

Relationship Between Increasing Old Age Allowances and GDP in Nepal

A Thesis

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LETTER OF RECOMMENDATION

This thesis entitled, "**RELATIONSHIP BETWEEN INCREASING OLD AGE ALLOWANCES AND GDP IN NEPAL**", is submitted by **Mr. Nabin Shrestha** under my supervision for partial fulfillment of the requirements for the degree of MASTER OF ARTS in ECONOMICS. I forward it with a recommendation for approval.

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APPROVAL LETTER

We certify that this thesis entitled "**RELATIONSHIP BETWEEN INCREASING OLD AGE ALLOWANCES AND GDP IN NEPAL**" submitted by **Mr. Nabin Shrestha** to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University, in the partial fulfillment of the requirement for the degree of MASTER OF ARTS in ECONOMICS has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the said degree.

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DECLARATION

I, hereby declare that the thesis entitled "**RELATIONSHIP BETWEEN INCREASING OLD AGE ALLOWANCES AND GDP IN NEPAL**" submitted to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University, is my original work done for the partial fulfillment of the requirement for the degree of MASTER OF ARTS in ECONOMICS under the supervision of **Prof. Dr. Kushum Shakya**.

This work has not been previously submitted in any form to Tribhuvan University or to any other institution for assessment for any other purpose.

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LIST OF ABBREVIATIONS / ACRONYMS

OAA	Old Age Allowances
GDP	Gross Domestic Product
SDGs	Sustainable Development Goals
GNP	Gross National Product
NPC	National Planning Commission
SSA	Social Security Allowances
CBS	Central Bureau of Statistic
MoHP	Ministry of Health and Population
MoF	Ministry of Finance
SSE	Social Security Expenditure
EE	Education Expenditure
NRB	Nepal Rastra Bank
FY	Fiscal Year
FDI	Foreign Direct Investment

ABSTRACTS

Ageing of the population has one of the most important facts that came to the foreground in 21st century and is inevitable fact. Along with this, it's a challenge to protect the elder population socially and economically for the government, specially developing countries like Nepal which have very small economic share in the world. The aim of this thesis is to know the relationship between old age allowances and GDP along with education expenses and to investigate consequences it can cause.

Social protection schemes have historically been weak and fragmented in the region and have failed to keep pace with economic growth. Consequently, old age has too often become an expensive burden for individuals, families, and society. Social protection is not only important in reducing old people's vulnerability-pension can also boost economic growth by providing income for individuals and somehow can helps in reducing poverty. Nepal have introduced non contributory pension systems that provide cash benefits to older citizens, but much is yet to be learned about their impact and possible replication in others.

Providing old age allowances are not a panacea. Rather, they should be part of a wide ranging set of program and sector reforms. Moreover, the differences in cultures and stages of economic development across the region must also be taken into account. And also, the capability of the country's administration to support the program also need to be considered and should be addressed.

Different researchers had traced that for long run economic growth investing on infrastructure is the most rather than on recurrent expenditure. Some other traced out that the country having more dependent population attracts less FDI. The total Nepalese population has been increasing and elder population above 60 years constitutes 7.99 percent of total population in 2011, which is estimated be 10.2

percent by 2031. Comparing to other South Asia countries Nepal provides highest OAA in terms of cash which is around \$20 per month.

Thus, to support the objective the correlation has been tested taking two variables; social security expense and expenses on education. The result found that there is positive relation between GDP and expenses on education whereas it is found that there is negative relation between GDP and expenses on allowances to elder population. It means investing on education is better as it will produce skilled human capital which is a need for future, investing on infrastructure will generate the local entrepreneurs and attract investors; both local and international supporting the national economy.

Keywords: GDP, elder population, social security, composition of government expenditure, socio economic, old age allowances, ageing.

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Ageing populations are a global phenomenon with potentially significant consequences and repercussions for, among other things, health care, pensions, and old age care. Expenditure on social security has been one of the hot topics to discuss in today world specially increasing old age allowances to protect the elder population. In developed country, they mostly have increased the OAA (old age allowances) and review the policies up to date for welfare of elderly people. Developing countries also tries to follow on footsteps of developed countries for the welfare of elderly people which sound quiet great but before implementing the policy they must know how capable the country is to handle the expenditure.

Increasing elder allowances has been the debatable topic in Nepalese context. Most of the people receiving old age allowance were not satisfied with the present amount as it is insufficient and this money is used for multiple purposes: buying daily consuming food and clothes, health related expenditure, with offspring and travelling (Malakar & Chalise, Jan 31, 2019). So, increasing in old age allowance satisfies a general people whereas the policy makers, economists were worry on this decision. They are worry as the decision could take the country into more budget deficit and put the country into critical situation. On one hand the present government is trying to adopt the social welfare theory whereas on the other hand the country is targeting to achieve life expectancy rate to increase to 72 years which causes increasing in elder population as a result the government expenditure also tentative to increase.

Ageing population is growing worldwide because of increasing longevity and decreasing mortality and fertility rates (Harper & Leeson, 2009). It has been estimated that there are 606 million people in the world over the age of 60, roughly 10 percent of the population. Of this elderly population, already 62

percent live in developing countries (UNDESA, 2012 Revision, 2013). Theoretically, this demographic change makes three types of effects on macroeconomic growth in an economy- positive, negative, and neutral effect (Bloom et al 2003). To the best of our knowledge, no study has investigated the relationship between aging population and macroeconomic growth in the South Asian countries, although the United Nations (2009) projected that by the year 2050, the working age population in less developed countries would decline by 49%.

Even though longevity and fallen mortality rates are considered major successes for medical science (Holger Strulik, 2012), the demographic change they convey is commonly taken as having a negative influence on national economies (Lee, 2011).

The Oxford Institute of Population Ageing, concluded that the elder population has slowed considerably in Europe and will have the greatest future impact in Asia, especially as Asia is in stage five (very low birth rate and low death rate) of the demographic transition model. Older people already constitute a large proportion of the poor in Asia. Thus, following the strategies of developed countries on socioeconomic welfare by increasing social security expenditure by developing countries especially country like Nepal whose economic growth is not much impressive could experience economic crisis so badly.

Many governments had confronted by a substantial and highly vulnerable segment of the population in urgent need of some form of social protection, largely because older people are disproportionately affected by poverty. The majority of these people in developing countries have no regular incomes. The majority of women who either work at home or are employed in the informal sector rarely have any form of social protection. They also tend to live considerably longer than men, working until advanced old age, looking after younger family members and undertaking household chores. Widowed women without any form of external assistance are especially vulnerable. All these

factors present a serious public policy challenge for governments in the Asia and Pacific region.

Undoubtedly it's a responsibility of the government to protect their citizens and it's even harder and challenging job to protect the senior citizens as the number of old people are increasing every year. But for the well being and respect to the elder people only increasing the allowances is not the permanent solutions besides these it's a government responsibility to observe the other aspects which could support in economic growth of a nation.

Increasing allowances means increasing government expenditure and to support this expenditure what is the government plan? Basically the government has two options to support the expenditure either taking loans or through tax. Since the Nepal GDP is not so much impressive, increasing tax could not be a great decision and taking loan from bilateral and multilateral organization could cause more burden for Nepalese and harmful in long run.

Nepal government is providing Old Age Allowances as social protection plan since the establishment of the Sainik Drabya Kosh in 1934, which was subsequently consolidated into the Employee Provident Fund. After restoration of democracy in 1990 social protection received greater attention and in same year Constitution of Nepal directed the state to pursue policies to ensure the education, health, social security, women, aged and disabled persons. Accordingly in 1994 the government of Nepal introduced the social security program by providing pension. A universal flat pension of Rs.100 to all persons at least age 75 years was first announced by late Prime Minister Manmohan Adhikari on 26 December 1994. The pilot test was conducted in five districts from five development regions and first disbursement of the old age allowance was made for six month period in 1995. During fiscal year 1995/96 this policy was extended to the entire country and was implemented by Home Ministry. As a time passes different provisions was made for social benefits and today the scheme covers the disabled, widow aged 60 plus, other general elderly people who have completed 75 years of age, allowances for endangered ethnicities get

benefited. The age threshold was later revised to 60 plus for marginalized senior citizens (dalit) and 70 above for others. Considering the life expectancy of the people living in Karnali zone, the age threshold was fixed at 60 years to be eligible for the scheme. The program provides cash transfers as allowances to elderly citizens, helpless widows, disabled people and endangered ethnicities of Rs. 2400, Rs. 1800, and Rs. 2400 per annum respectively. Considering the sharp rise in price the government has risen to Rs. 1000 per month in fiscal year 2015/16 and also made double in amount per month in fiscal year 2016/17.

If we look on to other South Asian countries, Thailand has launched the old age allowances system in 1993 under the Department of Public Assistance and started only in specific areas targeting only few older persons with amount of allowance 200 Thai Baht per head per month on flat rate which was changed as time passes and cash reached to 500 Thai Baht per head per month until 2011. After then, Thai government revised the system and practices multiple rate system making payment different amount for different age group.

No more exception from Nepal, the ageing population of Bangladesh has also grown. Bangladesh launched monthly allowance programme for older people in 1998 introduced by Prime Minister Sheikh Hasina and the eligible age for women was 62 years and for men it was 65 years. The allowances amount was Taka 100 per month at that time. Now, at present the amount has been increased to Taka 500 per month and the recipients has also been increased.

In Pakistan's history the old age benefits have been practiced since 1976 on the basis of contributory system. As of time the cash benefits have changed and provide Rupees 3600 a month as old age pension. It is different scenario than other country, and to get eligible for the benefits the men age should be 60 year and women should be 55 years of old and 50 years for miners.

Bhutan elder population care system is different from other countries. Bhutan practices traditional old age care and support system as they are still living in joint family. This informal care and support system rests on the principles of hierarchy and it has practiced contributory benefit system. Bhutan is more

concerned on happiness of their people rather than GDP of the nation and has made the free health facility treating the people using traditional treatment method. Unlike Bhutan, the government of Srilanka has introduced different schemes and under elderly assistance program the elders aged above 70 years are provided with cash grant Rs. 2000 per month per head.

India has practicing both the contributory and non-contributory benefits social security program. The program was launched in 1995 and as time passes different schemes and benefits have been changed. India's social assistance differ from state to state paying lowest of Rs 200 per month and highest of Rs. 2000 each.

