

Abstract

Thesis Title: The Impact of Demographic Transition on Economic Growth of Pakistan.

The demographic transition system is always bringing communal and economic modifications in the countries. Economic progress can have many beginning, but the current study focuses on demographic transition as a core foundation of economic growth. It has also encouraging observing the further connection between demographic transitions in promoting economic growth. Pakistan is also running with the demographic transition. Pakistan is in the initial periods of demographic transition in which the birth rate starts to lessen. It creates many unusual situation, options and challenges and opportunities. This type of situation creates many dangerous situations for under developing countries like Pakistan. Pakistan 2019 population is estimated at 216 million people at midyear according to UN data. This thesis examines the demographic transition impressions on economic progress of Pakistan. Once population growth is rising up day by day than problems creates in all the institutions of Pakistan. On the opposing, if suitable policies are not articulated, the demographic transition valor in point is a charge, leading to unemployment and an intolerable smash up on health, education, and old age security. The analyses are based on the time series data starting from 1975-2018 by means of the technique of Generalized Method of Movements for estimation.

Key words: Demographic transitions, economic growth, population, labor force, challenges, economically, significantly.

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CHAPTER 01

INTRODUCTION

Demographic transition is a concept used to symbolize measure of high birth and death rates to small birth and death rates as a country grows from a pre-industrial to an industrialized economic system. The mechanism is on the basis that birth and death rates are linked to a bracket together with steps of industrial growth. The model of demographic change is often called demographic transition model and is based on chronological data and trends.

The current period of very quick demographic change in maximum countries around the world is characteristic of the central phases of a secular method called the demographic transition. Over the course of this transition, declines in birth rates followed by declines in death rates take about a period of rapid population growth. This transition generally complements the development process that renovates an agricultural society into an industrial one. Formerly the transition's beginning, population growth (which equivalent the difference among the birth and death rate in the absence of migration) is nearby zero as high death rates more or less balance the high birth rates distinctive of agrarian societies before the industrial revolution. Population growth is over again near zero when the completion of the transition as birth and death rates together reach low levels in the maximum developed societies. Throughout the intervening transition period, rapid demographic change happens, categorized by two distinct phases. During the first phase, the population growth rate increases as the death rate declines while the birth rate relics high. In the second phase, the growth rate declines (but remains positive) due to a decline in the birth rate. The whole transition normally takes more than a century to ample and culminations with a greatly higher population size.

The deal involving these methods are not at the population echelon but the entity level. Human's craving for an elongated and fulfilling life is the key motivator for demographic transition. Science and equipment offer devices for calculating demographic methods, but utilize of these instruments during economic and cultural transformation is unconfirmed.

The transition from developing countries to developed countries is still an ongoing process. The transition involves five stages. In Stage 1, which applied to most of the world

before the Industrial Revolution, both birth rates and death rates are high. As a result, population size remains fairly constant but can have major swings with events such as wars or pandemics.

In Stage 2, the introduction of modern medicine lowers death rates, especially among children, while birth rates remain high; the result is rapid population growth. Many of the least developed countries today are in Stage 2. In Stage 3; birth rates gradually decrease, usually as a result of improved economic conditions, an increase in women's status, and access to contraception. Population growth continues, but at a lower rate. Most developing countries are in Stage 3. In Stage 4, birth and death rates are both low, stabilizing the population. These countries tend to have stronger economies, higher levels of education, better healthcare, a higher proportion of working women, and a fertility rate hovering around two children per woman. Most developed countries are in Stage 4. A possible Stage 5 would include countries in which fertility rates have fallen significantly below replacement level (2 children) and the elderly population is greater than the youthful population.

Pakistan is the 6th most populous country of the world. In 2019, Pakistan's population is expected at 216.5 million according to UN data. In the precedent, in accordance to the 1998, it was world's seventh densely inhabited nation through 130.5 million citizens. In accordance to the UN projections, in world Pakistan will be the third populous country by 2050. Pakistan consumes a sole consign in the demographic evolution. Pakistan has undergone the first phase of demographic changes through the transition of highly developed medical facilities from the Advanced nations, although Pakistan is in the 2nd phase of the demographic changes and at a standstill in the premature stages of the 2nd phase in which the rate of birth begins is to Declined.

In Pakistan, where the population expansion rate is high, the standard family with a working adult population is six, with the scope of advantage development suspect. In the existing circumstances and with the development procedure, Pakistan needs to have a typical family of four personnel with two functioning adults.

Numerous demographers mentioned original targets and gave solutions to the troubles, but the government of Pakistan is not capable to realize those targets because of their weak policies. In spite of the severe effort to take away the inequality lined with the population and the economic growth rates, a towering population growth rate persists. And have not had the time to

effectively transition to a demographic in Pakistan due to strapping resistance from the family institute of Pakistan in terms of restricting family size. At the end of demographic changes, social change in societies such as Pakistani society is very slow and can take many centuries (Mahmood, 2014).

The main purpose of this study is to analyze the impact of the demographic transition on Pakistan's economic growth. In addition, the study purposes to evaluate the consequences of population trends of Pakistan in the precedent years. Additionally, the study investigate the different aspects of demographic transition and population growth has increased day by day in Pakistan and its effects on Pakistan's economic growth rate.

1.1. Problem Statement

The world's most critical demographic threats today include population growth, population aging and its consequences, high global mortality and HIV prevalence inequality, low fertility, food scarcity and an increasing obesity epidemic. Argument for positive link between demographic transition and economic growth is the main theme of this research. The purpose of the research to estimate the effects of demographic change has an impact on Pakistan's economy; the carefully designed and efficaciously implemented policies of demographic transition are believed to affect economic growth positively and may bring long term prosperity in the country.

1.2. Work Already Done

There have been several studies in the past, some of which outline the demographic change and its effect on Pakistan's economic growth rate. For developing countries, several studies have estimated the influential impact of demographic change variables on economic development. The predicted effect of age on economic growth was specifically determined by Sunde (2009) accounting for the role of demographic transition. This also resulted in Pardeep (2015) counteracting the negative effects of population ageing. Furthermore, Feng (2011) and Reher (2011) conclude that the effects of poverty and inequality index that aging population has a negative impact on poverty reduction while it is positive as refers to equality during the demographic transition period.

There are the number of researchers who have carried out work on demographic change and its effects on Pakistan's economy such as Ali and Zahid (1998); Afzal (2009); Husain (2009);

Yaseen (2015). These all researchers highlighted the impact of high population growth as a situation of employment and ignored other barriers to economic development, such as negative effects of population growth on the health sector, education provisions etc. The demographic change's economic impact can have explosive social and political consequences.

1.3. Significance of Study

The significance of the study is to observe that how demographic transition creates impacts on economic progress of Pakistan economy. There should be necessity to discover changed characteristics of demographic change. The growth accounting framework of this study is based on endogenous growth theory and is comprehensive with the demographic transition as a further factor explaining country variations in economic growth. The process of estimating the outcome of the demographic transition is to make a regression analysis on country data by means of the Generalized Method of Moments for estimation. Previous studies have captured many different aspects of demographic transition, but present study may be regarded as a better contribution to the standing literature because this study provides a current viewpoint of the prevailing situation in the Pakistan in the context of demographic change and its impact on economy of Pakistan along with other selected variables in Pakistan. In this study, data will be collected from 1975 to 2018.

1.4. Objectives of study

- To find out the impact of demographic transition on economic growth of Pakistan.
- To examine the short-run and long-run relation between the variables like GDP, Gross Capital formation, labor force, life expectancy and dependency ratio of Pakistan.
- Explore the different aspects of demographic transition and their association with economic growth.
- To assess the consequences of past and current population trends of Pakistan.
- Suggest practical policy implications in the light of the results of the demographic transition's effect on economic growth.

1.5. Hypotheses

H_{Y1} = There is a positive impact of demographic changes on Pakistan's economic growth rate.

H_{01} = There is no positive impact of demographic changes on Pakistan's economic growth rate.

H_{Y2} = There is a positive impact of dependency ratio on Pakistan's economic growth rate.

H_{02} = There is no positive impact of dependency ratio on Pakistan's economic growth rate.

H_{Y3} = There is a positive impact of life expectancy ratio on Pakistan's economic growth rate.

H_{03} = There is no positive impact of life expectancy ratio on Pakistan's economic growth rate.

H_{Y4} = There is a positive impact of Gross capital formation on Pakistan's economic growth rate.

H_{04} = There is no positive impact of Gross capital formation on Pakistan's economic growth rate.

H_{Y5} = There is a positive impact of Labor force ratio on Pakistan's economic growth rate.

H_{05} = There is no positive impact of Labor force ratio on Pakistan's economic growth rate.

1.6. Research Question:

What is the influence of demographic changes on Pakistan's economic growth?

1.7. Limitation of Study

The study has following delimitations.

- This study is conduct on Pakistan.
- This study uses variables like GDP, Gross capital formation, Labor force, Life expectancy, and Dependency ratio.
- The data is collected from economic survey of Pakistan and World Bank.
- This study is utilizing 43 years' time series data.
- Generalized method of movement's technique is used here to handle the problem of endogeneity.
- Demographic transition is not the only factors which can influence the Pakistan's economic growth rate and there are more than other factor which can influence the Pakistan's economic growth rate.

1.8. Plan of Study

The study is arranged according to a sequence so that chapter 1 contains the components of introduction, problem statement, significance of the study, objectives of the study, and limitations of study, hypothesis and research question. Second chapter clarifies the associations of the variables with the literature review with the situation of diverse writers. The 3rd chapter elaborates the history of demographic transition in Pakistan in the background of altered variables and all the government. On the other hand, the 4th one defines the data and the variables which are nominated to clarify the demographic transition consequence of Pakistan economy. The additional chapter clarifies the methodology, and then next one expounds the estimation techniques and reports the results. The sixth chapter is grounded on the conclusion and recommendations strategies for progression of demographic transition.

CHAPTER-2

REVIEW OF LITERATURE

2.1. Introduction

Many researcher in earlier have been employed delicately examine the speculative and empirical fundamentals of connection among demographic transition and the economic growth. On the whole, thought that the bond amongst demographic transition and the economic growth has been resulting after the outdated theory originated in 1929 by the American demographer Warren Thompson, of the experiential variations, or exchanges, in natal and passing rates in developed humanities above the previous two hundred years or on. Afterward, experiential revisions were approved obtainable to perceive the consequence of demographic transition on the economic evolution. Furthermore, the progression has been multidimensional in fauna concerning its gathering with the economic growth. Considerable significant research has been necessary to discover the conduits concluded which it touches the economic growth. General research quantifiable is create in this ground at global level then in container the Pakistan, researchers and the strategy creators still have been catch and effectual enterprise for the procedure of demographic transition. Furthermore, the present progresses in the theoretical and empirical literature obligation are anticipated to have a few obvious ideas nearby the procedure of demographic transition and its influences on the economic growth.

2.2. Theoretical review

Sunde (2009) obviously intended the predictable consequence of stage on the economic growth, secretarial aimed at the character of the demographic transition. In adding to converging on Empirical recognition Concerns, article highlights the character of particulars. A theory of the economic and demographic transition anywhere decisions on learning and fertility of individuals is contingent on their existence expectation. This theory predicts that development in existence anticipation previous to population alter essentially increases the population. Upgrading in life expectancy reduces the population growth and promotes the growth of the human capital subsequently fright of the demographic transition. The result showed that life expectancy on the

population, human capital and per capita revenue has not the equal previously and subsequently the demographic transition. Additionally, the transition to a stable growth of income is predictable to be considerably greater in life. Supply evidence at the bottom of these predictions by means of irregular mortality decrease data in the circumstance of the epidemic revolution.

Lewis (1954) developed the theory of “economic development with unlimited suppliers of labor”. It placed onward that combat segment model somewhere these capitalist sectors would raise by depiction on the labor after non-capitalist sector at the extinction income. The spare of the capitalist sector has ploughed. This theory claimed that through flow in capital speculation in the capitalist sector present is growth in peripheral efficiency. Outstanding to excess employment on wage amount has continual and they amplified marginal efficiency amplified the excess in the capitalist sector and this would be vigor on up until the excess labor is entirely captivated. This theory correspondingly expired mistaken after the practices of emerging frugalities, where the labor hoard grows further than the rise in the claim.

Lund-Thomsen (2014) argued that existing debates on the position of labor in global value manacles have to go further than a narrow focus on labor values and community social responsibility fulfillment and connect with economic, technological, and social improvement as factors that could produce continued improvements in real salary and workers' circumstances.

Jorgenson (1967) protracted the limitations of the neoclassical growth theory to investigate these difficulties of the developing countries. Double economy model supposed that presence of excess labor, marginal product of the labor has not automatically anything. They have been rumored that neutral technological advancement incomes dwelling in the agriculture. Strategy assumptions sharp to the standing of both were quickening the amount of industrial improvement in cultivation and procedures to junior the amount of the population growth in dropping shortage and job loss.

Menike (2016) scrutinized the association amongst the population evolution and the economic growth because the world's population has been exceeded two billion. There is a burly debate on the relationship between these two factors in all countries, in spite of whether they have fewer developed economies, developed economies, or transition economies. Many theories

are found too, and the 1st theory states that the population evolution hurries the economic growth. The 2nd theory views population evolution as a tendency that unfavorably disturbs economic evolution. The relationships of population development and vice versa on the economic development and vice versa can be predictable by looking at population growth. Consequently; the major resolution of the study is to evaluate literature and decide the association amongst population growth and economic progress. This study has been optional even though a stable growing population may be an obstacle to a country's economic development; most countries have conventional population growth as an approval.

2.3. Empirical review

In literature, it is not merely the theoretical studies almost the relationships of the demographic transition on economic growth is established but observed effort is similarly here to give details to the association. Researchers have to find out a vibrant association amongst demographic transition and the economic growth there is originate uncertainty variety the conclusion of altered researchers. This literature is separated into four categories; first demographic transition impacts on developed countries economic growth. Second, demographic transition impacts on developing countries economic growth. Third, demographic transition impacts on Pakistan's economic growth. Fourth is a demographic impact on developed and developing countries economic growth.

2.3.1. Demographic Transition Impacts on Developed Countries Economic Growth

According to Mason (1997), a study was conducted to inspect the connection between population change in developed countries and the increase of eight Asian economies. The demographics of the Asian soaring countries occasioned in the labor force, sophisticated incomes, investment, taxes and in conclusion unparalleled economic development. Population change in East Asia will hold up strong economic growth for at smallest amount two or additional decades. Successful policy as well as fertility and mortality charges have shaped an era of astonishing economic growth. The result found that Demographic features such as variations in the stage assembly and arrival of the women into work force has managed to a

senior segment of the population in work force. Demographic change also amplified savings rates and augmented ability to save small families.

According to Becker (1999), the effects of population density on per capita income, human capital, expansion of the knowledge and moving back returns to natural resources. A mathematical model called population growth model was urbanized. As a result of this model it was established that population thickness augmented the productivity of human capital and knowledge sector while expenditure sector had an unenthusiastic collision on productivity.

Hondroyannis and Papapetou (2002) explored the belongings of demographic relocation in Europe. Annual data from 9 European countries like Italy, Germany, the UK, Spain, France, Sweden, Netherlands, Finland and Ireland stood occupied from International Monetary Figures throughout 1960-1998. Fertility rate was the needy variable while mortality, genuine wages and genuine per capita output were the sovereign variables. It has been shown by the results that actual GDP growth per capita had been an optimistic result on the children's insists, although a genuine wage adds to and a reduction in mortality negatively impacted fertility rates.

Cobanovic, Nikolic-Doric & Mutavdzic, (2007) empirically analyzed the position of demographic factors in rural development in Serbia. The 36-year time series data from 1947 to 2006 was working and was taken from the Republic of Serbian's Statistics. Variables like whole population, birth rate, usual rate increase, figure of employees, figure of citizens and gross domestic product were taken to discover the course of demographic changes and the economic growth. Consequences shows that gross domestic product in agriculture have enlarged at a rate of 1.67%. The pressing variables were having an enormous crash and agriculture had an important role in GDP in Serbia's economic development.

