

Downturn and Stagnation factors of Automotive Market in Pakistan*

TAKANAKA Kimio[†]

Abstract

Pakistan has about 180 million people. More than 70% of population is under 35 years old and the average age is 20s in Pakistan. According to the report of the International Monetary Fund, the Pakistani GDP per capita will be over 1,500 USD. The economic success of BRICs is the center of public attention, but Pakistani economy is also worthy of note. Pakistan develops also one of the typical economic growth Asian countries. However, there are several policy failures in industrial policies or lacking industrial policy in Pakistan. These policy failures prevent the market mechanism working properly. In fact, Pakistan has about 180 million people. Scale of population is almost same as Indonesia and Brazil, but the vehicle holding per 1,000 persons of Pakistan is only 12 cars against 77 cars of Indonesia and 198 cars of Brazil. According to economic scale, such as population and GDP per capita, annual sales in Pakistan is too small to maintain (feed and clothe) the industry on annual sales.

Keywords: Automotive Policy, Industrial Policy, Market Mechanism

1 Introduction

Originally, this paper was written for the Government of Pakistan as a part of the policy recommendation. Government of Pakistan announced 'Vision 2025,' as the policy aiming for advancing the industrial structure and the heavy chemical industrialization. Pakistan government, in the Vision, is to establish the economic and industrial structure to enable sustainable, spontaneous and comprehensive growth through improving productivity and promoting investment in private sectors. However, policy makers should recognize the real situation before they introduce new policies, such as current policies working properly or not. We think there are several policy failures and malfunctions. In this paper, focusing on the automotive sector; one of the biggest industrial sectors in Pakistan, we try to evaluate the policy

* This paper is the background information of my policy recommendation to the Government of Pakistan. According to the request from the Government of Pakistan, I was dispatched to Pakistan during 2014-2015 by the Government of Japan, as a Government Policy Adviser to Pakistan. I wrote the policy reform recommendation of automotive policy, as a government policy adviser.

[†] Professor, Graduate Institute for Entrepreneurial Studies.

effects statistically, and we also analyze the real effect and side effect of current industrial policies and the true nature of the problem of automotive sector in Pakistan.

2 Stagnation of Manufacturing in Pakistan

Many policy makers agree that development of automotive industry is very important for industrial development each countries. Therefore, it is very important for developing countries to adopt automotive industry development program as the main policy of industrial policies. Automobile has more than 300 essential parts, and automobile industry requires broad suppliers from tier 1 to 3 or 5 under assemble makers.

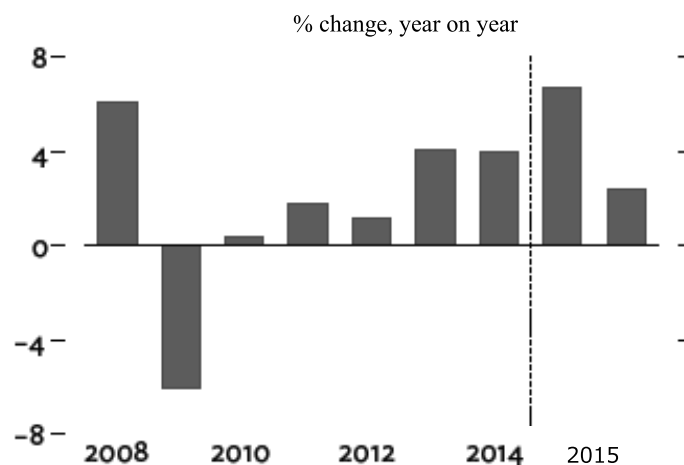
There are three major passenger car makers in Pakistan. Labor intensive production is the most distinguishing feature of automotive industry in Pakistan. Every operation unit is designated for use of human power, not for machines. Automotive plants in developed countries are in general designated for machine tools and their operators, and capital intensive production is the most distinguishing feature.

Every economy has three factors of production; labor, land and capital. The factors of production are also called resources. If a country wants to develop the economy, government of the country use the domestic resources effectively. Using theoretical framework of Economics; such as concept of comparative cost, we can explain labor excess economy whose comparative cost of labor is cheaper than any other factors fits labor intensive production, on the other hand, labor shortage economy, such as Japan, needs labor saving production. Let us suppose total of factors of production in every country is 3, each factor level of Japan is 1.2 labor, 1.1 land and 0.7 capital, on the other hand, Pakistan must be 0.5 labor, 0.6 land and 1.9 capital. That means Japan must mainly use capital in production and Pakistan must mainly use labor in production. Therefore, labor intensive production is reasonable in Pakistan¹.