1.2 Statement of the problem

In every fiscal year during the time of announcing a budget, it has always been a debatable topic on allocating the budget on each budget head of the government. Among many other heads, social security is the hot topic to debate on where the government should increase in elder allowances? What actions should government take to protect the elder population by maintaining economic growth at the same time? How the government should allocate the budget on what basis? Is the allocated amount enough for the elder people in today's economy where price of basic goods has increased? Does increasing ageing population affects on Nepalese economy?

Some group argue that the government must increase in allowances in this costly economy and some other defense that it is enough for elder since elder people live under the care of their family member so the subsidies they get in health sector is enough and if possible the government should allocate more in health sector and education sector. Different from these two group, some of the intellectual group said that, it's the responsibility of the government to protect the elder people since they are the citizen of the nation firstly, the other thing is in terms of increasing the allowances the foremost thing the government have to consider for economic stability of the nation. For the smooth operation of the economy the government must have vision for long term development. With

these debates, the government made a provision by decreasing the age threshold to the beneficiaries from 70 to 65 years and also doubled the elder allowance. So, to get more ideas on these issues where the country will move by government decision of increased benefits, this research paper has been conducted hoping this might help the researchers in further their research papers.

1.3 Objective of the study

For the purpose of determining the impact of increase on old age allowances to economic growth the following objectives have been set. The general objective of this study is to find the relationship between increasing old age allowance and economic growth and the specific objective of the study are:

- a) To identify the relationship between old age allowances and GDP.
- b) To investigate the consequences of increasing old age allowances to elder population on GDP.

1.4 Significance of the study

The share of budget in the social security has always been the concern of the society and the specific share on the elder people cannot be undermined. The government expenditure on old age allowances falls into recurrent expenditure rather than capital expenditure because of continuous expenses made by the government for the welfare and on support of the elder people. So the analysis of impact of increase in old age allowances has significant implication on sustainable economic growth. There are various studies conducted in order to assess the perception of elder people on the given allowances amount, the importance of providing social security and their needs, impact of social security on economy, however it is not found that the research is done with special concern to old age allowances with relation to GDP mainly the case on developing and underdeveloped country like Nepal. So, this study is useful in order to address the situation of expenditure allotment and its special impact on growth.

The findings of the study is important to draw the attention of the policy makers and to rethink on the current regulations, current public expenditures focusing mainly on elder population since, the elder population is increasing and the number will be more in coming years and of course to achieve the SDGs that the country has committed by the year 2030 could be a challenge, researcher to develop new theories, academicians to do research with determining certain gaps and also to the scholars and stakeholders who have concern on it. This research paper might give other perspective glass to the government to think before sanction of the schemes the government offers at different time and situation. For the long sustainable development of the nation, the government needs to do assessment from today to see the changes in future.

1.5 Limitation of the study

- a) The study aims to investigate the relation and status of elder population in economy and exclude other factors which also could have impact on economy growth.
- b) Due to very few researches conducted in this title in Nepal most of the international documents and research paper are reviewed and also took reference from local newspapers which might not be relevant in context of Nepal.

1.6 Organization of the study

The study is divided into six chapters. The first chapter is introduction that consists of background of the study, statement of the problem, objective of the study, significance of the study, limitation of the study and organization of the study. Second chapter is related with the review of the literature which includes theoretical perspective, international context and national context under empirical perspective. Third chapter deals with the research methodology which comprise conceptual framework, research design incorporating variables and tests. Fourth chapter deals with trends of population and economic growth. Similarly, fifth chapter deals with analysis portion. At last the sixth chapter deals with the summary, conclusion and recommendations.

CHAPTER-II

LITERATURE REVIEW

While conducting this study, detailed review of literature especially in the field of social security, population aging and GDP is done. In the process of research, the researcher has tried his best effort in collecting and reviewing the relevant literatures from different sources. This chapter includes articles published in different journals, reports, previous research papers prepared by scholars, books, etc. This chapter also deals with the research gap that exists on this study.

2.1 Theoretical Perspective:

This section highlights some basic theories that have been used to support the effects of public expenditure on economic growth considering increasing old age allowance as increase in public expenditure.

2.1.1 The Keynesian Theory

Of all economists who discussed the relation between public expenditures and economic growth, Keynes was among the most noted with his apparently contrasting viewpoint on his relation. Keynes regards public expenditure as an exogenous factor which can be utilized as a policy instruments promote economic growth. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers.

2.1.2 The Solow's Theory

Robert Solow and T.W. Swan introduced the Solow's model in 1956. Their model is also known as Solow-Swan model or simply Solow model. In Solow's

model, other things being equal, saving/investment and population growth rate are important determinants of economic growth. Higher saving/investment rates lead to accumulation of more capital per worker and hence more output per worker. On the other hand, high population growth has a negative effect on economic growth simply because a higher fraction of saving in economies with high population growth has to go to keep the capital-labour ratio constant. In the absence of technological change and innovation, an increase in capital per worker would not be matched by a proportional increase in output per worker because of diminishing returns. Hence capital deepening would lower the rate of return on capital.

2.1.3 Endogenous Growth Model

Romer (1986) and Lucas (1988) attempted to consider the sources of growth, so that the rate of growth would be determined within the model. This theory helped the economists to argue that not only technology causes increasing returns to scale but also technology offsets diminishing returns and allows and enables theoretically limitless growth possibilities. This discovery finally helped to develop how growth occurs. Endogenous growth model introduced human capital into the model of growth. Lucas considered accumulation of human capital as the engine of growth. Romer considered human capital stock in the process of innovation and adaption of new technology.

2.1.4 Musgrave and Rostow Theory of Public Expenditure

Musgrave and Rostow developed the model to address the cause of increase in public expenditure. According to them economic growth is not possible without public expenditure. At the initial phase public expenditure provides economic infrastructure such as railways, roads, sanitation and water supply but when economic growth takes place the public expenditure shifts towards the development of human capital (Taiwo, 2011). The investment in human capital is done through the investment in education, health and welfare facilities (Greg & Agboro, 2014). The model states that economy works as an agent that does decision on behalf of its people. This theory also states that demand for

infrastructural facilities becomes faster than the increase in per capita income (Greg & Agboro, 2014).

2.2 Empirical Perspective

2.2.1 International Context

Engelman et al. (1997) tested the impact of population growth on economic changes they reviewed on economic perspective on population growth by using the national and international data and reviewed the latest findings on relationship between population growth and economic changes. The researcher had related the population growth affects on GDP and GNP with a result depending on the nations resources, policies, and fertility rate. They further relate that less number of family size increases saving on financial institutions which increases investment on infrastructural development. They further finds that investment on education sector make huge positive impacts on human assets and the country need to focus on development of human assets because they are the valuable assets for sustainable development.

Otsu and Shibayam (2016) analyzed the effects of projected population ageing on potential growth, taking the reference of population projection over period 2015-2050 shows that governments facing population ageing have a challenging task to provide social security and public services for the aged while maintaining economic growth. An increase in the share of the elder population can be harmful to the economy in the long run. Increasing population ageing lead to an increase in government expenditure as the government pays huge amount in health care of the elder. This increased government consumption on health sector lead to a decline in aggregate productivity by shifting away economic activity in the more productive private manufacturing sector to the service sector.

Increasing aging people results slow down of the economic growth as there will be less number of labor forces. Today the younger people are lately joining the workforce because up to age of 25 they are tentatively pursuing higher degree

of education and training before transitioning into the labor market than in past. Increasing aging population and decreasing labor force makes slower growth. Increasing number of aging population makes more difficult for the government and policy makers. Projecting future government health care expenditure growth is recognized to be more difficult than projecting pension expenditure as the demand for and supply of health care does not have an equivalent framework to which to reasonably estimate future benefits or liabilities (Canada, 2005)

As the elder population increases, the public expenditure is also projected to grow as a percent of GDP. The book published by Wiener et al (1994) has projected that social security funding is tent to grow for long term as the beneficiaries increase. The government must consider the size of the economy before implementing any policies. The financial burden of public programs for older people will partly depend on how fast the economy grows. So, the question is-Is Nepal government ready to increase old age allowance with 6.3 percent GDP annual growth rate? It will be more challenging for the government of Nepal if old age allowance increases in coming days, since the Nepal has just stepped into the capitalist economy.

Donald and Shuanglin (1993) studied the differential effects of different forms of expenditure on economic growth for 58 sampled countries. They came up with the result that government expenditure on education and defense has positive impact on economic growth and that of welfare was insignificant and negative. Barro (1990) believed that expenditure on investment and productive activities is expected to contribute positively to economic growth, while government consumption spending is expected to be growth retarding. Government controls the economy through the use of public expenditure. This instrument of government control promotes economic growth in the sense that public investment contribute to capital accumulation.

Other importance of government expenditure includes the provision of those facilities that are not covered by the market economy such as health economic

growth. That is, human capital promotes high benefit associated with economic growth, but the financial source for public expenditure which is the taxation reduces the benefits of the taxpayers and as such reduces the benefits associated with economic growth. The beauty of public expenditure in promoting economic growth lies with the way it is being spent. In empirical literature, while some authors believed that there is no impact of public expenditures on economic growth (Gupta, Baldacci, & Mulas-Granados, 2002), others believed that the impact is negative (Henrekso & Folster, 1999), while some believed that the relationship is insignificant. Economic growth is an essential ingredient for sustainable development.

Although most of the researcher found that there is negative relation between population aging and economic growth, some authors such as Restrepo and Acemoglu (2017) claimed, there is no negative changes relationship between population aging and slower growth of a nation economy. This is a major puzzle for several theories that have become very popular over the last several years. The researchers said that this could be due to the increased adoption of technology. Introducing new technologies i.e. adoption of robots in production undertakes the tasks perform by labor and helps in increasing the productivity with less time consumption. The increasing scarcity of labor due to aging might actually be spurring the increased adoption of labor saving technology. The countries undergoing more rapid population aging have adopted more robots, although we recognize that this evidence is neither causal nor does it establish that the adoption of robots is the mechanism that neutralizes the potential negative effects of population aging on economic growth. The researcher has also demonstrate the models of directed technological change can account for the lack of such negative relationship and could generate positive relationship between population aging and economic growth which shows the clear need of technology in future for smooth growth despite increasing aging population.

