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Structural Transformation and Political Economy: A New Approach to Inclusive Growth

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Abstract

The "Jobless growth" of Pakistan's economy and its acquaintances with frequent changes in different governments in power (both democratic and military regime) and its influence on economic growth persuades to conduct a qualitative analysis of the structural transformation on the disaggregated level to evaluate the if it has any connection or impact on different sectors of the economy or not. This study's primary aim is to (a) consider how sectoral transformation has pretentious the economic growth and employment, and relationships thus thereof, and (b) to examine how these dynamics have influenced the generation of sustainable employment in the economy. For that purpose, the study took under consideration the sectoral transformation. For that purpose, the study employs the sectoral employment Elasticity approach. Our evaluation findings show that the economy performs better in military regimes than a democratic period. The reason could be anything, but our concern here is to identify the elasticities of employment in Pakistan's various political powers.

Introduction

By studying the available literature of previous studies, we have come to know that the time period starting from 1993-1994 till 2011-2012, is recognized as one of the "Jobless Growth" time period due to the elasticity of employment growth of GDP degenerated, and it is characterized by high GDP growth without proportionate employment growth (Bhattacharya and Sakthivel, 2005). The reason was considered to be the economic liberalization and other reforms such as relaxed labour market regulations, trade liberalization and emergence of technology-intensive services. These above mentioned were some of the leading reasons for weaker job creation (Ghose, 2005; Sen and Das, 2015; Eichengreen and Gupta, 2011). Another reason which can be considered as the root cause of low GDP growth is structural transformation of the economy. As it was presented by (Kuznets, 1973), it is the reallocation of the economic activities from primary sector to other sectors, and it is one of the indispensable characteristics of sustained economic growth. (Lewis, 1954) explain this phenomenon as the shift of labour inputs, from low productivity sector to high value adding sectors, and withdrawal of surplus labour from the traditional sector. With the help of this shift of labour inputs the agriculture sector transforms form subsistence farming to a capitalist mode of production and improves labour productivity in agriculture and reduces the surplus labour. This surplus labour, absorbed within an expanding modern manufacturing sector which works on increasing returns to scale, with higher productivity and wages (Kaldor, 1966). Importantly, part of the surplus labour may withdraw from the labour market during the early phase of transition. One reason is that the young may spend more time on acquiring the skills required for the modern economy and will hence stay in school longer. In addition, some women may withdraw from the labour market during the early stages of the transformation either due to the increased demand for household care or due to the missing job opportunities but later re-enter the labour market (Goldin, 1995).

Countries like Pakistan, which are rapidly growing in terms of the population, need to implement such policies that can not only generate economic growth but additionally, has ability to accommodate a large number of labour force simultaneously. Achieving sustainable employment for the long-run economic growth, is a dream for briskly growing countries. Specifically developing countries like Pakistan, with the increasing youth population, it is the first and for most responsibility and a challenge for the government to create new employment opportunities for the new arrivals and existing labour force according to their skills a capability.

One of the biggest challenges for Labour abundant countries like Pakistan is to follow the policies which can accommodate the huge number of people providing them with the right skill set to compete in the market. It was highlighted by Okun law (1970) that there is a strong relationship between employment and output growth. The study estimated that with one per cent increase in employment the GNP can be increased by 3 percentage. This fact is surely irrefutable, that with more employment opportunities, the overall output growth of the country leads to economic stability. It was said by Pleic, M., & Berry (2009) that the two most important factors to measure the economic growth of any economy from worker's perspectives are the growth of employment and

growth of wages. To identify a better growing economy, we have to look for its employment creation capability and how much growth in wages has been increased over the years. With constant increasing Labour force, Pakistan is facing an enormous underutilization of its labour force, but it is more important to create jobs than to raise wages said by Pleic, M., & Berry (2009).

Considering the importance of employment creation, it is imperative to work on the ideas which can help new influx in the market to get absorbed. No economy can cope up from the high rise of the population without putting efforts on job creation. The study conducted by Zulfiqar, K, & Chaudhary (2008) highlighted the importance of human capital by focusing on the issue that for Pakistan the ideas which can accommodate the human capital must be kept under consideration for the long-run economic growth. Polices that are capable enough to absorb swiftly growing population with the right choice of job should be given the importance as they are the engine for the economy.

Likewise, the structural transformation of labour force form low productive sector to high productive sector with systematic way is undeniable. For long-term economic growth, it plays a very crucial role. For economic growth and development, it is very significant for the authorities to open up the untapped ventures for the new arrivals in the labour market. These new entries in the labour market either skilled or unskilled are always highly motivated to give their best in the beginning of their career. They put extra effort and always ready to go to extra mile to prove their abilities. What is needed is the right direction and guidance for them to take the best of their abilities.

Unfortunately, in Pakistan, the importance of sectoral transformation has been neglected in past years. Non-existence of adequate policies leads people to nowhere. What is desirable in this context, is to move the unproductive or disguised employed people from one sector to another through smooth and systematic structural transformation. It is only possible with governmental interference. The agricultural sector is the one which has accommodated the highest sector-wise number of people throughout the years. But the growth is stagnant for many years in agriculture.

The sector-wise transformation is still at the rudimentary stage in Pakistan. For people, detaching themselves to move to another sector for better wages is still not an easy task. It takes a lot of courage in term of coming out of one's comfort zone to adopt new skill or to move from one sector to another. One of the most common examples is the agriculture sector of Pakistan, where people's earning is at subsistence level just to keep them stay alive. Still, they are devoted to it for the sake of their pride as leaving behind family's farm to be an employee of someone is not acceptable till today. The need is here to make people realized that although they are putting every effort possible on that piece of land to accommodate their needs, still, they are unable to fulfil their basic necessities.

With the help of trends study for the time period starting from 1964 to 2018, we have witnessed some very overwhelming condition of sectoral employment in Pakistan. These trends are presenting the true picture of sector-wise employment in Pakistan.

The basic objective of this study is to examine the sustainable employment and economic growth in Pakistan. For that purpose, this study has taken into account the share in growth and employment of different sector of the economy. Furthermore, the impact of different political regimes on all three sectors i.e agriculture, industrial and services sector has also been evaluated. This study is arranged in the following manner. Section 1 presents the detailed introduction of the topic. Section 2 consists the trends of economic evoluations with facts and figures presetend to show the linkage of growth and employment. Section 3highlights the existing literature review. section 4 contains the methodological framework and the data used for this study. Section 5 comprises the results of the study, and section 5 contains the conclusion of the study