In addition, there is few middle income family in Pakistan, and industrial production can't grow the domestic market in Pakistan. To increase the middle income family, the employment opportunity must be created more and more. Employment growth is necessary for market growth in Pakistan. Unfortunately employment level of manufacturing in Pakistan is still low. In fact, the share of manufacturing in total employment is, at 14.1% (industry: 20.7%), dwarfed by 45.1% in agriculture and 34.2% in services².

The economic transformation of Pakistan has largely bypassed manufacturing as it evolved from agriculture to services, most of the services with low productivity. The share of manufacturing in GDP increased from 13.4% in FY1995 to 21.1% in FY2013 but then subsided to 13.5% in FY2006, changing little since. Within manufacturing, large-scale manufacturing comprises 10.9% of GDP while small-scale industries amount to only 1.7%³.

Table 1 . Growth in large-scale manufacturing



Source: State Bank of Pakistan.

The weak performance of manufacturing reflects industry-specific problems, security issues, and poor human development in infrastructure sector and energy shortages. According to the Asian Development Bank, historically, the sector's performance has been damaged by a number of factors: poor infrastructure, cumbersome regulations, low productivity, distortions arising from industrial policy, a trade policy favoring import substitution and biased against exports, and limited access to finance, especially for small manufactures.

3 Lack of Innovation and New Technology

Manufacturing has undergone little diversification or deepening. The sector largely produces items with little value added, although the share of higher-technology manufacturing increased 17% of the total in 1970 to 28% in 2013, it lags the 58% achieved in Malaysia, 55% in Thailand, 50% in China. Notably, electronics occupied only 2.8% in FY2014 of large-scale manufacturing in Pakistan and engineering goods a strikingly small 0.6%.

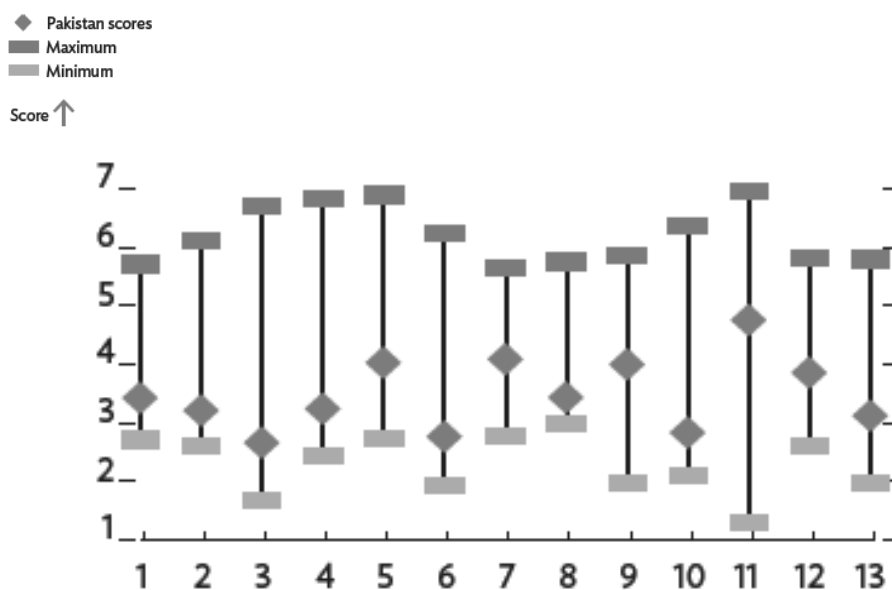
Most of the growth in manufacturing in Pakistan arises from higher inputs. Total factor productivity growth was only 1.6% in the 1990s and even slower at 0.9% from 1998 to 2013. Most companies lack incentive as well as capacity to innovate. In some key sectors, companies are risk-averse, due to a lack of competition and they often benefit from tax and tariff exemptions.

The Global Competitiveness Report 2014-2015 of the World Economic Forum ranks Pakistan at 129 of 144 countries surveyed⁴. Very low ranks on most of the components of the index indicate weakness in global competitiveness and in many areas necessary for rapid economic growth.