Atanasio, *et al*, Kitao & Violante, (2006) predictable that a macroeconomic impact of demographic migration. The North South calibrated Belgium model was worked on and data was taken after the UN Population Partition (2003) and US Census Bureau (2004). The grades of the study propose that the per capita income has greater than before by about 1.35% in the last 30 years and will enlarge by 0.80% over the next 50 years, thus hole the space of occasion. Fertility inaccurate rate of the population growth and age structure led to enlarged savings and wage

services. Decreased infant mortality and older-age mortality rates amplified with age. Women's contribution in the labor power exaggerated the standard output of the workforce; in general wage input and a slight enlarge in savings. Denationalization had a minor positive consequence and resulted in unsuitable changes to fair prices and taxes. The negative belongings of international capital flows can be mitigated.

According to Bloom & Finlay (2009), Asia contributes to demographic factors, particularly in East Asia. A predictable sample of this study was based on East Asia, Southeast Asia, and South Asia. Meeting model was used and GDP growth, population growth, working age split, age expectancy, population compactness and education were the input variables. The results of this study recognized that education and trade openness are categorically connected to economic growth. Whereas working on economic growth had been positive and important result on the aging population, and they added into population had a negative and important consequence of the economic growth. Effect of local dummies was not important.

Jemna (2011) tinted the pledge of demographic migration and examined the crash of the tendency of the demographic migration on the economic development in Romania. Expressive statistics and method of econometric modeling were empirically used to examine the assumptions of demographic transition theory. The consequences shows that the population evolution amount. The mortality and real wage directory did not influence on the economic growth. Growth frequency of TFR and lively populace considerably exaggerated the growing rate. Net speculation absolutely and considerably exaggerated the economic growth rate, so economic growth can be enlarged by growing net investment and attractive labor force in the labor market.

Reher (2011) interpreted the economic and social impacts on the demographic migration that took place in Europe and somewhere else framed by 1850 and 1975. This study assessed the window of chance that had unlimited and permanent economic implications. Mothers' education, public health initiatives, inhabitant's growth rate reductions, participation of labor force of women and high fineness of the life served has activate for demographic transition. Demographic migration has emerged as a challenge in the Uruguayan population, while in the emerging

countries it has been controlled to the welfare and modernization of society, which is still in progress. Most countries were benefiting from the window of occasion and the social process was earlier than in Europe. The development procedure can carry on even after the window of opportunity closes. Migration was an economic, social and political trouble. The positive belongings of migration will be in the outlook while age falling will be confronted.

Santoo *et al.*, (2012) conducted a study on demographic processes in Mauritius. The changing age structure of population and the lowly rate of the demographics have led to the trouble of aging. The consequences showed that the reduction in humanity rate and fertility rate distended probable age, which led to the aging of the society.

Feng (2011) designated the economic and communal pressure of the demographic revolution in China, which was finished at an unparalleled speed in the 2nd partial of the 20th century. Population migration has been accelerated by strong state interference such as child policy. Younger productivity and inferior labor costs followed the demographic move that led to the economic bang. Demographic transfers also gave increase to social expenses such as population aging, sexually irregular proportions (120 boys: 100 girls), millions of children graduating from line in life, tragic progress, the option of isolation, and a great number of parents.

Greenwood and Seshadri (2002) conducted a quantitative examination of demographic passage in the United States. The Baxter over Leaping Generation model was worn and it was recognized that from 1800 to 1940, technological advances in the United States reduced fertility and prolonged citizenship. Growing industrialization has abridged the position of agriculture. The ordinary cost and advantage of child be depending on the net frequency and the unimportant utility of manufactured goods. Economic growth boosted wages and wages replaced the capital and the consequence was a pointed refuse.

Pradeep Agarwal, *et al.* (2015) in country, altering age formation of its population has been straight allegations on the economic growth. In great and overfull countries like as India and China, the results are mainly major. This article observes the collision of changing population age structures on financial evolution in china and India. Different Chinese and

Indian's investments and growth possible, as fine as its first demographic productivity and timing, are badly exaggerated by the hold up in fertility, the analysis said. On the other hand, this relationship also indicates the predictable negative penalty when the dependency ratio starts to increase and the speed of population increases. Consequently, after the knowledge of china, it has been contended that high household reserves and investment throughout the demographic point are very significant frustrate negative effects of the population aging to make sure growing stability.

Chen, Huang, Rozelle & Zhang,(2014) explained that due to the elderly of the population, the migration on the demographic populace is a mainly rising problem in a developing world and particularly in China, which is earlier than most industrial economies, is the demographic transition. The results put forward that the aging population reduces economic evolution level of china in line for to the termination of the demographic profits with elevated cost of labor force. The significances of the Poverty and dissimilarity directory show that aging of the population has an unenthusiastic effect on poverty decrease, while it is positive because disparity is spoken during the demographic transition process. These results propose that measures to improve economic growth as well as other events to accelerate poverty assuage other demographic gains.

Kazbekova (2019) described the refuse in the employed stage population in the Russian Coalition; a learning of the compression suggestions on the split of the employed inhabitants on economic evolution has meticulous curiosity. The major reason of the reporting has to examine to giving of the 1st demographic distribution of GDP evolution frequency to GDP between Russia and 1997-2015. Interpretation to the results of the study, first demographic data contributed approximately 13% to the actual GDP growth per capita of the Russian Federation in 1997-2015. It would be established these stage arrangement on the inhabitants has been significant.

Bongaart (2002) world and the majority states and countries are come into contact with unusually speedy demographic changes. Majority intense illustration of the change has wonderful increase in human figures: 4 billion have been auxiliary since 1950. Estimates for the

subsequent limited century is predictable to be a very dissimilar world, through inaction or possible turn down in the portions of established world and the smallest amount developed states with continued fast growth. Other demographic processes have also changed radically: women's fertility has been declined sharply and life expectancy has been reached fresh heights. Historical leanings in fertility and mortality have been controlled to an actual young population in the emerging world and high fertility nations of the increasing world. Current societies are now at much unrelated steps of their demographic changes.

Truesdell (2012) China's demographic transition will make it complicated to carry on the scale of economic growth seen over the past thirty years. This trouble will be familiar through the expenditure of the demographic guard, which began throughout the huge Leap onward and was then greater than before through birth manage campaigns that built-in one-child strategy. This worry will be present in the form of a decrease and fast growing labor pool, resulting in a decline in innovation and productive ability, as well as a recovery of the optimistic tradition of doing business through family relationships. All of this will end in an unsuccessful income system test as China slowly experiences a transition from the demographic phase to the rising population.

2.3.2. Demographic Transition Impacts on Developing Countries Economic Growth

Watkins, Menken & Bongaart (1987) claims that the decrease of fertility required to attain demographic data will need reversal. Appealing education after the familiarities of East Asian as sound as Muslim states such as Iran, Malaysia, Bangladesh and Indonesia, it is obvious that demographic refuses very significant to compassionate population ratio, it is similarly significant reducing shortage. After decades of rapid population growth, the potential for slow growth is in front as fertility is declining. The incentive for population growth in the prospect is very sensitive to the time and the degree of the refuse in fertility.

Line (1967) proven that the population growth has been difficulty for the evolving states. Developing countries had been not there in properties, and undeveloped charges ended this condition of poorer quality by positioning a problem on the economy. It has implied that the economy might be established the settled countries by as long as work prospects for the

functioning session. In this system, the working class would no longer be dependent on and will be vigorous in encouraging the reduced. The compound connection between populace and economic development has perceived the states ought to acquire after their previous practices.

McNay (1995) highlighted on the demographic transition which has turned out to be an affected comprehensive occurrence, in which furthest emerging countries are currently contributing. Its collision of the women role and position of the transition, considerably less said approximately the association in the further course, i.e., the allegations of declining morality and fertility for women breathes. The study presents an examination of the proof this penalty in the emerging states. The writer reasons and concludes that the even though the demographic change is usually an optimistic procedure for women, there is not continually an uncomplicated link to improvements in the female status and the gender parity.

Tamura (1991) represents the dynamic universal equilibrium and implies that the prosperous countries had superior secondary education enrollment in the 1960s. Maltese and Permanent Growth Governments were shaped. A parent of the former government favor high fertility per child and per child does not favor any human capital investment, while parents with lower fertility and higher human capital decide later. Higher accomplished parents have higher rates of go back on human investment and child-rearing costs compared to low-skilled parents. Untried results also indicated that economic association was confused with the growth of secondary school enrollment and that demographic alter also accelerated economic growth.

Eastwood and Lipton (2001) shaped a friendship between demographic transition and poverty from side to side economic growth. Models built-in demographic indicators are social variables and regional dummies. The results indicated that high fertility rates had an unimpressed result on domestic consumption and storage.

Lee (2003) in adding, the Indian data from 1896 to 2000 and the UN approximation from 2050 were used to symbolize the demographic transition. Indian estimates show that fertility was slow and fertility declined for fifty years due to a decrease in mortality. Internationally, pre-population migration rates are accompanied by birth rates, slow population growth, small long

life, and young populations. In 2100, the world's population will almost certainly be 9.5 billion, although future fertility is tremendously undecided.

Nguyen (2009) analyzed the demographic pressure of Vietnam's economic evolution by means of OLS method and Ramsey test. Data from 28 provinces were damaged for the period 2002-2006. The results shows that age organization had an imperative collision on the economic development and a 1% growth in working age occasioned in an equivalent augment in per capita revenue. The proportion of the youth growth rate unenthusiastically exaggerated the economic growth even as the old did not. It was predicted that Vietnam would advantage from demographic data for one additional 10 years.

Dao (2012) conducted a study to decide the economic crash of demographic change by means of time series data from forty evolving states. These results of the study showed that the result of the population growth was linear then contrary on GDP evolution per capita. Fertility reductions influence the age organization of the population increasing countries. In the case of a population growth of less than 1.2%, the communication flanked by population growth and the young dependency ratio had an optimistic effect.

Frini and Muller (2012), in agreement with Becker's theory, examined the communication lined by population migration, education and economic progress in Tunisia. The study results exposed the primary education had an important impact on fertility rate even as secondary and higher education had unhelpful belongings on fertility rate. The decreasing in infant mortality represented the wish to have some children. Contraceptive use also negatively exaggerated fertility. The consequences showed that economic growth is connected to growth. Per capita income was also absolutely linked with fertility rates. Female wages had an intensely negative collision on births, even as protective wages had a positive result on fertility.

An and Jeon (2006) used the yearly data 1970-2003 to set up the belongings of demographic changes in the economic growth. A consequence shows that due to reduce in the dependency ratio, dissimilar age structures have subsidized for economic growth in the Korea. It was also predicted that this demographic profit was temporary and will finish in the near prospect.

Tiffen (1995) exposed the association amongst population growth and profits growth in the Kenya. Malthusian thoughts discuss to go back from the decrease of wages on land, and the critic declares that the technological progression counter works as a result of moribund proceeds. The results show that the population of the said region has increased fivefold while the thickness increased from 6,360 per sq. km during 1930 to 1963 to 13,600 per sq. km. This study revised the sight that increasing population compactness leads to improved social reforms in social and technological life.

By spreading the setting elective by Bloom and Williamson (1998), which income eliminating the age-dependent unpredictability when humanity and the fertility rates changes from the in elevation to little stages, and has been proven the procedure throughout the three demographic variables can for the time being boost or slow economic growth. Demographic Transition: The dissimilarity amongst the working age the whole population, proportion of the children dependent and magnitudes of dependents on old stage. An empirically pertinent inquiry asked, to what range are the alterations originate the donation of demographic variables in which practical econometricians analyze the known statistics. Be clever to reaction this query, we have predictable that these three demographic variables distended by the Solow-Swan model is incorporated in cross-section over the whole example era, using data. Comprise five-year, and panel statistics that comprise republic and period set properties. And originate the likelihood differentiating amongst the employed age and population as an entire is constructive important, and the proportion of children dependent was unhelpful then substantial for all 3 regression characteristics. In distinction, the quantity of the hoary age dependence relation was found to be optimistic for the 1st regression requirement and undesirable for the latter two regression individuality. In both gears, on the other hand, this was not imperative.

Schultz (2007) described the economic explanations for fertility migration, particularly for women recurring to school, who have certain women to look for senior education and the wages of women than men. At a communal level, states have at the same time established social support for elderly expenditure, which has expectant childbirth incentives through schools and public health programs, and subsidized children in human capital. , Which encourages parents to look for short, high quality children?

Samanta (2014) the rising supremacy of the provision segments in the South Asian economies optional that developmental competence these economists may understand be contingent on their aptitude attain a rapidly increasing young stage in this population. On the other hand, there is abundance proof to propose that South Asian countries agonize from an important ability gap, predominantly through regard to high-end amenities are comparatively skill-oriented. The conversation pursues to appreciate the environment of continuing demographic transition in South Asia and encounters in front of countries to district and supplement the source of expert labor of the future in South Asia.

Bloom, Canning, &Fink (2010) conventional the split of population of 60 an older to growth is approximately each country in the realm throughout 2005–50. On the other hand, interactive responses (counting superior participation labor force of the female) and strategy reorganizations (together with increasing the permissible age of superannuation) could be decreases economic penalty of the adult population. Furthermost non-OECD countries, the turn down in fertility rates will expand the population-to-population ratio as a rising proportion of young people will be additional far-away from stirring on the way to older ones. These factors recommended that aging in the population would not suggestively delay speed of economic evolution in the emerging countries.

Ahmed (2018) explores position of the age configuration and social wealth changes the economic evolution of the emerging countries. Rising economies and revenue collections are analyzed unconnectedly in 67 regions throughout the period 1960-2014. The results propose changes in the age organization and human investment absolutely inspiration social evolution at altogether stages of clash. On the other hand, this consequences are additional authoritative in comparatively developed areas and higher revenue collections. With a reduction of developed economies and vice versa has a fast pace of change. It can be completed that changes in age construction and social investment upset local revenue collections of the economy at different sizes and speeds. Growing social capital would be one more amount of the strategy to attain demographic data.

Kalemli, Ryder & Weil, (2000) investigated the belongings of mortality on economic evolution in construction of the growth venture in human capital. The incomplete balance model states that result of the irregular waning in newborn of infant humanity; parents create fewer children and put more belongings into every child. This result depends on the significant role of indecision regarding the number of available children. The developed economy is considered by lesser per capita income, speculation in social capital and fertility than stable state of Malthusian stable state. Inside adding to the analytical solution, this empirical experiment also shows that the model conforms to the stylized facts of the development procedure.

Paterson (2017) demands the affiliation amongst population growth and economic growth provocative; growing population in high-income states has possible to produce common and economic difficulties although growing population in low-income states. Their expansion might be measured. International migration could be cooperative in cooperative these inequalities, then several must contrasting it. Stimulating to the economic scrutiny of discrimination, it has acknowledged the unimportant growth in population and imperfect migration can central to the intensification in general and global economic variation.

Song (2013) Asia has seen burly economic evolution they supposed "East Asian economic phenomenon" since 1960s. Still nowadays, once the world's biggest thrifths undergo after commitment and lending emergencies, up-and-coming markets of Asia will have been able to preserve speedy evolution. The temporary, important demographic variations will be happening in countries of Asia. The consequences indicated an undesirable outcome on the total growth on inhabitants and beginning on economic growing population, although constructive properties on the proportion on the functioning population and operational stage population. These discoveries are corroborating that speedy economic progress in Asia can be qualified to appropriate demographic variations.

Klasen and Lawson (2007) scrutinized the affiliation amongst population, per capita economic development and scarcity by means of a motivating situation study in Uganda. Even though Uganda has been freshly practiced exceptional economic growth and dearth decline, presently has the highest rate on population growth in world, which will carry on for some time

due to the intrinsic demographic determination. Both theoretical considerations and burly empirical proof propose that at present high population enlargement is mainly an obstruction to Uganda's per capita growth. In adding, it plays a key role in achieving poverty decrease less productively and is associated with permanently poor and poverty-stricken families.

Awan and Zamurrad (2016) explained the population evolution, level have been persisted concentration of consideration aimed at eras but recently demographic transition in emerging countries had completed common experts proceeds memo on altering age assembly of the people as well. So the result of the declining population progress and subsequent variations in age construction, the quantity of working-age people is growing in maximum emerging countries, through an associated waning on reliant on age population, proposing frame of casual to these states which are referred to “demographic disbursement”. On behalf of economic return to emerge there are many strategies allocating through education, public health, and those who authorize labor arcade controllability and arrange for enticements designed for speculation and reserves. On the changed, no doubt appropriate strategies are not formulated; the demographic extra power in detail prominent to idleness and an unbearable draining on education, health, and old age safety.