Age patterns of consumption behavior provide an additional indication of the level of welfare among older persons. In low-income and middle-income countries, levels of consumption tend to decline at older ages, indicating that

older persons are faring less well than adults in other age groups in these countries (UN,2015).

Observing old age allowance system in neighboring countries, almost in every country the minimum age limit to be eligible to get old age allowance is 65 year (Bangladesh, India, Maldives). Nepal is only the country that provides old age allowance after the age of 70 years to general people. But in terms of cash Nepal provides around \$20, Bangladesh \$7.4, Maldives around \$321 per month.

Ismail et al (2015) by using dynamic model for the period of 1970 to 2013 had investigated that if women participation is more in labor market and contribute to higher labor productivity and economic growth an old dependency ratio did not have a long run co-integration. So, the government should keep on investing on human capital so that even though a country faces the aging society, the government could resolve the problem. Every country should invest on human capital since they are the active working force in a nation.

Huluka and Tesso (2015), reported that there is positive effect in economic growth with a share of the population that is economically active. In other words, the effect of population growth on economic development depends largely on the proportions of the working age and the policy mixes used to encourage people to work, save and invest. If an increase in the working age population is not matched by increased job opportunities, then they will face costly penalties, such as rising unemployment and perhaps also higher crime rates and political instability.

Another research taking the German case as an example illustrated a well known theoretical point. In an economy with a shrinking labor force, funding a pension system cannot work as an escape route from a rising burden of dependency. Faltering rates of return prohibit this mechanism. It further shows that moderately realistic assumption, foreign direct investment helps. It actually helps considerably in terms of consumption possibilities-but the magnitude of the problem is too large to be offset. Because all industrialized countries are

aging, a full offset would require a very large emerging market for investment (Supan, 1996).

Bloom, et al. (2003) had concluded, for developing countries, the demographic transition offers significant opportunities - opportunities that are unlikely to recur. They must therefore act soon to implement the policy mix required to accelerate the demographic transition and make its beneficial effects more pronounced. As mortality declines, policies to facilitate family planning and push down fertility rates become especially worthwhile. Such measures will have broader collateral impacts as well: Women will have more time to work and their health will be improved. A focus on education at all levels will prepare those in developing countries who have not yet reached working age for their future incorporation into the workforce. Practical, relevant curricula (taking into account the importance of changing technology) can give developing countries a better chance of catching up to some of the more advanced societies, many of whose education systems have problems of their own. As they begin to realize their demographic dividend, countries will be able to continue to invest in the development process. In principle, openness to trade combined with flexible labor markets will create work opportunities for the enlarged working-age cohort. The Demographic Dividend encouraging savings and investment via reform of financial institutions and targeting the poor with microfinance programs will give countries the resources to prepare for the future, when the boom generation passes out of the workforce. A failure to act on these issues could have a damaging effect on future prospects, as unemployment rises, the social fabric crumbles, and rising numbers of old people begin to overwhelm available resources. Reform will be needed, and necessary reform will inevitably be controversial. The demographic transition changes society profoundly and fundamentally influences family structure, the status of women and children, and the way people work. Policymakers must comprehend the nuances of demographic changes and help develop policies that take advantage of the positive impact of such factors on economic growth. Demography provides a clear narrative within which policies can be framed and a powerful lens through which priorities can be identified. Embracing and

understanding demographic challenges must therefore be a priority for all governments, as they build the broad partnerships that will be necessary to secure change.

According to Chanana and Talwar (1987), the elderly should be considered as human resources and their rich experience and residual capacities should be put to optimum use for the benefit of national development. Their ability to lead healthy and fruitful lives should be ensured by the Government.

Bhattacharya (2005) analyzed, for a growing elder population and for the sake of their security the policy makers must assess the impact of the forthcoming age wave. The process of pension sector reforms should be accelerated, suitable steps should be undertaken to build the required healthcare facilities and a suitable social security system should also be designed. The researcher further adds, the success of social security system depends on two critical factors – ability and willingness of the working class to make adequate savings in order to maintain the same standard of living during their old age and next is the availability of the economic, financial and regulatory frameworks that meet the expectations of the savers by offering risk adjusted returns. Thus, financial experts must design suitable retirement schemes for the major percentage of workers that is not less attractive than any other saving instrument.

Kuenen et al (2011) reported that the demographic structure of the world that has looked like a pyramid for centuries has increasingly look more like a house. Developing countries are seeing their life expectancies and fertility rates approach those in developed countries. The report analyzed the working age group is shrinking in developed countries. Although the annual number of people reaching working age globally remains roughly constant, the number of people reaching retirement is set to more than double. The situation had challenged the economic growth maintaining high productivity and ensuring sufficient labor availability and resulting high older population decline productivity in physically demanding jobs, it is crucial to note that older workers can actually be more productive than their younger counterparts owing

to their deep experience. So, the nation must have open eyes on taking advantages of their skill set and must figure out how to position older workers in jobs that keep them engaged and that make the most of their talents been shown.

Guarino (2018) had reported that, nations experiencing shrinking population have seen a reduction in financial capital that could be used for long term investment and enhancing economic growth. The researcher further add, due to shrinking population and more elderly people there have been a reduction in public savings since governments use those funds in taking care of the elderly. It is not only due to older people less likely to be participants in the working population but because they were less productive on a per worker basis. The bottom line is that increasing aging populations have an impact on the rate of economic growth and therefore affect every member of society.

Niepelt and Eiras (2012) and Lisenkova et al. (2012) argued that population ageing increase the allocation of government spending more to social security than to education and infrastructure investment. According to these authors, the changes in government priority will ultimately impact (negatively) the economic development of the country. Nevertheless, to some extent, the continuous rise in immigration will make it possible to mitigate the rise in government spending. Therefore, population ageing is believed not to have a negative impact on economic growth as long as there is a continuous flow of immigration (Blake & Mayhew, 2006). Glomm, Jung, Lee et al. (2010) argued that opportunity costs of running generous public pension schemes for civil servants are potentially large in emerging economies that often suffer from low public investment in education and infrastructure. To support the statement the researcher developed the two sector dynamic general equilibrium framework to quantify opportunity cost effects and found that efficiency and welfare gains of reallocating government resources from non-productive public sector pensions to productive public education and infrastructure investments are larger than the welfare effects created by classic public pension reforms that simply reduce savings and tax distortions by making pensions less generous. And further

found welfare losses for the generation born before the reform are offset by welfare gains by the generations born after the reform.

Nagarjan, Teixeira et al. (2016) argued that the ageing population has affected economic growth through three mechanisms; consumption and saving patterns, public social expenditure, and human capital. And the findings focused on public expenditure convey a negative impact of ageing on economic growth.

Most of the literature argued that there is a negative relationship between population ageing and economic growth (Narciso, 2010; Bloom et al., 2010; Lisenkova et al., 2012; Walder and Doring, 2012). Population aging had decreased a country's stock of human capital and subsequently exert a negative influence on its economic growth (Narciso, 2010; Lisenkova et al. 2012). Furthermore, an aging population expected to reduce the labor force is assumed to affect economic growth due to the lower productivity levels. Even though the higher participation of women in the labor force increases labor productivity, this participation will further lower the fertility rates, which will eventually lead to back to the initial problem (Alders and Broer, 2004). Even so, some authors, such as Prettner (2012) and Lee et al. (2011), claim the existence of a positive effect. According to Prettner, older individuals tend to save more and so there tend to be more resources available for investment, impacting positively on growth. The inequality in age structure leads to demographic transition and can have a positive effect on growth if the proportion of the active working age group is higher than the non-working group (Lee et.al 2011).

Some authors (Hock and Weil 2012; Walder and Doring 2012) concluded that the increasing in ageing population leads to fall in consumption which ultimately deprives growth. An increase in the elderly population tends to reduce the per capita income of the three generations, child, working group and retiree, and this will mean a net decrease in the total consumption of the family (Lee, et al 2007). Increase in the old age dependency ratio reduces the disposable income of the working population, resulting in a decrease in the fertility rate and further reinforcing population ageing.

Rosenberg (1988) concluded that some additional costs of caring for the elderly caused by demographic aging partially get offset by reductions in expenditure in other branches of social security.

Focusing on changes of the composition of aggregate basket of consumption derived from ageing, Merette and Georges (2009) claimed that ageing population will prompt changes in consumption patterns such as a higher demand for health services and a lower demand for housing. Such changes in the demand for goods and services will definitely influence the economic growth of country.

Narayana (2011) argued that the rise in the old age population have negatively affected the public net transfer of India. In the situation of increasing ageing population, increase in old age allowance will added further burden on government expenditure. Thus taxation is relied on as the major source of income for a government agency. Rise in the ageing population will affect government revenue from taxes and increase government spending, especially on health care, the pension system and other old age related benefits (J. Elmeskov, 2004). According to Eiras and Niepelt (2012) and Lisenkova et al.(2012) population ageing had increased government spending on social security against the allocation for education and infrastructure investment, which ultimately impact (negatively) on economic growth.

Turner (2011) concluded that increasing life expectancy is no secret, yet government policy does not deal with their well known consequences for social security financing. Turner suggests a unified approach have to develop that recognize interrelationship between social security, pension, and work at old age. The policy has to be developed that is directly related to the effects of increasing life expectancy rather than separately treating the issues. Dealing with only one area may be more difficult and less effective than dealing with all area at the same time. Policies have to design to encourage work at old age, provide better targeting of social security benefits, encourage employers to provide defined benefit plan.

Shibayama et al (2016) used neoclassical growth model computed long run economic growth in Asian economies and argued that population aging is harmful for economic growth because of the decline in labor participation rate and its negative effect is significantly magnified through the increase in social security tax and the slowdown in productivity growth. Ageing population affects on future productivity growth reducing the average annual economic growth rate than its potential that it could achieve. The researcher also concluded that increase in government consumption helps growth slightly, but an increase in labor income tax and the decline in productivity growth have major effects on growth.

Bloom et al (2010) argued that population ageing tend to lower both labor force participation and saving rates, thereby raising concerns about a future slowing of economic growth. However, OECD countries are likely to experience modest but not catastrophic declines in economic growth rate. The researcher also suggests that greater female labor force participation and policy reforms (including an increase in legal age of retirement) mitigate the economic consequences of an older population.