At the low stage of the technical levels for manufactured goods, usage of value-engineering is necessary for industrial development. For example, value-engineering is the typical production

style of Suzuki's overseas operation⁵. In general, when automakers plan to build up overseas operation, they ask their tier 1 or 2 suppliers to join their operation overseas. Automakers want to reduce their operational costs, especially parts. If they can't purchase the essential parts overseas, they must import these parts. Import of parts takes many costs and causes risk factors for automakers. Then, they try to avoid importing parts within minimum level. Suzuki's overseas operation use local parts as much as possible. Suzuki redesigns the models which can be made by local parts as much as possible. Every Suzuki's overseas operation has typical localized model, such as Mehran in Pakistan. Current local contents level is 72 to 80 %, and Suzuki purchases parts from more than 100 Pakistani vendors. Value-engineering is useful for industrial development, but it also has weak point. As value-engineering creates the demand for present technical level parts, auto vendors are busy to produce their present level parts, instead of research and development of parts. Suzuki's Mehran is the typical example, as we know. It is easy to criticize Mehran, but it is not an essential problem. The most important thing is to improve the domestic production and the technical level of manufactured goods.

Table 2. Pakistan scores in Global Competitiveness Index 2014–2015



1 = Global Competitiveness Index 2014–2015, 2 = institutions, 3 = infrastructure, 4 = macroeconomic environment, 5 = health and primary education, 6 = higher education and training, 7 = goods market efficiency, 8 = labor market efficiency, 9 = financial market development, 10 = technological readiness, 11 = market size, 12 = business sophistication, 13 = innovation.

Note: The index scale runs from 1 (worst) to 7 (best).

Source: World Economic Forum. *The Global Competitiveness Report, 2014–2015*.

The environmental improvement must be progressed, while employment and production grow in Pakistan with usage of value-engineering. Enhancing industrial competitiveness will require that Pakistan address policy distortions, create a business-friendly environment with a stable macroeconomic framework, and improve infrastructure, access to finance, and human

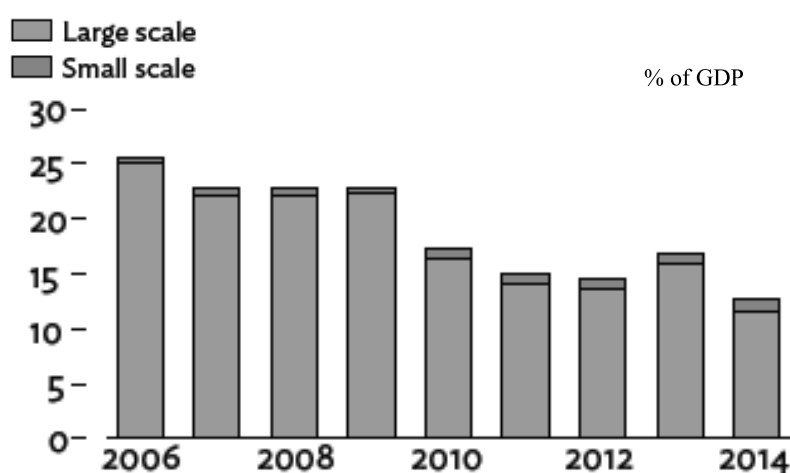
development.

4 Investment Promotion, as the Industrial Policy

As mentioned above, Pakistan is a typical labor excess economy. That means Pakistan is also a capital shortage economy. In fact, domestic finance in Pakistan is very tight for small manufacturing, as also mentioned above. According to the report of Japan External Trade Organization (JETRO) in 2013, the share of labor cost in manufacturing in Pakistan is less than 10%, and it is the lowest level in Asian nations⁶. If the Government improves the domestic financial climate, especially the easing of domestic finance for manufactures, Pakistan will easily to introduce foreign manufactures. However, the share of manufacturing in total investment in FY2014 has declined by half since FY2006.

Foreign manufactures have been concentrated in oil and gas and, since sector liberalization and privatization, in finance and telecommunications. The high cost of doing business, including the disproportionate burden of taxes, deters investment in manufacturing. The federal budget for FY2015 cut the corporate income tax rate from 34% to 33%, but this is still high level compared with competitors of Pakistan⁷. Deficient infrastructure remains a key constraint on investment, and shortages of electricity and natural gas are binding constraints that force industries to operate below capacity. In fact, according to JETRO's research report in 2013, the operational problems in Pakistan are the fluctuation of exchange rate against US dollars, shortages of electricity, inflow of foreign low cost products into local market and difficulty in procurement of raw materials and parts from local market.

