

# Structural Changes and Dynamics of Economic Growth in Pakistan

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## 1 Abstract

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The structural shift in the economy implies that the dynamics of sector shares (industry, service, and agriculture) are related to each other and to economic growth in the long run. A rising economy changes the proportions of its basic sectors such as agriculture, industry, and services in the same way as a growing human body changes the shape and size of all of its parts. These industries are regarded as development engines. Developed economies rely significantly on efficient manufacturing and service industries. Therefore, a debate exists why structural changes occur in the developed countries. The neoclassical growth model assumes that structural change is a minor byproduct of economic expansion (Cristina 1997). On the other hand, World Bank economists such as Kuznets (1971), Rostow (1971), Chenery and Syrquin (1975), and Baumol et al. (1989) believe that changes in the economy's sectoral mix cause growth. According to estimations by Kongsamut, et al. (2001) for 123 countries between 1970 and 1980, a growth in services boosts these economies' per capita GDPs. These economies shift their focus from the agricultural sector to one that focuses more on services and less on industry. According to Rath, et al. (2006), increased growth in the services sector fuels India's economic expansion.

Pakistan has an agrarian economy. This sector directly or indirectly employs more than 40% of the workforce. One of the primary fundamental challenges with Pakistan's economy is a lack of investment in agriculture sector for growth, which leads to poor levels of productivity. Agriculture is the largest individual sector, and while investment growth has been consistent with the economy's average of 10%, growth in value added has been slower. Manufacturing is the largest sub-sector in Industrials, and because it has been the slowest growing industry, we can conclude that the country is de-industrializing. agriculture has provided around 23% of Pakistan's GDP, industry 21%, and service provides 51% of GDP. The services sector has contributed more than half of the economy's GDP. Given the foregoing factors, we claim that the fundamental empirical question in Pakistan is how the biggest share of an economy's services sector is related to productivity and growth OR how these

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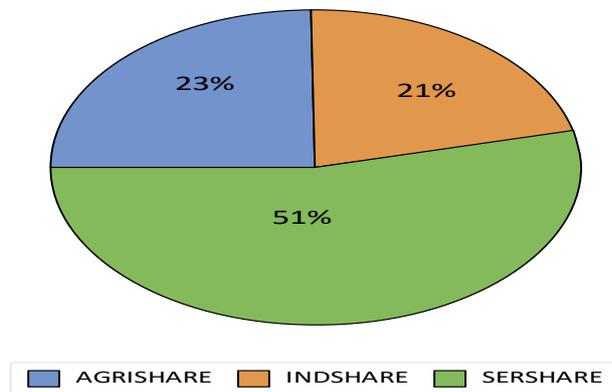
## **2 Causes and Analysis**

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The relationship between these sectors and economic growth, or how the shares of the three primary sectors change over time, is the subject of competing theoretical claims. Consequently, fluctuations in resources, output, and employment that come along with economic expansion are seen as posing a potential obstacle to industrial economics adjustment. According to the economics mainstream hypothesis, this adjustment issue is only temporary. Baumol (1967) posed the conundrum of coupling a model of stable growth along a steady route with structural change between sectors with varied productivity pathways. According to this concept, labour is drawn to the stagnating service sector due to its poor productivity growth, which slows the economy's overall growth rate (Kratena, 2005). It has been demonstrated (Echevarria, 1997; Kongsamut et al., 2001; Bonatti and Felice, 2008) that the functional forms of consumers' utility functions and the disparities in technical advancement between the sectors determine whether Baumol's pessimistic conclusion is reproduced or not. When a stable course is found, however, the structural modifications often come to an end. By accounting for intermediate demand for services, Baumol's conclusion is also significantly altered. In this instance, the modest productivity gains in the services sector do not pose a danger to the stability of the overall rate of growth (Oulton, 2001).

In Pakistan, the services sector is growing while the industrial and agricultural sectors are shrinking. These dynamic shifts may result in a productivity trap. The expansion of the service sector relative to the rest of the economy reduces the long run rate of growth of output per capita since the creation of services requires fewer resources.in comparison to other sectors (Baumol et al., 1985; Bjork (1999); Wolff (1985b)).

