Audits.

Another mechanism available to ensure process control is through the International Standards Organisation's certified Quality Assurance surveyors. Once again this is not seen in the automotive sector.

Safety standards are laid out in the Motor Vehicles' Rules which unfortunately are not standardised across the country. The first step should be to establish the standards and have these approved by sub-national governments. No vehicle is examined in Pakistan as there is no facility available which can test these. Further, there is no trained examiner available with the Offices of the Motor Vehicles Examiner. It is suggested that help should be sought from such agencies as the Transports Internationaux Routiers or International Road Transport (TIR) or the Transport and Road Research Laboratories to help establish these facilities and operate these for a few years. In the interim the human resource skills need to be established and a transparent system for examinations developed and implemented.

CHAPTER 4
EXTENT OF EFFECTIVE PROTECTION

The previous chapter has highlighted that a transition has been made to a tariff based system (TBS) from the system of physically setting targets for deletion in the automotive sector in conformity with WTO requirements. The objective of this chapter is to determine what the resulting levels of effective protection in different sub-sectors.

Section 4.1 sets up the methodology for quantifying the effective rate of protection (ERP). Section 4.2 presents estimates of the ERPs. Based on these estimates we present in Section 4.3 recommendations for changes in the tariff policy in a medium term setting.

4.1. METHODOLOGY

The ERP enjoyed by an industry is quantified as follows:

$$\text{ERP} = \frac{\text{VA} - \text{VAW}}{\text{VAW}} \times 100 \qquad \ldots\ldots\ldots (1)$$

where VA = value added at domestic prices

VAW = value added at world prices

The value added at domestic prices is derived as follows:

$$VA = (1 + t_0) - \sum_{j=1}^{n} a_{ij}(1 + t_{ij}) \qquad \ldots\ldots\ldots (2)$$

where t_0 = import tariff on competing imports to the industry's output

a_{ij} = input – output ratio of the *j*th input

t_{ij} = import tariff on the *j*th input

similarly, the value added at world prices is given by

$$VAW = 1 - \sum_{j=1}^{n} a_{ij} \qquad \ldots\ldots\ldots (3)$$

The above equations are based on the assumption that domestic prices adjust fully to the import tariffs. Pursell, Khan and Gulzar (2011) argue that in a regime of high tariffs, as is the case in the automotive sector currently, it is possible that domestic prices do not adjust fully to the tariffs. They make a comparison of the prices of the same models in Pakistan and India

respectively and conclude that it is likely that implicit nominal protection rates are below the protection available from tariffs, especially in the case of large cars.

They attribute the under pricing in relation to that indicated by tariffs due to the presence of substantial excess capacity and depressed demand conditions since 2008. Therefore, they compute the ERPs in two scenarios:

(i) with domestic prices consistent with the tariff structure, the ERPs available work out as 120 percent for assembly of cars, 95 percent for vendors and 104 percent for the integrated process.

(ii) with domestic prices of vehicles about 90 percent of the world price plus tariff the ERP falls to 48 percent for the integrated process.

In effect, we depict the two scenarios in Figure 4.1 – Case I. In scenario 1, the domestic price adjusts fully to the tariff while in Figure 4.1 – Case II the domestic price lies between the world price and the world plus tariff.

Our calculations of ERPs are based on two scenarios, first, the domestic price equal to the world price plus tariff and, second, the domestic price equal to 90 percent of the world price plus tariff. We extend the analysis beyond cars and parts to other vehicles.

4.2. RESULTS

The input-output ratios for different segments of the automotive sector have been derived from the data contained in the Census of Manufacturing Industries (CMI) of 2005-06 undertaken by the Pakistan Bureau of Statistics.

The tariff structure for different types of vehicles and parts as of 2011-12 is given in Table 4.1. We assume that bulk of imports of CKD and non-localised parts is on the concessionary regime as per SRO 656(1)/2006. The reduction in the rate of duty is not pronounced in the case of cars, 32.5 percent versus the statutory rate of 35 percent. However, it is more pronounced in the case of other vehicles. Following the survey of units in Phase II of the study we will be in a better position to quantify the share of imports on concessionary rates.

