

A Research on Industrial Structure Evolution and Adjustment in Pakistan

Zhao Yulin

School of Economics
Wuhan University of Technology
Wuhan, PO box 430070
P.R. China.

Muhammad Mudassar

School of Economics
Wuhan University of Technology
Wuhan, PO box 430070
P.R. China.

Abstract

Industrial structure transforms and evolves with the changes in the overall economic base. In the globalized world economy with rapid changes in technology and innovations every industry has to keep itself on the track of evolution to reap maximum gains. In this paper we have analyzed the structure of industry and economy vis-à-vis primary, secondary and tertiary industries in Pakistan. Characteristics and salient features of the industry at different strata are considered and ways to evolve and adjust in its present forms are discussed. More recent trends during the last decade after year 2000 and historical trend of industrial structure adjustment since its birth as an independent country in 1947 are discussed in this paper. Certain adjustments and policy measures are required to optimize its industry and stay competitive. It should make adjustment according to its vast resource base, human capital and prevalent economic features to bring about enormous structural changes in its industry.

Key Words: Industrial Structure, Adjustment, Development, Pakistan.

1. Introduction

Industrial structure describes the output and input relationship in various industrial strata. Proportion of production elements in different industries and their mutual interaction is very important for determining the optimum utilization of resources. In the industrialized economy it defines the parameters for growth and development in the economy (K.S. Guo, 2001). Modern economies or developed countries are constantly characterized by changes in their investment structure and nature of growth and development of these countries is mostly characterized by perpetual adjustments in their industrial structure (Wang Song-sen, 2003). Since the advent of 21st century Pakistan's investment and macroeconomic environment is affected adversely owing to several social and political factors. This has shaken the very foundations of the industrial structure in the country. More particularly since 2001 incidence of twin tower attacks and participation of Pakistan in war against terrorism has affected the economy internally and externally.

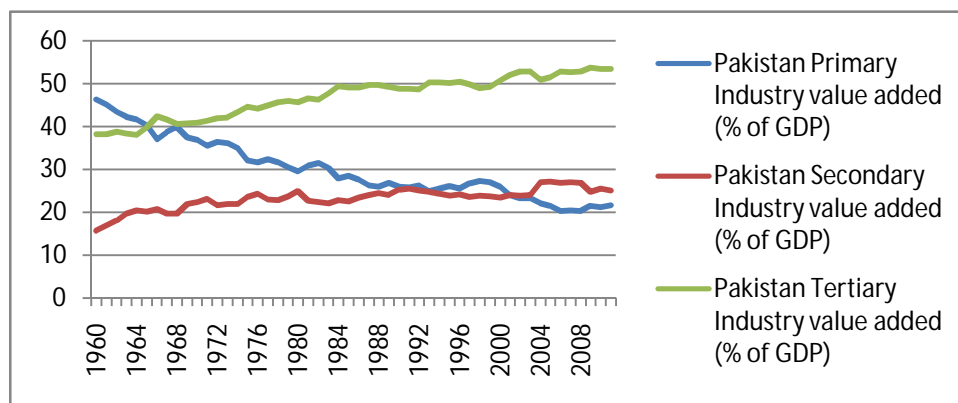
To meet the increasing demand of huge population, energy consumption requirements keeping in consideration the environmental and infrastructural rudiments there is a strong need to make adjustments in the industrial structure (Cao Yu-shu, 2006). With changes in the world economy in globalized aspects we need to regulate the industrial structure of Pakistan in coherence with available resources. Pakistan is a developing country and with a large portion of population associated with agriculture needs to furnish its industrial structure requirements in coherence with other factors; like strengthening the agriculture foundation, improve small and medium enterprises; rational distribution of resources in spatial aspects and develop in harmony with other regions along with development of high-tech based industry (Shabbir, T., A.H. Khan, 1991). Pakistan has a great potential to learn and adapt to the changes in the industrial structure. It has to make peculiar arrangements to meet ever growing demand, narrow down the spatial imbalance of industrial structure and realize industrial improvement. Government role is very critical in determining the path and direction through macro-economic management and encouragement of fair competition. A prudent policy categorized with the fundamental changes in industrial structure adjustment and optimization can bring magnificent results in sustainable economic development of Pakistan.

In this paper, we will discuss some existing problems in the industrial structure of Pakistan, its evolution over the years and which adjustments we may inculcate to optimize the target gains in its structure. The parameters of growth and development especially in the developing countries like Pakistan are determined by the patterns of economic outlook of the industry.