Table 3. Manufacturing shares in investment at current prices



Source: Ministry of Finance. *Pakistan Economic Survey 2013–2014*.
<http://www.finance.gov.pk>

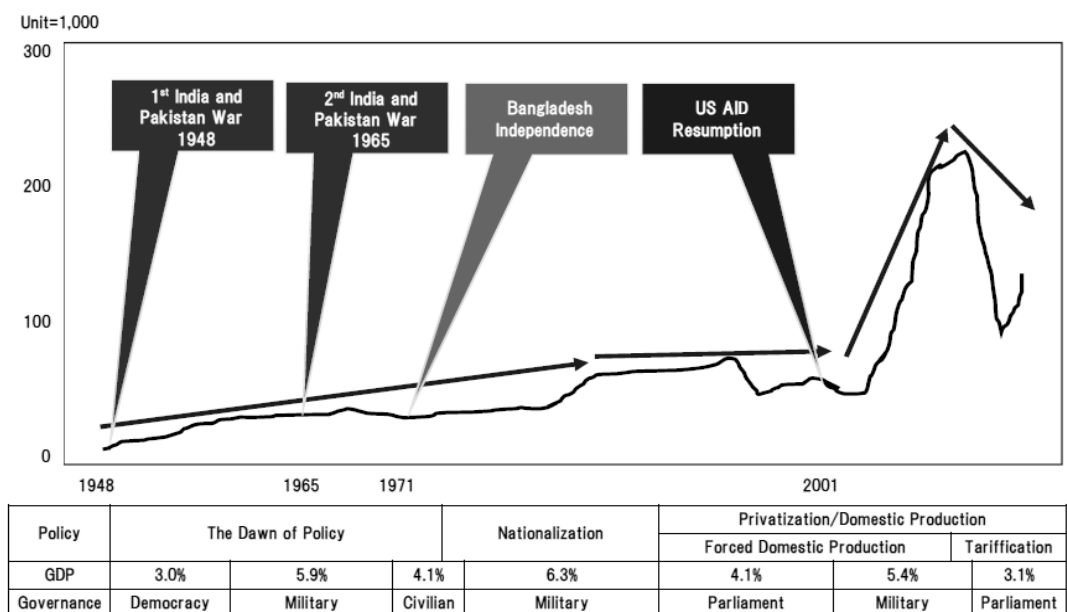
The policies and legislations for investment promotion are necessary, but essential. The first priority may improve the domestic infrastructure including shortage of energy, logistics and security issues.

5 Historical Trends of Automotive Sales in Pakistan

To carry out the more growth, the manufacturing sector, especially the automotive industry which has the very wide component and parts-supply industries and very high level of added value, is regarded as the center of the growth policy.

About Automotive policy in Pakistan, nationalization policy was introduced by civilian government in 1970s, and automobile sales grew up 50,000 units in 1980s. After decade of military government, government was shifted to the parliamentary democracy, and new government changed the automotive policies from nationalization to privatization. Pakistan government introduced Import substitution industrialization policies to manufacturing industries, and automotive industry was also privatized and domestic production was enhanced in the end of 1980s. In 2001, US economic assistance was resumed, and it gave good impacts to national economy in Pakistan. Economic growth rate from the end of 1990s to the beginning of 2000s raised to more than 5%, and automobile sales increased more than 200,000 units. However, so called Lehman Shock, bankruptcy of Lehman Brothers caused international financial crisis in 2008, and Pakistan economy was dropped drastically. Automobile sales was also drastically decreased almost half of the previous market volume.

Table 4. Vehicle Sales Trends, Automotive Policy and Governance



Note: This figure is made by author, using the sales data from Pakistan Automobile Manufacturers Association and the policy trends from the government documents.

6 The True Nature of the Problem of Automotive Sales

Automotive industry is highly volume driven industry due to heavy fixed costs for research and development, production equipment and network for distribution and after sales services. The problems facing the local industry are mostly attributable to insufficient volume. It is said that production capacity of an efficient car assembling line is about 1,000 units per day running at 1 minute takt time and 2 shifts per day, or an efficient sales for one engine is 100 thousands per year. However, total monthly production of 3 main automobile manufactures in Pakistan is about 3,230 cars in 9 models in 2013.

The vehicle sales 2014/ 2015 reached 151,134 cars, and exceeded previous year's sale of 118,102 cars. In 2015, Indus Motor introduced fully model changed new Corolla. The good sales resulted from the model change of Corolla. New Corolla has a good influence on the vehicle sales in Pakistan⁸. In addition, there was another good impact from Punjab Provincial government in 2015. Punjab government purchased Pak Suzuki's Bolan and Ravi for the youth employment scheme. The good sales were also supported by the drop of interest rate to 7%. The drop of interest rate gave a boost to the consumers to buy cars with a bank loan.