The estimated ERPs are presented in Table 4.2 under the two sets of assumptions. The following conclusions are reached from the ERP estimates:

(i) If domestic prices fully reflect tariffs, then the ERPs are generally high. They range from 98 percent for small cars (800cc) to as high as 374 percent for large cars (above 1500cc). This is a reflection of the very high customs duty of 75 percent on

large cars. The ERPs come down sharply to between 35 percent and 113 percent for cars with the second set of assumptions.

(ii) The ERP on parts ranges from 32 percent to 78 percent depending upon the particular set of assumptions.

(iii) The ERP on motorcycles is extremely high at 196 percent under the first set of assumptions and falls to 76 percent if in the presence of intensive competition in this market the domestic price remains somewhat below the world price plus tariff.

(iv) In the case of trucks there appears to be a large differential between the ERPs for small and large vehicles respectively.

Overall, in both sets of assumptions, there is a substantial variation in the ERPs for different types of vehicles and parts. Consequently, there could be substantial misallocation of resources within the sector and between the automotive sectors and the sectors of the economy. In cases where the ERP is high there is a danger of over investment while in other sub-sectors investors may be reluctant to enter. Clearly, the policy goal must be to move to a regime where the tariff levels are more moderate and, more or less, uniform across sub-sectors.

4.3. RECOMMENDATIONS ON TARIFF REFORM

The Government does envisage the reduction of tariffs in the automotive sector in a five year time frame, as per an earlier ECC decision. But this process does not seem to go for enough with only minor reduction in tariffs in the terminal year from the present level and large inter-vehicle differentials will persist according to this scheme of up to 70 percent.

Based on the above analysis, we make the following recommendations (see Table 4.3):

(i) The maximum tariff on vehicles should be brought down to 35 percent in a five year time frame, with moves in the first year (2012-13), third year (2014-15) and fifth year (2016-17).

(ii) The dispersion of tariffs among CBUs of vehicles should not exceed 15 percent in the terminal year with lower rates of 20-25 percent on trucks and buses and 35 percent on cars and motorcycles.

(iii) The same tariff rates should apply on cars of different sizes. However, in order to discourage luxury consumption, excise duty may be applied both on CBU imports and domestic production. The rate of excise duty may be levied at 20 percent on cars with capacity of 1300-1500cc, rising to 60 percent for cars above 2000cc.

TABLE 4.1: DUTY STRUCTURE ON AUTOMOTIVE SECTOR (DURING 2011-12)

S. No.	Category	Duty Structure (%)							
		SRO 655(I)/2006				Rate of Duty on CKD on Non-localised parts		SRO 693(I)/2006	1st Schedule of Customs Act 1969 (CBU)
		Rate of duty on raw Materials	Rate of duty on sub-components	Rate of duty on components	Rate of duty on sub-assemblies	SRO 656(I)/2006	Statutory	Duty on localised parts under SRO and/or Statutory	
1	Agriculture Tractors of PCT 8701	0%	0%	0%	0%	0%	35%	35%	15% (0% SRO 567)
2	Road Tractors for Semi-Trailers (Prime Mover) of 280HP and above of PCT 8701	0%	0%	0%	0%	0%	35%	35%	15%
3	Road Tractors for Semi-Trailers (Prime Mover) less than 280HP PCT 8701	0%	0%	0%	0%	10%	35%	35%	30%
4	Buses-Falling CNG-Dedicated of PCT 8702	0%	0%	0%	0%	0%	35%	35%	0%
5	Buses-Falling PCT 8702 (Non-CNG)	0%	5%	10%	15%	5%	35%	35%	20%
6	For Vehicle of PCT 8703	0%	5%	10%	20%	32.50%	35%	50%	50-100%[a]
7	Trucks of g.v.w not exceeding 5 tons falling under PCT 8704	0%	5%	10%	15%	20%	35%	50%	60%
8	Trucks of g.v.w exceeding 5 tons falling under PCT 8704	0%	5%	10%	15%	10%	35%	35%	30%
9	For vehicle of PCT 8711 motorcycles	0%	5%	10%	20%	15%	20%-35%	47.50%	65%
10	For bicycles falling under PCT heading 8712	0%	5%	10%	10%	Nil	Nil	Nil	35%
11	Other vehicles	0%	5%	10%	15%	Nil	Nil	Nil	35%
12	Trailers of PCT 8716					5%	5%	Nil	15%