Lee et al (2011) conducted research finds Asia face a fundamental challenge in sustainable growth both in medium and long term, population ageing has been stood as the biggest challenge as the youth population that contributed sustainable growth are maturing. The researcher further address it's a challenge for policymaker as they are responsible to tackles the challenges of developing social system that provide economic security to growing elderly and to sustain strong economic growth. To support the elderly and achieving strong sustained growth one of the strategy is promoting investment in physical capital, high savings and investment rates. Governments have to put in place policies that are conducive to working, to generating high rates of savings and investment, and to greater investment in human capital. So, closer regional cooperation and integration are integral components of such policies. Besides this, the countries across the region have to prepare as early as possible to cope with socioeconomic impacts of population aging and get full advantages of younger

population with giving immediate priority to them. But the one should also be aware that the failure to spread the fruits of growth to the elderly will not only be socially costly but may adversely affect economic growth by causing political instability.

Abeywardhan and Magoro (2019) argued that growth in the GDP mainly depends on the demographic change in the future and decrease in working age population is the main challenge the country face. The researcher further add, population who contributed to the economy is maturing and they become dependents of their children. Improvement in health facilities and reduction in mortality cause population ageing. The pressure to the economy is very high as the older population consumption is very high because of higher spending on healthcare. So, this unparalleled pace of population ageing alarms the policy makers to invest in human capital and to generate savings and investment.

In context of OECD and 15 EU, Lindh and Malmberg (2009) found a significant negative effect of aged population on the growth rate of real GDP per capita. Furthermore in the case of USA, Maestas et al (2016) examined the short run relationship between the ageing population and macroeconomic growth and estimate that a 10% increase in the fraction of the population ages 60 years and above decreases per capita gross domestic product by 5.5%. This study concluded that the declining growth has been attributed to the decreasing labor supply associated with ageing population.

Using data for the period of 1951-2001 in Taiwan, Lee and Mason (2007) also found a negative effect of ageing population on per capita income of families. The findings of Lisenkova et al (2012) were also similar for Scotland where the authors predict negative impact in output productivity. The negative effects of ageing population on economic growth have also been confirmed by Wang et al (2014); Hu et al (2012); and Sun and Liu (2014) for China, and by Loumrhari (2014) for Morocco.

Although the foregone empirical research findings conveyed negative effects of ageing population on macroeconomic growth, some studies (Blake & Mayhew

2006; Cai, 2010; Li et al 2012) found positive or neutral effect on economic performance. Applying Solow Model, Li and Zhang (2015) examined the ageing effect on the Chinese economy for the period of 1798-2012, and found a positive effect on per capita income. Using the Chinese provincial panel data for the period of 1985-2005, Li et al (2012) found a positive effect of ageing population on savings and investment that would enhance economic growth. The studies of Canari (1994) and Borsch-Supan (1996) also found either weak or positive effect of ageing population on private saving.

In relation to negative effect of the ageing population on economic growth it is argued that saving rate of the aged people actually decrease as they continuously spend their savings only source of spending (Davies & III, 2006). Moreover, Hock and Weil (2012), Walder and Doring (2012) and others opined that with the increase of ageing population overall consumption level of the country falls which ultimately hampers growth. Lee and Mason (2007) noted that consumption falls because per capita income of all people falls with an increase of elderly population. Since, consumption and savings/investment are important components of aggregate demand, growth will be affected with the ageing population. Furthermore the consumption pattern of households is also changed with the increase of ageing population. As Nagarja et al (2016) and Walder and Doring (2012) noted, a country with high proportion of old people will have more consumption spending on medical care and less consumption spending on education. This has implication for economic growth as well. Economic growth may also be affected by public expenditure (Meijer, Wouterse, Polder, & Koopmanschap, 2013). With the increased aged population, the government has to spend more on social security and medical system compromising the spending on education and other productive sectors. In addition, the government income decreases with an increase of aged population because of low collection of tax revenue. Foreign direct investment is also adversely affected in a country with a high proportion of aged population (Nagrajan et al. 2016). Davies and Robert III (2006) revealed that foreign investments do not go in a country with ageing population because of scarcity of workers which negatively affect the country's capability to produce wealth.

Narciso (2010) also revealed that the current and future age structure of the nation has significant effect on current international capital flows. As a result, a negative effect on production and growth is the likely outcome (Lisenkova et al 2012).

Using time series data for the period of 1972-2015 with endogenous growth model Rahman et al (2017) reveals that in Bangladesh elderly population is not a matter of concern because there is long-rung positive relationship between the ageing population and per capita real GDP which means there is an increasing capital formation process in the economy than that of per capita ageing population.

Other scholars, Razin et al (2002) claims that ageing has two opposite effects on the size of social welfare (political effect and economic effect) and finds that the dependency ratio has a negative effect on per capita social transfers. Other age groups react to ageing, thereby preventing increases in benefits per retired persons and that institutional reform have been successful at reducing the impact of ageing on pensions in recent years (Sanz & Velazquez, 2007).

2.2.2 National Context:

Chalise (2006) had tried to illustrate the population aging in Nepal using census data, and other reports for the purpose of further research. The researcher concluded that the increase in proportion number of elderly is not matched by any corresponding increase in support measures either through formal channels; pension/health plan or informal channels; socio-economic security measures or the provision of subsidies for healthcare, home help or any other form of nursing care. Further the researcher says that, the pension plan for the elder in Nepal is limited and forced to dependent upon family support. Like other Asian countries the responsibility of the elder lies on their family member and government have little obligation to provide care for the elder in Nepal. The existing provisions for the protection and advancement of senior citizens, however falls far short of their rapidly growing needs. The elders are neglected group in Nepalese societies not only in social security but also in their rights.

National Planning Commission (2012), conducted research in Six districts of Nepal covering all the belts; Mountains, Hilly and Terai analyzed that most of the elder are not satisfied with the allowance they get, which seems the amount distributed by the government is not sufficient for them along with untimely distribution of the facility. But it found that the objective of the SSA (social security allowance) program is quite successful as it effectively tackles poverty and vulnerability, raises the status of older people and contributes to a range of developmental outcomes in poor households. The report has also found that most of their allowance is spend on their health services followed by food, tea/snacks, and clothes.

K.C, Upreti et al (2014), a qualitative research conducted in Rolpa district revealed that each individual can have multiple both positive and negative perspectives of the state, which are associated with specific experience and programme impacts. Some appreciate the same thing while others may have issues with it. Thus, it is important to recognize that various perceptions can often co-exist, perceptions have a situational nature and they are associated with a specific facet of state society interaction. Despite the low value of the pensions they received, they feel valued and recognized. Mostly they are concerned for the older people who are living without family support and believed that state assistance for these people was especially important. Some other group expressed dissatisfaction with the state because of limited value of the allowances and criticized the state for not assessing their needs properly. They wish the state increase the value of the pensions.

Malakar and Chalise (2019), in a research conducted in Kirtipur Municipality to know the perception of elderly on old age allowances in Nepal using both quantitative and qualitative data for the study purpose finds that 61.7 percentage of the elderly expressed that the old age allowances was insufficient and further it is not easy process as they have to wait for a longer period to receive the benefits. People who are satisfied from the allowances reported it's an honour from government. The research further added a detailed in depth study related to old age allowance is required and government should take initiative for the

better management of old age allowance with alternative way other than cash which leads to sustainability of the program.

Khanal (2014) in an article confronted that a very few studies have been done using the primary data CBS,2011, MoHP, NPC , 2012, world bank , 2011 and secondary data (World Bank, 2013) and no comprehensive evaluation has been carried out so far on the field of social security. According to world bank report shows that 55 percent of health costs are paid by out of pocket expenditure and 43 percent of people do not seek treatment due to lack of money. In totality it shows the government need to invest more on health services. Khanal further added that the leakage in social assistance programme to the non-poor is significant so there is need to develop viable and sustainable financial plans and strategies.

National Planning Commission (2017) had drawn the attention of the policy makers by addressing the challenges that Nepal need to be quickly prepared for; rapid progress of the ageing of the society and the duration of the demographic window of opportunity period, which is not particularly long compared with other countries that have more advanced economies. Based on calculation performed by Population Council, Nepal will become an ageing society by around 2028 – 11 years counting from 2017 and an aged society (older accounting for 14 percent or more) by around 2054 – 37 years counting from 2017. This transition period in Nepal is much faster than what today's industrialized countries had historically experienced: 115 years for france; 85 years for Sweden; 47 years for UK; and 40 years for Germany. The report gives an advice for the necessary actions need to be considering the investment in children as an act of paying forward to the generations that will support in our old age and continue to develop our society in future. More specifically, Nepal needs to invest in children on a priority basis, particularly in such areas as health; nutrition; water, sanitation, and hygiene; education including early childhood development; child protection; and social protection. Doing so is fundamental for the country to take maximum advantage of favorable

conditions to cope with the challenges of coming ageing and aged society and economic development.

2.3 Research Gap

The international review of the existing empirical literature on relation between increasing allowances to elder on economic growth shows investment on education sector make huge positive impact on human assets and country should focus on development of human assets as they are the source of productivity. On the other, some researcher reported that increasing share of elder population is harmful to the economy in long run as it tends to increase government expenditure on social welfare, health care. There is negative relationship between ageing population and economic growth, so the government must consider the size of economy and increase government expenditure on education, defense, and infrastructure and in some other productive sectors. Also, the country having high dependency ratio loses the FDI.

Differently from this view other scholars had claimed there is no negative changes relationship between population ageing and lower growth economy because modern technologies is substituting the labor forces which increases production and work is done more efficiently and economically.

In Nepalese context Chalise reported that the elders are neglected group and government supports to elder are not matched in terms of health care, social security. Likewise, research conducted by NPC and some independent researcher Malakar and Chalise claimed that the beneficiaries are not satisfied with the allowances as it is invest on personal consumption and health services.

Since the study is not done much on relationship between ageing population and GDP, impact of ageing population on economic growth, there exists the confusion of whether the increasing in old age allowance will be productive for the nation or not. Even the United Nation (2009) projected the ageing population increase significantly over next 30 years, with working age

population decline to 49% by 2050. Nepal is at high risk due to increasing number of migrant workers. So, there is an urgent need for empirical studies on ageing and economic growth in developing and least developed countries like Nepal, which require more attention from researchers. Before sanction of any policies the government must conduct proper research without any bias-purely for the sake of welfare of the nation.