Dhar and Samanta (2006) the increasing governance of the provision area in South Asian economies suggested the progress capacities are these frugalities can be appreciate be contingent on their capability to grow the wild promising fresher collection of their population fascinated in the subdivision. Yet, present is desirable proof to submit that South Asian countries struggle after substantial talent openings, primarily, through admiration to the high-end facilities incline to remain comparatively talent intensively. Ability expansion, consequently, grasps the crucial in the forthcoming progress of the area. This conversation paper pursues the appreciation of the environment on continuing demographic change on the South Asia and encounters confronted via the states of these areas for enhancement impending hoard of accomplished labor in the South Asian countries.

Singariya (2016) the creative size of an economy is straight connected to the magnitude of its employed, age population qualified toward its entire population, it is necessary to differentiate lined by the 2 mechanisms once discovering the impression of demographic

modification on economic exhibition. The focal point is on the century from 1950 to 2050, which covers the period of most rapid global demographic transformation. Thus the growth of reliant population slows down economic growth. Conversely, ageing in need of population is rarer weaknesses in the progression of Rajasthan economic growth.

2.3.3. Demographic Transition Impacts on Pakistan's Economic Growth

Durrant and Arif (1998) Pakistan has command and micro levels causes deficiency at together demographic factors. Further enlightened the connection among shortage of dynamics and demographic factors in the scenery. It draws 5 beliefs from the analysis. First, family mass raises the hazard of bodily in enduring paucity or existence "transiently deprived" (entering or obtainable of scarcity). This means that due to demographic pressure, larger families are supplementary possible to breathing in lingering poverty or temporary scarcity. Second, in elevation addiction proportion is linked through both long-term (lingering) scarcity and intermediate poverty. Third, population evolution is harmfully associated to continuing deficiency at the spell of service, but they must no character in serving households escape paucity. Fourth, deprived of energies to progress together the healthiness position of the pitiable, lowly and their educational level, it is tough for families to avoid scarcity. Fifth, household properties, exclusively accommodation, retain homes out of chronic deficiency. Notwithstanding the position of properties aimed at domestic welfare, demographic heaviness can placed countless relatives in scarcity and mark the association out of scarcity problematic.

Siddiqui *et al.*, (1998) investigated the steady rate of population evolution in Pakistan and initiate that one clear outcome of rapid evolution amount was the augment in the quantity of people fewer than fifteen years of phase. This is very solemn wrong for the reason that in spite of a decent economic advance growth, extraordinary population growth has been reserved per capita revenue in stripe through worldwide morals. Great fertility amounts, attached by a hold up in growth, have formed a condition that positions wonderful burden on given those satisfactory possessions for healthiness, learning, occupation and extra social sequencers. The cause for the quickly rising labor strength needs a strong and steady increase of economic movement so that it can only bind to the current level of income.

Amjad, *et al.* (1997) has investigated the disturbing condition of population detonation in service lookout. He found the greatest undeviating and informally volatile outcome on the population rises in the service situation. Pakistan will demand generating 2 to 3% jobs each little in 1990s for the reason those inhabitants of Pakistan will be growing by 1.25 million once a year. The study merely draped on consequence of extraordinary population evolution on occupation circumstances, deserted additional economic expansion difficulties similar to unfavorable belongings of population evolution on vigor segment, learning comestibles, etc.

Yaseen (2015) the comprehensive method of demographic transition has been reflective and future achievement common and economic suggestions for the creation. Pakistan is in the 3rd step of demographic transition and the consequence has obvious through original decisions, openings, challenges and weaknesses. This paper observed the bearing of demographic transition and economic growth of Pakistan by using the time series data over the time period of 1974 to 2011. The statistical reproduction of the training displayed that demographic transition completely exaggerated the economic growth in the long run and destructively in the short run. The consistent procedure has similarly recommended capitalizing the demographic ability.

Jaffri (2016) explored that collision of demographic Variations on increase in Pakistan for stage 1988-2014. In this study second-hand population growth (PG) level and percentage of internal phase working population (MAWP) as cursors of demographic transform, expected breaks up representations by means of these proxies. Founded on item origin assessments, the revision has functional Autoregressive Distributive Lag (ARDL) form. The study concludes that PG, MAWP have optimistic and unenthusiastic collision on inflation in Pakistan, in that order. The strength of outcomes is sustained by typical analytical investigations and consequences has originated steady with current empirical confirmation for other countries. No earlier empirical revise for Pakistan on the subject exists; thus, importance the donation of this study in the prose. The study suggests that demographic influences laterally through conventional macro-economic elements of increase have got to be measured for deceitful successful policies to be in charge of price increases in Pakistan.

Siddiqui *et al.*, (2001) has emphasized on devising an effectual and joined people strategy aimed at Pakistan. In spite of same uncertain advancement, the global people progress proportion is immobile actual extraordinary. A larger interpretation of populace evolution and monetary

expansion is optional instead of a slender personal planning development. The state familiarities through population question and monetary progress has been an instance of misused occasions. It similarly positions serious suggestion for prospect.

Afzal (2009) conducted study for expresses affiliation between population evolution and cost-effective progress in Pakistan. Actual GDP growth stayed reliant on capricious although population evolution rate, actual gross domestic speculation evolution, actual distant speculation development, exports evolution and isolated ingesting as proportion of GDP were independent variables. Results found the population growth obstructed economic evolution harmfully and it was a preventive influence to the economic extension. Investment's donation to economic growth was positive and significant. Overseas investment, trades and secretive ingesting as measurement of GDP affected economic progress of Pakistan positively but not significantly.

Husain *et al.*, (2009) empirically estimated a link between Demographic Transition and Economic Evolution in Pakistan by means of time series data since 1972 to 2006. Unit Root Test and Augmented Dickey Fuller Tests were employed ensure to inactive. GDDP (Gross Domestic Product Growth) was taken as dependent variable while Newborn Mortality Proportion, Overall Fertility Rate, Income Rate, Evolution of Labor Strength and Population Evolution Degree were independent variables. The consequences establish that the lessening in newborn humanity rate and fertility rate accelerated economic growth. Increase in income rate had an optimistic influence on evolution however growth in labor strength had no optimistic force on the economic progress of Pakistan.

Mahmood *et al.*, (2011) examined that in what technique the shifting demographics in to Pakistan, resultant mainly after fertility evolution, would distress improving achievement of school-age populace throughout the subsequent two eras. The simple question give a lecture was whether the probable population variation would authorize the state to profit after the demographic surplus and develop the likelihoods to complete common key education by 2015, single of the goals of the Era Development Goals (MDGs). By means of probable population assessments and school employment data, the conclusions display that near 9.5 million issues aged 5-9 years were not joined in school in 2005-06. Agreed the existing leanings in employment, this quantity are predictable to surge practically four periods by 2030, thus

spreading the population learning break finished the years. Consequently quick rise in conscription is the anticipated opportunity. Or else the great education discrepancy would generate settings exceedingly uncomplimentary to entrepreneurship on the demographic payment, and attitude a hazard rather than suggestion an occasion to inspire economic change. In standings of strategy movements, reserves in school education requirement to be practically gathered to fascinate the eventual growth in the school-age population through the subsequent two eras.

Naushin Mahmood (2011) observed that in what way the shifting demographics in Pakistan, consequential principally from productiveness change, would disturb enlightening realization of school-age population throughout the subsequent two eras. The rudimentary query spoke was whether the predictable populace alteration would permit the republic to advantage after the demographic surplus and augment the balances to accomplish worldwide key education by 2015, first goal has been of the Epoch Development Goals (MDGs). Consuming anticipated population appraisals and school employment data, the conclusions display that almost 9.5 million children aged 5-9 years had not registered in school in 2005-06. Pretentious a regular and firm intensification in conscription, learning reproductions displayed that the number of children aged 5-9 years who will not ever arrive school will cumulatively upsurge to roughly 27.7 million by 2030, of which 12.2 billion would be boys, and 15.5 million girls, and it might take additional two eras to comprehend extensive key employment. Additionally, children aged 10-14 years not joining secondary glassy were 14.5 million in 2005-06. Certain the contemporary trends in acceptance, this figure are projected to intensification almost four times by 2030, in that way broadening the population learning gap concluded the years. Accordingly swift escalation in registration has been favorite decision. Else the hefty education discrepancy would generate situations highly negative to entrepreneurship on the demographic further, and stance a hazard slightly than suggestion a prospect to arouse economic expansion. Links of strategy events, investments in school education have been requirement to be nearly gathered for attract the future intensification in the school-age population through subsequent 2 eras.

Moreover, Husain (1999) Pakistan was one of the upper 10 loosest mounting emerging countries among 1960-1990 recordings an once a year normal evolution rate of 6 per cent. The

assembly of the reduced was also happen throughout this historical by means of the cut of agriculture approaching dejected after 50-20 percent. The succeeding 25 years have, still, fetched approximately a substantial waning in progress tariffs and in further modern seven years, it has protected after further South Asian countries. A mishmash of political insecurity and interruption of growing independent development, deficiency of endurance in strategies and poor control have endorsed to this consequence. Pakistan has similarly not engaged its environmental position to take improvement of intra-regional employment and speculation. The imminent probable can solitary be comprehended if Pakistan is bright to situation themselves for summit the future contests of incorporation into the county and international economy, securing demographic surpluses since of young at heart populace and affecting up the order of equipment. The comprehension of this penalty area will be contingent upon complete macro-economic policies, durable institutional and governance agenda, speculation in organization and human expansion and political permanence.

Akmal Hussain (2003) advocates that give a lecture the contest of demography and progress would have necessitate variation in the recognized arrangement of economic evolution and community procedure. The imaginative energies of the undeveloped condition to be involved in the progression of economic growth, exclusively assumed their rising portion of the working-age population. Terminated 60 percent of Pakistan's populace is lower age 30. The labor strength in the phase assembly 15–49, assessed at 96 million in 2010, is predictable to intensification to 181 million by 2050, although whole labor strength is probable to intensification after 110 million to 235 million completed the identical faded. Consequently, except these undeveloped people are assumed admittance to education, comfort, and repairs, the exact economic probable of this demographic transformation could have volatile social and political moments.

Similarly, Ellahi (2016) is to regulate the connection among numerous demographic variables and economic evolution of Pakistan for the dated of 1980-2012. Time series econometric practice has been used for the investigation. Johansen's co-integration test displayed occurrence of extensive run connection among diverse demographic variables. Subsequently beginning the existence of mistake improvement tenure in the classical, modification decline test

has been nearly new to recognize the discrete shockwaves among the variables. The study arranges the demographic evolution has been identical substantial person in the economic advance of Pakistan.

2.3.4. Demographic Transition Impact on Developed and Developing Countries Economic Growth

Gomez and decos (2003) assessed the change in per capita GDP due to modify in quantity of adult employees transversely republics. The results found that decrease in birth rate had controlled to reduction in the ratio of charges occupied age individuals, optimistic outcome on economic growth surges in extent of work force. Growing occupied phase populace also affected saving rates and labor force productivity. Decline in birth rates changed the extent and construction of the occupied age populace. Cohort working age persons had large positive impact while ratio of prime age workers had confident but lessening consequence on growth of per capita GDP. Evolution was highest when the main stage worker's ratio was 0.36. South Asia's vigorous economic growth could be attributed to the extent and construction of the occupied age population. Rich nations have had aged working population while poor nations young one. Persistent decrease in birth rate will impulse down countries from finest adulthood proportion to diminishing. The impact of ageing population was not clear cut on economic growth.

Prskawet (2007) conducted a research to guess the belongings of age structure happening economic evolution. The data of 97 emerging and advanced countries was used the time passé 1960-1995. The results indicated that the growth of the working age population had been optimistic and significant impression on the Growth Domestic Product per capita growth rate although the evolution rate of the populace affected Growth Domestic Product per capita negatively significant. The results also exhibited that youth dependency ratio's aftermath was negative and significant; while social infrastructure caused Growth Domestic Product per capita absolutely momentous. A declining minority addiction ratio and a constant hoary addiction ratio were also forecasted for India.

Azomahou (2009) examined the spatial inspiration of demographic exchange and economic evolution. Data of the actual GDP per capita income, aggregate population and age

structured population variables was taken to analyze the input of demographic variables to economic evolution. The countries were divided into four sections like Africa, Asia, Europe and Latin America and distance matrix was constructed. The results exhibited that demographic distance affected economic growth significantly and the quantity of combined population evolution shudders intensified it is said countries. The effect of demographic distance was clear and significant in Europe, Latin America an Offshore countries while effect in Asia and Africa was not clear. Open and integrated countries were more spatially dependent than the close economies.

Choudhry and Elhorst (2010) evaluated empirically influence of demographic transition and economic evolution by employing the data set of seventy developing and non-developing countries located in the changed counties of the domain. Together cross section square data was employed over the time period 1961-2003. The results found that when operational age residents exceeded population evolution proportion that led to temporary boost in economic growth. Child reliance percentage and hoary age dependency ratio had undesirable impression on the economic growth. Child dependency ratio of Pakistan will endure to decline till 2050 and is probable to have constructive properties on economic evolution. Results also indicated that booth of occasion will adjacent for China in 2020; conversely it will persist undeveloped for Pakistan and India till 2050.

Canning (2011) explored the grounds and significances of the demographic change and established an association among demographic transition and economic evolution. In the last five decades, world experienced exogenous drop in mortality and fertility which commanded to urbanization containing profound socio-economic and political implications. The results found that there was a lower rate of economic evolution in nations with stylish death charges. The decline in fertility due to better public health and technological progress was a driving force to escape the Malthusian trap. The technological advancement in health, long life expectancy and improved quality population stirred to economic growth. The modern world is a success story of both industrial revolution and health revolution.

Marchiori (2011) explored implications on projected demographic trend world widely capital currents and existing financial records over the 21st century. The touching generation's model was calibrated of the world economy and countries were grouped into ten regions. Each region was containing households, firms and government, and capital was mobile across the world. The calibrations were grounded on the data for the period 1950-2010 another one 1950 to 2300. The results of the study showed growth in the labor strength would drop the principal to labor proportion and would raise the peripheral efficiency of principal. Established districts would try into mortgagor sections and their demands for capital would be financed by Chinese, Indian and Latin American districts. Family policies and immigration policies were also emphasized in Europe for the population growth and demographic boom.

Whereas, Misra (2015) the countries agreement finished the unlike periods of demographic change in the procedure of expansion, a gap of a demographic occasion opens in the segment of speedily decreasing newborn humanity. Consequence is a growth in the segment of undeveloped grownups in the populace principal to a 'youth bulge'. This prominence is symptomatic of a heavy stick of the occupied ages in the population which earnings a demographic surplus short dependency ratio. The payment, nonetheless, is momentary in this circumstantial, this object challenges to study in what way economic evolution of several country becomes partial by its demographic surplus. In this study, we should carefully chose Brazil, China, India, Russia and South Africa (BRICS) and the European Union to see this connection among 2 variables economic evolution and demographic surplus with immobile consequence model casing a historical of 1990–2015. The outcomes from regression equation revelation that connection among Growth Domestic Product evolution frequency and demographic disbursement is confident consequently, authorizing our hypothesis that demographic disbursement has very constructive impression on economic evolution.

Ranganathan, Swain & Sumpter (2015) An imperative transition in the economic antiquity of states befalls once they interchange from a management of stumpy opulence, from top to bottom child mortality and high fertility to a municipal of extraordinary opulence, squat child mortality and truncated fertility. Scientists have suggested innumerable theories to elucidate this demographic exchange and it's relative to economic evolution. Now this

editorial, we test the legitimacy of particular of these theories by suitable a non-linear energetic classical for the accessible cross-country data. Our tactic plugs the opening among the micro-level mockups that converse instrumental instruments but do not contemplate alternate representations might right the data glowing, and representations from evolution econometrics that display the effect of changed features on economic progress but do not take in non-linearite and multipart exchanges. Henceforward, our representations can be recycled in strategy creation to guess short-term growths in the display variables. We similarly discourse how our attitude can be recycled to appraise strategy enterprises such as the Era Development Areas or the Supportable Expansion Areas established supplementary correct, country-specific progress marks.

Cruz (2016) distinct the varying population age-structures are influential the courses of expansion in several countries, carrying together occasions and contests. Quick population evolution is traditional to linger in the simplest countries completed the approaching eras. At the matching spell, these countries will see constant intensifications in the portions of their populace that are of working-age, and these moves have the probable to increase evolution and deficiency decrease. This paper designates the primary apparatuses concluded which demographic variation might disturb economic conclusions and assessments the reminder amongst vagaries in the segment occupied age population with per capita evolution, reserves, and scarcity rate. An intensification of one proportion argument in the working-age population segment is create to be accompanying through an intensification of the Growth Domestic Product per capita by additional than one proportion argument, with correspondingly constructive possessions on reserves and deficiency discount.