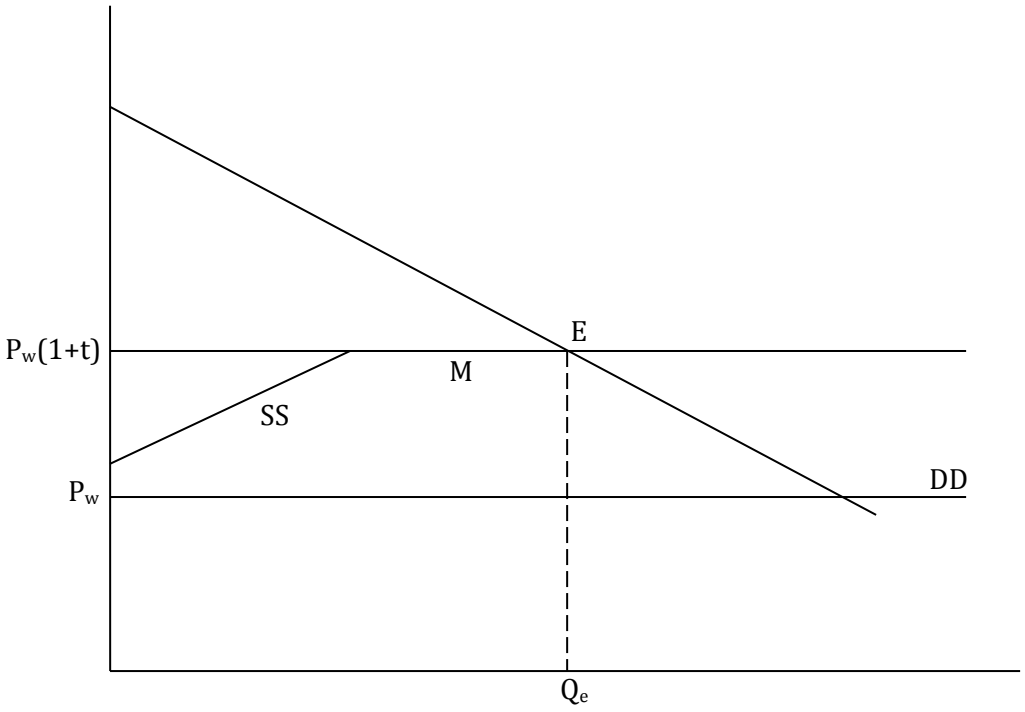
Source: EDB

Customs Tariff, 2011-12

[a] rate on CBU for 800cc cars is 50%; 55% for exceeding 800cc but not exceeding 1000cc; 60% for exceeding 1000cc but not exceeding 1500cc; 75% for exceeding 1500cc but not exceeding 2000cc and 100% + 50% RD for exceeding 1800cc but not exceeding 3000cc.