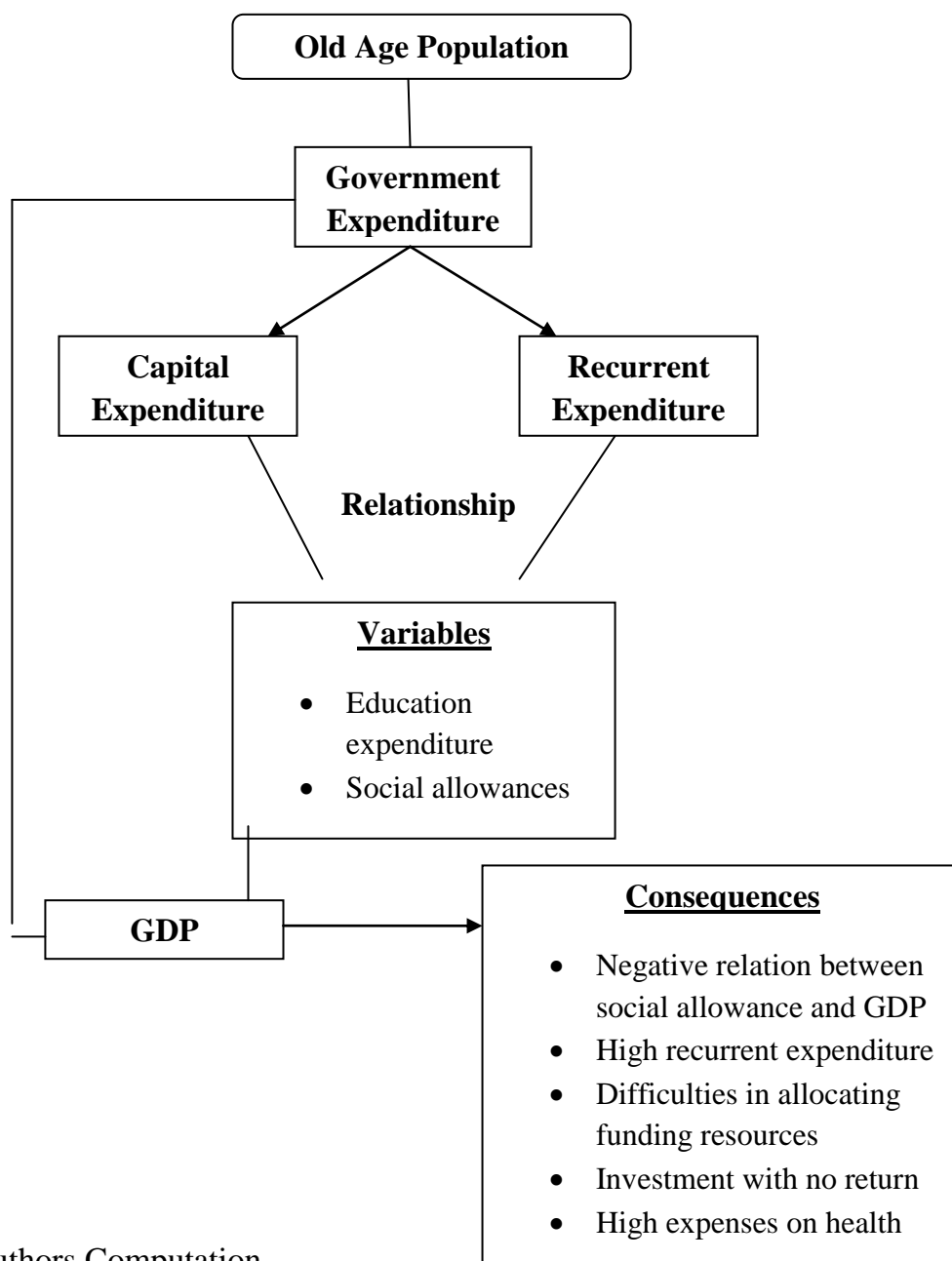
So, this research study tries to explore the relationship between increasing old age allowance and economic growth in Nepal, taking GDP as dependent variable and expenditure on education and increasing allowances as independent variable in the scenario of increasing dependent population, by applying econometric techniques on the annual dataset covering the time period from 2009 to 2018 with projected population till 2031 AD. And the short and long run effects between ageing population and GDP are left for future researcher.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Conceptual Framework

This research paper has been conducted under the following concept as mentioned below:



Source: Authors Computation

With increasing number of old people worldwide, it's a challenge for the government to take care specially for the developing country like Nepal, which have small economy with around 26 million population and most of the active population migrate to the third country in search of job makes it more challenge as it has been saying that for the growth of the economy active population matters a lot. Many researchers had traces that there is remarkable importance of increasing on capital expenditure rather on current expenditure for the economic growth.

The impact of increasing old age allowance on GDP can be traced in different ways, the allowances distributed to elder are used either for consumption or they save it in financial institutions. Nepal government is working on financial literacy and financial inclusion policies; through this we can assume fewer people have access to financial institution. The report published by NRB shows 83 percent of total population have registered an account with financial institutions out of which only 75 percent have active saving account (48 percentage of men and 27 percentage of populace). The research conducted by NPC also traced that the allowances provided to elder are consumed on daily consumption goods and health service. So, this research is purely based on assumption that the national saving is very low effecting low capital formation for investment and less investment indicates less economic growth.

3.2 Research Design

The major objective of the thesis is to find the relationship between increasing old age allowance and GDP in Nepal. In order to achieve the given objective different technique is adopted. The methods adopt quantitative and qualitative technique. Qualitative techniques is presented by observing the nature, trend and structure of population aging, income and expenditure pattern or trend of the government through graphical and tabular presentation and quantitative analysis is presented through descriptive analysis and correlation.

Main data for the study is the projected population published by the CBS, Economic survey from different years, Red Book and Budget Speech from FY

2010/11 to 2017/18 cited from Ministry of Finance. For the completion of this project, we have observed different point of views of scholars and tried to analyze from different perspectives.

3.3 Data Source

In order to fulfill the objective of this paper secondary data has been used published by regulatory and autonomous body of Nepal. Data published by Nepal Rastra Bank in different levels, Economic Survey, Central Bureau of Statistics, Budget speeches of GoN, Ministry of Finance is taken under consideration in the study ranging the period of 2009 AD to 2018 AD. The necessity to take these data is nature of study. GDP is taken from Nepal Rastra Bank, government expenditure is taken from budget speech, population projection from the report published by Central Bureau of Statistics. Besides these the research have considered other sources such as newspapers, national and international journals and reports, websites, research paper published by scholars.

3.4 Sample Design

There are normally two types of sample design i.e. random sampling and judgment sampling. This study is based on judgment sampling due to easy access of data.

3.5 Model Specification

Data were collected from the Central Bank of Nepal Macro Economic Indicators, Ministry of Finance, Central Bureau of Statistic while the three variables are used to test the impact of government expenditure on economic growth disaggregated into education and social security expenditure.

3.6 Description of Variables

3.6.1 Economic Growth

GDP is proxied in this paper for economic growth. It is the total market value of all final goods and services produced within boundaries over a given period (normally a year) of time. The GNP which should have been more appropriate is the total value of all final goods and services produce by all nationals whether within and outside the country over a given period of time in the economy. However, it is difficult to compute GNP or get realistic figures especially for Nepal (a developing country) because of the difficulty involved in generating values for the country's citizens outside the country. Thus, this paper used the nominal GDP at producer price as the measure of economic growth in this study.

3.6.2 Social Security allowances Expenditure

Basically social security means income provided to all the elder people, retirement pensions, allowances provided to poor family, indigenous people, but in this paper we have excluded the pension fund, allowances provided to poor family and others remain same. So, in this paper social security allowances defined the allowance provided to elderly people.

3.6.3 Education Expenditure

Education expenditure includes all the government expenses made on education sector either in vocational educational training or technical education which helps the people to get the job opportunities or make them able to be a entrepreneur.

Among various tools used to analyze, simple regression and correlation are the tools mostly used by the researcher. Regression may be defined as a statistical measure that attempts to determine the strength the relationship between one dependent variable and a series of the relationship between one dependent

variable. Regression usually shows the cause and effect relationship between the two variables.

Correlation may be defined as the degree of linear relationship existing between two or more variables. These variables are said to be correlated when the change in the value of one results change in another variables. Correlation may be positive, negative or zero.

Due to limited data, only correlation has been used to meet the objective of this paper to find the relationship between GDP, social security and education.

CHAPTER-IV

TRENDS OF POPULATION AND ECONOMIC GROWTH

This chapter deals with the presentation and analysis of data collected from various sources. Data analysis covers nine years periods from F/Y 2009/10 to F/Y 2017/18AD and for demographic the projected year from 2011 to 2031 AD. These data have been analyzed and interpreted with the help of the research methodology defined in previous chapter. In the following section, the relevant and generated data (from secondary sources) relating to the study is presented in tabular form with graph and analyzed it in systematic way.

Table 1: Projected Population of Nepal (Medium Variant)

Year/Age Group	0-14	15-59	60 ≥	Total
2011	9248246 (34.96%)	15091848 (57.05%)	2113585 (7.99%)	26453679
2013	8920516 (32.73%)	16084358 (59.01%)	2252474 (8.26%)	27257348
2015	8749640 (31.21%)	16938889 (60.41%)	2349376 (8.38%)	28037905
2017	8643885 (29.99%)	17736680 (61.53%)	2445145 (8.48%)	28825710
2019	8609935 (29.08%)	18456351 (56.60%)	2543337 (7.80%)	29609623
2021	8630188 (28.41%)	19095611 (62.86%)	2652255 (8.73%)	30378054
2023	8743907 (28.10%)	19594809 (62.97%)	2778198 (8.93%)	31116914
2025	8822053 (27.73%)	20071337 (63.09%)	2921069 (9.18%)	31814459
2027	8821348 (27.17%)	20564200 (63.35%)	3076971 (9.48%)	32462519
2029	8715209 (26.36%)	21095057 (63.81%)	3246596 (9.82%)	33056862
2031	8537076 (25.41%)	21631456 (64.39%)	3428507(10.20%)	33597039

Source: Authors Computation from Annex A

Table 1 shows Nepal is moving towards aged society from ageing society from 2011. An increasing number of aged populations are faster than any other industrialized country. The population aged above 60 year will be 10.2% of total population and it is assumed to reach 14% by 2045 which is most challenging for the small economy like Nepal where there is limited resources

to utilized and exist poor infrastructural development. If we compare the ageing population ($60 \geq$) and the active population (15-59), ageing population is increasing faster compare to active population, which is due to low fertility and high mortality rate. If this trend continues then without any doubt within a decade the population pyramid of Nepal will be no more in pyramid shape.