Similarly, Hussain (2010) the economics of demography offers greatest identifications to the procedure manufacturers to traditional their significances for imminent arrangement. Demographic transition also services in producing procedure location that takes systematic benefits of demographic prospective of the country. This paper empirically reconnoitered suggestion among demographic variables and economic evolution of situation in Pakistan for era 1972-2006, by means of time series econometric system. An opinion of sight of demographic

change in Pakistan has been advice that demographic transition has key impression on economic evolution. Variations in particular building, the place of women and children, tactic people effort completely affords an authoritative description in which strategies can be mounted.

Additional study is directing not solitary the probable shortest implication among demographic transition and economic evolution. Bloom and Finlay (2008) in 1994 the World Row called East Asia's durable economic evolution routine a "marvel". Employment sincerity, great savings rates, human capital addition, and macro-economic dogma merely explicated chunk of this advance show; the residue was missing impenetrable. These previously studies charity the 1960-1990 model era, but since 1990 Asia has endured key economic restructurings in retort to financial emergencies and added features. Additionally, swift demographic variation has nonstop in East Asia and in Asia supplementary mostly, though fertility rates deteriorating beneath auxiliary in several of these countries. In the paper, we re-examine the person of the demographic evolution of the illumination cross-country variances in economic evolution, through an exact effort on East Asia. Through the working-age segment foundation to waning in sundry Asian countries, origination and plasticity in the labor arcade will be requirement for them to remain to appreciate the extraordinary rates of economic progress they have veteran to date.

By rereading the hypothetical and pragmatic lessons connect the course of demographic transition and its suggestion through economic evolution laterally by respectable foundations, it can be resolved that the hypothetical fundamentals of demographic conversion are very irrational, compulsive and have distant feat bearings on economic evolution. This demographic evolution course is connected with the population strategy establishment and international controls are actuality fashioned for active demographic change. By revising literature, it can be determined that there is tranquil a requirement to discover the changed magnitudes of demographic exchange and to block the breaks in factual in relations of investigation. This study is an effort to fix the deficiencies institute in abovementioned lessons with reputes to research systems and variables creations.

CHAPTER 03

HISTORY OF DEMOGRAPHIC TRANSITION OF PAKISTA

3.1. Theory of demographic transition

The theory is based on an examination of demographic time advanced through the American demographer Warren Thompson (1887–1973) in 1929. Adolph Landry of France prepared equivalent amplification on demographic streamers and populace evolution growing everywhere 1934. Frank W. Notestein (1945) technologically advanced further authorized theory of demographic transition. By 2009, the survival an undesirable relationship amid productiveness and manufacturing expansion had convert single of the maximum generally familiar conclusions in community science.

The observable fact theory of the demographic transition discusses to the historic move in demographics as of in elevation birth charges and elevated newborn death charges in the world through insignificant expertise, edification (exclusively of women) economic progress, to demographics of low birth charges and low death rate in society by means of greater knowledge, learning and economic progress, as well as the periods among these 2 situations. Even though this change has befallen in countless advanced states, the theory and model are regularly blurred when practical to separate nations in arrears to overt communal, politically aware and economic influences moving precise populations.

3.2. Stages of demographic transition

Demographic transition contains 5 stages.

- The stage 1; pre-industrial civilization, death rate and birth rate are in elevation and almost in stability.
- The stage 2, · Death rates drop rapidly in the second stage of developing countries due to improvements in food supply and sanitation, which increase life expectancy and decrease disease.

- In stage three, birth rates decrease due to various fertility factors such as contraceptive contact, urbanization, wage rises, reduction in subsistence farming, increase in the status and education of women, decrease in the value of child labor, increase in parental investment in children's education and other social changes.
- For the duration of stage 4, there are together low birth rate and low death rate.
- Stage 5, linking an increase in fertility.

3.3. Demographic transition Model of Pakistan

Currently Pakistan has been suffering in step two in the demographic transition model. Pakistan is very elevated whole productiveness proportion of 3.8 issue per woman; excessively high for be calculated a stage three or stage four countries. Pakistan's population Pyramid as well states that is has a very immense plinth of younger people but a very minor peak of older people. Consequence existence anticipation is attractive reduced; the most important characteristic of a stage two country. Furthermore the birth rate and inhabitants pyramid in Pakistan also has been very extraordinary infant progress rate of seventy-four deaths for each thousand live births. This is a dead haggles of the country creature in stage two.

3.4. The challenge of the demographic transition

Labor force growth rate has been quicker on the whole population development proportion. Therefore the operational phase inhabitants (ages 15–64) as a proportion of whole inhabitants enlarged since 54 percent in 1998 to 57 percent in 2005. At the similar stint, the dependency ratio (the population underneath 15 and completed 64 separated through the working-age population) declined from 0.86 to 0.75. The tendencies have been estimated keep on completed the subsequent 2 decades, and the dependency ratio would attain its lowest glassy by 2030.

Dependency ratio declining means additional working people attractive repair of rarer charges. Hence it establishes a space of coincidental advanced economic growing uncertainty those who are working age include admittance to dynamic occupation. The data recommend, this so-called demographic transition in Pakistan shall be final till 2050 when progress rates of population and labor strength are estimated to amalgamate. It had been projected that above the

60 percent of Pakistan's people is lower than 30 years of age. The labor force in the age group 15 to 49, projected at 96 million in 2010, is predictable to enlarge to 181 million by 2050, whereas the whole labor force is projected the enlarge from 110 million to 235 million more they similar break. This means that 3.1 million individuals, of whom 2.1 million would be young, the projected go into the labor force each time above the next 4 decades. If not they are delivered through sufficient health, learning, & livelihoods, this demographic modification can obligate unstable communal and political moments.

3.5. Population of Pakistan (1950 - 2018)

Years	Population
1975	66.79 Million
1976	68.81 Million
1977	70.95 Million
1978	73.19 Million
1979	75.57 Million
1980	78.07 Million
1981	80.7 Million
1982	83.45 Million
1983	86.3 Million
1984	89.23 Million
1985	92.22 Million
1986	95.26 Million

1987	98.36 Million
1988	101.5 Million
1989	104.6 Million
1990	107.7 Million
1991	110.7 Million
1992	113.7 Million
1993	116.7 Million
1994	119.8 Million
1995	122.8 Million
1996	125.9 Million
1997	129.1 Million
1998	132.3 Million
1999	135.4 Million
2000	138.5 Million
2001	141.6 Million
2002	144.7 Million
2003	147.7 Million
2004	150.8 Million
2005	153.9 Million

2006	157.1 Million
2007	160.3 Million
2008	163.6 Million
2009	167 Million
2010	170.6 Million
2011	174.2 Million
2012	177.9 Million
2013	181.7 Million
2014	185.5 Million
2015	189.4 Million
2016	193.2 Million
2017	197 Million
2018	201 Million

Population growth rate in Pakistan remained rather very slow in the starting era and was less than 2% till 1960. In the era of Ayub Khan financial development accelerated population growth rate and it was over 2%. Throughout inter-censual period of 1981-98, Pakistan's population growth rate was 2.69% and it has been one of the highest in the dominion (Zaidi, 2006). As economic evolution lengthened, population growth rate ongoing to turn down and it was below 2.5% between 1990 and 2010. The decaying preference in population growth rate continues and it is decreased to 2%.

In case of Pakistan, high profitability led to elevated population growth in new past. During the 1960s abundance rate remained linking 6 and 7. According to Pakistan Fertility analysis of 1975 there were 6.3 births per woman. In 1990s there was disconnecting declining propensity in fertility rate. The PIHS of 1998 showed that TFR declined to the level of 5 (Sathar, 2001). Rendering to the Economic Survey of Pakistan TFR for Pakistan would be fallen to 3.3. Fertility rates are little older in pastoral zones than urban zones. The current population of Pakistan is 204.5 million as of Sunday, August 4, 2019, based on the modern United Nations projection. Pakistan population are comparable from 2.65% of the whole world population.

3.6. Problems due to population growth

Population growth rates in Pakistan accelerate up to speed in the 1940s as health advances prolonged life expectancies and birth levels stayed high. Pakistan's population is projected to cross 290 million by the year 2050 (according to data from the 2016 US Census).

There are differences on the traditional view of Pakistan's population along with capital. According to UN projections, in 2050, Pakistan's population will rise to an estimated 380 million, surpassing the United States, Russia, Indonesia, and Brazil to become the world's third-leading nation behind India and China. With the Asian nation's peak population growth rate for the massive rise, Pakistan will be accomplishing spectacular declines in per capita simplicity of arable land, forest supplies and water use. Speedy population growth at three percent per annum in the past has reduced economic growth. Pakistan's literacy rates for women are 21 per cent and for men 47 per cent.

In Pakistan the data from the Population Census indicates two phases of demographic change. In the first period that lasted until 1981, the birth rates are higher and the contribution to the growth of the young (0-14) population has been maintained, causing a distension at the lower end of the population pyramid. The number of working-age (15-59) citizens who continue in refusing through this process. Thus Pakistan then seems to have entered a second phase as a result of a fall in the productivity rate from 6% in 1981 to 3.5% in 2011. This led to an increasing distribution of the working age population (15-59) from 48.5 percent to 58.8 percent, and likewise decreased in the young (0-14) donation population (from 44.5 to about 35 percent).

Pakistan is sixth maximum populated state in the domain through an anticipated population of 199.71 million. Conventional population growth and fertility percentage is 1.86 and 3.0 correspondingly. The administration is being responsive of the matter of elevated population growth and fertility rate and trying to conquer through the different programs similar to organization of Family Welfare Centers (FWC), Reproductive Health Services Centers (RHS), and County. Exercise Institutes and Mobile Services Unit. The administration has to be paid Rs. 8176 million in 2016-17 to population happiness sequencers for soft implementation. In accumulation, the administration is likewise irritating to develop feasible capabilities of minority and has initiated a lot of developments and sequencers to get better the service side by side in the state. By means of an outcome the redundancy amount has decreased from 6.2 percent in 2012-13 to 5.9 percent in 2014-15. Youth Development Program is unique in the most important ingenuities occupied by the administration to create employment opportunities for youth through diverse modes of business procedures. Its objectives to contemporary a variety of prospects to the youth together with micro attention free loans, small business loans for industrial events, adolescence preparation and skill expansion services. In accumulation, the government is similarly given that payment support to students of fewer advanced ranges and laptops to the capable youth. Demographic data of a state this stage an imperative character in manufacture the strategy for structure of economic strategies.

The Crude Birth Rate (CBR) and Crude Death Rate (CDR) are important statistical values which can be used to compute a population's growth or rejection. The Crude Birth Rate and Crude Death Rate are both considered diligent population of 1000 by the number of births or deaths. From 26.1 per thousand in 2015 to 25.6 per thousand in 2016 and 25.2 in 2017, these rates may have significant impacts on the health of the population of Pakistan CBR. While the crude death rate declined from 6.8 per thousand in 2015 to 6.7 per thousand in 2016, and 6.6 per thousand in 2017.

This enhancement is remaining to the improved well-being accommodations comparable immunization and convenience of life lessening drugs. People evolution dramas an element task in the advance preparation of a state. Escalating people progress increase the dependency ratio and sets demands on education, health coordination and diet quantity. Conversely, Women's

learning can support to diminish inhabitants evolution for the reason that education would enlarge understanding about their duty towards families and happiness peril reason. A stable perfection in health and education next to the successful population programs, the inhabitant's evolution will determinedly decreasing.

Life expectancy at birth (LEB) is distinct the age quantity existences one will be predictable to live by the side of birth. It is usually used by means of one of the most important displays to evaluation the health positions a population in developed as well as developing countries and it similarly demonstrates social and economic growth of a state. Enlarged standard life is muscularly associated with enhanced comfort conveniences and in this regard the administration is production sincere hard work for stipulation of better health facilities to its general public. The most important purpose of the health care system is to offer lengthy and healthy life People. In Pakistan, standard life for both male and female enhanced taking place version of governments' pains to grip comfort issues successfully. The regular life expectancy of males has enflamed from 65.2 year in 2015 to 65.5 in 2016 and 65.8 years in 2017 even though female's life expectancy rate also heightened from 67.3 years in 2015 to 67.7 in 2016 and 68.2 years in 2017.

10.9 percent of population is between the ages of 0-4 years and 21.2 percent is among 5-14 years in Pakistan. Inhabitants composition of the state is twisted in the direction of working age population as 61.4 percent of population is declining in the age group 15-59. This demographic transition might be incomparable consumed for the economic growth by given that appropriate education, talent and professional guidance in upcoming years.

Pakistan's family training system, which was the only one of the world's oldest programs, faced inconsistent subsequent assistance, which was a prime reason for stopping the work of regular administrative adjustments that led to constantly evolving tactics sensitively caught up in delicate ends. Population services ought to provide sufficient national visibility and outreach to society. In Pakistan where degree of evolution of inhabitants is tranquil very remote above the position so much so that standard family size is 6 with one working grown-up, opportunity of building property is inconsequential. Pakistan beneath current circumstances and growth

potentials need to have an average family size of 4 with two effective adults. This will permit young work influence to save and consume more concluding into higher efficiency and superior GDP growth swiftness for times to get nearer.

Demographic change is considered through the reject trendy humanity pursues by the drop in productivity, and it is the variation among the 2 that explains the standard calculation in a population. With regard to 45 in the not-on-time 1970s to the early 1980s, although by the year 2006 the demographic transition began and dropped to 30 births per 1000 population. It is expected to nearly half by 2050, at 16 births per 1000 population. Gradually decreased from 24 deaths per 1000 in 1950 to an estimate of eight in 2006.

This adds to would be due to the varying age agreement. The Pakistani administration has founded huge economic restructurings subsequently 2000. Standard expression conjecture for occupation conception and scarcity lessening has finest approximately an era. Government proceeds obligate significantly enhanced than earlier than in current an excessive length of time, as a outcome of financial growth, the denationalization of public values distributions and tax reorganizations lengthening the levy improper; ordered tax gathering by way of a outcome of self-assessments and dishonesty reins in the Central Board of Revenue.

Pakistan has persuasively offending tariffs and sanctioning transfers by calming ports, energy materials, roads, and irrigation project. Balanced development has been completed in the majority of the Millennium Development Goals (MDGs) in Pakistan since 2000. Squat early position and slow evolution all through the 1990s mean that a lot of the MDG goal will be rigid to achieve. The Pakistan Government remnants enthusiastic to accomplishing these goals but important further incomes and endeavor will be needed to acquire significant advancement essential.

The proportion of the population has living lower the countrywide deficiency contour diminished from 34.5 percent in 2001 to 22.3 percent in 2005-06. Enrolment rates in primary seminaries have greater than by in recent times. There are at the in attendance three million additional children in primary schools when evaluate to 2001. In 2005-06, 53 per cent of 5-9 year-olds were in primary school, up from 42 per cent in 2001. Poor difference of education with poor educational has been accomplishment residue a key uncertain block to the progress. The

percentage of female to male enrolment rates in main schools bigger than ahead of from below 0.68 in 1991 to 0.85 in 2005-06. Evolution has absolute just before the goal of reducing the under-five civilization rates by two thirds. The rate of alteration would obligate accelerating assemble the target.

These taxes are at a stoppage remote over the position when related towards those of the respite of South Asia. Humanity in center of the under-fives 136 in 2005 was 99 per 1 000 live births linked to 130 in 1990. Pakistan has the sixth maximum rate of maternal deaths, that is, approximately 300-400 deaths per 100,000 births. Pakistan also has the 6th maximum integer of TB cases in the world even though the Regular experimental Treatments(DOTS) instance finding and treatment charges have superior extensively since 2000, and they were on passage way to meet WHO marks aimed at 2010. In spite of an unimportant deterioration in the quantity of people with right of admittance to innocuous water over current years, Pakistan still hopes intersect quantity without contact to enhanced water and cleanliness through still 2019.