FIGURE 4.1: TWO PROTECTION SCENARIOS

Case I: $P_e = P_w(1 + t)$



Case II: $P_w < P_e < P_w(1 + t)$

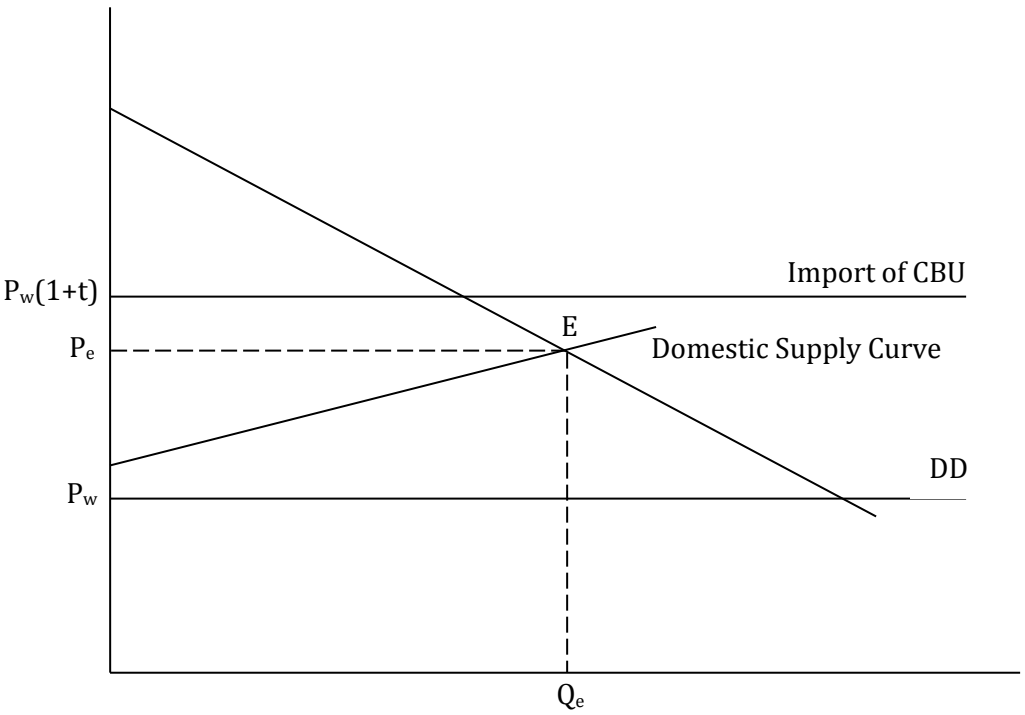


TABLE 4.2 EFFECTIVE PROTECTION RATES

(%)

	1. Tariffs are effective in determining domestic prices	2. Domestic Prices are 90% of world price + tariffs
Car Assembly		
800cc	98.5	35.2
800 - 1000cc	113.2	51.5
1000 - 1500cc	153.4	64.2
1500 - 1800cc	374.2	113.0
Motorcycles	196.1	75.6
Trucks		
(< 5 Tons)	216.1	78.2
(> 5 Tons)	36.1	15.7
Parts	78.3	32.2
Buses (Non-CNG)	22.5	10.1

Source: Authors' own calculations.

(iv) The distinction between localised parts and non-localised parts needs to be removed in the tariff schedules, as is the case in most countries. In addition, SRO 656(1)/2006, meant for concessionary imports, must be withdrawn. These provisions have conferred considerable discretionary power to EDB and the Customs Department and led essentially to a reversion back to the licensing regime with scope for rent seeking.

Following the scaling down of tariffs, it is likely that the levels of effective protection will be based on prices domestically corresponding to the world price and tariffs. Our calculations are that ERPs in the terminal year, 2016-17, resulting from our proposed tariff reforms will be 40 close to 50 percent for cars. These are more moderate levels of ERPs. In addition, they will promote more competition and balanced development of the automotive sector.

An obvious area of concern is the impact of tariff reforms over the next five years on the level of tax revenues, especially since the automotive sector is a major contributor to FBR revenue (see Chapter 2). Pursell, et al (2011) have argued that given the current redundancy of tariffs, a reduction in them should not necessarily effect revenues. In fact, if the proposed reforms lead to greater competition and increase the volume of sales of vehicles then the level of revenues could even rise over time. This will increase pressure also for cost effectiveness and innovation and enable the automotive sector to make a transition to the next stage of development. In particular, the removal of concessionary rates on CKD and parts will promote diversification and greater technological sophistication of the auto parts sector.

It needs to be emphasised that we will have a second look at our proposals for tariff reform after completion of Phase-III of the study in light of the implications for the automotive sector of Pakistan in the event of granting of MFN status to India.

TABLE 4.3: PROPOSED TARIFF STRUCTURE IN AUTOMOTIVE SECTOR

(%)

Description*	Current Rates of Customs Duty			5th Year Terminal Tariff Structure		
	CBU	CKD Localised	CKD Non-Localised	CBU	CKD Localised & CKD Non-Localised	Excise Duty
Passengers Cars Capacity						
800cc	50	50	32.5	35	20	0
800-1000cc	55	50	32.5	35	20	0
1000-1300c	60	50	32.5	35	20	0
upto 1500cc	60	50	32.5	35	20	20
upto 2000cc	150	50	32.5	35	20	40
beyond 2000cc	150	50	32.5	35	20	60
Passenger Buses (Non-CNG)	20	35	5	20	20	
Motorcycles	65	16-47.5	15	35	20	
Trucks						
Trucks over 5 tons	30	35	10	25	20	
Prime Movers (less 280 HP)	30	35	10	20	20	
Prime Movers (> 280 HP)	15	35	0	20	20	
Autoparts	-	5		-	5	
Terminal in 5 years but in 3 moves 1st, 3rd and 5th year.						