Table 5. Monthly Production of Vehicles in Pakistan

Monthly production	Number of models	OEM	Monthly production
More than 2,000 units	2	Suzuki	5,308
1,000 – 2,000 units	3	Toyota	2,344
Less than 1,000 units	4	Honda	1,967
1,077 units/model	Average		3,230 units / OEM

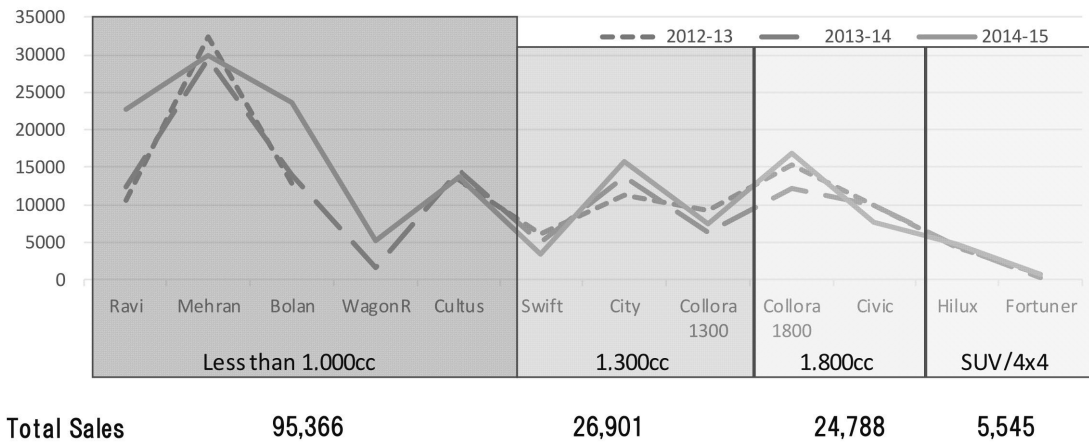
Source: Pakistan Automobile Manufacturers Association, *Automotive Production and Sales in Pakistan 2013/14*.

The vehicle market has roughly four segments, such as less than 1,000cc class, 1,300cc class, 1,800cc class and sports utility vehicle (SUV)/ 4 wheel drive (4x4) models. Using the segments, we can explain the market scale of less than 1,000cc is 67 billion rupees, 1,300cc is 43 billion rupees, 1,800cc is 55 billion rupees and SUV/4x4 is 18 billion rupees.

As mentioned above, Pakistan has about 180 million people. Scale of population is almost same as Indonesia and Brazil, but the vehicle holding per 1,000 persons of Pakistan is only 12 cars against 77 cars of Indonesia and 198 cars of Brazil.

According to economic scale, such as population and GDP per capita, annual sales in Pakistan is too small to maintain (feed and clothe) the industry on annual sales. Using the population, GDP per capita and annual vehicle sales of 174 countries, we estimated the correlation between GDP and vehicle population.

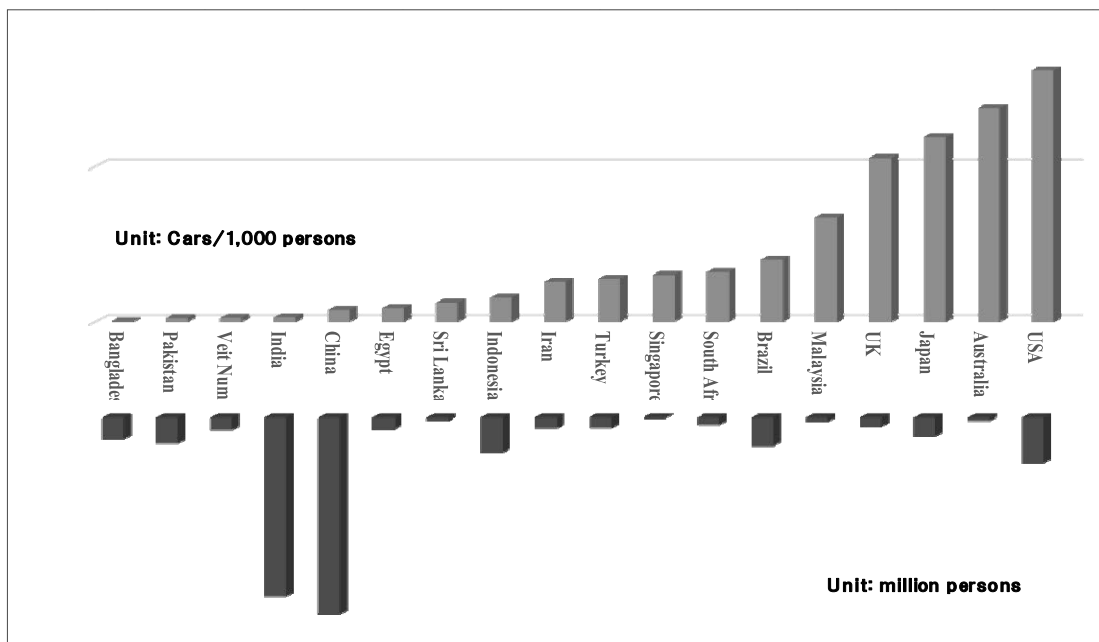
Table 6. Monthly Production of Vehicles in Pakistan