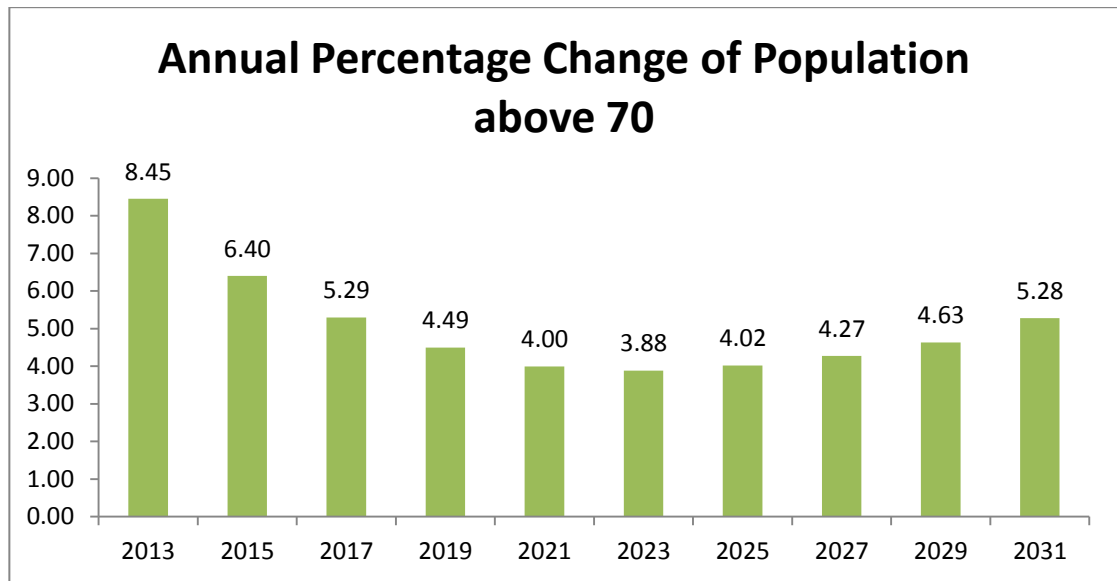
Table 2: Annual Change of Population

Year	Total Population	% change on Total Population	Population above 70+	% change (age above 70)
2011	26453679	-	843134 (3.19%)	-
2013	27257348	3.04	914393 (3.35%)	8.45
2015	28037905	2.86	972937 (3.47%)	6.40
2017	28825710	2.81	1024421 (3.55%)	5.29
2019	29609623	2.72	1070461 (3.28%)	4.49
2021	30378054	2.60	1113229 (3.66%)	4.00
2023	31116914	2.43	1156435 (3.72%)	3.88
2025	31814459	2.24	1202936 (3.78%)	4.02
2027	32462519	2.04	1254359 (3.86%)	4.27
2029	33056862	1.83	1312427 (3.97%)	4.63
2031	33597039	1.63	1381739 (4.11%)	5.28

Source: Authors computation from Annex A

Table 2 shows that the population is projected to increase every year. There is steady growth of population which is increasing at decreasing rate and elder population is increasing slowly till 2023 at decreasing rate and afterward it seems growing faster than the total population increasing at increasing rate. Through this we can assume that the birth rate is decreasing and life expectancy rate is increasing i.e. number of elder population is increasing and in year 2031 the elder population is estimated to be around 14 lakh i.e 4.11% of total population.

Figure 1: Annual change of population above 70

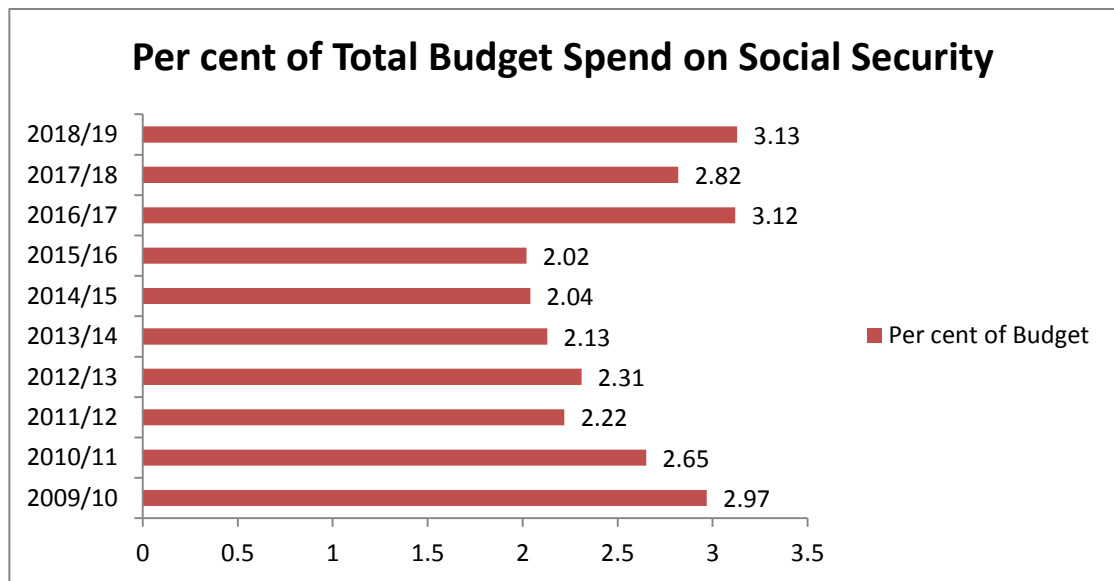


Source: Author's Computation from Annex A

Figure 1 show that the numbers of beneficiaries', population aged 70 above are increasing at decreasing rate until 2023, after onwards it is projected to increase at increasing rate each year. This showed there will be an increasing on government expenditure in coming years specially affecting on recurrent expenditure. As of past records, more than half of our total budget is allocated for the recurrent expenditure and the provision of increasing old age allowance added more recurrent expenditure followed by the practices of federalism. Since the government expenditure increases the policy makers and the government must find out the sources of revenue to cover these expenses.

Only identification of source of revenue is not only the challenge for the government, but also these source of revenue should be sustainable and acceptable to the Nepalese economy.

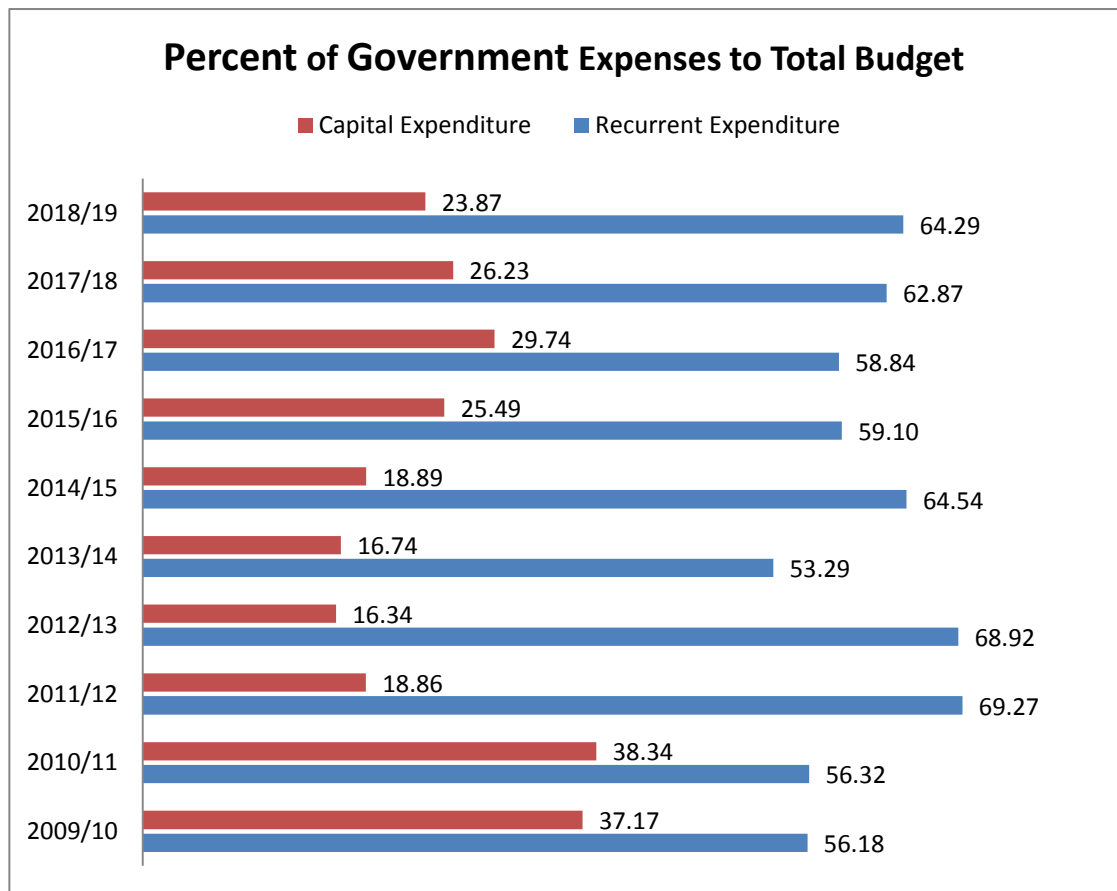
Figure 2: Percentage of Social Security Allowance Expenditure out of the Total Annual Government Budget, 2009/10-2018/19



Source: Authors Computation from Annex B

Figure 2 explain over the years the number of senior citizens has increased and so as the number of recipients of the social security allowances. The allocated budget for social security has been increased since 2015/16 after the government decided to increase social security allowances. In fact the total expenditure on social security increased drastically from 2.02 per cent of total budget in 2015/16 to 3.13 per cent in 2018/19 which is a huge expenses for the small economy like Nepal whose GDP falls around NPR 3008.859 billion (Economic Survey 2017/18). The figures also include social security to the endangered ethnic group, single woman and disabled. Increasing in budget allocation in SSA is due to increasing beneficiaries and increase in receipt amount from NPR 500 to NPR 2000. In figure above, we see the allocated budget is decreasing till 2015/16 because during the time, number of beneficiary children are decreasing and afterward the elder beneficiaries starts increasing.