* unchanged for buses

CHAPTER 5
COMPETITIVENESS ASSESSMENT OF THE SECTOR

Assessment of the competitiveness of a sector is important from the viewpoint of, first, implications on consumer welfare, second, extent of pressure for innovation, productive efficiency and cost minimization and, third, to enable the preparedness to make a transition from internally competitive to an internationally competitive market.

Therefore, determining the extent of competition in different sub-sectors of the automotive sector will help in identifying if excessive profits are being made due to 'monopolistic' pricing behaviour, whether the process of 'technology deepening' is taking place and if the sector is emerging as competitive in international markets and the process of exporting has commenced.

The chapter is organised as follows: Section 4.1 highlights the key elements of the methodology used to assess competition and contestability in a market. Section 4.2 identifies measures of competition and contestability within a market. Section 4.3 assesses the extent of competition in different sub-sectors of the automotive sector and proposes some steps for increasing competition.

5.1. METHODOLOGY FOR ASSESSING DEGREE OF COMPETITION

The statement of methodology given below relies on the following:

~ DFID, **Competition Assessment Framework**
~ OECD, **Competition Assessment Tool Kit**

The primary purpose of a competition assessment is to evaluate government policies, regulations and laws to determine those that promote and those which impede competition, such that the latter can be redesigned to increase competition. The steps in the assessment include the following:

Identification of the relevant market: different sub-sectors of the automotive sector constitute individual markets. There may be need for further disaggregation, as in the case of cars. Three markets can be distinguished, one for small cars (800cc), one for medium sized cars (1000cc) and one for large cars (1300-1600cc).

Identification of competitors: this includes both suppliers (domestic and imports) and buyers. It is possible that 'monopsonistic' elements are present in the latter.

Examination of the market structure: this involves determination of market share of each supplier; extent of stability of market shares over time; and rate of entry of new firms into the market and their degree of success.

In particular, it is essential to look for the presence of any barriers to entry. The first type of barriers are **natural barriers** which arise when there are large economies of scale; problems for new entrants to access technology, raw materials or distribution channels or relative smallness of the market in relation to the minimum size of investment.

Strategic barriers result from actions by existing suppliers like creating excess capacity (to reduce interest of potential entrants); arranging tong term exclusive contracts and supply and distribution arrangements and potential predatory response by lowering prices if entry takes place.

The third type of barriers are **regulatory and policy barriers** like licensing restrictions; requirements to be met by foreign investors; trade barriers, including high import tariffs and high environmental, safety and other standards.

The anti-competitive stance of policies can be determined by looking at the following:

- ~ presence of non-tariff barriers to imports
- ~ high tariffs on competitive imports
- ~ differential tax concessions
- ~ unequal application of laws and regulations
- ~ differential access to land, infrastructure, intellectual property rights, etc.

5.2. MEASURE OF COMPETITIVENESS

The measure most commonly used by regulatory agencies to assess degree of competition is the Herfindahl–Hirshman Index, HHI, which is quantified as follows:

$$HHI = \sum_{i=1}^{n} S_i^2 \qquad \ldots\ldots\ldots\ldots\ldots (2)$$

where S_i = market share of the ith firm supplying in the market

n = number of suppliers

The lower the value of HHI the more intense the degree of competition. A threshold level of HHI adopted by regulatory agencies, including the Competition Commission of Pakistan (CCP) is 1800, beyond which the market is considered as not meeting competitive norms.

Other measures of competitiveness include the following:

(i) domestic prices compared to prices in other countries, especially neighbours
(ii) rate of entry of new firms
(iii) extent of excess capacity
(iv) rate of profitability
(v) degree of innovation in the form of new products and cost cutting improvements.