Source: Pakistan Automobile Manufacturers Association, *Automotive Production and Sales in Pakistan 2013/14*.

Note: Unit in this figure is car(s).

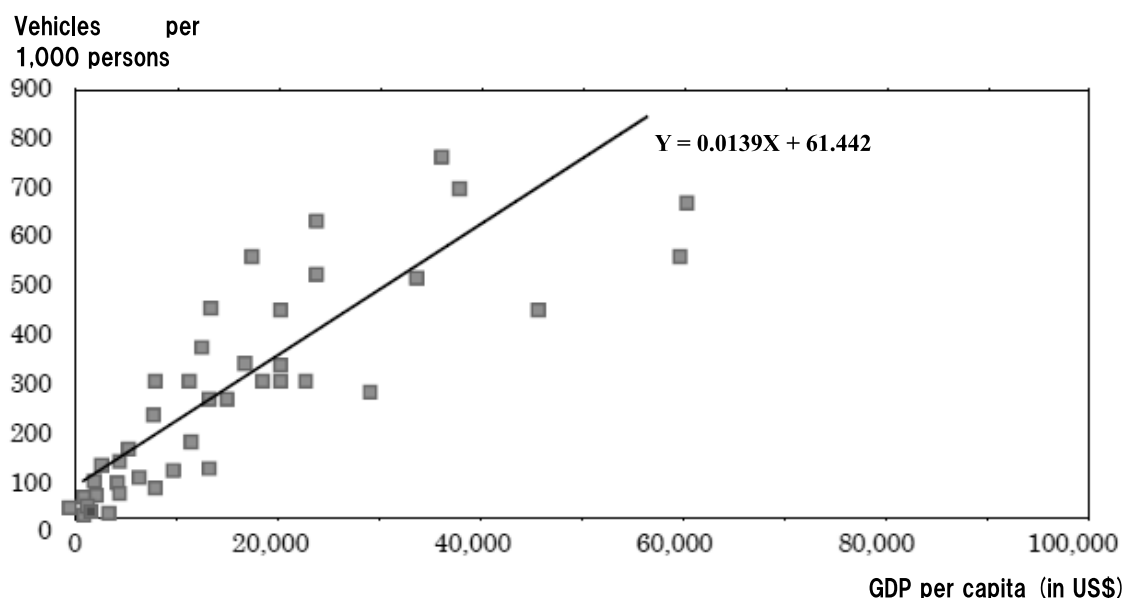
Table 7. Vehicle Holding and Population in 2010



Source: World Bank, *World Development Indicators*.
 JAMA, *World Vehicle Statistics*.

When approximated with the above estimation, 480,000 new vehicles per year, excluding motorcycles, could be sold in a country of the scale of Pakistan economy. However, the vehicle sales market is still around 150,000 new vehicles annually. The Automobile market in Pakistan is clearly stagnating.

Table 8. Correlation between GDP and Vehicle Population



	Population (X 1,000)	GDP per capita (US\$) = X	Vehicles per 1,000 people = Y	Number of Vehicle Owned
Actual in 2010	171,730	X = 1,030	Y = 75,8	13,010,093
Approximation				
Actual in 2010	182,590	X = 1,275	Y = 79,2	14,454,037
Approximation				
Possible increase of vehicle population in 3 years				1,443,944
Possible annual vehicle sales				481,315

Source: World Bank, *World Development Indicators*.
 JAMA, *World Vehicle Statistics*.