Linking Growth and Employment – Some Facts

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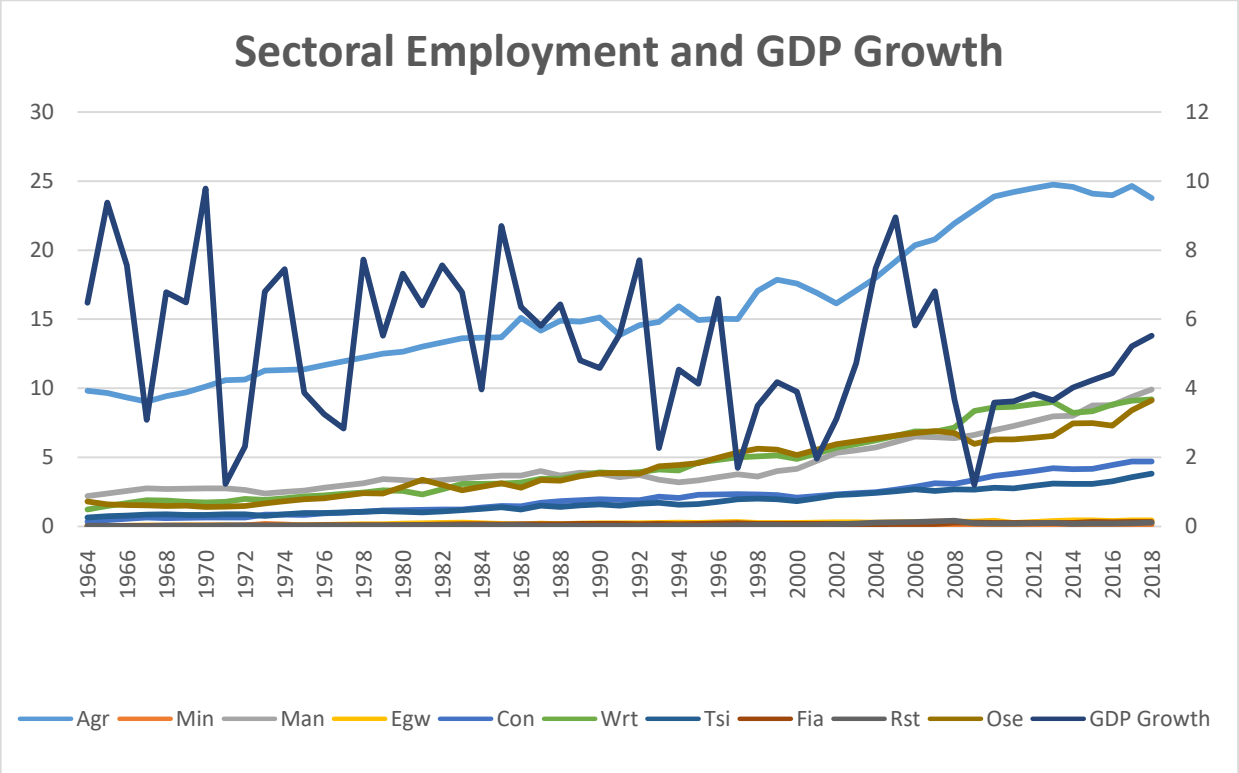
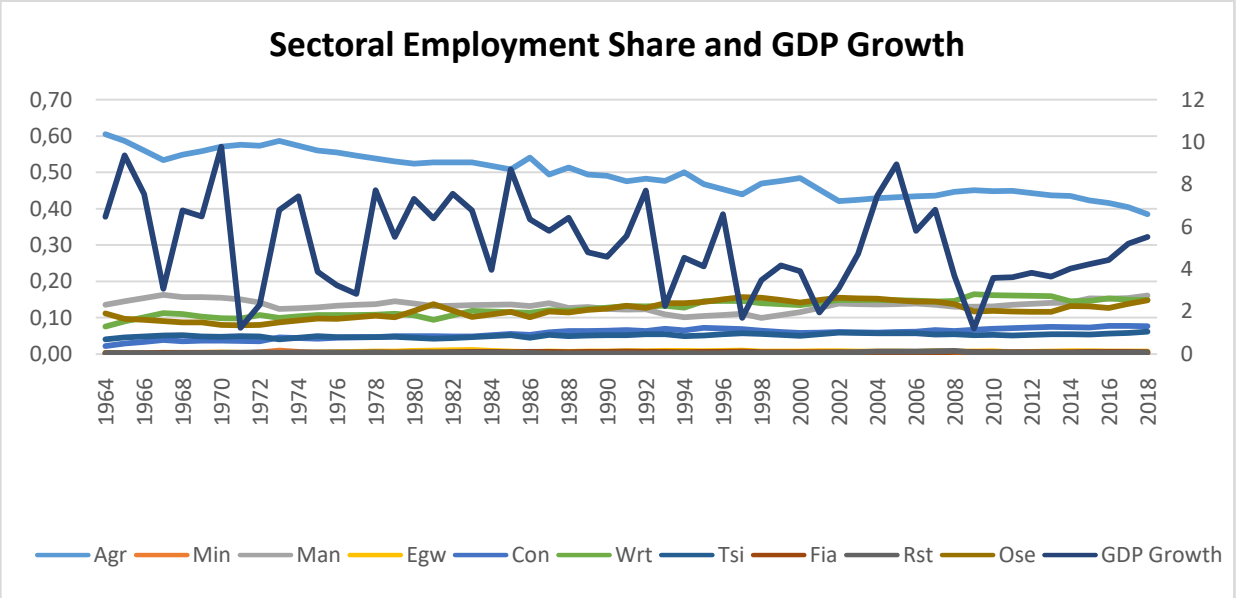
Figure 1: Sectoral Employment And GDP Growth



Source: Authors' Estimation

The figure 1 is presenting the Trends of GDP growth and Sectoral employment in Pakistan for the time period of 1964- 2018. The study not only took the major sectors of the economy like agriculture, industry and services, but it has further bifurcated it for the profound analysis. The graph is highlighting the specific growth of a particular industry with the help of bifurcation. Throughout the years, it is evidently visible in our analysis, that agriculture is the prominent sector, which is facilitating the most number of people in term of employment. The GDP growth is fluctuating during the time span taken under consideration. There are some spikes and dips in the GDP growth over the years. Overall, all the sectors showing increasing trends in terms of growth. We can see that after agriculture, it is the manufacturing sector which is on the second number in terms of the highest number employed. Real estate is the one sector which is showing the least growth. To boost the Real estate business, the government of Pakistan recently give it the status of the industry, and also announce some incentives to promote the business activities in this particular sector.

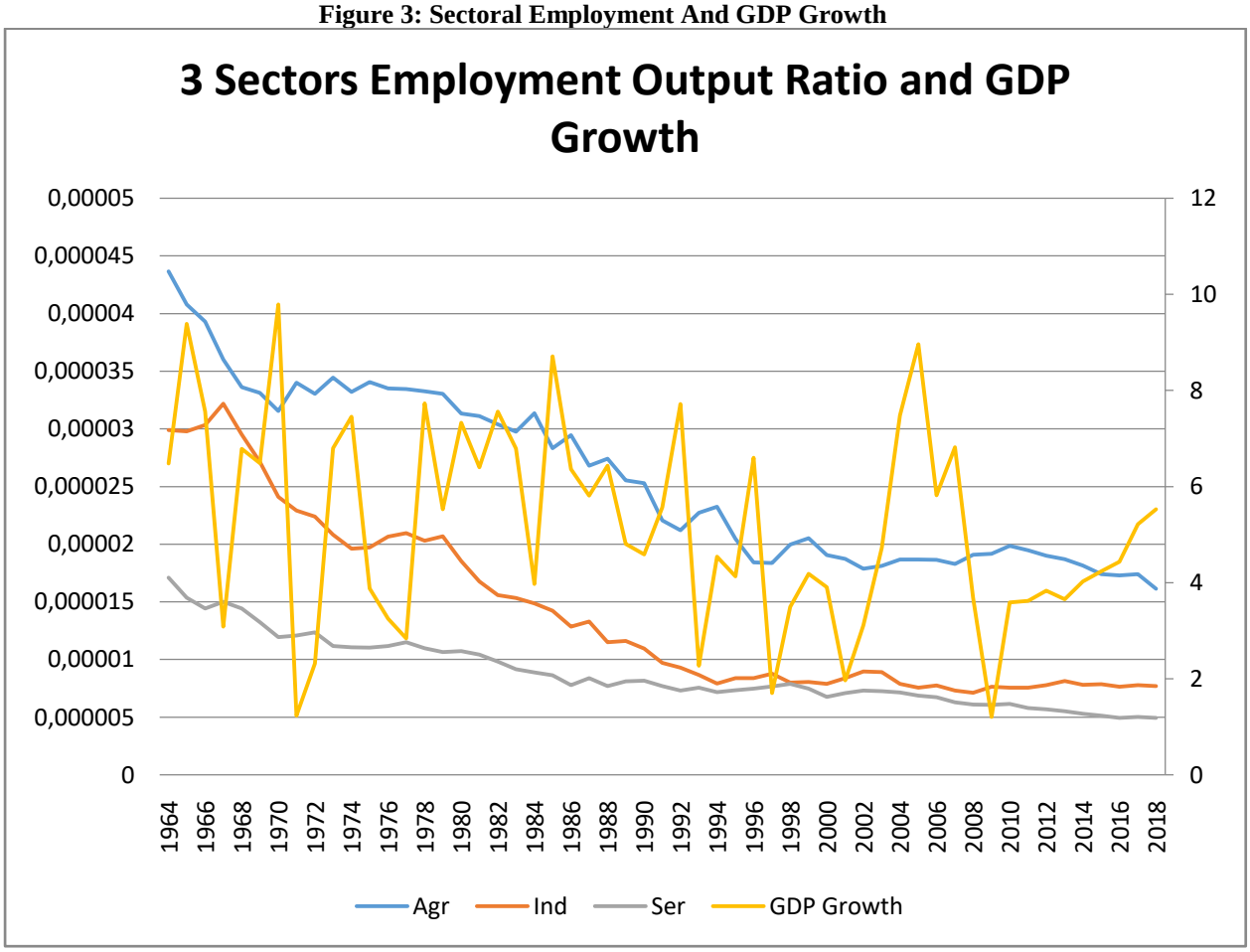
Figure 2: Employment Output Ratio And GDP Growth



Source: Authors' Estimation

The employment output ratio and GDP growth is presented in the figure 3. Again the agriculture sector is on the highest on % in terms of employment output ratio but the thing which needs to notice is that its trends are decreasing, showing the reducing capacity of job creation is the agriculture sector. Trade and business is in the second position with % contribution in employment output ratio. Other sectors such as Manufacturing with % and Public administration with % are also showing the increasing trends in the data. Overall, it is visible in our analysis that the labour is moving out of the agriculture sector to other sectors such as trade and business, manufacturing and construction sector. The trends are as expected for the developing country like Pakistan as it is the part of the process of development.