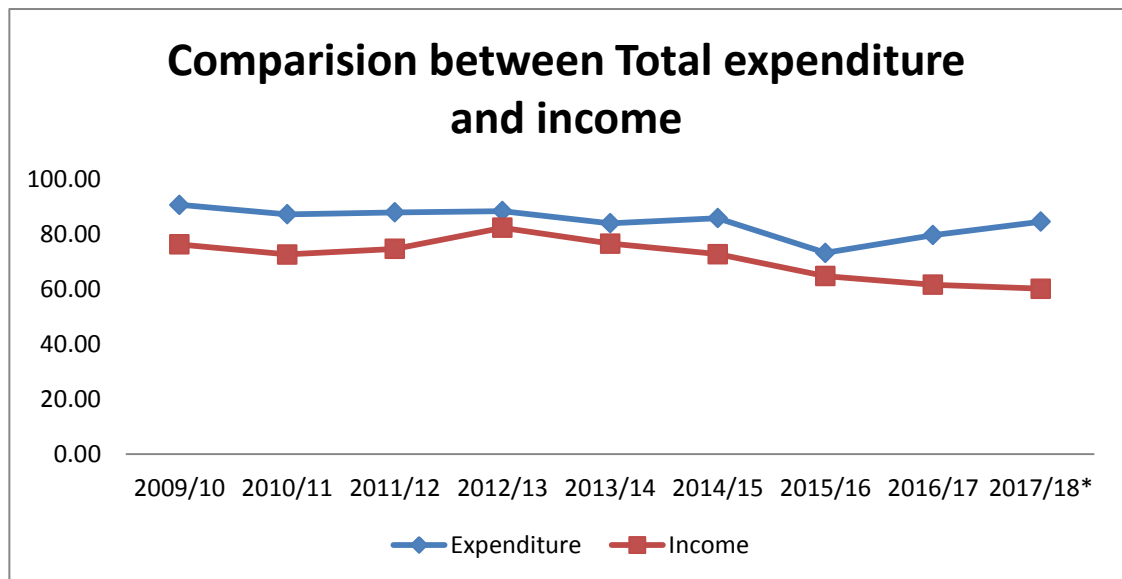
Figure 3: Percentage of Recurrent and Capital Expenditure out of Total Annual Budget



Source: Authors computation from Annex C

Figure 3 shows in an average more than 50 percent of the total budget is allocated for recurrent expenditure and for the year 2018/19, it was 64.29 percent whereas only 23.87 percent was allocated for capital expenditure. Despite different views of importance of capital expenditure, Nepal is still practicing the high expenses on recurrent expenditure and the sanction of increase in old age allowance added more expenses on recurrent since the recipient has increased.

Figure 4: Comparison between total expenditure and income to Total Annual Budget



Source: Authors Computation from Annex D

Through figure 4 it can conclude that the government income and expenditure tends to be equal in year 2012/13 having fewer differences, which can be assumed that there is less government deficit following in the year 2015/16. After then, the expenditure took its height and the source of income of the government to meet expenditure starts to fall reaching to around 60 percent. One of the factor of increasing government expenditure could be increasing in number of social allowances beneficiaries and other could be increasing in allowances amount i.e. around 4 percent of the total budget have been disbursed on social security budget head.

Table 3: Public Finance and GDP with their Ratios (%)

Discription	Fiscal Year (In Rs 1 Billion)								
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18*
GDP	1192.77	1374.95	1527.34	1692.64	1941.62	2120.47	2247.43	2599.23	3008.86
Expenditure	259.69	295.36	339.17	358.64	435.05	531.56	601.02	837.25	1082.99
Government Income	218.49	245.74	287.98	333.93	396.89	450.41	531.41	647.47	770.27
Budget Surplus(+) /Deficiency (-)	-41.20	-49.62	-51.18	-24.71	-38.17	-81.15	-69.61	-189.78	-312.72
Ratio of GDP (in %)									
Expenditure	21.77	21.48	22.20	21.20	22.10	25.00	26.70	31.70	36.00
Government Income	18.32	17.87	18.90	19.70	20.20	21.10	23.60	24.50	25.60
Budget Deficit	3.45	3.61	3.40	1.50	2.00	4.00	3.10	7.20	10.40

Source: Economic Survey of different year. (Note: *Estimated)

Table 3 draws the conclusion that the total expenditure of the government is increasing with higher ratio from 2015/16 and is estimated at 36 percent of total GDP in 2017/18 having higher expenses on current expenditure. The government income tends to decrease in 2010/11(which could be the effect of financial crisis) but after then it has improving but not satisfactory compare to government expenditure, and the budget deficit hit to 10.4% of GDP in 2017/18 which is the highest level of a decade. If we see the trends, every year the government income to the GDP is increase by 1 percent whereas the government expenditure to the GDP has been increased by 5 times than the income.

Table 4: Trade Deficit as % of Nominal GDP at Producers Price

Year	Trade Deficit percentage
2009/10	26.3
2010/11	24.3
2011/12	25.4
2012/13	28.3
2013/14	31.7
2014/15	32.5
2015/16	31.3
2016/17 ^R	34.7
2017/18 ^P	38.6

Source: Macroeconomics Indicators of Nepal, 2018

Table 4 shows that at nominal GDP at producer price, the import of goods and services are more, comparing export of goods and services. It is estimated that the trade deficit will be 38.6 percent in FY 2017/18 highest of all time. Since, FY 2010/11 country has been continuously experiencing trade deficit. This indicates the poor policy and weak system of the government. Being the member of different trade union having huge natural resources, Nepal is still not been able to utilize its resources for the development purposes. The table shows Nepal is relying more on importing goods instead of being self-reliant and also the existing industries are not been able to get its market for export or lack government support. If the government still don't take the relevant action to address this issue then there will be no doubt that the nation will face the economic crisis sooner or later in near future.

CHAPTER-V

ANALYSIS ON INCREASING OLD AGE ALLOWANCES AND GDP IN NEPAL

In order to determine the relationship among the GDP on education expenditure and increasing in social security allowances and education expenditure we have checked the correlation between these variables. In the process of analyzing, various source of publication are used, includes current macroeconomics published by Nepal Rastra Bank, Economic Survey, Red Book published by Ministry of Finance and National Population data published by Central Bureau of Statistic.

5.1 Relationship between old age allowances and GDP

Table 5: Correlation Result (correlation between nominal GDP, education expenditure and social security expenditure)

	<i>Nominal GDP</i>	<i>EE</i>	<i>SSE</i>
Nominal GDP	1	-	-
EE	0.967554	1	-
SSE	-0.0467	0.134371	1

Source: Author's Computation from Annex E

Table 5 presents the correlation matrix of the model proxies. From the above table, it was revealed that government expenditure on education has positive relationship with GDP in Nepal within the period under review. The table reveals that a unit increase in GDP is due to 0.9675 unit increase in education expenditure. The relationship is not perfect ($r=1$) but it is very strong. Also, the correlation matrix results indicate that social security protection expenditure has negative relationship with GDP within the period under review. This indicates that a unit in GDP is attributable to 0.0467 decreases in social security protection expenditure.

The results suggest that increasing on allowances neither benefits to the target population nor helps on the growth of the nation. Thus instead of increasing allowances it would be better to invest those amount on productive sectors which will retain the investment. Since current expenditure means spending on items that are consumed and only last a limited period of time. They are items that are used up in the process of providing a goods or services. In the case of the government, current expenditure would include wages and salaries and expenditure on consumables - stationery, drugs for health service, bandages and so on. Increasing elder allowances is considered as increase in current expenditure which the country gets nothing in return in long term. Whereas, capital expenditure is spending on assets. It is the purchase of items that will last and will be used time and time again in the provision of a good or service. In the case of the government, examples would be the building of a new hospital, the purchase of new computer equipment or networks, building new roads and so on. While capital expenditure has a lasting impact on the economy and helps provide a more efficient, productive economy. Current expenditure, however, doesn't have such a lasting impact. Once the money is spent, it is gone and the effect on the economy is simply a short-term one. So, this shows that the increasing elder allowance seem more burden for the country specially small economy country like Nepal, where being the member of so many trade organization still not been able to get benefits of the opportunities.

5.2: Consequences of increasing old age allowances to elder population on GDP

The direct effect due to increase in old age allowances can be seen in government budget. As it has been projected that the number of elder population will increase in near future, the effect can be felt in recurrent expenditure of the government. Managing such expenditure is the challenge for the economy like Nepal where development projects have still been under construction, trade deficit is increasing every year, unable to get benefits from comparative advantages, political stability is supposed to maintain and every year around 500 thousand youth emigrate in search of job to other country that

means the independent population-contributors in economic growth are leaving the country.

Increase in old age allowances is an expense with no return, no return means no growth. A nation can sustain only when it gets return from investment, investment without return causes financial crisis and Nepal is not so far from this situation if it regulates random policies without any further research knowing its consequences. Different scholars had supported the economic growth is possible only when country invest in its infrastructural development which benefits the nation in long run. Increasing old age allowances only increases the proportion of recurrent expenditure every year and to manage the resources for these expenses is a challenge. Also, increasing in number of elder population means increasing dependent population and the country with huge dependent population discourages FDI.

Since, there is negative relationship between increasing in old age allowances and GDP, decision of increasing social security by current government could lead a nation into financial crisis soon. Improper and unplanned expenditure without resource identification leads a nation into huge debt.

CHAPTER-VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

Increasing elderly population has been one of the major problems throughout the world (with decreasing the youth population) as a result of decreasing fertility rate and increasing life expectancy rate. Due to this the most vulnerable countries are the developing countries whose effect can be seen faster than in developed nations. So, it's a major issue that the entire nations have to address as soon as possible. And Nepal is not spared from its effect.

Different scholars have different views on expenditure of the government. Some scholars argue that the government should increase its expenses to get economic growth but doesn't have addressed on which sectors the government have to focus on. Some others have found that there is positive relation between the recurrent expenditure and economic growth and negative and non significant relationship between capital expenditure and economic growth. Whereas some other groups of scholar have suggested that increasing in government expenditure on productive sector which will gives return on investment plays a significant role on economic growth.