2. Industrial Structure Evolution in Pakistan

Before independence in 1947, there existed almost no industrial base in Pakistan as compared to India, which have significant portion of subcontinent manufacturing units and industry. So a huge imbalance in industrial base was inherited to Pakistan by British Empire resulting in evident regional disparity. Contemporary economic growth is mostly adhering to industrial growth in that time, so a new born country with weak industrial base was facing serious repercussion for the industry and economy as a whole (Lall, S., J. Weiss, 2004). It was realized then and a prudent industrial policy was formed for the overall adjustment in the industrial structure according to available resources.

Fig. 1 Industry value added (% of GDP)

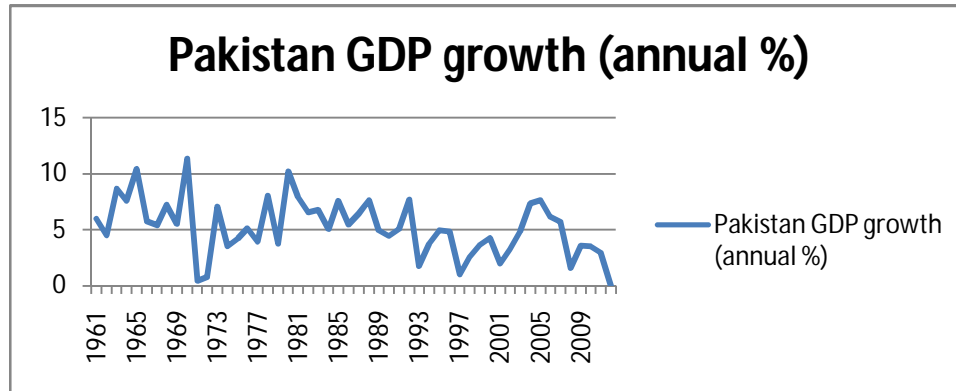


Source: World Development Indicators

First, major percentage of population is directly or indirectly involved with agriculture as its primary source, so development and sophistication of agriculture was prioritized accommodating associated population. Secondary industry, especially manufacturing of foods and daily consumption products were given importance in their linkage and processing with the primary or agriculture sector. This has led to interior industrial adjustment promotion of superior industry. Pakistan was gifted with raw cotton production, which leads to the 1st step in setting up of textile industry. Textile Industry for many decades was the source of foreign exchange earnings major trade contributions to the national exchequer. Textile industry was also the source of modernization and sophistication in overall industrial base (Ahmad, H., et al.2010). In 1960s, Pakistan was going on with its 5-year developmental plans to revive by developing agriculture as the basis, exerting the advantages, reinforcing the construction of infrastructure and fundamental facilities, outstanding science and technology education, promoting local investment and foreign co-operation in exploring resources comprehensively and increasing the value of manufacturing industry at its core.

We can see that share of Primary, Secondary and Tertiary industry in value added percentage of Gross Domestic product (GDP) have changed significantly in its pattern, slope and structure. Primary, Secondary and Tertiary industry were composed in an order of 1: 3: 2 which has changed significantly over the period of half a century into 3: 2: 1. If we closely observe the internal structure of each of the industry we can see that all the industries constituting Primary, Secondary and Tertiary industry have transformed in the right path as most of the developing countries would do in their pursue of development. Shrewd upward movement in Tertiary industry along with declining trend in Primary industry, and steady upward movement in Secondary industry are all desirable contributors to GDP and development of the economy. We can observe the changes in GDP growth rates are also accommodating the changes in the industrial structure of three industries.

Fig. 2 GDP Growth (1960-2012 annual %)



Source: World Development Indicators

The average annual GDP growth rate in Pakistan was fairly volatile in 1950-60s with a noticeable sharp increase in the late 50s as a consequence large scale industrialization followed by short periods of negative growth due to political and regional disturbances. The growth performance showed relative stability in the 1970s with a spike in the early 1980s reaching as high as 9%. However in the 1990s, GDP growth exhibited a declining trend particularly in the years 1993 and 1997 (see Fig. 2). We can see from Fig. 2 that changes in GDP are highly volatile over the period, while the direction and path of changes in industrial structure is typical in its nature. As a developing country with huge population depending on agriculture or Primary industry it is desired to make transformation towards Tertiary industry. Secondary industry is also showing the desirable upward movement in its contribution towards GDP which is a bit lethargic but on the path of optimization. The order of 3: 2: 1 in industrial structure adjustment is pivotal in directing economy on its path of development and growth.