Figure 3: Sectoral Employment And GDP Growth



Source: Authors' Estimation

Figure 3 is presenting the three sectors employment output ratio and GDP growth, which is highlighting that although agriculture sector is leading industrial and services sector, but it is showing a decline over the years. Though it is persistent in the era of the 1970s which was the time of the green revolution in Pakistan, after that, it persistently went down.

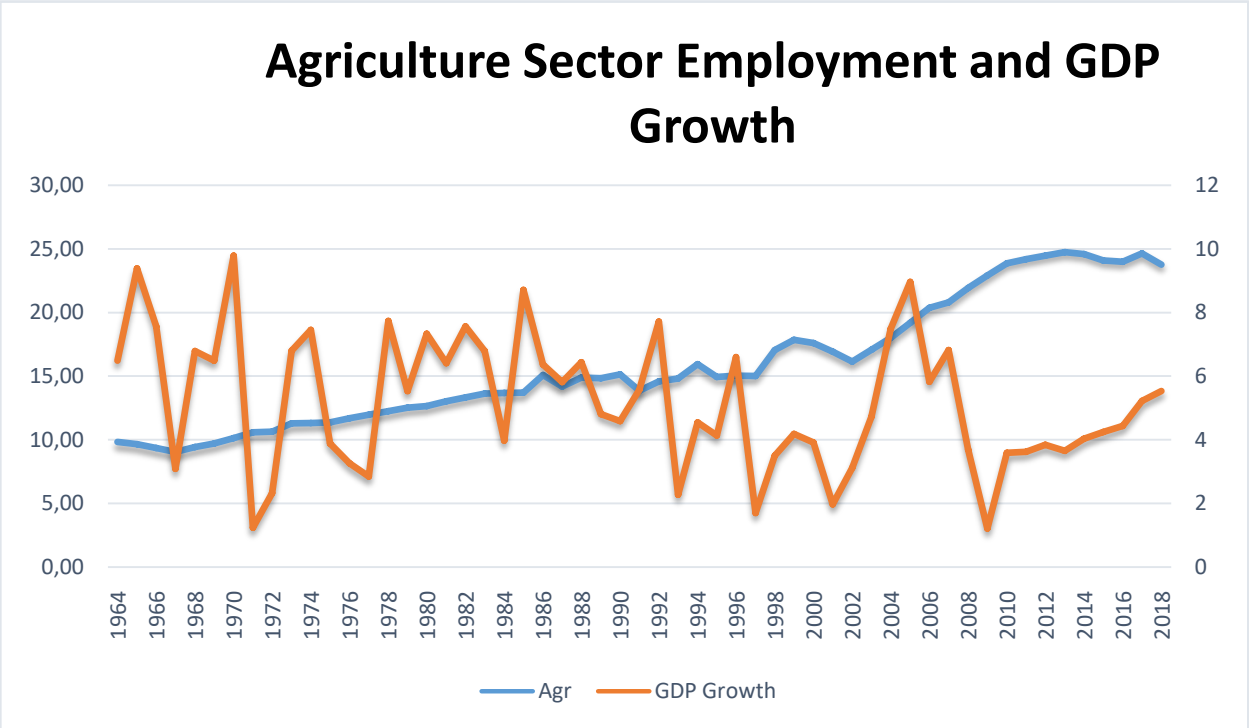
Agriculture Sector

Agriculture is considered as the foundation of economic growth. The development of the country and poverty reduction is associated with it, and this sector of economy is considered as the engine of economic opulence (Sertoglu, 2017). It was described by Gunner Myrdal (1984), the battle for long-term economic growth will be won or lost in the agricultural sector. Nevertheless, in which way this leads to economic prosperity is still a debate to discuss among economists and development specialist.

Countires like pakistan, that are higly populated, are always in need to implement such policies that can help the country to grow by engaging more people into labour force. Those policies can be helpful to resolve the issues related to unemplyment in the country. Over the years, agriculture sector has absorbed the largest number of people in terms of providing them jobs. With this highest ratio among other sectors, agriculter sector faces some issues which reduces its efficiency and productivity. Although, the sector has provided the jobs, but its productivity does not increases with the same pace. Some researchers have questioned the impact of agricultural sector on economic growth (Chebbi, 2010, and Gardner, 2005). The question raiesd by Gardner 2005, "is agriculture an engine of growth" was addresed by Lavorelet al. (2013) by evaluating the causality relationship

between agricultural value added per worker and GDP per capita. Findings of the study presents causality relationship between agricultural valued added and growth for the developing countries. However, developed countries remianed unclear. Infact it supports the assumption presented earlier that agricultural sector has been a backbone for developing countires.

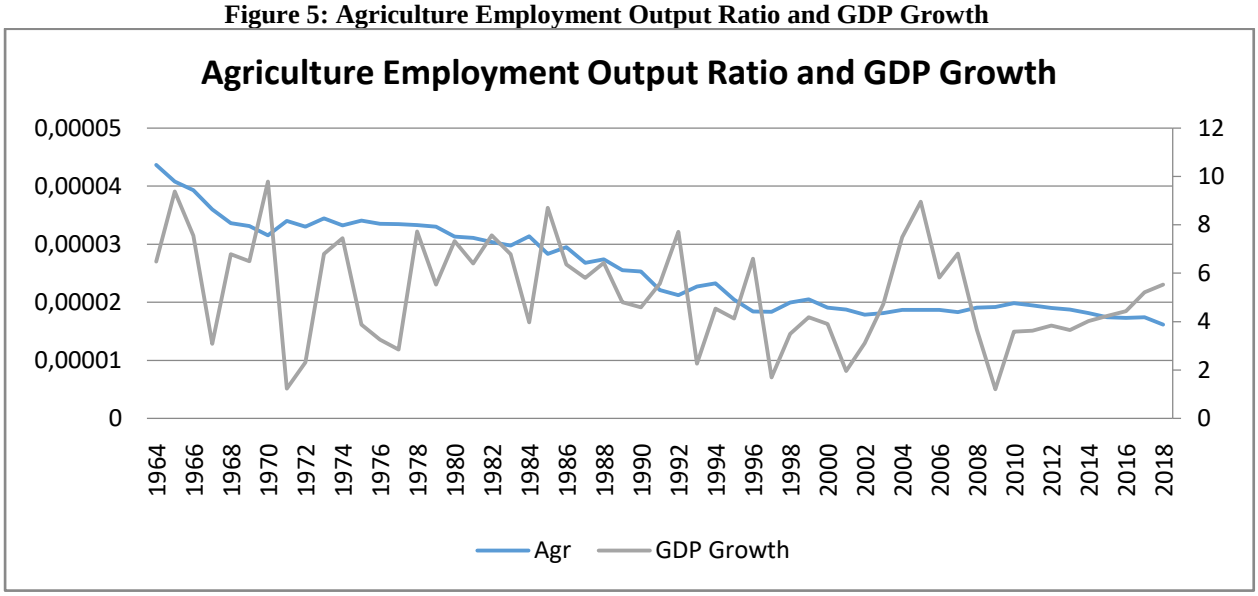
Figure 4: Agriculture Sector Employment and GDP Growth



Source: Authors' Estimation

A comparison between GDP growth and agriculture sector presenting an amazing growth, the agriculture sector is constantly increasing right after the 1980s. which is a good sign and it crossed the 20% growth after 2005.