Like mainly developing countries, Pakistan faces grave environmental troubles. Fast inhabitants evolution and remarkable GDP growth must place massive weight on the state's natural reserve support obligate appreciably enlarged levels of pollution. fast increase in industrial production and suburbanization has controlled towards augmented stages of industrial ravage, water effluence, solid surplus, and vehicle emissions that must occasioned in somber health troubles a lot of zones of the state has attempted to worth environmental costs in Pakistan and has put the approximation environmental smash up at \$1 billion to \$2.1 billion per year, or 2.6 to 5.0 percent.

There is a secure connection between quick population growth and poverty. With inactive or worsening employment opportunities, a constant enlarge in population would result in growing comparative and complete poverty.

The matter of scarcity in Pakistan has the abovementioned consequence for acceptable expansion. Long- run development is not promising lacking defending privileges susceptible groups and the contribution of the whole population in the expansion method. The occurrence of deficiency enlarged in 1990s generally because of depressing economic growth. Growth has forever helped in poverty decrease.

The leading outcome of evolution has been of scarcity diminution. Scarcity can be occupied attention of if the economy succeeds in achieving a highly regarded economic growth further 6%. Various strategy decisions might be used on the way to take attention to scarcity occurrence. Strategies are adopted that decrease concerted organize property dissimilar access to education and proceeds- getting prospects. Since prompt economic evolution and inhabitants' evolution are unsuited, population growth obligation is condensed.

3.7. Growth rate of Pakistan's population

If the country's population continues to rise at the same rate (1.90 per cent), it is likely to be accelerated twice in the next 37 years, making Pakistan the world's third most densely populated country; although land area will remain behind the similarly slightly due to residential plans. Most of the factors attributable to increased population growth in Pakistan are well above ground fertility, low contraceptive frequency, high lack of family planning, rising mortality, early marriage practice, child partiality, deprivation, analphabetism of women in particular and lack of empowerment of women; religious constraints, opinions, levies, traditions and deficiency of relaxation events.

In Pakistan somewhere rate of growth of population is still very elevated so significantly so that average family size is 6 with one functioning adult, chance of building property is unimportant. Pakistan below present situation and growth potentials need to have a common family size of 4 with two working adults. This will smooth the progress of young work force to save and squander more culminating into advanced productivity and higher GDP growth rate for times to arrive.

3.8. Census in Pakistan

- In 1951 census, the territory of Pakistan had a population of 75 million populations, where the West Pakistan had a people of 33.7 million and East Pakistan (today Bangladesh) had a population of 42 million.

- The era of 1961 census, the population of Pakistan had 93 million, with 42.8 million settling in West Pakistan and 50 million settling in East Pakistan.
- In 1972 census, the population of Pakistan had 65.3 million. Rendering to the 1981 census, the inhabitants of Pakistan had 83.783 million.
- In 1998 census, the population of Pakistan had 132.3 million. In census lawful outcomes, established on August 25, 2017, the population of Pakistan was 207.7 million.

3.9. Demographic Transition and the Brewing Challenges

“It is relaxed to supervise the unfortunate uncertainty they are statistically unseen”. This passage as of the World Bank’s instruction manual deficiency dissimilarity be expresses the in dispensability of numerical data in foreknowing socio economic contests steering those to the general approach opportunity meant for creating necessary intercessions. Strategy manufactures, predominantly rising states, are frequently inhibited through the unobtainability of steady statistics. In adding up to assessing the obtainable situation, statistics assist administrations in monetary preparation which is fundamental for boarding ahead the path to expansion.

The accessible supply of statistical in sequence nearby Pakistan’s economy has latterly been augmented by means of frequent data sets and information available by limited and global agencies. In the middle of these, applicable data established contains the details of the country’s populace, concluded and available for Pakistan Bureau of Statistics. The population census that was delayed concerning 19 years, amassed critical evidence concerning the spatial and sequential changes demographics above time. Adding together to these, UNICEF likewise at large data sets, relating to superiority of hominid lifespan, produced during the a variety of rounds of the numerous gauge Cluster Survey (MICS). By satisfying the in order breaks, these data sets present the possibility narrow restrictions bordering research-backed strategies. In addition, these statistics similarly open out state’s input strengths and alarming trials stemming on or after its demographic evolution, which were or else obscured.

Demographic transition denotes to turn down humanity fine productivity charged answer to changes in the economy above time. The data dig up from the World Bank exposes that Pakistan entered the demographic change throughout 1980s, much soon than reduce of South Asian nations. On the other hand, the fertility rate in Pakistan has steady high in contrast district oppose fragments.

Through the present productiveness rate of 3.414, Pakistan stances another in the district, exceeded merely through Afghanistan with a speed of 4.477. Whereas simple birth rate viewpoints at 27.7, that too, is next individual to Afghanistan. As a result, Pakistan houses a population of 207.774 million persons, a standard increase rate of 2.4% yearly. Up till now this growth encompasses changes in age arrangement attached through deviations in operational needy age populations. Comparatively extraordinary productiveness rate, supplemented by declining mortality, occasioned in the assembly the earlier persons on occasion in Pakistan's history.

The adolescence protuberance has been enumerated by way of the NHDR which avowed that 64% of Pakistan's population is less than 29 ages even as one more 30% has inside 15-29 years. By way of linking the information regional population increase charges, a countless of unexpected burning spots and susceptibilities abruptly look angrily. Baluchistan, through a rate of 3.37%, shows uppermost population expansion, surveyed by means of Khyber Pakhtunkhwa (KP) that cultivated at 2.89% because 1998. Sindh and Punjab has knowledgeable turn down in their inhabitants' expansion rates. More important clarification meant for relocation has the 'sub-replacement fertility', which is the fecundity rating those consequences in the new age group being fewer crowded than their indications?

However these grips used for a lot of European countries, it is unsuccessful just before give details the container of Pakistan where the lushness rate mostly outdoes the said standard. Possibly a more practical clarification is the 'rural exodus' that requires state to city relocation catalyzed once less people are wanted for rustic agriculture. Sindh and Punjab have the maximum segments of urban populations, i.e. 52.02% and 36.71% in that order, consequently equipping plenty confirmation intended for the rustic migration (or rural flight) squabble.

Residual provinces are mostly rustic which, in chance, display is short of industrial foot as well as a generally favorable environment for the economic behavior. These are the changes pressure the income situation the opportunity obtainable to people in dissimilar regions, which can sufficiently be gauged from side to side the Multidimensional scarcity directory. This improved poverty gauge, residential by Oxford Human Development Initiative (OPHI) and UNDP, reveals the deficiency of persons in conditions of comfort, learning and existing income distinctive.

As per the most recent MPI data, Baluchistan is the poorest province with an occurrence of 65.3%, followed by KP which is 50.7% multilayered deprived. Sindh has position 3rd with an MPI of 50.5% whereas Punjab has the lowly occurrence of multidimensional scarcity (25.2%). These rankings stay put unaffected yet the provinces are realized from side to side the lens of human development index (HDI). Baluchistan has the lowly individual development, which is obvious from its HDI value of 0.421. Sindh and KP have average levels of human development as established by their HDI scores of 0.640 and 0.628 in that order. Punjab has the uppermost HDI of 0.732, thus located in the great average group.

Sindh and Punjab saw a refuse in the population enlargement, an important split of the youth bulge is the majority probable concerted in KP, Baluchistan and previous FATA. These have been many districts that fail to spot out on socioeconomic and human expansion. Next of kin deficiency, that arise the approach of annoyance and separation, is one of the documented causes at the back youth radicalization and political aggression. Stop the youth bulge from on foot the range towards aggression, there is a terrible requires revamping the obtainable approaches towards the labor market, human capital formation and economic organization. All, the majority unrelenting confront has to give employ the working age inhabitants that has augmented in lately.

Whereas the majority individuals hope for protected occupation in the communal segment, it's comparatively scanty magnitude remnants weakened cabin early stages protuberance. This calls for condition commanded inventiveness meant for boosting free enterprise novelty programs crosswise the country. Private enterprise and startups obligate the possible to revolve employ seekers into engines of employ formation. The freshly ongoing 'E-

Rozgar Program' by Punjab government, those objectives to teach alumnae in freelancing, is the first place in this course. To make sure impartiality, such files would must countrywide treatment with broader addition criteria. Separately from employment cohort, freelancing from side to side online raised area can transport foreign swap over wages, which has been at present the country's maximum urgent anxiety.

Following its sovereignty, Pakistan was born into an agrarian economy in which agriculture made the main GDP donation, employed most of the labor force, and received foreign exchange through exports. Because Pakistan isn't an additional agricultural economy, key commodity exports and consequently foreign exchange earnings declined sharply. The nation relies on a net importer for individuals agencies for behind conjugal disbursement the economic growing.

Freelancing, free enterprise and startups could be sufficiently seal liberty missing through the agriculture in recurrent segments of the wealth. India takes secured demographic bonus of its childish population largely from side to side freelancing. Pakistan at present has 161 million cellular subscribers in the middle of whom 68 million had right of entry to 3G/4G internet military.

Adding up, there survive 70 million broadband subscribers as fine. Specified the better telecom and IT communications, Pakistan is completely competent of flattering a freelancing ambitious 'gig economy'. Separately from employment, GDP and abroad exchange over incomes, a great puddle connected freelancers could moreover scheme yielding representation of the country crossways the sphere. Though, set up the footstep of freelancing, convinced lenient situations require just before be safeguarded.

First, it necessitates an important digitalization of the budget, occupational sociability and ease of use of operational payment classifications similar PayPal. Second, important savings should be complete in human capital configuration aimed at attaching the filled possible of the demographic payment. Whereas safeguarding these necessitate arrangement on national height, yet an additional effectual come up to would be broken up the slope of expenditure from 'guns' towards 'butter'.

3.10. Changing the paradigm of economic policy:

3.10.1. Growth through equity

The outline of economic evolution in the history recommends the organization of Pakistan GDP expansion have 3 types:

3.10.2. Unsustainable growth:

The trouble of indefensible evolution is indicated by information that comparatively elevated GDP growth has been happened merely through periods when great assets inflows were obtainable; they have failed piercingly and overseas aid cut down. For instance, in the 1960s through armed government of Ayub Khan, big external aid currents became obtainable as Pakistan connected the SEATO and CENTO pacts to turn out to be fraction of the US alliance next to the Soviet Union. GDP progress grasped concerning 6 percent through the period. In the following period 1973 to 1978, when the government of Prime Minister Z.A. Bhutto adopted an additional self-governing overseas strategy, aid cut down and so did the GDP enlargement rate, averaging 4.9 percent yearly. in the decade 1978–88 throughout the government of the General Zia ul Haq, overseas aid inflows augmented piercingly and GDP growth augmented to 6.6 percent yearly, as the military command located Pakistan to have fun a front-line function in the American-sponsored ‘Jihad’ beside Soviet troops in Afghanistan.

Once more throughout succeeding independent interval 1988–98, overseas aid tides cut down piercingly and the GDP growth rate declined of a yearly standard to concerning 4 percent. In succeeding the Musharraf government (1998–2008) great distant help invasions yet again became obtainable as Pakistan initiated to have fun an input role in the conflict next to violence, GDP growth augmented stridently to 6.3 percent yearly. In the subsequent period of the autonomous government (2008–11), GDP growth declined stridently after more to 2.6 percent.

3.10.3. Growth with inequality:

Economic growth is attended the growing income disparity. Burki (2011) estimate the richest 18,000 members of the inhabitants have a standard profits of US\$72,700 per capita associate with general per capita takings of US\$1,050.

3.10.4. Low employment elasticity of growth:

The suppleness of GDP growth with admiration to service shortage lessening is comparatively squat. The confirmation for the period 1999–2011 expressions the being without a job rate did not drop considerably with senior growth. At the similar time, throughout low-growth years, as those who became without a job in the official sector cleaned into service in the relaxed sector, in general unemployment rate did not rise considerably. throughout 1999 to 2001, the unemployment rate remained at concerning 6 percent, and slowly greater than previous to 8.3 percent in 2004 (Hussain 2008), attainment 10.3 percent in 2011. If such underemployed people are incorporated, then the unemployment may be considerably superior. Given the obtainable organization of growth with low employment suppleness, 5 percent GDP growth has been producing employment for less than 1 million people per year.

After six decades of enlargement had a great deal as 40 percent of the population might be under the scarcity row. The strategy confront is to significantly decrease scarcity and produce employment for the extra than 3 million people who on standard will be incoming the labor force yearly over the after that 4 decades. What is necessary is to: (a) maintain a higher rate of GDP growth of 7-8 percent, and (b) augment growth suppleness with admiration to occupation and scarcity decrease. Gathering the planned objectives requires a comprehensive growth example. This involves altering the in attendance institutional arrangement that produces rents for minute best by controlling opposition and exclusive of the heart class and deprived from speculation and high-wage employment.

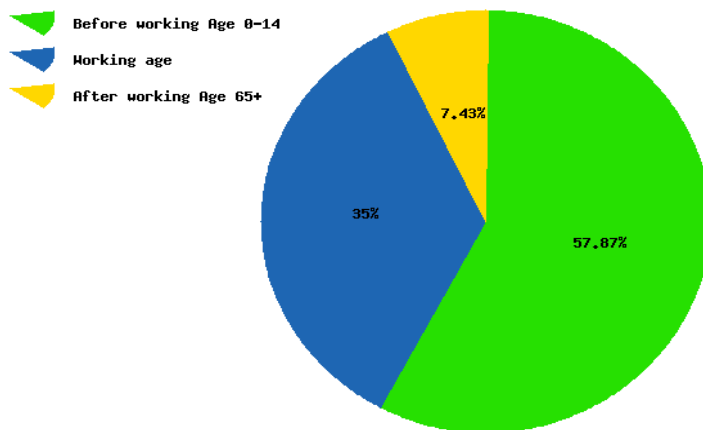
Engendering senior and continued GDP growth with high elasticity's for service and deficiency decrease will necessitate institutional changes for comprehensive growth. This would be engage enabling the center class and the deprived to obtain productive possessions and just right of way in to acclaim and markets for goods and services. purposely such an complete growth approach would consist of 4 elements: (i) restricted capital gathering in the micro-enterprise sector from side to side participatory growth; (ii) a tiny and average planter policy for accelerated agriculture increase through the stipulation of land possession privileges to the landless and institutionalized hold up the land growth and technologies for escalating yields per

acre; (iii) an institutional structure for accelerated enlargement for tiny and medium-scale enterprises by growing the manufacture and exports of high-value additional harvest in the light manufacturing and locomotive sectors; (iv) an institutional structure for as long as productive possessions deprived from side to side impartiality dangers in great corporations which are retained by the deprived and accomplished by authorities. These huge corporations can be commenced from side to side public–confidential organizations in the farm animals, fisheries sectors and milk crops.

3.11. Age Configuration of Population

Impression of varying age configurations has until that time transpired as of the stable fertility turn down that has progression in Pakistan subsequently slowly 1980s and untimely 1990’s. Revenue of beholding at the fluctuations in age construction in scrutinize dependency ratios, i.e., the ratio of persons less than 15 to 64 to persons flanked by 15 to 64. This ratio has been submission in what way a great deal of the young population is getting bigger and that of childhood lessening. Ratio will bring on declining for a quantity of extra year’s to further than 2030; frequently because of the decreases in the degree of the population at the young ages of 0-14, an enduring make bigger operational age population. Age is the primary principles of attaching the potential for economic growth throughout labor force participation.

3.11.1. Age composition of Pakistan in 2019



This figure shows that Pakistan has 35% working age population of its total population while the lasting 65% is young and old dependent population in 2019.

Source: Pakistan Economic Survey 2019-10-10

3.12. Fertility Decline in Pakistan

Unnecessary to say, prosperity decline in Pakistan has protected remote at the last several states in Asia, equal in South Asia. On the other hand, currently demographic change has lastly enchanting habitation; similar fluctuations have opening the come into vision in age-structure of the population. Through the reduction young age inhabitants the quantity of equipped age population is slowly growing. With the quantity share of 52 percent in the late 80s to early on 90s, quantity of employed age population (15–64 years) has attained approximately 59 percent in 2006. The hole of working age population will crest in 2045 to 68 percent previously preparatory reject over another time the grounds actuality the rising old age population segment as a substitute for the young. The almost three percent old age population opening will be growth to approximately 10 percent by 2050 in Pakistan standard alternate, UN (2005). The young age population divide with lessening fertility, naturally, appearances the decreasing leaning as existing 38 percent in the total population the young population is conventional encompass only 23 percent of the country's population by 2050. Observing at the little elevated option we discover 18 and 27 percent of the population, in that sort, encompassing young people in 2050.