**Figure 1: Shares of Agriculture, Industrial and Services Sector  
( Average value of shares from 1990-2021)**



Source: Author's calculation based on WDI data set

Figure 1 shows the mean values of shares of all three sector in last three decades. Agriculture generated approximately 23% of Pakistan's GDP over the last three decades, industry contributed 21%, and the services sector supplied more than half of the economy's GDP. We want to bring in worldwide benchmarks at Macro Pakistani, so let's dive into three sectors analysis with agriculture, Pakistan's largest employer, and see how the minimal change in value add compares globally.

The share of services in all sectors of the economy has increased over time. In fact, the growth rate of the services sector outpaces that of agriculture and industry. The service sector contributes for 51% of GDP. The services sector is also linked to other sectors of the economy; it offers critical inputs to the agriculture and manufacturing sectors. In light of the preceding considerations, we contend that the main empirical question in Pakistan is how the highest share of services sector in an economy are related to productivity and growth. In order to answer this question, we need to know the productivity of each sector because when structural changes happen, resources shift from low productive sector into high productivity sector.

**Figure 2: Productivity in Agriculture, Industrial and Services**  
 ( Average value ( constant US\$ ) from 1990 to 2021)

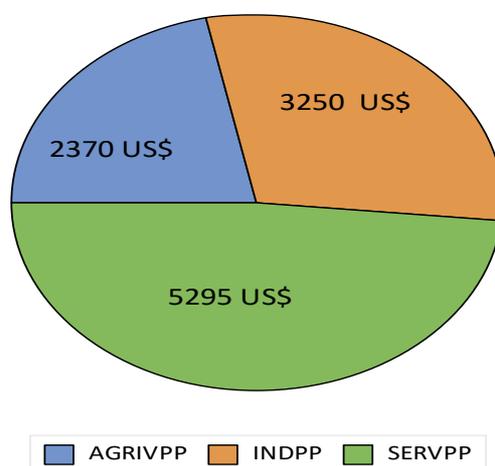
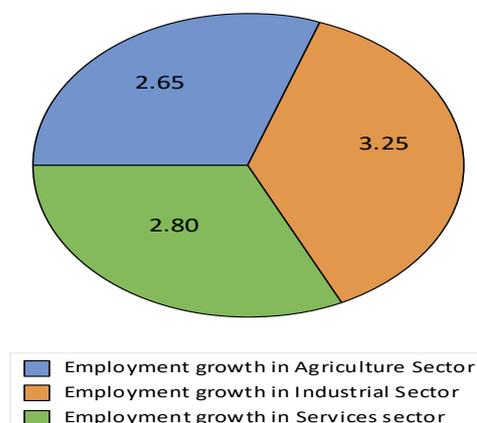


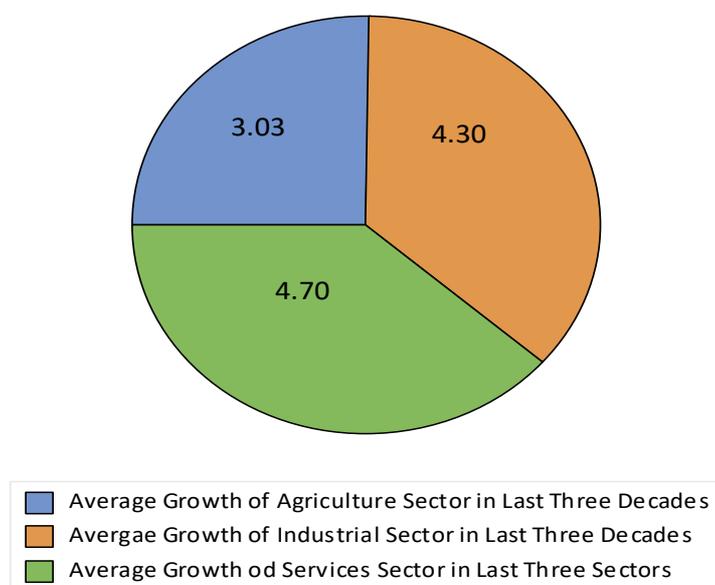
Figure 2 shows the productivity of agriculture, industrial and services sector in last three decades. Average productivity of agriculture sector is 2370 US \$, Productivity of industrial sector is 3250 US \$ and productivity of services sector is 5295 US\$ in last three decades. Productivity of services sector. These dynamics show structural transformation in Pakistan is balanced, economy moved from low productivity sector (i.e. agriculture) to most productive sector (i.e. Services sector). But now another question arises how these structural changes effects the employment and economic growth in last three decades.