Figure 5: Agriculture Employment Output Ratio and GDP Growth



Source: Authors' Estimation

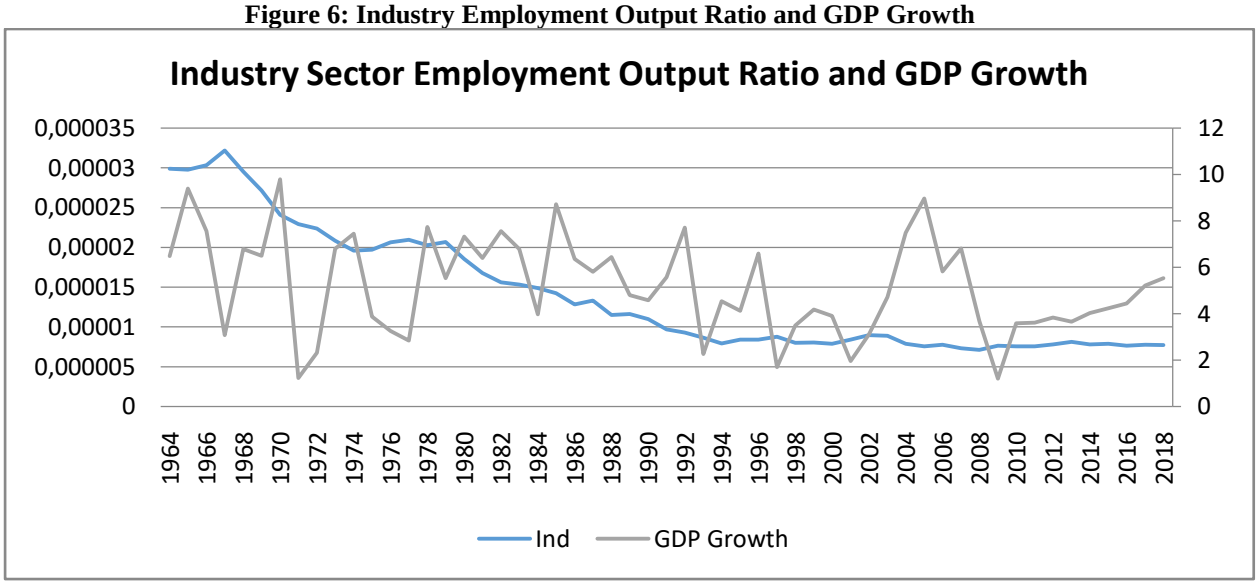
The trends in agriculture and total employment output ratio in comparison with GDP growth showing a downfall. In the past years agriculture sector is facing a decline showing that the labour is moving out from this sector.

Industrial Sector

The process which brings the changes in social and economic structure of a country and transforms the living standard of the people by improving the efficiency of factors of productions, and technology is considered as manufacturing development (Ellahi, N. 2011). From the time when the emergence of industrial revolution took

place, this sector has been considered as one of the most important determinants of the growth around the world. Specifically, in case of developing countries, we have example of Indonesia, Korea, Taiwan and China. All above mentioned countries achieved high growth rates with the help of better industrial development, which lead to reduce the poverty and present high trends in economic growth (Kniivila, 2008). With the help of industrials sector, the economy of a country may achieve considerable changes in the real sector which further improve the national income to manifold along with the employment opportunities, with all such above transitions, industrial sector has the potential to improve the balance of payments, production of exportable goods and import substitution (Saeed, 2002).

Figure 6: Industry Employment Output Ratio and GDP Growth



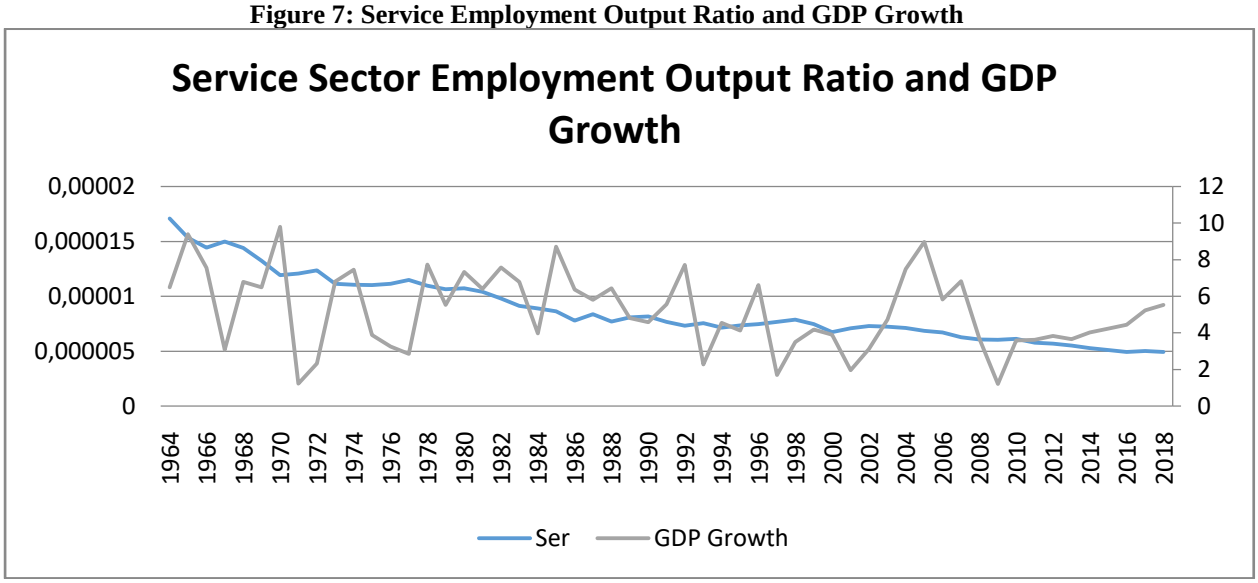
Source: Authors' Estimation

Industry sector in comparison with the employment output ratio and GDP growth is facing a decline. Although the industrial sector has seen the rise in the beginning, later on, it starts falling. Low level knowledge or completely no knowledge of the latest technology, poor manufacturing standards, and cheap substitute from imported goods are some of resons of lower gorwth of the industrial sector. The manufacturing sector has not adopted the latest trending techniques that can improve the quality of its production and help it compete with the less expensive goods available in the market.

Services sector

The services sector of the country is an imperative constituent of economy which makes direct and essential contiribution to GDP and job creation with the provision of important inputs that have significant effect on overall investment climate and on growth and development (Dossani, 2018). While seeing the past literature, one thing which has emerges with wide unanimity, that with this increasing chunk of services sector in total output and employment is a characteristic of high-income elasticity of demand for services, reducing relative productivity of services, contracting out of services from firms in the manufacturing sector, and finally increased international trade in services. (Nayyar,2011). In Pakistan, services sector has grown quite swiftly. This may be the result of an improvement in education rate for both male and female.

Figure 7: Service Employment Output Ratio and GDP Growth



Source: Authors' Estimation

Sustainable Development and Economic Growth

To attain a sustainable development and achieve a long run economic growth, it is essential to work on the available resources and engage them into a way which not only give the prosperous future to the people of the country, besides it can also be beneficial for the country in larger interest. The most important factor to consider here is how a country is transforming the standard of living of the people from low income, low standard living to high income modern standard of living. It is been evaluated on the basis of how a country is incorporating the strategies and policies to improve the economic, political and social wellbeing of its people. Economic progress is a key phenomenon for the development expansion of countries. In general, economic development encompasses wide economic growth (employment, output enlargement, using more resources) and exhaustive economic growth is enhancing productivity, investment in R&D, innovation implementation of economic reforms and creation of new jobs. Economic development may be a process which will be defined as appointive mobilization of human resources, organizational, financial, physical and natural resources so as to enhance the standard of competitive services and products and to extend their quantity for the community.