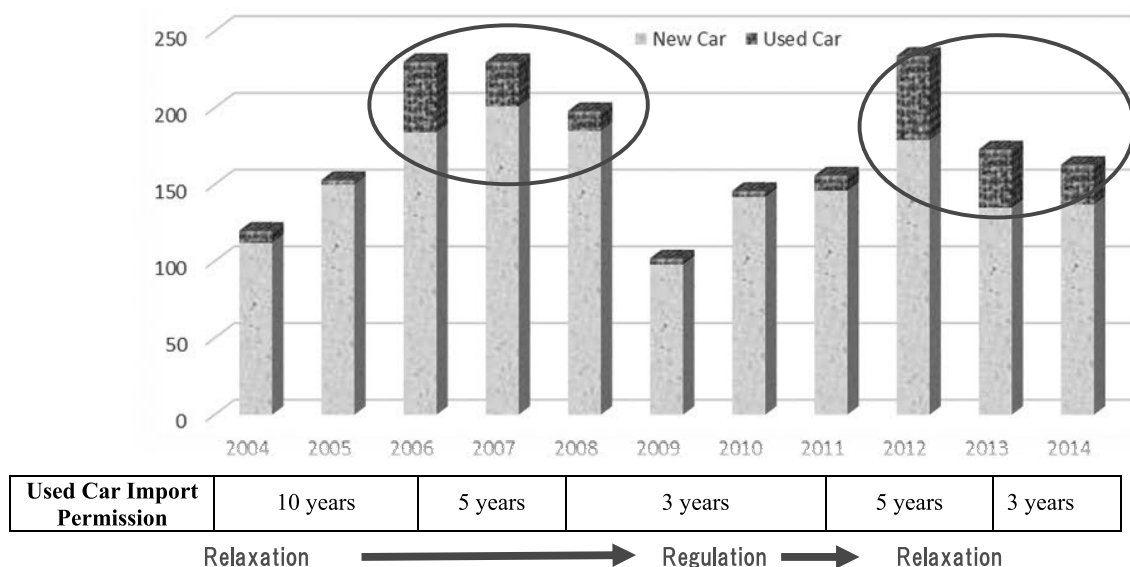
Growth in durable consumer goods market, such as automobile market, needs support of income factors, like stable growth in employment and increase in disposable income. It is important that there isn't institutional barrier, such as limitations on the holdings of vehicles. There is surely no such kind of barrier in Pakistan, but the used car policy and high tax rate including sales tax may become an institutional barrier for market growth.

7 The Nature of Used Car Policies

Used car importing policy has repeatedly between regulation and relaxation. Using actual data, relations between new car sales and importing used car is indicated as a figure below. Used car importing policy was relaxation between 2000 and 2008, and the policy was changed to regulation in 2008. From 2008, used car import was drastically dripped, but imports increased again from 2012 after policy change in 2011.

In fact, the case of the lowest price level model, like Mehran, tax volume occupies one third of retail price, and 50% deduct of tax volume for these models increases roughly 40,000 vehicles from current market scale. On the other hands, market mechanism, as the change in price directly affects market scale, may not work in automobile market.

Table 9. Market Change and Used Car Policy



Source: Pakistan Automobile Manufacturers Association, *Automotive Production and Sales in Pakistan 2013/14*.

In general, when people want to prepare for an unforeseen and emergency for security reason, market mechanism may sometimes not work in these countries. Then, we try to analyze the automobile market in Pakistan, using the actual data. Since January 2008 through June 2014, retail price of vehicles in Pakistan were lowed three times, March – October 2009, June – October 2011 and March – June 2014.

Table 10. Price Elasticity of Demand for Vehicles

	01/08		03/09		10/09		01/11		10/11		03/14		06/14
Price	100	↗	135.9	↘	125.5	↗	147.4	↘	147.0	↗	185.6	↘	181.6
Sales	13,492	↘	6,754	↗	11,958	↘	6,850	↗	14,826	↘	11,362	↗	11,957
Price Elasticity	Less 1,000cc		11.06			28.29			32.38				
	All cars		2.66			12.25			7.46				

Source: Pakistan Automobile Manufacturers Association, *Automotive Production and Sales in Pakistan 2013/14*.

This table proves that sound market mechanism is working, and incentives by the government action, such as tax reduction and subsidies, will have the same effect. Then, price reduction, including cost reduction in production side and tax reduction in sales side, does work for market growth in Pakistan. For the cost reduction in production, manufacturers try to create the scale

economy. The scale economy increases volume benefits. Volume increase will enable automobile manufacturers to rationalize or modernize their production operations, bring the new models and expand the localization. For auto-parts suppliers, they will be able to invest in new technologies and equipment for quality and productivity improvement and further localization. Therefore, vehicle prices will be lower due to reduced burden of fixed costs. Ripple effects on the national economy to generate additional employments and revenue for national exchequer, for example, multiplier effect of automotive industry are 2.82 in Japan.