These developments in profitability and humanity charges in the state point out a growing center age of the population. From a youngish middle age of 20 years in 2006, it is predictable enlarge to a grown-up 33 years by 2050 (standard modified). Middle age of the population in Pakistan happens in add to in the 1990s, through lessening fertility level, leaning would be carry on in future. Demographic change darks a calmer corridor in the country, the middle age shall be about 29 years by 2050, and associated to 38 year profitability debility is speedier.

The changing age collection of the population could be finest symbolized in population pyramids. Altering age formation of population in Pakistan is greater than an era (for years 1950, 2000, 2025 and 2050). We can see the large contract fertility decline revenue position from 1950

to 2000 and the age structure gradually emerges like a characteristic pyramid, though; the pyramid does display the minor reduction.

During 25 years afterwards 2000, the population age conformity displays a obvious modification, through the bottom behind its pyramid look. In the succeeding twenty-five years the age constitution has conventional the variation Survey, from what it watched like fifty years preceding, budge just before about cylindrical shape. The lessening fertility kinds the bottom daintier and due to the earlier far above the ground fruitfulness rates a character age group, which currently encompasses occupied age adults, interchanges its technique from side to side the demographic development of the country's population, creation center substantial. The maximum of the pyramid, yet immobile slender, shows a spreading orientated with the split of the mature slowly growing the population.

The age-sex exact labor force participation rates (LFPRs) for the year 2005 to 2006. The male turn expressions a characteristic inverted-U shape, with the LFPR summing between 25–50 years of age. The female participation has remains squat all through the lifetime, screening no precise outline. This tendency of little female labor participation has kept at completed stretch. As we know that female LFPR does expression an unimportant accumulative movement but has sustained to endure little in excess of the previous decade. Assistances of demographic bonus cannot be repairing through partial the inhabitants are not entirely lively in the labor market as is common in the Pakistan. With only one-fifth of females in working ages essentially vigorous in the labor market funds a squander of possessions that might be used to advantage the prospect the shifting demography in contribution of Pakistan. Existence portion of the labor market place is merely helpful and there is skill in the market to marinate up these employees.

Despite low contribution rates in the middle of females, rate of severance is considerable senior for the males. The redundancy rates are chiefly substance observing in the middle of older women. Unemployment rates scale for grownup years but are particularly marked among women aged 60 and overhead. This leaning has severe suggestions for the state as the balanced completion of the demographic change is aging of the population. Dwindling job prospects at older ages anxiety the oblige for suppleness are not merely in the labor market but likewise in the

labor power to manage through the circumstances that has been destined to attain put formerly the 'echo generation' becomes timeworn.

3.13. Afghan refugees effect on the Pakistan's demographics

The occurrence of huge figures Afghan refugees has a substantial contact on the demographics of Pakistan. Subsequent to Soviet Union conquered Afghanistan in December 1979; refugees inaugurated flooding more than the borders into Pakistan. By 1990 just concerning 3.2 million refugees has advanced in Pakistan, make smaller of proximate 90,000 from 1989. In anticipation that time unoccupied extents of the Baluchistan and North-West Frontier Province has been stable by refugees throughout the 1980s. The United Nations High Commissioner for Refugees (UNHCR) conformist in 1990 there were 345 Afghan refugees in communities. For 68.5 percent were in the North-West Frontier Province, 26.0 percent in Baluchistan, and 5.5 percent in Punjab. Every community accommodated an average of 10,000 people, and women and children accounted for 75 percent of the refugee population.

Arrival of refugees has thoughtful collective penalty, and the population of wilderness areas has similar to consequence on the environment. At the start, Pakistanis required helping their nationals in a spell of could do with, but complications sluggishly controlled a lot of imagine their company had vanished extreme adequate. Middle of the troubles was price rises, shortage of low-paying jobs for they had reserved by refugees, and propagation of armaments, particularly in urban zones. The growth of loathing between refugees and Pakistanis, predominantly in Punjab, produced the government to confine refugees' allowed association on the state in the mid-1980s.

To help out the Pakistan is avoiding clash with custody refugees disconnect after limited population, the UNHCR placed limitations for expenses of nutrition and extra properties and things in its refugee campsites in the North-West Frontier Province and in Baluchistan. Meanwhile the 1989 finale of the Soviet profession in Afghanistan, the UNHCR, the Pakistan government, collection of NGOs have optimistic the refugees to go back to family, then pending destructive combating in Afghanistan breaks, a lot of will be decided on to stay in Pakistan. The figure of Afghan refugees quiet exist in Pakistan was projected 1.4 million.

3.14. Dependency Ratio

The entire demographic procedures have occasioned popular lessening dependency ratio in the country. Quantity of the inhabitants for ready ages (15–64 years) endures add the even as these in the earlier ages (0–14) diminish. The quantity of the hoary in the whole population is conventional explain an extensive enlarge only following 2025. It will be formerly growing mature population that will yield confidence ratios advanced next to the 20th century once it was frequently young dependency subsidized to entirety dependence ratio. Old, young and whole dependency ratios in Pakistan will conventional turn over the year 2050. We will get figure dependency diminishing in the late 1990s till regarding middle of the 21st century, the span of with the young dependency; on the other hand the old dependency ratio displays rising leaning after 2025, manufacture whole dependency ratio enlarge over near center of the century

Presently comparable in attendance is shade in dependence, there are shades in the demographic transition available to the state. A 70 year old is dependent then the slighter gradation than a 90 year old Mason (2005). The same, demographic transition interests concluded shade obtainable prospects. Supposedly, demographic bonus has dissimilarity between amount of evolution prepared age population and whole population.

After dissimilarity has errand of working age inhabitants, it has been careful to opening accessible by country's demography to mark practice on the financial evolution Mason (2005). Pakistan's 'window of opportunity' unbolted from 1990s expected to close up in year 2045. The approximately fifty-year extensive 'offer' is the greatest presently (that is primary 2000s) previously beginning takes out in the end in 2045.

3.15. Future Population of Pakistan

Future population has expected through utilization multi-state populace projection organization. The projection typical relies foundation year population through outlined academic classes and discrepancies of every demographic module to adjustment i.e. migration, morality and fertility. The protrusion outcomes expression that the population of West Pakistan is going away to be rising greatly within the next 5 decades i.e. from 174 million in 2010 to 281 million

in 2060 even West Pakistan can supervise in comprehend substitute close to fertility by 2035-40. The considerable enlarge within the future is thanks to “population momentum”. It’s going away to be mentioned that close to 1/2 enlarge in 2010 is thanks to population incentive, which can carry on all through successive 5 decades. This impetus would reason more surge within the working-age (15-64) population i.e. after one hundred and five million in 2010 to 157 million in 2030 and 186 million in 2060. Consequently, West Pakistan can get to take on effectual labor policies to step up the in service age population.

The massive labor, if fine sophisticated, sure-handed and satisfactorily used might be a main boon for the socio-economic well-being. Due to speedy productiveness waning within the forthcoming, the quantity of populace elderly 65+ can go faster seven million in 2010 to forty two million in 2060. The proportions of population aged 65+ are outwardly expanding 6 fold. The prompt population aging pretenses some contests meant for strategy manufacturers meant for formal amendment, mutually through the economics of annuity and health care system for old. This enormous untaught and clumsy young population mutually with imperative quantity of elderly population within prospect would be abode intense weight on economy, if not participated with in health and education. What is more, varsity age (underneath 14) populations are leaving to be stagnating all through uninterrupted 3 decades (until 2030-35) i.e. close to sixty one million. This suggests that till 2035, a lot of kids can get to be registered in colleges. A lot of colleges are going away to be obligatory and a lot of lecturers to be skilled and employed, appreciably within the rustic zones. Divide of the young population would but turn down when 2035 i.e. after sixty one million in 2035-40 to fifty million in 2055-60.

CHAPTER 4

RESEARCH METHDOLOGY

4.1 Introduction

This chapter summarizes the data, its source of collection, and the method used to estimate the data.

4.2.Theoretical Framework

According to Malthusian population trap (1798) is that population boost was spring to stop since life-sustaining income, which increase at an arithmetic rates, would be inadequate to support population growth. Secret motivation of population growth is the occurrence wherever by population continues to increase yet following a drop in birth rates as the great accessible youthful population expands the population attractive ability.

The smash of Demographic changes on economic evolution is considered by the succeeding development model:

$$\text{GDP} = A f(\bar{K}, L)$$

$$\text{GDP} = A \bar{K}^\alpha L^\beta$$

Now taking log of both sides

$$\ln \text{GDP} = \ln A + \beta_1 \ln \bar{K} + \beta_2 \ln L + \mu_t \text{-----} (1)$$

While population includes together employees i.e. labor strength and non-workers. In arrange to comprise non-workers in the model we utilize proxy of addiction ratio as it calculate the weight on the dynamic population.

$$\ln \text{GDP} = \ln A + \beta_1 \ln \bar{K} + \beta_2 \ln L + \beta_3 \ln \text{DR} + \mu_t \text{.....}(2)$$

Where DR stand for addiction ratio in other terms quantity of the population that is dependent on work force. The ratio of dependents will be the age dependency ratio (people 14 years or younger, or 65 and older) the working age population (individuals matured 15–64 years).

One more significant variable of demographic transition is life expectancy which shows that the standard number of year’s toddler is predictable to live. Thus 2 equations becomes as:

$$\ln \text{GDP} = \ln A + \beta_1 \ln \bar{K} + \beta_2 \ln L + \beta_3 \ln \text{DR} + \beta_4 \text{LE} + \mu_t \dots \dots \dots (3)$$

Somewhere LE represents the life expectancy. Life expectancy variable is worn as stage variable as it is further suitable to use in number form (Bloom 2009). Gross capital formation (GCF) consists of outlays on flourishes the permanent property will be economic advantage disposable ups and downs for this stage of accounts, and it also refers to the profit of GDP.

Now to locate the Demographic transition from 1975 to 2018 and its suggestion from economic growth. We can illustrate it by the subsequent distinction model.

First we will convert our model in per capita form for year 1975.

$$\left(\frac{Y}{C}\right)_{1975} = \left(\frac{K}{C}\right)_{1975} + \left(\frac{L}{C}\right)_{1975} + \text{DR} + \text{LE} + \mu_t$$

K/C= Capital per capita

Y/C= GDP per capita

L/C= Labor per capita

DR= Dependency Ratio

LE= Life Expectancy

For year 2018.

$$\left(\frac{Y}{C}\right)_{2018} = \left(\frac{K}{C}\right)_{2018} + \left(\frac{L}{C}\right)_{2018} + DR + LE + \mu_t$$

Now to find the growth rate of the variables we have to take the natural log of the differenced variables:

$$\ln\left(\frac{Y}{C} 1975 - \frac{Y}{C} 2018\right) = \ln\left(\frac{L}{C} 1975 - \frac{L}{C} 2018\right) + \ln\left(\frac{K}{C} 1975 - \frac{K}{C} 2018\right) + \ln(DR 1975 - DR 2018) + \text{Life Expectancy} + \mu_t$$

$$\ln\left(\frac{\left(\frac{Y}{C}\right)_{1975}}{\left(\frac{Y}{C}\right)_{2018}}\right) = \ln\left(\frac{\left(\frac{K}{C}\right)_{1975}}{\left(\frac{K}{C}\right)_{2018}}\right) + \ln\left(\frac{\left(\frac{L}{C}\right)_{1975}}{\left(\frac{L}{C}\right)_{2018}}\right) + \ln\left(\frac{(DR)_{1975}}{(DR)_{2018}}\right) + LE$$

The on top of growth model is functional in the regression form and depicts relation among the expected log of Growth Domestic Product per capita as dependent variable and the log of capital per capita, total dependency ratio, labor per capita, and life expectancy:

The complete regression model took year as follows:

$$\ln(Y/C) = \beta_0 + \beta_1 \ln(K/C) + \beta_2 \ln(L/C) + \beta_3 (DR) + \beta_4 (LE) + e \quad \text{----- (4)}$$

Regression model will be given as:

$$\Delta \ln(Y/C) = \beta_0 \Delta + \beta_1 \Delta \ln(K/C) + \beta_2 \Delta \ln(L/C) + \beta_3 \Delta (DR) + \beta_4 (LE) + \epsilon$$

The yearly modify in 43 periods, after bottom year 1975-2018, and ϵ has been the blunder phrase. GDP per capita, $\ln(Y/C)$, capital per capita in (K/C) and labor per capita, in (L/C) , were log alteration in arrange create them as expansion charges, because the amounts of modify its accepted log are identical evolution charges of the variables. Only the difference in the entirety dependency ratio was intended. Life expectancy at birth was practical as a variable asserting quantity the years, grounded on 1988 year.

This is the generalized equation to investigate the impression of demographic transition, it's consistent suggestion on economic evolution consequential after the theoretical model and methods the source of investigation in the revision.

4.3. Econometric Technique

Previous revisions used standard least square (OLS) approximation method to confine the results on demographic transition on economic process.

This study's econometric model depends on associate degree over known equation including endogenous variables that correspond with term inaccuracy. Furthermore, the remaining option to cope with the endogeneity drawback may be instrumental variable (IV) technique. TSLS calculation methodology is a special variety that deals with endogeneity problems and does not have a norm for more than established equations. Error corrected for autocorrelation of strange type. In comparison, 3 stages least square (3SLS) is technique to be practiced here as it deals with the problem of endogeneity but implemented in the presence of equations method. Additionally, recent parallels have been discussed. Finally, the calculation of Generalized Least Square (GLS) addresses the endogeneity downside together, but there were a few additional assumptions

To transaction endogeneity, contributory variable is that greatest offered alternative may utilized on multivariate investigation to unravel issues simultaneousness unfairness amongst informative variables, and as well as blunder measurement. In the same way, generalized method of Moment will that the comprehensive sort of contributory variable practice that produces constant result equal within the incidence of auto-correlation and hetroskedasticity. Furthermore, it is obvious benefits to produce limitations during the make the most of target perform which have instant restriction during which relationship among the lengthened regressor and also the fault span is zero.

These 2 facts of GMM build greater to TSLS, 3SLS and GLS technique. Thus GMM estimation contains an obvious advantage on particularly mentioned technique with applicable to its reliability and potency. Furthermore, the system of GMM not solely takes addicted to consideration inferior instant likes similar to mean, median, mode however conjointly complex mandate instants comparable lopsidedness, kurtosis additionally. Thus distinction GMM technique will be going after estimation the expansion equations singly taking completely diverse needles of demographic transition. Distinction GMM everything popular 2 stages i.e., by

management regression in stage within the beginning and in another place it shows regression on 1st distinction of the limitations to calculate able.

Mostly, matter endogeneity ascends thanks the occurrence of converse causing, successively the endogenous variable associates through the fault period. During the scenario, normal regression toward the mean usually yields unfair and contradictory estimates. Conversely, regular estimate should be obtained, if associate degree acceptable instrument is on the market. Linear models, there square measure 2 key necessities exploitation associate degree IV:

- ✓ The apparatus should be interconnected through endogenous informative variables.
- ✓ The device will not be correlate or orthogonal to error term within the equation.

To attack endogenously verify variables and absent variable partiality, distinction GMM estimating technique established by Arellano and Bond (1991), Arellano (1993), Arellano & Bover (1995) have used approximation expansion equation singly mistreatment lagged morals of variables as implements. Economic code E-Views have worn for approximation rationale. However potency of GMM approximation, to a bigger level, is contingent on however the implements of endogenous variables square measure established (Greene, 1997).

From offered selections of E-Views within light-weight of higher than conversation, “GMM statistic (HAC)” possibility is preferred to induce usual faults dependable in occurrence of auto-correlation heteroskedasticity. Throughout assessment, this method permits accurate ongoing correlation of unfamiliar type additionally heteroskedasticity. A lot of exactness, Newey-West west system is employed get to dissonance residuals. E-view mechanically determines likelihood price of J-statistics that may be take a look at to envision the strength of the model and devices utilized in investigation. Furthermore, familiarity take a look at will be directed to envision traditional circulation of residuals when regression is lane.

4.4. Diagnostic Test

Earlier than obtainable to major assessment system, several diagnostic tests are showed ahead of successively regression investigation. These whole trials are designated in feature under an agreement with their proper ordering and reason.