Furthermore, many other factors can determine the economic development of a country (Lankauskiene, Tvaronaviciene, 2011). The main objective of economic growth and development is to cultivate the speed of asset creation. moreover, every country tries to place all efforts to achieve the maximum outcomes and enhance its developmental level, because the well-being of a nation depends on it (Lankauskiene, Tvaronaviciene, 2011). Sustainable development could be a difficult concept that's treated in a different way. On one hand, it's terribly broad because it could also be related to the competitiveness of a given and on the other hand, to adopt a very practical approach, sustainable development is estimated by a broad array of indicators.

The Bruntland Commission published its report in 1987 and proved the oft-cited definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations General Assembly, 1987, p. 43). Economic growth is an increase in the production of all goods and services over a particular time. Economic growth focuses on country's growth without consideration of human capital growth. In the current scenario mostly developing economies focus on Economic growth in terms of GDP and ignore sustainable development. Economies can achieve short-run economic growth without sustainable development but for the long growth, economies should be the focus on Sustainable development. Long term economic growth "requires strategic policies that help in the sustainable development of the country. Very informative and healthy literature available on economic growth and sustainable development debate. Current economic growth can't ensure the sustainable development. Usually assumed that economic growth and development is taken place through sectoral growth and structural transformation. But question in that, "is sectoral transformation is enough for economic growth?" "Is sectoral structural transformation target to long run growth?" And lastly "is this growth will lead to sustainable development?"

It is widely discussed in the literature that the three pillars of economy agriculture, manufacturing and services sector are the engine of the economy for any country. Agriculture is the ancient and one of the oldest ways of earning. Through agriculture the society can generate the raw material for the industry sector, which further get utilized in the manufacturing of many goods. The people who worked in industrial sector, get trained and transformed into human capital which after further training can work into services sector. The interlinkages

among these sectors are creating the way for raw labour to turn into human capital. The smoother transition from one sector to another, the better will be the results for the long-run economic development and growth for the country.

Structural Change: Causes and Outcomes

Pakistan is facing the process of structural transformation. The growth in service sector is swifter than any other sector. But the objection here to discuss is the growth pattern of services sector, which are unable to follow the trends of basic macroeconomic variables both real and nominal. The basic condition for a positive effect of sectoral change on growth is that there has to be a net shift of resources out of sectors with relatively low productivity level to sectors with high productivity levels. The shifting of the economic resources has to follow the growth model which postulates that economic resources like labour, output and income are transformed from low efficient and low productive sector to highly efficient and highly productive sector. As per theory of sectoral economics, primary sector (agriculture and mining but not only mining) transforms its resources for the secondary sector (manufacturing) that leads to substantial growth of tertiary sector (services). The basic philosophy of sustainable development is very deeper than economic growth as the development is addressing the basic human needs at present while not compromising on the wealth opportunities for the future (Ceigis, Ramanauskiene,2009). It was mentioned in World Bank Definition of 1992 and mentioned above as well that the specific definition of "sustainable development is a development that continues". While Robert Allen 1980 explains it as "development that is likely to achieve lasting satisfaction of human needs and improvement of quality of human life".
The most recent population census indicates that Pakistan is currently facing the process of demographic transition. Providing new employment opportunities for the upcoming young generation is the biggest challenge for policy makers and economic managers. The experts conclude that Pakistan need a stable and a higher rate of economic growth to generate adequate and compatible job prospects that can duly defuse the population bomb. The recent thesis on sectoral economics revealed that agriculture sector is overemployed while services sector is the most under-employed sector in Pakistan (Bilal A. R, 2016). Since the sectoral structural transformation from agriculture sector to industrial sector and/or services sector may facilitate the process of demographic transition smoothly.

Literature Review

Khan, M. A. (2020) discussed both backward and forward linkages of the economy form cross sectoral linkages with the help of input-output Data using Global Commutable General Equilibrium (CGE) Model on Nepal Social Accounting Matrix 2007-08. The results of the study present an affirmative effect of Manufacturing and Services sector and are in favour of growth, welfare, household income of Nepal's economy.
Ibrahim, M. (2020) estimates the structural transformation in 32 countries of Africa by applying the sample splitting estimation approach for the time period of 1985 to 2015 to study the impact of trade and financial integration openness and its impact on the economy of Africa. Finding of the study recommends that the integration of financial effects and trade complements each other while studying the cross-country differences in countries' level of structural transformation. The study also highlights the non-tariff barriers are the real problem for the African countries.
With great emphasis on the services sector Lee, J. W., & McKibbin, W. J. (2014) examine the experience of productivity growth in Asian economies, considering this experience the study works on the effect of swift growth in labour productivity with the help of empirical general equilibrium model. This model help author to see the movements of goods and capital across sectors and economics with the view of consumption and investment dynamics. The study concludes that the rapid productivity growth in the services sector in Asia play its role for the sustainable and balance growth of Asian economics, it was also identified by the author that a positive expansion of the durable manufacturing sector was also witnessed which is an initial requirement for the better economic growth.
By working on panel vector autoregression model Kim, S., Lee, J. W., & McKibbin, W. J. (2017) took under consideration the impact of Asia's demand rebalancing and supply-side-productivity changes on long-term economic growth in Asia and across the world. Finding of the study reveals that a productivity-neutral demand rebalancing shock has no long-lasting effect on Asian output, on the other hand labour productivity shocks have positive, and stable effects. It was recommended by using a global intertemporal multi-sector general equilibrium model that labour productivity shocks can rise the foreign GDP over a period of time, but rebalancing shocks have adverse international spillover effect. Further it was found that the labour productivity shocks can help in rebalancing.
with the help of cross-country panel data Lee, J. W. (2017) study the past four decades of China's growth and identify the important aspects. China work on its low par capita income with the help of strong human capital, high trade openness, batter quality of institution and high investment rate to converge its par capita income to

the level of advanced economics of the world. It is visible through the shift-share analysis with industry-level data that the competent labour productivity growth in manufacturing sector plays vital role in China's inclusive labour productivity growth. In the period of 1980-2010, the growth in the services sector was record as declining but the reorganization of labour force from agriculture to services sector was affirmative in the accumulated labour productivity growth. It was witnessed that the average potential GDP growth, which was estimated to get reduce by 5% to 6%, it reduced more till 3% to 4% because of the reason of convergence effect and problem faced in structural changes. Later on, china improved its institutional and productivity specifically in services sector.

Lee, J. W. (2016) evaluate with the help of cross-country regression, the economic growth and catch-up of Republic of Korea for the previous half century and work on the difference of output per worker between US and Republic of Korea. The gap reduced very swiftly with the policy of reduced per capita income, relative to its potential level, it increases the higher growth and indorse the forecast of conditional convergence theory. The study confirms that the catch-up of Republic of Korea to United States was due to strong investment, reduced fertility, trade openness and better human resources and above all rule of law. Its was also witnessed that better opportunities in democracy slow down the pace of the catch-up. While achieving the steady-state level in per worker output the state improves it institutional policy factors. Policies related to export-oriented and manufacturing plays a vital role in the improvement of better productivity, but services sector performance disappoints. To achieve a sustainable growth form the Republic of Korea's experience the People' Republic of China learn the lesson to improve its services-based economy as it will potentially face a slow down in its pace due to the reason of convergence effect and the impact of rebalancing between domestic consumption and services-based economy.

Murach, M., & Wagner, H. (2017) study the process of rebalancing of investment and manufacturing-led growth model towards consumption and service-led model which is linked with the decreased growth rate for China. The study compares China's state of structural change to the previously experience of Japan and South Korea. With the help of simulation study.

Sodipe, O. A., & Ogunrinola, I. O. (2011) in "Employment and economic growth nexus in Nigeria" evaluate the employment and economic growth in relation with the economy of Nigerian by applying the Ordinary Least Square (OLS) technique before and after the time series data, it was found in the study that the time series data was corelated with non-stationarity by using the Hodrick-Presscott filter. The findings of the study reveal that there is a positive relation between employment level and economic growth in Nigeria and a negative relation between employment growth rate and GDP growth rate. further, it was also proposed that to increase labour-promoting investment strategies to reduce unemployment in Nigeria.

Colantonio, E., & Nico, G. (2014) estimate the Okan's theory in Europe's labour market for the youth. The author examine the role of real output growth in encouraging the job creation by doing an empirical analysis on real output growth effects on youth unemployment rate by taking the age group of 15 to 24 on different version of Okun's law. Findings of the study suggest that Okan's law does not fit in case of Romanian economy.