**Figure 3: Employment in Agriculture , Industrial and Servies Sector**  
 ( Average Growth Rate from 1990 to 2018)



The private sector's share of the service sector is steadily increasing. Investment and foreign direct investment have the potential to boost productivity in transitional economies like Pakistan. As a result, it is necessary to understand the relationship between Gross Fixed Capital Formation, employment and economic growth in three main sectors of an economy over the last three decades. It is worth noting that, while agriculture provides 23% of GDP, it employs about 40% of the workforce. This means that workers in this sector are just half as productive as other workers in Pakistan. Employability is still high in agriculture sector even its productivity is low. This is due to highest number of unskilled labor are associated with this sector.

Figure 4: Growth Performance of Three Main Sector of Pakistan's Economy



According to Slow and Swan's Neoclassical growth model, marginal productivity of inputs (capital and labor) is positive and decreasing. Low capital and labor costs are related with high productivity. This suggests that investment and skilled labor have a greater influence in transitional economies. Human capital investment might be growth-oriented, and it could be represented in the services sector of these transitional economies. Because of the availability of competent and low-cost labor, the services sector in Pakistan is rapidly expanding. In Pakistan, the cost of inputs such as capital and labor is relatively low, and the cost of doing business in the services sector is suitable for investors in services sector.

Manufacturing is the largest sub-sector in Industrials, and because it has been the slowest growing industry, we can assume that the country is de-industrializing. Manufacturing is critical to industrial growth. As a result, the current state of the manufacturing sector must be discussed in the context of Pakistan's economy.

Shares of Manufacturing exports and Imports  
( Average values of shares of exports and Imports in total exports and Imports)

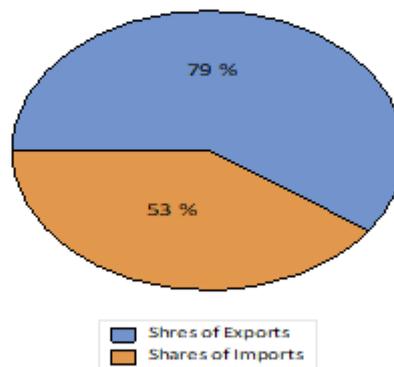


Figure 5 depicts the percentages of manufacturing exports and imports during the last three decades. The average share of manufacturing sector exports in overall exports is 79%, which is significant when compared to other areas of the industrial sector. As a result, manufacturing is critical to Pakistan's industrial growth. On the other hand, manufacturing imports account for more than half of all imports of products and services. As a result, the development of the manufacturing sector has the potential to raise export potential while decreasing import expenses in Pakistan.

The manufacturing sub-sector is further subdivided into small scale and large scale manufacturing, small-scale manufacturing accounts for 14% percent, and large-scale manufacturing (LSM) accounts for 80 % of the manufacturing sector. Cement, fertilizer, edible oil, sugar, steel, tobacco, chemicals, machinery, food processing, and medical devices, particularly surgical ones, are important industry sectors. One of the biggest producers and exporters of surgical tools is Pakistan.

Table: 1 Growth in Manufacturing sector

Manufacturing	2019	2020	2021	2022	2023	Average
Large Scale Manufacturing	3.5	-11.2	11.5	11.9	-8.0	1.54
Small Scale Manufacturing	9.0	1.4	9.0	8.9	9.0	7.58

Source: Annual report of SBP, 2023

The last five years have seen an average rise of 1.54% in large-scale manufacturing. Manufacturing, the industry's largest sector, dropped by 3.9 percent in 2023 after growing by over 12% percent in 2022. The primary driver of the contraction was a fall in large-scale industrial output, which was brought on by limitations on exchange rates as well as floods and supply chain disruptions that slowed down demand. Conversely, the average growth rate of small-scale manufacturing over the past five years has been 7.58%, which is acceptable.