5.3. ASSESSMENT OF COMPETITIVENESS OF THE AUTOMOTIVE SECTOR

We assess below on the basis of the above measures the degree of competitiveness of different segments of the automotive sector.

Cars

The HHI values for motor cars of different sizes are presented in Table 5.1. There are three producers in the large car category, namely, Honda, Toyota and Suzuki, with Toyota having the largest market share of 67 percent. The HHI value is high at 4728, well above the threshold level of 1800. In 1000cc cars, Suzuki dominates the market, leading to a HHI of as high as 9090. In the 800cc category, there are two car manufacturers and the HHI is also high at 6924.

Further, market shares of individual manufacturers have not changed substantially over time. Also, there has been very limited entry into the car market. Nissan and Kia did enter in the 1300cc – 1600cc group earlier but have since ceased production.

TABLE 5.1: MAGNITUDE OF HHI, 2010-11
(Index of Market Concentration)

Sub-Sector	Makes	HHI[a]
Motor Cars		
1300 – 1600cc	Honda, Suzuki, Toyota	4728
1000cc	Suzuki	9090
800cc	Diahatsu, Suzuki	6924
Trucks	Hino, Nissan, Master, Isuzu	*n.c.*
Buses	Hino, Isuzu	2782
Tractors	Fiat, Millat	3795
Motorcycles	Honda, large number of other makes	1170

Source: Author's own calcualtions.
n.c. = not computed, because of dominance of imports

There is evidence of lack of innovation in terms of changes in models, quick availability, fuel efficiency, increase in user efficiency and cost cutting. A key indicator of the lack of competition is late deliveries and high premium payments even in the presence of substantial excess capacity (see Table 2.3).

The high prices of cars is demonstrated by the high ratio of prices to average household income, which places Pakistan in the lowest decile of countries in terms of affordability of cars. Also, a comparison of prices of major makes of cars in Pakistan and India is undertaken in Table 5.2. Contrary perhaps to expectations, large and medium-sized car prices are, in fact, higher in India. It is only in the small car category where prices are substantially higher by 25 to 34 percent in Pakistan. Part of the reason for higher car prices in India is the high import duty of 100 percent on CBUs, which has raised prices even in the presence of more economies of scale and 18 car manufacturers as compared to three in Pakistan. Also, as highlighted earlier, in recent years car prices in Pakistan have declined in real terms in the presence of stagnant demand conditions.

TABLE 5.2: COMPARISON OF CAR PRICES IN PAKISTAN AND INDIA

(US $)

	Price in Pakistan* (1)	**India** (2)**	**Difference (%)** $\left[\frac{(1)-(2)}{(1)} \times 100\right]$
HONDA			
Civic MT Oriel	21848	24347	-10.3
City MT	15626	17284	-9.6
TOYOTA			
Corolla Altis 1.8 MT	19841	21134	-6.5
SUZUKI			
Mehran VXR	6223[b]	4664	25.1
Alto VXR	8063	5340	33.8
NANO (TATA)[a]624cc	-	2985	

Source: EDB, Bloomberg Currencies
* exchange rate: 90.165 Rs = 1 US $
** exchange rate: 50.335 Rs = 1 US $
a cheapest in the world
b Maruti Suzuki in India

Positive factors contributing to greater competition are, first, entry has been facilitated by removal of the requirement for obtaining licenses for investing in the automobile sector. The AIDP, as highlighted in the previous chapter, allows new entrants to import CKD cars at the same rate, 35 percent, as auto parts. As per the general Industrial Policy, a number of incentives are available to new entrants including 50 percent initial depreciation allowance, 100 percent

foreign equity and full remittance of profits and low customs duty of 5 percent on imported plant and machinery. It is possible, however, that the limited size of the market in Pakistan has restricted entry.

Further, import of used and reconditioned cars has been liberalized, but only under gift, personal baggage schemes and transfer of residence. But this policy has been revised year-to-year, especially with regard to provisions for depreciation.

What is the net effect of the negative and positive factors on competition among car OEMs? Table 5.3 gives estimates of profitability, measured as the return on capital employed, in different sub-sectors. In the case of car assemblers, the rate of return was very high in 2005, during a period of great buoyancy in demand. Since then it has fallen sharply to 12 percent, highlighting the cyclical nature of this industry. Nevertheless, car manufacturers continue to enjoy higher rates of profit than for the private sector as a whole.