Sawtelle, B. (2007). Provide a deep understanding of "Jobless recovery" faced by U.S economy with the help of studying industry-sector employment responsiveness to the long-term real GDP expansion happed between 1991-2001. The study identified two employment models, one using real GDP as alone explanatory variable and other using real GDP, five additional macroeconomic performance variables, and time trend as explanatory variables by using the monthly data for April 1991-March 2001. OLSQ regression were used to drive industry-sector elasticities of the employment with respect to real GDP. Finding of the study reveal five industries exhibiting "Jobless recovery" characteristics (negative employment) and broad range of employment elasticities across industry categories.

Nayyar, G. (2011) evaluates the quality of employment being generated in different sub-sectors of services, relative to the industrial sector, where quality is defined to include wages, job security and social protection by analyzing the household survey data of India for the time period of 1993-94 to 2004-05, study show that either sub-sectors of services are either good or bad emlpyers, higher wages do not compensate for less job security or less job protection.

Arnold, J. et al (2016) the role of liberalization and in India's manufacturing sector for the period of 1993 to 2005. Study concludes that banking, telecommunication, insurance and transport reforms has a significant impact on the productivity of manufacturing firms, and the reforms made in services sector benefited both local and foreign manufacturing sector.

Eichengreen, B., & Gupta, P. (2013) examine the progressive implication between per capita income and service sector and consider it as one of the best-known regularities in all of the growth and development economics. The study identifies two waves of service sector growth, first in countries with relatively low level of per capita GDP and second in countries with high per capita income. It was found that with first wave the built-up primary traditional services and in second modern i.e. financial, computer, technical, communication, legal advertising and business services all mentioned are amenable to the application of information technologies and increasingly tradable across borders. Furthermore. The evidence of the second wave happened in low income level countries post 1990 but this change was not considered as equal in all economies. The study found it most deceptive in democracies with open to trade, and to those which are relatively closer to the major global financial centers.

Ellahi, N. (2011) highlight the importance of the electricity for the economic growth of any country as industrial sector is the economic engine for any country. The study is based on endogenous growth mode, and empirically it applies Auto Regressive Distributed Lag (ARDL) methodology to examine both long-run and short-run estimates. It was found in the study that labour, capital. Electricity supply and industrial sector development has a significant role in improving the economic growth of Pakistan and because of electricity shortage the performance of industrial sector may suffer. It was recommended that to make policies for the industrial to fix the problem of electricity because without the contribution of it industrial sector cannot improve.

Sertoglu, K. et al. (2017) consider agriculture as the solution for the long-run economic growth, and empirically examines the impact of agricultural sector on economic growth of Nigeria with the help of time series data form 1981 to 2013. The results show that real gross domestic product, agricultural output and oil rents have a long-run equilibrium relationship. The study use the Vector Error Correction model and it shows a speed of adjustment of the variable towards their long-run equilibrium path is slow although the impact of agricultural output on economic growth is positive. The study recommended the policies which can make a long-run impact on agricultural sector with better budget allocated for the sector.

Studies on the employment intensity of growth at sectoral level

Authors	Period Countries	Nb of Sectors	Approach/Methodology	Results
Kapsos (2006)	1991-2003 160 countries	3	Time series/ Multivariate regression	Elasticities are between 0.3 and 0.38. In the case of Morocco this value is 0.28 (1999-2003). The service sector is the most intensive in employment
Ajilore and Yinusa (2011)	1990-2008 Botswana	9	Time series/ Error-correction model	Low elasticity in all sectors, Jobless growth
Leshoro (2014)	1980-2011 Botswana	3	Time series/ Error-correction model	Positive but low elasticity
Paul et al. (2015)	1960-2014 Cameroon	3	Time series/ OLS	Significant elasticity for agriculture (0.65) and services (1.1), but not significant for industry
El-Ehwany and El-Megharbel (2009)	1980/81-2004/05 Egypt	6	Time series/ OLS	Positive elasticity in all sectors, manufacturing and mining is the most intensive in employment
Misra and Suresh (2014)	1993/94-2011/12 India	6	Time series/ OLS	Significant elasticity for the manufacturing, mining and construction sector, the latter exceeds the unit
Mkhize (2016)	2000Q1-2012Q4 South Africa	8	Time series/ Error-correction model	Long-term relationship in financial and business services, manufacturing, transportation and utilities
Sawtelle (2007)	1991M4-2001M3 United States	15	Time series/ OLSQ	Elasticity between 1.23 (construction) and -0.04 (durable goods manufacturing), five sectors have negative elasticities
Islam, I. and Nazara (2000)	1977-1996 Indonesia	5	Cross section/ OLS	Elasticity between 0.6 and 0.7 at the global level. Agricultural

	(provinces)			(1.05), Industry (0.60), Trade (0.92), Services (0.98), Other (0.46)
Tadjoeddin and Chowdhury (2012)	1993-2006 (two periods) Indonesia (provinces)	9	Panel/ System GMM two steps	Positive elasticity in all sectors
Perugini (2009)	1970-2004 Italy	5	Panel/ Fixed effect model	The elasticity for agriculture and industry is lower than for services
Sassi and Goaied (2015)	1983-2010 Tunisia	15	Panel/ Mean Group model	The most labor intensive is services sectors and exporting manufacturing industries
Ezzahidi and El Alaoui (2014)	1991-2011 Morocco	20	Arithmetic method/ Arc-approach (1999-2009)	Positive but low elasticity
Guisan and Exposito (2017)	1995-2012 5 European countries	4	Pool of 5 countries: Model in levels by GLS and mixed dynamic model by LS	Elasticity: Agriculture 0.37, Industry 0.21, Building 0.41, Services higher than 0.70

El-Hamadi, Y., Abdouni, A., Blouaouz, K (2017)

Methods:

As explained earlier, the uninterrupted procedure of moving the labour from lower to higher productivity sectors are considered as structural changes. In this process, (a) the labour force moves from low productivity to higher productivity sectors to earn better. (b) in this procedure, the productivity within the sector also increases. The productivity within the sector is entitled to the adaptation of the latest technologies and better management practices. In the long run, it enhances production efficiency, resulting in the reallocation of the resources attached to it. With the criteria mentioned above, our analysis aligns with Ocampo et al. (2009); Worrall et al. (2016). It has been seen that the changes which come with time bring new opportunities which were not available previously. Initially, at the comprehensive level, there was little confusion about what industry means in the 1950s, and it includes manufacturing, mining, construction and utilities. Among these, only manufacturing was initially considered as the main interest subject. It has created economic activity at that time and gave more output per worker compared to the agriculture and services sector. It was also witnessed at the time, that few of the tradable services and agricultural value chains had shared a comprehensive characteristic with the manufacturing (Baumol, 1995; Bhagwati, 1984). Some of them also got benefits to form technological changes and productivity growth as it was achieved by manufacturing and demonstrate the accumulation of the economies of scale (Ebling and Janz, 1999; Ghani and Kharas, 2010). Although these industries are not precisely manufacturing, this is the very reason for emphasising the movement from lower-to-higher productivity in and across all sectors in our study. There is no argument against the economic transformation with the labour force movement from lower-to-higher productivity sector (for instance, from agriculture to manufacturing or services sector) and can decrease poverty for sustainable growth in developing economies. Still, it has been seen that not all the struggles to encourage transformational policies are not always achieve success. Many countries try to do that by implementing such policies but unfortunately gain low-quality and jobless growth,

It is the continuous closing of the productivity gap across sectors and firms and between poor and rich countries. Why productivity is important because is output per worker its show how rich and poor your country. We typically focus on two mechanisms for closing these gaps:

Raising within sector productivity growth (arising productivity in manufacturing and agriculture. That can happen either thorough innovation enhances technology) either through shifting resources or by raising the productivity of existing activities.

Moving labor and other resources from lower to higher productivity sector (structural change)

Both are extremely important for achieving sustained growth in productivity. Example of agriculture labor moving to low productivity sector to high productivity sector manufacturing sector.