4.4.1. Descriptive statistics

Descriptive statistics are described at first place in the analysis. Descriptive statistics has been regulation of quantitatively telling major structures of compilation indication. Descriptive statistics intentions to sum up a trial, somewhat practice the data to absorb nearby the population that taster of data is consideration symbolize. Some measures that are usually used to describe a data set are measure of central leaning take in the mean, median and mode.

4.4.2. Lagrange Multiplier Test

Lagrange number (LM) test could be broad standard for testing hypotheses linking to parameters throughout a probability structure. The hypothesis bottom test is uttered joint or supplementary constraints on the principles of parameters. To carry out connect degree lumen make sure solely inference of the parameters subject to the limitations is pleasing. This is frequently in distinction with Wald tests, that area unit supported unobstructed estimates, and possibility quantitative next of kin tests that necessitate each imperfect and apparent estimates.

The name of the test is expectant by the extremely in order that it will be deliberation to be testing whether or not the Lagrange multipliers worried in implementing the limitations area unit significantly entirely dissimilar from zero. The term Lagrange number itself might be a wider mathematical expression coined when the effort of the eighteenth century man of science Joseph Louis Barrow Lagrange.

The lumen testing principle has conventional widespread pertinences too more than a few issues of concentration in political economy. Furthermore, the concept of testing the appeal of

striking the limitations, even if at first developed all the way through a chance scaffold, has been wide-ranging to dissimilar inference environments, in cooperation with technique of moments and sturdy consideration.

The name Lagrangian number makes convinced was in the beginning utilized by S. David Silvey in 1959. His effort provided an eventual dealing of testing issues right through which the null hypothesis is nominative by constraints. The fine quality assistance of this system is that it permits the optimization to be resolute while not expressive parameterization in provisions of the constraints.

As a result, the strategy of Lagrange multipliers is expansive familiar solve hard harassed optimization issues. The stratagem will be summarized as follows: so as to seek out the stationary points of a carry out $f(x)$ subject to the parity control $g(x) = 0$, types the Lagrangian execute.

4.4.3. Generalized method of moments

Economics and statistics, Generalized method of moments(GMM) can be universal technique aimed at approximating limitations in purposeful mathematics models. Frequently practical inside for situation partially ordinary models, somewhere the limitation of absorption is finite-dimensional, although the complete style in data's segment carry out capacity not is prominent, and for that reason maximum possibility judgment isn't correlated. The approach needs that a swayed multiplicity of moment setting was clear for the model. These moments' states of communication are meanings of the classical restrictions and also information, particular the hope is nothing at parameters' accurate principles. The GMM technique before diminishes an affirmative customary examples arithmetic mean of the pressing state of affairs. The GMM estimators are famous dependable, asymptotically customary, accomplished within grouping of totally estimators that don't routine a lot supplementary info to one side from that forbidden surrounded by the instant circumstances. GMM was wrought by Lars Peter Hansen in 1982 as a simplification of the strategy flashes, announced by Karl Pearson in 1894. Hansen communal in 2013 is great compliment in economic science incompletely efforts. Population moment position

can are play a significant position within the speech statement thus its worth going back to the primitives to be pleased about the workings of GMM. The unprepared unrestricted moments are natural to exertion out and that they tell essential aspects of connect in treatment allocation. For example, the focal four moments tell North American nation regarding the population denote, discrepancy, asymmetry and kurtosis.

Management them we are brilliant to at once place confines consistent with our theory on the assignment, scale or form of the allocation with no specifying a full model or allocation. If we will noticed some info on the population, the inquiry scraps a way to use the example to approximate the parameters of concentration. In ordinary, sample statistics each have a complement within the population, for instance, the association among the sample mean and also the population predictable value. The similar old next step inside the assessment is to use this similarity to allow cause for development the sample moments as foundation of estimators of the population parameters. The majority tactics were the in Karl Pearson's work [1893], [1894], [1895] inside the late nineteenth century. The Pearson family of distributions may be a awfully lithe graphic character that has fairly a few essential and repeatedly used distributions among its members calculation on the parameterization you decide. Pearson's disadvantage was to decide on a suitable member of the family for a specified dataset.

The economics literature offers the research worker a good multiplicity of inference ways contradictory within the amount of in succession they use, preliminary from completely parameterized likelihood-based techniques to antiseptic statistic ways and a stylish diversity in lined by. Selecting one befittingly may be a respectful task as a correctly such steady model provides a good deal superior brilliance estimates than ways that presume very little bonus than mere connection among variables at one an advance. On the contradictory hand, this aptitude comes at a cost of conceivably bogus confines. From a new reason of read, semi- and non-steady ways are a good deal improved to variations within the basic information generating practice and still may well offer constant estimates while not stunning additional assumptions. We've mentioned that GMM is additional brawny to model command than metric facility unit because it needs fewer in succession. This explains the increasing superiority of semi steady estimation

frameworks like GMM, as they consent to fit in precisely the maximum quantity restraint as theory implies. To utter it in our have way, the GMM computer is constructed on a lot of common (unspecified) independence of the population than within the antique likelihood-based framework, because it needs fewer and weaker assumptions.

CHAPTER 5

DATA PRESENTATION & ANALYSIS

5.1. Selection of the variables and the data sources:

The variables are particular aimed at the study is GDP per capita growth rate, gross capital formation, Labor Force, Dependency ratio & Life expectancy. The study will be use time series data after the period 1975-2018. The data will be collected from Pakistan economic survey, IFS, World data bank. The definitions of the variables have assumed in the table.

Table 5.1.: Definition of the variables

GDP per capita:	Total worth of entirely belongings and amenities that are formed for the country in a challenging time era at odds by the population. GDP per capita is used to estimate the economic productivity the state on accounts of number of people. It reflects the typical of living in people.
Gross capital formation	Capital formation has a word used to explain remaining capital accrual for the duration of a secretarial era aimed at demanding country. The tenure mentions to accompaniments of capital things, such as paraphernalia, outfits, conveyance property, and electrical energy. Countries need capital things to put back grown-up ones that are used to harvest things and facilities. If a nation cannot put back capital goods as they arrive at culmination of their practical lives manufacture deteriorations.

	Frequently, the sophisticated the capital formation of an economy, the more rapidly a frugality can produce collective revenue.
Labor Force	The labor force is defined as individuals who wanted to work and they have aptitude for working appropriately. The size of labor forces to arbitrator the unemployment rate. Employed and unemployed completed the labor force. Those individuals who are not measured laboring or else unemployed, they are not in grouping of labor force.
Dependency Ratio	Dependency ratio is recycled to compute load on productive population. It is defined as the age population ratio among non-workers (i.e. these are not in the labor force) and workers (i.e. those in the labor force). Non-workers comprise those individuals of age 0 to 14 years and above 65 years. Workers comprises individual of age 15 to 64 years. Generally age of the people intensifications, the ratio canister is moved to imitate inflamed needs linked through a mature people.
Life expectancy	Life expectancy has demarcated the figure in centuries creature is anticipated to aware. Average age, creature canister breathing is used as base the life expectancy. This quantity is firm grounded on the statistical standard, allowing for numerous influences, counting

	time and residence of natal, battle, education level, revenue, and health antiquity. There are a lot of varied types of life expectancy calculations, and the number varies in surplus of time.
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5.2. Description of variables

5.2.1. GDP Per Capita

The finest deputation, which elaborates economy presentation in the country, is the gross domestic product. Gross Domestic Product has been amplification to way for the merit things and amenities which are contrived inside restrictions of the state in one year time border. It similarly contains last things and facilities of all foreigners corporation which happens in the border of the state. To a few extents particular facilities comparable educational protection which are completely beneath management of government are similarly parts of gross domestic product.

On the other hand, gross domestic product canister remain explained through assist the 3 opinion i.e. revenue, move toward, construction tactic and outflow method, first consideration says that revenue has been shaped through the manufacture in recognized as income consideration, while particular worth which unite to the manufacture on each phase is the making preceding one came into organism concluding shopper accepted this good recognized as the outflow consideration.

well-known technique in the direction of compute the GDP remains toward calculate altogether the ended goods and services which are shaped in the 4 ways all of the state in an exact period surround usually 1 year time boundary equivalent with asset, government expenditure and sum shopper plus exports charge deficiency bring in value. GDP is the recognizable calculate growth, general revenue and assent. Researchers discover 2 types of GDP. Real GDP make known gross nominal GDP quantity intended the rise, manufacture tangible

GDP extra helpful intended for old comparisons. At the same time as nominal GDP discover currency spending and called a little bit money GDP. And real GDP christened a little bit steady worth GDP or inflation-corrected GDP.

The GDP expressions are rising amounts come again economies must shape all through the time. Tax income and administration spending are connected through GDP. a little bit management inflict original levies to gather revenue, which influence economy unenthusiastically a little bit government growth the abovementioned outlay which, previous hold back its revenue to a fund a scheme of communal attention instance authority vegetal, progress of excavations or development comparable Gwadar port etc. since government container pay for the extensive and massive quantity of change.

Gross Domestic Product of Pakistan cultivated 5.5% in 2018 associated to previous time. This degree is 3 -tenths of one percent superior to the numeral of 5.2% available in 2017. The GDP figure in 2018 was \$314,588 million; Pakistan is quantity 41 in the position of GDP of the 196 countries we distribute. The broad price of GDP in Pakistan let go \$10,021 million with admiration to 2017. The GDP per capita of Pakistan in 2018 was \$1,565, \$21 less than in 2017, when it was \$1,544. To view the development of the GDP per capita, it has been attractive to look back a few years and contrast these data with those of 2008 when the GDP per capita in Pakistan was \$1,038. If we order the countries conferring to their GDP per capita, Pakistan is in 154th location; its population has a small level of wealth contrast to the 196 countries whose GDP we distribute. Conversely, projections for the coming years forecast that GDP will grow at a rate underneath 3 percent in the pending years.

Many researchers have done their researches on GDP and evaluate different results. According to Kelly and Schmidt (1994) describes in the study that when population growth will be high brakes to hamper normal evolution tolls when designed as per capita gross domestic product (GDP). They existing moral investigation of under developed very poor states and an undesirable.

5.2.2. Gross Capital Formation

Gross capital formation is (likewise acknowledged as gross domestic speculation) entails the expenditures for accessories to lasting possessions of economy desirable disposable variations in the period of accounts. Stipulated property contain land enhancements (fences, ditches, drains, and so on); plant, machinery, and start procurements; the building of roads, railways, and comparable, counting schools, offices, hospitals, private housing lodgings, profitable and manufacturing constructions. Catalogues are frameworks of goods under arrest through organizations get jointly provisional unpredicted vacillations the produce or sales, and 'work in growth. Conferring to the 1993 SNA, net procurements burgle were correspondingly cautious capital formation. Gross fixed capital formation is fundamentally net benefit. It has part of the disbursement process of scheming GDP. On the way to be extra accurate Gross fixed capital formation events disposable supplement in fixed capital. Gross capital formation must be rotten into the next parts: gross fixed capital formation and speculation registers. Gross static capital formation entails the price of manufacturers' achievements of new and obtainable non-financial possessions a smaller amount worth of their disposals of non-financial property.

Conversely, sometime gross capital formation affects channel the economic growth rate. Enhanced capital investment allows for additional examine and growth in the capital association. This growing capital structure raises the original capability of labor. As labor becomes well-organized, supplementary goods are wrought (higher gross domestic product) and the economy will be growing highly. The two main sources of Sources of Capital Formation are native and outside foundations of which national foundations enclose charitable instinctive investments, public borrowings, recruitment of inactive resources, and shortfall financing. In 2017, gross capital formation for Pakistan was 5,026,831 million %. Between 1998 and 2017, gross capital formation of Pakistan grew considerably from 583,673 million to 5,026,831 million % rising at an increasing annual rate that reached an utmost of 36.09 % in 2006 and then decreased to 11.05 % in 2017.

Indication after the literature review designated gross capital formation has the concealed work strength in emerging states is supposed to progress through a regular percent (Maliha Mahru Rehman *et al.* 2017).

5.2.3 Labor force

The labor force has information of people which are working benefits the unwaged who are seeing aimed at effort. Labor puddle ensures that enclose the jobless who aren't observing for effort. For instance, stay-at-home moms, pensioners, and learners have not element of the labor force. Disheartened employees who will have been similar to work then must specified up seeing have not in the labor force both. To measured quantity of labor force, you obligation easy for get to excited to effort, and have observed for an occupation lately. The authorized dismissal rate has been events unemployed at rest in labor force. The magnitude of the labor force is contingent not merely on the quantity the grownups then similarly by what means probable the experience can become the trade. Labor puddle contracts throughout the later curve. That's correct straight still the figure of people who will identical full-time work and they might become it may perhaps wait similar. Genuine redundancy frequency events entirely redundant, equal to they were no lengthier in the labor force.

In whole world Pakistan has largest manpower and labor force Pakistan, suitable just before its huge inhabitants, which is the 6th major in the realm. Bestowing to data shaped the CIA World Fact book; entire figure of Pakistan's labor force is 57.2 million, formation of 9th biggest country by accessible social workers. Around 43% of the labors are concerned in agriculture, 20.3 industries are outstanding 36.6% in further facilities. These circumstances below which Pakistan's blue-collar toil everything had regularly been raised up the deal mergers and employees' privileges administrations. There is similarly renowned, however broad practice the child labor of Pakistan. All beside thru further states in the South Asia, Pakistan usually trades ample of its employment to seal to Persian Gulf countries and Middle East.

Many researchers are working on labor force and they also give the many different results and aspects on the economic growth rate. However, that undesirable belongings of evolution in the whole population and undeveloped population for the economic development although screening optimistic belongings of development on employed age population and the working age population proportion (Sijia song 2013). Fang *et al.* (2014) has considered labor force and the connection amongst extensive route evolution and redundancy. They have trust upsurges in

redundancy recompense, escalations in engagement charges, upturns in employees negotiating power all inferior work and long run economic growth distressing womanly labor contribution.

5.2.4 Life expectancy

Life expectancy is approximation on standard figure of added centuries for person of known phase must be expecting the animate. The maximum ordinary quantity of the life expectancy has life expectancy at natal. Life expectancy is supposed calculate. It accepts the age-specific passing charges for the time query would be smear all through the life span for the entities congenital in the year. Estimation result have developments of age-specific humanity (death) rates for a given period over the whole lifetime of the population born (or active) throughout time. The calculation changes significantly by sex, age, race, and environmental position. Consequently, life expectancy is normally agreed for precise classes, somewhat than for the population in universal. Life expectancy imitates indigenous situation. In less-developed states, life expectancy at natal is reasonably little, associated through more-developed states. In particular less-developed states, life expectancy at birth might be lesser than life expectancy at age 1, for the tall newborn humanity charges (normally owing to communicable ailment or shortage of contact to a sparkling aquatic source).

Life expectancy has planned by making lifespan board. Life table includes statistics on age-specific passing charges on inhabitants in inquiry, which needs inventory figures of the quantity of persons, and the quantity of deceases at every stage for the inhabitants. These statistics characteristically are subsequent after general survey and vigorous statistics data, and after them the regular life expectancy for all of the stage collections inside the inhabitants might be designed.

This admission contains the typical amount of centuries to be existed by a compilation of persons congenital the similar time, if humanity for every stage remainder stable for prospect. Life expectancy at birth has similarly gauge the largely worth life in state and recapitulates this humanity at very eternities. It can also be consideration of as representative the probable revert to an asset in humanoid wealth and is indispensable for the computation for the variety actuarial

events. Both sexes have dual. The standard quantity of ages of life unsurprising by an imaginary regiment of persons who will be focus throughout altogether their subsists to the humanity charges of an agreed era. It has articulated the eternities. Life expectancy at birth for Pakistan was 66.63 years. Life expectancy at birth of Pakistan augmented after 51.62 ages in 1968 to 66.63 centuries in 2018 rising at a mutual annual amount of 0.52 %.

Evidence of literature review that life expectancy improvements of life expectancy do, on the other hand, decreases population growth. These imply that the things of life expectancy on inhabitants, social wealth and revenue per capita are not similar beforehand and following the demographic transition. Study found marked association among economic disparity life expectancy on the additional influence, a study by José (2013).The authors propose that when people are working additional hard during good economic times, they experience more stress, experience to pollution, and likelihood of damage amid other longevity-limiting factors. Study showed by Mason (1988) on the healthcare position of the labor force shows that life expectancy had been an optimistic smash on economic growth. The study examined that; life expectancy next to through work efficiency has been an apathetic collision on economic growth. This negative growth is unsettled to slow down healthcare expenses (fewer than two percent of the GDP) indecision superior inhabitants' evolution amount.