### **3 Expectations and Implications Towards Nearest Future**

The study's goal was to examine how structural changes have affected the growth performance of the main sectors of the economy, productivity, and employability in Pakistan over the last three decades. The higher growth rate of the service industry is supported by its highest productivity and employability. As a result, this study supports the premise that growth in services raises per capita GDPs in these economies. These economies shift their emphasis away from agriculture and towards services and away from agriculture and industry.

Pakistan was recognized as an agro-based economy that relied primarily on raw crops and intermediate products. Agriculture is a mix of formal and informal sectors that directly or indirectly employ about half of the labour force in the country. One of the key underlying difficulties addressed in the introduction is a lack of investment in the agriculture industry. Because of a lack of investment and R&D in the agricultural industry, yield per capita and yield per acre of important crops are expanding slowly. Agriculture has contributed roughly 23% of Pakistan's GDP, industry 21%, and services 51%

The increased growth of the service sector adds a new level of stability to Pakistan's growth process. According to the data, services sector has higher rates of employment and productivity development, the services sector has more prospects for skilled job creation. This contributes to lower poverty and living standards. The services sector drives economic growth and competition by expanding trade and investment. The study proposed a measure and strategy for addressing bottlenecks in the expansion of the services sector, as well as a policy reform package to position the services sector as a vital sector for growth, employment, and poverty reduction. Information technology may be a critical influence in the services sector. There is an urgent need to focus on developing the IT sector in order to absorb skilled labor in communication services. South Korean firms could play a significant role in this industry.

## REFERENCES

- Baumol, W.J. (1967), Macroeconomics of unbalanced growth: The anatomy of Urban Crisis. *American Economic Review*, 57, 415-426.
- Baumol, W.J., Batey, B.S., Wolff, E.N. (1985), Unbalanced growth revisited: Asymptotic stagnancy and new evidence. *American Economic Review*, 75, 806-817.
- Baumol, W.J., Blakman, B.J., Wolff, E.N. (1989), *Productivity and American Leadership*. Cambridge: University Press.
- Bjork, G.C. (1999), *The Way it Worked and Why it Won't: Structural Change and the Slowdown of U.S. Economic Growth*. Westport: Praeger Publishers.
- Bonatti, L., Felice, G. (2008), Endogenous growth and changing sectoral composition in advanced economics. *Structural Change and Economic Dynamics*, 19, 109-131.
- Chenery, H., Syrquin, M. (1975), *Patterns of Development 1950-70*. London: Oxford University Press.
- Cristina, E (1997). "Changes in Sectoral Composition Associated with Economic Growth", *International Economic Review*. 38: 431-52.
- Echevarria, C. (1997), Changes in sectoral composition associated with economic growth. *International Economic Review*, 38, 431-452.
- Kongsamut, P., Rebelo, S. and Danyang Xie (2001) Beyond Balanced Growth. (IMF Working Paper, WP/01/85, June). 31-452.
- Kratena, K. (2005), Sectoral economy: Do sectors matter? *Estudios de Economia Aplicada*, 23, 289-289.
- Kuznets, S. (1971), *Economic Growth of Nations. Total Output and Productive Structure*. Cambridge: Harvard University Press.
- Oulton, N. (2001), Must the growth rate decline? Baumol's unbalanced growth revisited. *Oxford Economic Papers*, 53, 605-627.
- Rath, D. P. and R. Rajesh (2006) Analytics and Implications of Services Sector Growth in Indian Economy. *The Journal of Income and Wealth* 28:1.
- Rostow, W.W. (1971), *The Stages of Economic Growth*. Cambridge: Cambridge University Press.
- Wolff, E.N. (1985), The magnitude and causes of the recent productivity slowdown in the United States: A survey of recent studies. In: Baumol, W., McLennon, K., editors. *Productivity Growth and U.S. Competitiveness*. Oxford: Oxford University Press. p27-57.