In Pakistan, tax reduction is difficult choice for the government, because the government must make up the deficit in fiscal balance. As the public sector must control the fiscal deficit, the public sector takes liquidity from national economy. Then, the government could not introduce tax reduction in Pakistan. However, there are possible policies to adopt, such as progressive tax system, instead of flat tax system. Tax incentives based on fuel efficiency, emission and safety should be considered to encourage model changes that Pakistan government strongly requests for automobile manufacturers and competition for the better. Creation of new taxes on ownership of vehicle are also regarded policy options. There are a lot of special taxes for particular application, such as compensation for wear and tear roads and bridges caused by vehicles and air pollution caused by vehicles not comply with emission control laws, like EURO II. The revenue from the new taxes can be used to fund incentives for stimulating policies, thus flexibility in policy-making will be enhanced.

8 Final Remarks: True Nature of the Problem is Government Policy Failure

As we argued above, Pakistan is one of potential growth market and the market mechanism is fully equipped in the economy. However, the lack of healthy income distribution and policy failures prevent market mechanism from working correctly. Because of the lack of healthy income distribution, the owners of new cars are limited about 10% of national population in Pakistan. The lack of income distribution is caused by the serfdom and sharecropping since British colonial era. The Government of Pakistan has continued to create the middle class and correct the distorted income distribution, but these efforts are still on the way. Policy failure, like used car policy, is another problem to prevent market mechanism from working. As we mentioned above, Pakistan government, in the Vision 2025⁹, is to establish the economic and industrial structure to enable sustainable, spontaneous and comprehensive growth through improving productivity and promoting investment in private sectors. To improve productivity and promote investment in private sectors, the Government must rethink and correct the current policies.

Endnotes

- 1 The United Nations, *Yearbook of Statistics*, various years.
- 2 The State Bank of Pakistan, *Economic Data*, 2015.
- 3 The State Bank of Pakistan, *Economic Data*, 2015; The Asian Development Bank, *Key Indicators of Asia Pacific Member Countries*, 2015.
- 4 World Economic Forum. *The Global Competitiveness Report, 2014–2015*.
- 5 The original source of Suzuki's strategy and episodes in operation of Pakistan is from the interviews with the President Mr. Hirofumi Nagao of Pak Suzuki.
- 6 Japan External Trade Organization, *Azia Shinshutsu Kigyo Chosa*, 2013
- 7 Ministry of Finance. *Pakistan Economic Survey 2013–2014*.
- 8 Pakistan Automobile Manufacturers Association, *Automotive Production and Sales in Pakistan 2013/14*.
- 9 Government of Pakistan, Planning Commission, *Vision 2025: One Nation, One Vision*, Ministry of Planning, Development and Reform, 2013.

Reference

- 1 The Asian Development Bank[2015], *Key Indicators of Asia Pacific Member Countries*.
- 2 Engineering Development Board, Government of Pakistan[2015], *Draft Automotive Development Policy: ADP (2015-2020)*.
- 3 Government of Pakistan, Ministry of Industries[2008], *Production and Special Initiatives, Auto Industry Development Programme (AIDP)*, Engineering Development Board, January, 2008.
- 4 Government of Pakistan, Planning Commission[2001], *Vision 2030, Ministry of Planning, Development and Reform*.
- 5 Government of Pakistan, Planning Commission[2013], *Vision 2025: One Nation, One Vision, Ministry of Planning, Development and Reform*.
- 6 Japan Automobile Manufacturers Association, *World Vehicle Statistics*, various years.
- 7 Japan External Trade Organization[2013], *Azia Shinshutsu Kigyo Chosa*.
- 8 JETRO, Pakistan Office[2014], *Pakistan Seiji Keizai Sangyo no Tebiki*.
- 9 Pakistan Automobile Manufacturers Association[2015], *Automotive Production and Sales in Pakistan 2013/14*.
- 10 Takanaka, Kimio[2015], "Rethinking Marketability and Market Stagnation of Automobiles in Pakistan," *Industrial Bulletin*, Vol. 14, No. 6.
- 11 The United Nations, *Yearbook of Statistics*, various years.
- 12 The World Bank[2015], *World Development Indicators*.