5.2.5. Dependency Ratio

The age-dependency quantitative relation will confirm that stage within the Demographic Transition Model and accurate country is in. The dependency quantitative relative acts type of a rollercoaster once researching the periods of Demographic Change Model. All through stages, one and a pair, dependency quantitative relation is elevated thanks to considerably elevated crude birth rates golf fondle weight onto the lesser working-age population to need care of all of them. In stage 3, the dependency quantitative relative begins to reduce as a outcome of fertility and mortality rates start to lessen that displays the quantity for adults to the young and old area unit plentiful larger throughout this stage. Bit by bit four and five, the dependency quantitative relation starts to enlarge all over once more because the working-age resident retires.

Result on the fertility rates caused younger population to decrease, once they get older and start in renovation, there'll be added bulk for them to need care of the preceding working-age population that just retired since there'll be extra young and old folks than working-age adults all through that summit amount. The population configuration of a country is a very significant issue for important the economic position of their country. Japan may perhaps be a pleasant example of narrate aging population. They entail a 1:4 quantitative relation of individuals sixty five years and older. These causes difficulty for them as a result of there don't seem to be sufficient folks inside the working-age population to hold up all of the elders. African nation is one more example of a population that struggles with a younger population (also called the "youth bulge"). Each of those countries area unit battling high dependency ratios in spite of the fact that each countries area unit on conflicting stages of the Demographic Transition Model.

Dependency ratio has a converse affiliation through average existing (equal factual soothe rappings of things and amenities obtainable), which means the superior dependency ratio is inferior for excellence of existence. In Pakistan the dependency ratio of youth is approximately 53.4 percent, which enhances the entire of 60.4 percent.

Evidence of literature review that unfair fluctuations once mortality and fertility rates changes after elevated little echelons; we must established 3 things might momentarily sluggish dejected economic evolution throughout the procedure of demographic transition. The evolution shows disparity among the working age and whole people, youngster dependency relation and ancient stage dependency ratio. Bloom and Williamson *et al.* (1998), Tanveer (2010) described that dependency ration sometimes positive and significant and sometime it creates negative impact.

5.3. Data presentation and Analysis

The data for the regression analysis and definition of the variables have been reserved as of World Bank development indicators and The Pakistan economic survey.

5.4. Description of the variables.

The dependent variable is Gross Domestic Product and Gross capital formation, labor force, life expectancy dependency ratio are independent variables.

5.5. Statistical Analysis

5.5.1 Descriptive Analysis

Statistical analysis starts with descriptive analysis. This is the first step before conducting any analysis or following any estimation technique.

Table 5.5.1: Descriptive Statistic

Variables	Obs.	Mean	Std.Dev	Min	Max
Per capita GDP Growth rate	43	14.52776	5.05291	5.7669	30.2116
Gross capital formation	43	16.8818	11.3573	1.8813	48.52482
Labor force	43	38.6435	12.9414	20.6400	63.2600
Life expectancy	43	61.3538	3.3189	55.2700	64.4800
Dependency ratio	43	81.1238	8.5591	64.9700	88.8700

Study has grounded the time series yearly data taking 43 observations on each variable used in the investigation. Descriptive statistics demonstrate the per capita Gross Domestic Product growth rates have mean value is 14.5 with the least value is 5.76 and maximum value of 30.2. The slighter value of standard deviation specifies that the data cannot extremely disperse and data points are very adjacent to means normal worth. Economically, it may be reasoned here that the progress rate of per capita Gross Domestic Product has been stagnant above the years in Pakistan's several economic, social, political factors are responsible for this.

The value of Gross Capital Formation is choices after 1 percent from 48 percent through the regular value of 16 percent. Furthermore, the worth of standard deviation displays that data points fluctuate after mean value through 11 percent. Economically, it may be interpreted here that the level of even though rigorous challenges, the economy has shown flexibility in these years.

The minimum value of labor force is 21 percent and highest value is 64 percent through the typical value of 39 percent. The value of standard deviation has 13 percent which displays the developed near to disparity current in the data.

The other is life expectancy rate and its mean value is 62 percent through variety of data 56 to 65 percent. It may be interpreted here that there has been a sharp modification in life expectancy rate completed years in Pakistan. Life expectancy at true of Pakistan amplified after 52 years from 1968 to 67 years in 2017 upward at a usual yearly rate of 0.54 %.

Dependency ratio indicates choices after 65 percent to 89 percent through typical value of 82 percent. Again higher value of standard deviation displays a cultured close of variation current in data aimed at dependency ratio. Age dependency ratio aimed at state is intended shadows: $\text{Age dependency} = (\text{people younger than 15 and older than 64}) / (\text{working age people ages 15-64})$. A advanced worth aimed at earnings that occupied individuals obligate to sustenance additional non-working people, whichever early or old.

5.6. Results & Discussion

5.6.1. Results of the model

The potency of the regression analysis mostly is contingent proceeding the condition of model, statistical and economic consequence and construction of variables in the investigation. Procedure of the demographic transition is multidimensional now nature in line for this; five displays of demographic transition are created now to captivity their possessions the economic evolution. Furthermore, balancing involvement among variables of demographic transition is

analyzed by interactive expression. The equation has anticipated means of method of generalized method of movements observes contact of demographic transition on economic growth.

Estimation Equation

TABLE OF 5.6.1: RESULTS

Results of GMM estimation

Variable	Coefficient	t-Statistics	Probability Value
Intercept	2.4227	0.0633	0.9498
Gross capital formation	0.8621	1.86	0.07
Labor force	1.6921	1.7682	0.0857
Life expectancy	3.1354	2.6286	0.04
Dependency ratio	-1.3353	-2.7251	0.04
R²	0.8213	Adj R²	0.81
D.W Stat	0.8466	LM test of Serial Correlation	P-value (0.23)

5.6.2. Discussion

After applying the simplify Method of Movement (GMM) technique on model, we get the principles of coefficients of our model. Now let's we start to talk almost contact the every independent variable on dependent variable.

Imperative evolution influential variable encompassed the regression investigation has Gross capital formation. It has been pragmatic that outcomes gained of completely variables

were in harmony through economic theory imitates the economic situations in Pakistan. Gross capital formation to GDP ratio is an actual significant evolution defining adjustable in diverse growing theories, and outcomes attained that it has a constructive and statistically momentous impression on economic evolution.

The affiliation between Gross capital formation and GDP is attuned with conventional theory of economic evolution like Solow growth model (1956) and other exogenous growth theories. According to theory, that identified the neoclassical evolution model screening in what way principal and knowledge inspiration economic evolution. Gross capital formation has an optimistic influence on economic growing over the frequencies of knowledge and information movement see, e.g., [Solow (1956)]. As the result shows that Pakistan is poor because we contain low level of capital stock while modern economies contain more capital stock per worker, so they are rich nations.

According to the estimated results, that a constructive suggestion among gross capital formation and economic progress, inferring that gross capital formation has advantageous aimed at economic progress in Pakistan. Numerous empirical revisions have similarly exposed that gross capital formation absolutely inspirations economic evolution in Pakistan [Kemal and Arby (2004)]. According to the theory, gross capital formation is the feasible work strength in emerging nations is presumed to progress through a regular percent. [Maliha Mahru Rehman (2017)]. On the identical theoretical surroundings it might be rational now that gross capital formation augments economic evolution by increasing innovation technological diffusion.

Subsequent regression is outing to scrutinize the connection among labor force and economic evolution. The impression for the labor force on economic evolution is investigated the occurrence on GDP, by means of GMM approximation technique. Labor force takes constructive and statistically substantial influence on GDP in Pakistan given era. Other things held constant if labor force intensifications by one component on average GDP resolve escalation by 1.69 units. According to theory, it was predicted that operational age share would drop, and depress economic evolution. Ratio of old age to young female labor force contribution would increase [Bloom (2009)]. According to the theory, Pakistan is surrounded by the top in terms of

population evolution amount in the world, so does not mean that elevated growth of population matters in economic growth. Somewhat it is labor force and labor participation that actually matters in the growth path [Singariya (2012)]. Interpreting to the academic opinion of interpretation, that the diminution in infant mortality rate and fertility rate accelerated economic growth. Intensification in remuneration rate had a constructive impression on progress while progress of labor force had no optimistic impact on the economic progress of Pakistan. [Hussain (2009)].

Next two independent variables of our model are core variables of our study. Both variables are used as proxies of demographic transition. The first variable is life expectancy. Magnitude life expectancy has more than gross capital formation and labor force. The constant life expectancy has 3.13 which implies that as enlarge in life expectancy by one unit then on average GDP will enlarge by 3.13 units. The undesirable affiliation amongst life expectancy rate and Gross Domestic Product is feasible in unindustrialized nation consistent Pakistan.

The results are approximately in outline through the supplementary studies that obligate originate the same negative connotation among life expectancy & per capita GDP evolution in Pakistan [see e.g., Johnson (2007); Qureshi & Ahmed (2012)]. As we identify that life expectancy is conclude by health facilities to the people. As health facilities get better straight in an economy additional it brings improvements in GDP. There are a variety of high impact studies in economics, who claimed that health of human beings bring wealth and health of economy. Our findings are well-matched with Weil (2005). According to the theory of Weil, that investment in health related projects are absolutely associated through economic evolution in the long run.

Dependency ratio has our further independent variable, which has been also statistically considerable but has unpleasant impact on GDP. It is as dependency ratio augment it reduces the usefulness that further brings reduce in GDP. Mostly rising nations are suffered by high dependency ratio which curtails the growth ways. Pakistan is also a developing nation which is straightly pretentious by high dependency ratio. In case of Pakistan, we have high population weight as well as large hidden impetus of young population. There is almost 66% is youth in on

the whole population. This two third population can be approval for Pakistan. If channelize this young population into creative labor force via dipping the dependency ratio. With changes to the dependency ratio, the influences of people aging on economic evolution become more considerable in Pakistan. According to theory, the growth of working age residents affected Gross Domestic Product per capita negatively and expressively. [Prskawet (2007)].

The results are approximately in stripe through the additional studies which have originated a negative association among dependency ratio on economic evolution in Pakistan. [See e.g., Kelly and Schmidt (1994); David Trues dell (2012)].

The results of selected control variables next to variables of demographic transition authorize strong significant relationship of these variables through economic evolution. during the circumstance, which put on show demographic transition is encompassed in regression investigation, manage variables similar gross capital formation, labor force, and life expectancy has highly significant and positive crash on economic development although dependency ratio have adverse relationship through economic evolution.

At concluding stages, we converse regarding our model. The high value of R^2 show on the complete fine fit of our model. The value of R^2 is 0.82, which implies that 82% disparity in GDP is due to these four independent variables. The in common model is good quality fit. Now, we talk concerning the commonsense test of our model. At this time we report D.W value which shows that our model is not free from autocorrelation. But whenever we take lags of variables then DW test by no means give us suitable in sequence concerning autocorrelation. For this reason we used Langrage Multiplier (LM test of serial correlation. LM test accept the null hypothesis is not autocorrelation. LM test point out the residuals are not in sequence interrelated and our equation meticulous for hypothesis tests and forecasting rationale as we know that by failure to pay time series data undergo from autocorrelation. It is due to accurately selection of instruments of Generalize method of moment (GMM).

CHAPTER 06

CONCLUSION & POLICY RECOMMENDATIONS

Demographic transition shows precise imperative character in the economic evolution rates of all country furthermore its developed or developing country. It is an exceptional theory which led to population studies. Demographic transition is making cause on the economic situation of the country. Due to Demographic theory Demographic transition is multi phase's procedure which takes 50 to 150 years in completion. With the passage of time country attributes changed and humanity transition and fertility transition reason of demographic transition. Pakistan is the 6th crowded country. In 1998, census Pakistan was the 7th heavily inhabited state in the world. Interpreting to a survey of UN, in 2050, Pakistan would be the 3rd largest overcrowded state in the world. Maximum OECD states have been handled squat birth charges in amalgamation through advanced rates of the matured residents, which obligate controlled to a disappearing population development rate and quickly shifting age alignments. Keynes (1937) predicted that falling population growth disturbs combined petition and yield evolution harmfully (see also Hansen, 1939, and Myrdal, 1940). Abovementioned research has exposed that population of advanced years will stimulus the makeup of manufacturing parsimonies concluded its impressions on employment markets, entitlement, reserves rate and capital deposit (Hageman & Nicolette, 1989).

The work purpose has been investigating the influences of demographic transition on the economic development in Pakistan. In this study we are trying to indicating problems and finding solutions on these matters. The study consumes the five variables i.e. per capita GDP rate, gross capital formation, labor force, life expectancy and dependency ratio. The study might be practice the time series data from the era 1975-2019. This study consumes the economic procedures similar above approved equation.

Additional, we talk about model of the study. The high assessment of R2 show usually good fit of our model. The rate of R2 is 0.82, which implies 82% disparity in GDP, due to these four independent variables. The generally model is good fit. Now, we have to talk about the

diagnostic test of our model. Here we report D.W value which shows that our model is not praising from autocorrelation. But at any time we take lags of variables then DW test not at all give us appropriate information relating to autocorrelation. For this point we opt Langrage Multiplier (LM test of serial correlation. LM test permit the valueless suggestion of no autocorrelation. The LM test pointed out that residuals are not consecutively connected and our equation is meticulous for hypothesis tests and forecasting purpose. As we know that by avoid time series data go through from autocorrelation, but in case autocorrelation is not a problem. It is due to properly selection of instruments of Generalize method of moment (GMM).

Results indicate that the dynamic development causal variable included in the regression analysis is Gross capital formation. It would be logical that outcomes gained of entirely variables are in peace by the economic theory and imitates the economic conditions in Pakistan. Gross capital formation toward GDP proportion has identical key growth shaping variable in diverse progress theories, and outcomes gotten that it is constructive and statistically substantial impression on economic development. Now Accordance to assessed outcomes, an affirmative association among gross capital formation and economic growth, indicating that gross capital formation has beneficial planned on the economic development in Pakistan. Afterward regression is track to investigate the association among labor force and economic development. The influence on labor force on economic development is investigated the manifestation GDP, expending GMM estimation technique. Labor force is positive and statistically significant effect on GDP of Pakistan in given period. Next two independent variables of our model are core variables of our study. Both variables are used as proxies of demographic transition. The first variable is life expectancy. The magnitude life expectancy is more than gross capital formation and labor force. The damaging linking among life expectancy rate and GDP is believable in developing country like Pakistan. Dependency ratio is our further independent variable, which has been also statistically considerable but has unpleasant impact on GDP. It is as dependency ratio augment it reduces the usefulness that further brings reduce in GDP.

Demographic transitions essentially passing in flora. In line for to lack of previous arrangement, Pakistan has been practically exhausted the 1st 15 years of the chance demography

had presented it. On the other hand, age structure will persist to be a significant strength in the state for the succeeding 50 years. In what way economic progress is shaped by demographic variations in the coming years will be contingent on the conducts strategies and organizations response the challenges and prospects the approaching grasps. Period is going available to placed suitable policies in abode, the absenteeism of which could consequence in large-scale unemployment, massive difficulty on education and health structures. In short a socio-economic adversity could revenue residence formation the demographic change more of a demographic threat.

Recommendations

Few policy implications arise from this analysis:

- Therefore, a policy implication that could be haggard from this study is the essential to lower Pakistan's fertility level, which is the highest amongst the developing countries and might endure great due to a high level of dependency on the young.
- This study has exposed an association between employment prospects to economic growth and has significant implications for Pakistan. The government essential attention to produce employment opportunities in the country by confirming the constant source of energy to agriculture and industrial sectors.
- To put up the rising number of people in working ages would be a main people in working ages would be a main matter for the nation. New ranges requirement to be matter for the nation. New areas essential to be discovered to provide employment to the always explored to arrange for employment to the constantly growing numbers. Sectors that could growing facts. Sectors that could offer an occasion to growth arrange for an chance to increase employment can be structure movement; employment can be structure movement, warehousing, transport, retail shops, and other warehousing, transport, retail shops, and other service industries.
- Moreover, this study has also focused on the significant relation of life expectancy on economic growth. The government should give supplementary devotion to advance urban infrastructure for perfection of elementary needs and hence life expectancy.

- This study also suggested that Government has a duty to simplify entirely the proficient and capable labor force because they can significantly give to economic growth.

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