3. Industrial Structure Adjustment and Transformation

The adjustment of industrial structure is an important factor of promoting economic development and it is constrained by the level of economic development at the same time. The process of industrial upgrading changes the yields of different industry sectors by technological progress and institutional changes, as a result, production factors flow between industry sectors gets in coherence so that the resources can be optimized. The general pattern of changes in industrial structure, to improve the proportion of secondary industry increased gradually at first and then gradually declined with the improvement of economic development (Chen et al. 2003).

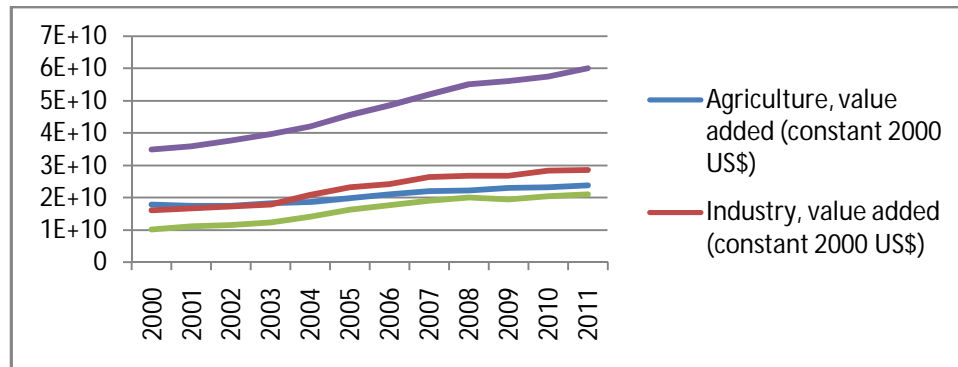
Table. 1 Industry value added (annual % growth)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Industry										
Primary Industry	-2.18	0.103	4.147	2.432	6.483	6.297	4.115	1.039	4.02	0.579
Secondary Industry	4.132	2.698	4.237	16.26	12.12	4.105	8.808	1.432	-0.1	6.094
Tertiary Industry	3.09	4.763	5.216	5.841	8.492	6.487	6.991	5.951	1.685	2.644

Source: World Development Indicators

Proportion of secondary industry exceeded primary industry since 2000. The average of the proportion of primary industry dropped 4.7% per year while the secondary industry increased 2.1% per year. Over the same period, the proportion of tertiary industry in GDP kept increasing slightly and stably from 41.1% in 1970 to 50.5% in 2005. Tertiary industry plays an important role for the development of the national economy of Pakistan. The output of service sector accounted for about 50% of the Gross Domestic Product.

Fig. 3 Industrial value added (constant 2000 US\$) Year 2000-2010



Source: World Development Indicators

We can see although there is volatility in annual percentage growth from Year 2000-2010. Still, value added of Industrial structure has a positive upward trend during the same time period with base year taken as 2000.

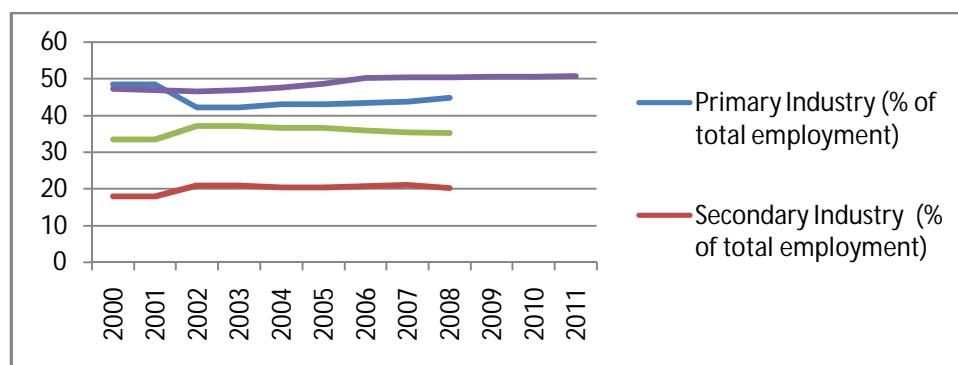
4. Characteristics and Analysis of Industrial Structure in Pakistan

Proportion of tertiary industry in Pakistan is always very significant than the proportion of primary and secondary industries, occupying a high position in the national economy; Secondly, the proportion of secondary industry did not improve much because the process of industrialization is relatively slow. Tertiary industry is growing at a consistent pace accommodating the huge skilled population at our disposal. Major problems are identified like weak infrastructure, energy crisis and political instability. Still the characteristics of industrial structure in Pakistan are very encouraging as:

- (1) It accords with the general law of industry structure evolution.
- (2) Secondary industry is in the middle stage of industrialization.
- (3) Tertiary industry needs to transform its internal structure need further upgrading according to modern science and technology education.
- (4) Primary industry also needs to modernize and agricultural productivity gains are required to meet the needs of growing population and decreasing agricultural employment.