The study has used the elasticities to calculate sectoral employment elasticities. The definition of elasticity is, the percentage change in the number of people employed in the economy, connected with the percentage change to the output of the economy, that is calculated by gross domestic product. With this broad definition, usually, two ways are being utilised for the calculation of elasticities. One of them is Arc elasticity which is presented below in equation 1:

$$\varepsilon_{it} = \left(\frac{(E_{i1} - E_{i0}) / E_{i0}}{(Y_{i1} - Y_{i0}) / Y_{i0}} \right) \text{----------(1)}$$

Result:

Employment Elasticity 3 Years Gap

Years	Agr			Ind			Ser			Total		
	Ch.Emp	**Ch.Output**	**Elasticity**	**Ch.Emp**	**Ch.Output**	**Elasticity**	**Ch.Emp**	**Ch.Output**	**Elasticity**	**Ch.Emp**	**Ch.Output**	**Elasticity**
1964-67	**-0.07991**	0.115284	**-0.6932**	0.33361	0.238744	1.397356	0.157973	0.3206	0.492742	0.042488	0.220786	0.192438
1967-70	0.120334	0.279276	0.430879	0.000225	0.334988	0.000672	**-0.06097**	0.18019	**-0.33837**	0.048435	0.244044	0.198467
1970-73	0.113784	0.019644	5.792386	**-0.0101**	0.146424	**-0.06896**	0.090468	0.166304	0.54399	0.083944	0.104783	0.801122
1973-76	0.036427	0.065362	0.557323	0.137938	0.147464	0.935399	0.211362	0.21103	1.001574	0.095634	0.146107	0.654549
1976-79	0.071308	0.086829	0.821239	0.219087	0.217652	1.006596	0.154636	0.211182	0.732238	0.120493	0.170214	0.707894
1979-82	0.064305	0.157289	0.408833	0.018572	0.350912	0.052926	0.120018	0.214599	0.559267	0.069856	0.222871	0.313437
1982-85	0.027319	0.102227	0.267236	0.105167	0.211304	0.497707	0.115042	0.266669	0.431405	0.066878	0.205846	0.324892
1985-88	0.087581	0.123839	0.707216	0.057607	0.30847	0.186752	0.066081	0.195322	0.338319	0.075297	0.200092	0.37631
1988-91	**-0.06941**	0.155729	**-0.44569**	0.010269	0.196823	0.052173	0.134123	0.135946	0.986593	0.005174	0.155216	0.033335
1991-94	0.149755	0.091346	1.639416	**-0.03548**	0.181924	**-0.19504**	0.086287	0.166711	0.517587	0.092313	0.151157	0.61071
1994-97	**-0.05845**	0.19208	**-0.30431**	0.162277	0.050634	3.204878	0.22525	0.142648	1.579065	0.072259	0.131743	0.548485
1997-00	0.172666	0.130476	1.323354	0.010902	0.123537	0.088249	**-0.03714**	0.096211	**-0.38605**	0.064166	0.111249	0.576784
2000-03	**-0.02943**	0.019849	**-1.48269**	0.258294	0.114721	2.251491	0.220849	0.136336	1.619893	0.106415	0.10109	1.05268
2003-	0.192965	0.159411	1.210486	0.180597	0.356996	0.505878	0.133315	0.222773	0.598433	0.168346	0.239252	0.703636
2003-09	0.124442	0.094253	1.320305	0.068215	0.08282	0.823652	0.038108	0.151515	0.251512	0.081789	0.120885	0.676584
2009-12	0.068699	0.077631	0.884938	0.157421	0.13489	1.167035	0.069202	0.139692	0.495391	0.087025	0.12488	0.696872
2012-15	**-0.01533**	0.0748	**-0.20498**	0.117963	0.107593	1.096381	0.039884	0.154616	0.257957	0.032422	0.125993	0.25733
2015-18	**-0.01418**	0.063727	**-0.22256**	0.129902	0.15306	0.8487	0.169838	0.213222	0.796533	0.082632	0.168321	0.490916

Source: Authors' Estimation

	GDP growth	
Employment	**Positive GDP growth**	**Negative GDP growth**

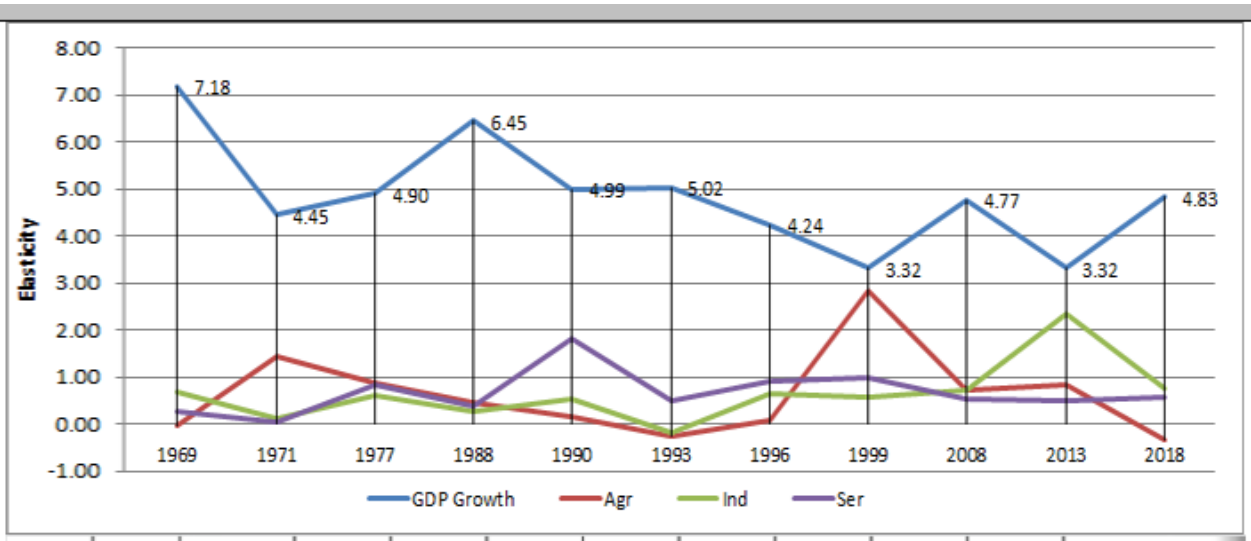
elasticity		
$e < 0$	(-) employment growth (+) productivity growth	(+) employment growth (-) productivity growth
$0 \leq e \leq 1$	(+) employment growth (+) productivity growth	(-) employment growth (-) productivity growth
$e > 1$	(+) employment growth (-) productivity growth	(-) employment growth (+) productivity growth

In the table above mentioned in (Khan, 2001; Kapsos, 2005). Presenting the complete chart for any economy that how in any economy it is possible that with the presence of positive GDP growth, negative employment elasticity exists which translates into the economy is experiencing adverse employment growth with affirmative productivity growth. Meanwhile, it is experienced on the other side in an economy with negative GDP growth, the negative employment elasticity matches with positive employment growth and negative productivity growth. It is observed, that the opposite is correct for the economies with both positive and negative GDP growth respectively, when the elasticity of employment is greater than one. Nevertheless, if the employment elasticity resides between zero to one, the economy with positive GDP growth will face the positive employment and productivity growth. This situation is considers as ideal for any economy with the presence of both productivity improvement and rise in employment all together. One thing which is very significant to highlight here, is that both the growth in productivity as well as employment growth elasticity are important for any economy in order to demolish the poverty. The justification given for this, is that when employment elasticity supplies the quantitative part of the employment growth, the other part is the qualitative part of employment which should not be ignored. Therefore, both characteristics should be in balance.

For a better and detailed understanding, this study has calculated the sectoral employment elasticities with the gap of 3year time period. The study took the data starting from 1964-67 till 2015-18, combine together this complete time period is spread over the 54 years of Pakistan's employment history. This is fairly a long-time duration to understand any country's employment trends. Before we delve into the detail of the above analysis, it is important to highlight the fact which we have discussed above as that it is imperative to know that Pakistan is an agriculture-based country, and an enormous number of its population directly or indirectly are associated with it. The same is describe here. The agriculture sector is more responsive to changes in employment as compared to other two sectors (industry and services). Over the years, in the agriculture sector, the negative change in employment is witnessed six times. This is highest as compared to industrial sector and services sector. This negative change is supporting the argument that in past 54 years of Pakistan's economy, the growth has increased but unfortunately this growth is jobless, and it has not created the employment opportunities for the new entries in labour market. Although the situation in the industrial sector and services sector is also not good, but it is slightly stable as compared to agriculture sector.