The Competition Commission of Pakistan (CCP) has prepared a report evaluating competition in the automobile industry. The report concludes that

> 'The automotive industry is facing problems of low volumes/ underutilization of capacity, high prices, late delivery, premium and slow transfer of technology. Therefore, requirement of effective competition is much more pronounced now than ever before to keep the industry afloat.'

The report proposes the following measures to improve competition:

(i) Tariff on import of new cars in all segments of the market be reduced to bring protection to manufacturers down to 5 – 10 percent. We evaluate this proposal in the next chapter.

(ii) Change in the market supply chain and terms applicable to purchasing vehicles. In particular, there should be legal prohibition on payment of premium.

TABLE 5.3: TRENDS IN PROFITABILITY OF OEMs AND AUTOPARTS MANUFACTURERS

(%)

Companies Producing	2001	2005	2010
Motor Cars	15.2	45.0	12.1
Trucks/Buses	13.7	26.8	-6.8
Tractors	54.7	50.2	64.5
Motorcycles	25.2	37.8	23.2
Auto Parts	26.0	40.0	22.2
All Companies Publicly Quoted in KSE	**8.5**	**23.9**	**9.4**

Source: SBP

(iii) Consistency in policies, such that frequent changes in taxation, deletion and import policies are avoided.

The report has been placed on the website of CCP for public comments.

Buses/Trucks: This sector effectively faces competition from imported CBUs in the presence of relatively low rates of customs duty.

Tractors: There are only two major domestic suppliers – Al-Ghazi and Millat tractors. Imports of built-up units have been virtually eliminated by 2010-11. The HHI for this sector is also relatively high at 3795 (see Table 4.1). Further, despite generally depressed demand conditions, sales of tractors have continued to grow and the rate of capacity utilisation is high at 110 percent (see Table 2.3). As such, there is no evidence of a policy of output restriction being followed to raise prices.

However, the industry has been the beneficiary of a differential taxation policy whereby tractors had been zero rated from the general sales tax. This is one of the factors contributing to high rates of return. According to Table 4.3, among the various sub-sectors, profitability is the highest in the tractor industry at above 50 percent on capital employed. In fact, contrary to the general trend, profitability has increased in 2010 and reached the peak of 65 percent.

The government introduced the 16 percent sales tax on tractors in the latest Budget of 2011-12. But, following a slump in sales, this decision has been reversed and the GST rate has been reduced to 5 percent.

The primary way of increasing competition in the tractor sub-sector is to promote new entry, given the high rate of capacity utilisation currently. Also, as the economy picks up, the standard GST rate should be applied to this industry.

Motorcycles: This is the only segment of the automotive sector where the market is quite competitive. The HHI is very low at 1170, below the threshold level of 1800. The entry of a large number of indigenous units and assemblers with cheap Chinese technology has greatly increased competitive pressures within the industry. Real prices have consequently fallen sharply and despite a slowdown in the economy sales have shown rapid growth in recent years. The features of this sub-sector need to be replicated in other parts of the automotive sector. Given the relatively large size of this market, approaching 2 million units and relatively high protection, there has been space for entry of new units. As such, the rate of profit of the leading unit, Honda, remains relatively high in 2010 (see Table 4.3), second only to the tractor companies.

Auto parts Manufacturers: This is the most fragmented part of the automotive sector with a very large number of units, although there are specialised 'niches' and some manufacturers are licensed with OEM while others primarily sell in the replacement market. In the absence of data, it is not possible to quantify the HHIs in different segments of the auto parts market.

Auto parts manufacturers enjoy relatively high rates of protection, but it is unlikely that they are able to hike up their prices to levels corresponding to world prices plus tariffs for a number of reasons as follows: (a) technical specifications, quantities and delivery times are typically solely determined by the assembler (b) the assembler often provides the production technology including the equipment needed to produce the parts (c) the assembler is the sole buyer of the parts (d) the assembler frequently has the capacity to produce the parts in-house if not satisfied with the general performance including the quality and prices of the parts supplier (e) very few parts suppliers have alternative markets for their products and rely almost entirely on one or at most three of the major local Japanese assembly operations for sales (f) the production/sales of most parts suppliers are far below the levels required to make exports profitable, and in any case exports would generally have to start with supplies to the multi-national operations of the same companies being supplied in Pakistan (g) given the lack of enforcement of proper quality standards, there is intense competition in the replacement market for repairs and maintenance of existing vehicles.