Industrial structure employment driving functions tend to be in coherence with its adjustments and transformation.

Fig. 4 Employment in Various Industries (% of total employment)



Source: World Development Indicators

A stable shift in the employment structure makes industrial structure adjustments viable and vibrant. Such policies bring more equitable and inclusive growth.

4.1. Internal Changes in Primary Industry

Crop production was steady, and at the same time, agriculture was headed for livestock husbandry plantation improvement. Agro based industry was first developed quickly, which played a great role in increasing crop production, agricultural efficiency and farmer’s income.

4.2. Internal Changes in Secondary Industry

Raw material comparative advantages are very successfully converted into economic advantages, and achieved a lot in improvement of industrial structure. Five industries which contribute most to the economy including textile, tobacco, fertilizer, chemicals and medicine industry, whose total contribution rate amounts to 71.8% have evolved significantly in globalised aspects. The cotton-based textiles production dominates the entire manufacturing sector, but the level of agricultural production continues to decline. Pakistan is in urgent need for power generation equipment and improvement of infrastructure. If Pakistan can maintain political stability, it will maintain a good growth rate and develop many new industries.

4.3. Internal Changes in Tertiary Industry

With the exception of transportation, storage, posts and telecommunications, estate, the increasing rates of added value of Wholesale and Retail Trade, Catering Services, Financial and Insurance Industries, and others are all above 14%, with an increasing rate of 15.8%, 14.5% and 16.6% over the last year respectively. Wholesale and retail trade is the largest sector. The finance, banking and insurance industry show a strong momentum of growth in recent years. The development of secondary industry in Pakistan is slow, but it cannot be ignored with inflicting changes in the tertiary industry.

In the past few years, the successive governments in Pakistan implemented structural reform policies to liberalize the economy and make it more open, globalized and market oriented. The aim is to develop relatively massive and competitive industries, thus, form a new industrial system with the characteristics of proper resource allocation, specialized industries, industrial chains and linkages, environmental friendliness, close collaboration with the local economy and effective logistic system. A revamped management formula should be put forward to the adjustment of industries to be specialized and networked.

5. Conclusion and Suggestions

Formation of a Pakistan characterized industrial system is necessary to change the formula of economic growth. Decline in the proportion of primary industry and steady growth in secondary industry, along with significant rise of the proportion of tertiary industry is conducive to the growth of the economy. Only by minimizing the unnecessary leakages and maximizing the internal and external economies in the industrial structure of target industry, we can optimize the output level with same set of inputs. These contributions may be incorporated in the adjustment process of industry to make it more efficient with highest rates of returns and productivity. This will help to establish and promote the proper development of industries with stress on the scientific outlook and cultivate the development of industrial clusters. We need to convert the resource advantage into industrial advantage, including the development of modern service industry. Vast amount of human, natural, capital and energy resources should be utilized in an efficient way to enhance the quality of industrial structure. An industrial policy focusing on advancement of primary industry, striving for the upgrading of secondary industry and boost of tertiary industry will certainly strengthen the competitiveness of Pakistani characterized industrial structure.

References

- Ahmad, H., M. Mahmud, N. Hamid, T. Rahim (2010). A Strategy for Reversing Pakistan's Dismal Export Performance. Lahore School of Economic: Center for Research in Economics and Business, Policy Paper Series No. 1.
- Cao Yu-shu, (2006). Industrial structure adjustment based on Scientific Outlook on Development. *Chinese & Foreign Corporate Culture*, (2), 13.
- Chen Chun & GAN Chun-hui. (2003). Optimization of industrial organization and adjustment and upgrade of industrial structure. *Journal of Shandong Institute of Business and Technology*, 17(5), 25-28.
- K.S. Guo, (2001), Structural optimization and economic development, *Guangdong Economic Press, Guangzhou*.
- Lall, S., J. Weiss (2004). Industrial Competitiveness: The Challenge for Pakistan. Seminar Paper No 2. Islamabad: *Asian Development Bank Resident Mission and Asian Development Bank Institute*.
- Shabbir, T., A.H. Khan (1991). Mincerian Earning Functions for Pakistan: A Regional Analysis. *Pakistan Economic and Social Review*. 29(2).
- Wang Song-sen. (2003), Viewing the improving of investment structure from the angle of the upgrading of industrial structure in western region. *Shandong Agricultural*, (12), 112-118.