According to the classical theories of micro economic, when the consumer demands the goods, its demand curve shifts upward, pushing the prices to increase which causes the inflation. The cycle till this stage in the economy of Pakistan works well. But after this stage, the second cycle according to the microeconomic theory has to be increase in production, as higher demands encourage the producer to increase the supply of goods by producing more. The theory of microeconomics encourages the producer to increase its production by incorporating the improved factors of production (land, labour and capital). In the short run, capital is fixed, but the producer can increase the demand for labour for higher output. Unfortunately, this is not happening in case of Pakistan. The producer instead of producing more to meet the higher demands from consumer side, imports the goods from foreign market to satisfy the amplified demand from consumer. This causes the negative impact in the employment in our economy. Although the employment in the services sector has increased, but this increase does not help the agricultural and manufacturing sector. In the above-described scenario of our economy, one must ask how people are demanding more if they do not have employment? The answer to this question is, we have a very good ratio of remittance, which is coming from the relatives lives out of country and sending a hefty amount to their families as a source of income for them to survive.

Sectoral Elasticity and Political Regime



Elasticity	General Ayub Khan	General Yahya Khan	PPP	General Zia Ul Haq	PPP	PML	PPP	PML	General P. Musharr	PPP	PMLN
	1964-1969	1969-71	1971-77	1977-88	1988-90	1990-93	1993-96	1996-99	1999-2008	2008-13	2013-18
Agr	-0.04	1.45	0.87	0.47	0.15	-0.24	0.06	2.82	0.71	0.85	-0.35
Ind	0.70	0.12	0.62	0.25	0.55	-0.20	0.65	0.58	0.72	2.33	0.75
Ser	0.27	0.04	0.84	0.39	1.82	0.49	0.93	0.98	0.52	0.49	0.57

Source: Authors' Estimation

The above chart is the historical representation starting from 1964 till 2018 about the different democratic and military regimes of Pakistan. Over the years, the economics condition of Pakistan faces many ups and downs. It is clearly visible from the above chart, that the economy performs better in military regimes as compared to democratic time period. The reason could be anything, but our concern here is to identifies the elasticities of employment in various political regimes of Pakistan. As it was described by Dr Faheem jehanger khan (the citation has to be included here) in public policy and economic growth of Pakistan that "the Pakistan's economy has performed very poor and its average GDP growth remains 4 which is far less as compared to China, India and Bangladesh. The instability of the economic conditions is linked to political uncertainty. The past five decades of Pakistan has seen only four political eras, where democratic parties through the process of general elections came into power. The constant influence of the military involvement into governmental issues and the instant changes of the political parties did not allow the economy to grow. Although many action plans were made in these years, but disappointingly, they stayed into to files only, and most of them never implemented in practical." At a glance, the complete 54 years historical representation of Pakistan sectoral elasticity and political regime is presented in the chart and graph above. The inter-connection between overall all economic growth and the political regime are showing an overwhelming conclusion. Overall, the economy of Pakistan is on a rocky path, facing my rises and falls. If we break our analysis into regime wise analysis, we can see that in General Ayub khan's era (1964-69), the elasticity of agriculture sector is -0.04. This negative sign in agriculture sector is coming from negative employment. The change in employment with respect to out put is negative. Although the output increased, but it does not help employment to rise. After that, there comes four different political regimes both military as well as democratic. None of them present a negative trend in for the time starting from the 1969 General Yahya to ending of People's party second tenure as the governing the country. In these four different regimes there is not a single observation showing a negative employment in any sector. Then comes PMLN in power (1990-93). After coming into power PMLN government it is very sad to see, that for next nine years the economy continuously run on the path of negative growth. Between that nine-year time period, PMLN came into power twice (1990-93 and 1996-99), and PPP once (1993-96). The complete nine-year time period of Pakistan economy, faces the worst time of continuous fall in economic growth. In the first tenure of PMLN government, both agriculture and industrial sector depicted a negative growth with -0.24 and -0.20 respectively. Agricultural sector faces a negative growth trend again in PMLN latest government tenure (2013-18) with -0.35. The negative inclination in agriculture sector is showing the dire need of reforms in this particular sector precisely, as being an agriculture-based economy, most of the population generate its livelihood thorough agriculture sector. If this sector does not grow by providing more opportunities in terms of employment, then in long run this sector will lose its grip on employment generation.

The above chart representing the same. Overall, most of the hikes in GDP are in military govern time period, and the drastic falls are in democratic regime. Regardless from whatever the reason behind it, one thing here we can say for sure, that the economy of Pakistan has grown only under the military influence governments.

Conclusion:

In this study we have studied many definitions of Jobless growth. The one most important which we have that The time period starting from 1993-1994 till 2011-2012, is recognized as one of the "Jobless Growth" time period due to the elasticity of employment growth of GDP degenerated, and it is characterized by high GDP growth without proportionate employment growth (Bhattacharya and Sakthivel, 2005). Achieving sustainable employment for the long-run economic growth, is a dream for briskly growing countries. Specifically developing countries like Pakistan, with the increasing youth population, it is the first and for most responsibility and a challenge, for the government to create new employment opportunities for the new arrivals and existing labour force according to their skills a capability. It was said by Pleic, M., & Berry (2009) that the two most important factors to measure the economic growth of any economy from worker's perspectives are the growth of employment and growth of wages. To identify a better growing economy, we have to look for its employment creation capability and how much growth in wages has been increased over the years. With constant increasing Labour force, Pakistan is facing an enormous underutilization of its labour force, but it is more important to create jobs than to raise wages said by Pleic, M., & Berry (2009). Likewise, the structural transformation of labour force form low productive sector to high productive sector with systematic way is undeniable. For long-term economic growth, it plays a very crucial role. The sector-wise transformation is still at the rudimentary stage in Pakistan. For people, detaching themselves to move to another sector for better wages is still not an easy task. With the help of trends study for the time period starting from 1964 to 2018, we have witnessed some very overwhelming condition of sectoral employment in Pakistan. It was described by Gunner Myrdal (1984), the battle for long-term economic growth will be won or lost in the agricultural sector. Nevertheless, in which way this leads to economic prosperity is still a debate to discuss among economists and development specialist. Although, the sector has provided the jobs, but its productivity does not increases with the same pace. Some researchers have questioned the impact of agricultural sector on economic growth (Chebbi, 2010, and Gardner, 2005). Unfortunitly, the employment growth in agriculture sector is stagnent. There is no productivity in the agricultureal sector in terms of providing employment.

The process which brings the changes in social and economic structure of a country and transforms the living standard of the people by improving the efficiency of factors of productions, and technology is considered as manufacturing development (Ellahi, N. 2011). in the beginning, manufacturing sectors performs really well in providing employment opportunities to the labour force which was being idle due to non-productivity of agricultural sector. Not only this, it also produces goods which initially fulfil the needs of domestic consumers. Later on, lack of latest technology and better-quality product imported goods in less price, reduces the demand of locally manufactured goods. Which results in downfall of manufacturing industry.

While seeing the past literature, one thing which has emerges with wide unanimity, that with this increasing chunk of services sector in total output and employment is a characteristic of high-income elasticity of demand for services, reducing relative productivity of services, contracting out of services from firms in the manufacturing sector, and finally increased international trade in services (Nayyar,2011). Pakistan is currently on number forth rank on international freelance market place in providing freelance services. Competing with US, brazil and India. This is all because of the expansion in services sector, which helps to fetch a good income from international market. This fact is irrefutable that services sector of Pakistan is blooming. To encourage the efforts of individuals and provide them skill full training and help them to compete internationally, Government of Pakistan has initiated some online free training courses (digiskill.com) so that it can help the individuals regardless of any age to learn new skill and start earning on their own.

Abbreviations:

Symbols	Variables
Agr	Agriculture
Ind	Industry
Ser	Service
Emp	Employment
Output	Output
MIN	Mining & Quarrying
MAN	Manufacturing
EGW	Electricity and Gas Distribution
CON	Construction
WRT	Wholesale and Retail Trade
TSC	Transport, Storage and Communication
FI	Finance and Insurance
RS	Real State
OS	Other Services

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