Overall, there appears to wide variation in the extent of competition among different segments of the automotive sector. Competition is limited in the market for cars and is most intensive in motorcycles, with other sectors falling in between. The CCP needs to be pro-active in ensuring greater competition among car and tractor manufacturers. In addition, there is need to review other policies, laws and regulations. We focus on the tariff regime in the sector in the next chapter.

REFERENCES

Asian Development Bank (2008). *Pakistan Private Sector Assessment.* Manila.

Competitiveness Support Fund (2007). *Policy Analysis on the Competitive Advantage of the Motorcycle Industry in Pakistan: Problems and Prospects.* Competition Commission of Pakistan and the United States Agency for International Development, Islamabad.

ESCAP (2002). *Development of the Automotive Sector in Selected Countries of the ESCAP Region.* United Nations; New York.

Federal Board of Revenue*. Annual Report.*

Federal Bureau of Statistics. *Census of Manufacturing Industries (CMI) of 2005-06*.

Federal Bureau of Statistics. *Pakistan Statistical Year Book*.

Felipe J. (2007). *A Note on Competitiveness and Structural Transformation in Pakistan.* Asian Development Bank.

Ghani, Javed A (1997). *Automobile Deletion Policy: An Analysis.* Working Paper No. 15, Centre for Management and Economic Research; Lahore University of Management Sciences; Lahore.

Ministry of Finance. *Pakistan Economic Survey.*

Mirza, M. Shahrukh and IrfanAnjum Manarvi (2011). *Analysis of Technological Advancements in Pakistani Automobile Car Industry.* Global Journal of Research in Engineering Volume 11 Issue 3 Version 1.0, Global Journals Inc. (USA)

Nag, Biswajit, Saikat Banerjee and Rittwik Chatterjeey (2007). *Changing Features of the Automobile Industry in Asia: Comparison of Production, Trade and Market Structure in Selected Countries*. Asia-Pacific Research and Training Network on Trade, Working Paper Series, No. 37.

Nagao, Hirofumi (December 7, 2010). *Why importing used cars may be a bad idea.* Business Recorder.

Niazi, Javeria and Maham Mustafa Bhatty (2011). *Study on Regional Value Chain: Case Study for the Automobile Sector*. Institute of Public Policy, Beaconhouse National University; Lahore, Pakistan.

Pursell, G., Khan, K., & Gulzaar, S. (2011). *Pakistan's Trade Policies: Future Directions.* Prepared for the Planning Commission, Pakistan.

Saeed, Muhammad (2004). *Pakistan & WTO.* World Trade Review.

SMEDA (2005). *Cluster Diagnostic Study: Auto Parts Cluster Lahore.* Small and Medium Enterprise Development Authority, Government of Pakistan; Lahore.

State Bank of Pakistan. *Balance Sheet Analysis of Joint Stock Companies Listed on the Karachi Stock Exchange.*

United Nations Conference on Trade and Development (2007). *Elimination of TRIMS Experience of Selected Development Countries.* United Nations, Geneva.

World Bank. *World Development Indicators.*

Ismail, Z. (2011). *Vehicle User Cost.* Islamabad.

The International Growth Centre (IGC) aims to promote sustainable growth in developing countries by providing demand-led policy advice based on frontier research.

Find out more about
our work on our website
www.theigc.org

For media or communications
enquiries, please contact
mail@theigc.org

Subscribe to our newsletter
and topic updates
www.theigc.org/newsletter

Follow us on Twitter
@the_igc

Contact us
International Growth Centre,
London School of Economic
and Political Science,
Houghton Street,
London WC2A 2AE

IGC
International
Growth Centre

DIRECTED BY
LSE
UNIVERSITY OF OXFORD

FUNDED BY
UKaid
from the British people

Designed by soapbox.co.uk