This research paper has used descriptive analysis to determine the relationship between GDP on social security expenses and education expenses. This paper has considered GDP as proxy of economic growth which is dependent variable and social security expenses and education expenses as explanatory variables. This paper has tried to see the relationship between increases on old age allowance on economic growth. Hence, the paper results that there is positive and significant relationship between GDP and increasing expenses on education based on the available data and finds negative and insignificant relationship between GDP and increasing on social security allowances at present context.

This research paper presents that it is expected to increase recurrent expenditure resulting increase an elder population. The past data shows that more than 60

percent of total budget has been allocated for recurrent expenditure where as only around 25 percent has been allocated for current expenditure. And the decision of running government on increasing social security allowances has added more on that 60 percent expenditure.

The result emanating from this paper reveals that increasing expenses on social security had negative and non-significant impact on GDP while expenses on education sector had positive and significant impact on economic growth. This suggests that the decision of increasing on old age allowances is not appropriate at the current situation. Due to this the nation might has to face the economic difficulties in near future and could be hindrance to get double digit economic growth in future.

6.2 Conclusion

Respective conclusion can be drawn from this research paper

- a) The total population has been increasing throughout the sample period and the elder population above 70 years tends to increasing slowly till 2019 which onwards expected to increase at increasing rate. This result shows there will be more demand of expenditure on old age allowance directly affecting on national GDP.
- b) Most of the people demand that the allowances provided to elder are not enough for their living as major proportion of allowances are spend on their health services rather than their living. Only around 35 percent of people are satisfied with the allowances.
- c) The positive relationship is achieved with capital expenditure on education as it is assumed that government capital expenditure on education helped to build more skilled manpower for infrastructure development, to produce human capital leading to productivity, awareness on healthy living and hence the growth.
- d) The supportive factor of government expenditure i.e. government revenue, whose major source is trade has been on deficit continuously during the study period.

6.3 Recommendations

Increasing elder population is inevitable as the world is moving in a path of increasing life expectancy rate. To achieve a goal, a country also should have to be prepared from its effect on the economy. It's a responsibility of government to take care of its citizens but one should not ignore the thing that ability of the nation on making these expenses. The leaders have no right to make the decision that could drag the nation into crisis only for the sake of the party to exist. They have to think of the nation as a whole specially on the situation where the country is in crucial point as the country is practicing the federal system, unstable economic growth, unfavorable investment environment. Hence, from the findings of the study, following recommendation can be outlined.

- a. The government should focus to increase expenditure on such sector which will give return on investment such as education, infrastructure development, and so forth.
- b. Since, huge amount saved by elder people goes on health expenses there is no value of increasing allowances as it ultimately goes on health expenses and less savings. Contrary, it will be more effective if the government made expenses on health services which will benefit the populace instead of increasing allowances.
- c. Achieving the economic growth is not only the factor that determines the better nation, to maintain the sustainable growth rate is the biggest challenge to Nepal.
- d. Since, Nepal is facing the huge trade deficit every year and in FY 2016/17 the import of goods by country has increasing by 28 percent whereas the export is struggling to get positive growth on exporting goods. Thus, the government should frame the policies or program that could contribute on export through the elder people participation for economic growth.

- e. Nepal has huge gap of budget deficit which is not good for the health economy. Thus, government has to search for the alternatives to address the problem as soon as possible.
- f. Government should not think the elder people as the disable populace rather the nation should respect them and extract their knowledge for the protection of the culture which we are rich in it and make them active participation in such activities since we are making year 2020 as the Nepal Tourism Year which is one of the mega project for economic growth of the nation as this project directly impact on the tourism sector.

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ANNEX - A

Population projection by age and sex for Nepal, 2011 - 2031 (medium variant)

	2011	2012	2013	2014	2015	2016	2017
Age group	Total	Total	Total	Total	Total	Total	Total
0-4	2567963	2,734,838	2,778,878	2,830,227	2,887,862	2,950,167	2,980,653
5-9	3204859	2,962,543	2,867,346	2,787,937	2,723,598	2,674,278	2,711,218
10-14	3475424	3,320,242	3,274,292	3,210,778	3,138,180	3,062,864	2,952,014
15-19	2931980	3,159,436	3,232,877	3,284,284	3,312,519	3,317,315	3,296,863
20-24	2358071	2,504,610	2,635,876	2,775,231	2,907,703	3,021,920	3,114,997
25-29	2079354	2,089,747	2,134,302	2,185,571	2,252,613	2,340,931	2,452,896
30-34	1735305	1,820,998	1,863,529	1,907,709	1,952,824	1,998,815	2,043,660
35-39	1604319	1,592,319	1,627,382	1,664,021	1,701,885	1,740,785	1,781,359
40-44	1386121	1,402,216	1,431,001	1,460,178	1,490,354	1,521,989	1,555,381
45-49	1172959	1,216,788	1,246,891	1,276,230	1,305,186	1,334,086	1,362,903
50-54	985,214	1,012,808	1,043,379	1,075,765	1,108,405	1,140,180	1,170,796
55-59	838,525	853,187	869,121	886,933	907,400	930,950	957,825
60-64	716,002	724,983	734,712	745,335	757,069	770,098	784,293
65-69	554,449	597,869	603,369	610,955	619,370	627,822	636,431
70-74	395,153	490,595	492,192	487,964	483,713	482,949	485,969
75-80	235,135	238,696	276,958	306,968	327,881	339,914	348,687
80+	212,846	151,191	145,243	149,969	161,343	176,432	189,765
Total	26,453,679	26,873,066	27,257,348	27,646,055	28,037,905	28,431,495	28,825,710

	2018	2019	2021	2023	2025	2027	2029	2031
Age group	Total	Total	Total	Total	Total	Total	Total	Total
0-4	3,005,283	3,023,043	3,034,615	3,009,844	2,948,304	2,857,448	2,749,090	2,632,885
5-9	2,756,039	2,808,095	2,929,397	2,985,819	3,014,891	3,010,613	2,968,682	2,893,117
10-14	2,857,566	2,778,797	2,666,176	2,748,244	2,858,858	2,953,287	2,997,437	3,011,074
15-19	3,251,748	3,189,113	3,042,839	2,839,071	2,697,751	2,686,743	2,784,242	2,906,027
20-24	3,188,230	3,239,650	3,273,395	3,209,327	3,076,832	2,894,308	2,724,324	2,614,336
25-29	2,583,644	2,722,428	2,968,344	3,134,728	3,215,471	3,202,462	3,098,524	2,956,350
30-34	2,088,473	2,139,932	2,295,207	2,537,131	2,807,080	3,013,918	3,139,712	3,176,000
35-39	1,824,062	1,868,397	1,959,793	2,049,766	2,168,463	2,367,851	2,635,615	2,880,616
40-44	1,590,535	1,627,263	1,704,217	1,787,680	1,877,500	1,968,942	2,065,895	2,220,991
45-49	1,391,666	1,420,853	1,482,725	1,551,319	1,626,047	1,705,820	1,793,195	1,885,056
50-54	1,200,540	1,229,600	1,287,085	1,344,520	1,403,889	1,468,922	1,540,726	1,617,678
55-59	987,578	1,019,115	1,082,006	1,141,267	1,198,304	1,255,234	1,312,824	1,374,402
60-64	799,723	816,973	859,487	913,995	974,964	1,034,001	1,090,320	1,145,959
65-69	645,738	655,903	679,539	707,768	743,169	788,611	843,849	900,809
70-74	491,340	498,414	514,017	530,682	550,346	574,011	602,196	638,335
75-80	350,207	347,968	346,492	354,681	367,388	380,885	396,084	414,140
80+	206,494	224,079	252,720	271,072	285,202	299,463	314,147	329,264
Total	29,218,866	29,609,623	30,378,054	31,116,914	31,814,459	32,462,519	33,056,862	33,597,039

Source: National Population and Housing Census 2011, CBS

ANNEX - B

Total Budget and Budget Distributed on B.H. No.365015 (per cent of social security expenditure to total budget)

Fiscal Year	Senior Citizen, Disabled, Endangered ethnicity, and single Women Security Scheme (SS Budget) (NPR in Billion)	Total Budget (NPR in Billion)
2009/10	8.5 (2.97%)	285.93
2010/11	8.95 (2.65%)	337.9
2011/12	8.56 (2.22%)	384.9
2012/13	9.35 (2.31%)	404.83
2013/14	11.01 (2.13%)	517.24
2014/15	12.59 (2.04%)	618.1
2015/16	16.56 (2.02%)	819.468
2016/17	32.69 (3.12%)	1048.92
2017/18	36 (2.82%)	1278
2018/19	41.15 (3.13%)	1315.16

Source: Ministry of Finance, Red Book from FY 2009/10 to 2018/19

ANNEX - C

Budget Structure (in Billion)

Fiscal Year	Total Budget	Recurrent Expenditure	capital expenditure
2009/10	285.93	160.63 (56.18%)	106.28 (37.17%)
2010/11	337.9	190.32 (56.32%)	129.54 (38.34%)
2011/12	384.9	266.63 (69.27%)	72.61 (18.86%)
2012/13	404.83	279.01 (68.92%)	66.135 (16.34%)
2013/14	517.24	275.66 (53.29%)	86.611 (16.74%)
2014/15	618.1	398.95 (64.54%)	116.75 (18.89%)
2015/16	819.468	484.27 (59.10%)	208.87 (25.49%)
2016/17	1048.92	617.16 (58.84%)	311.95 (29.74%)
2017/18	1278	803.5 (62.87%)	335.2 (26.23%)
2018/19	1315.16	845.5 (64.29%)	313.99 (23.87%)

Source: Ministry of Finance, Budget Speech

ANNEX - D

Percent of Government Income and Expenditure to Total Budget (In Billion)

Fiscal Year	Total Budget	Total Government Expenditure	Total Government Income
2009/10	285.93	259.6891 (90.82%)	218.4918 (76.41%)
2010/11	337.9	295.3634 (87.41%)	245.7412 (72.73%)
2011/12	384.9	339.168 (88.12%)	287.984 (74.82%)
2012/13	404.83	358.638 (88.59%)	333.927 (82.49%)
2013/14	517.24	435.052 (84.11%)	396.885 (76.73%)
2014/15	618.1	531.558 (86%)	450.413 (72.87%)
2015/16	819.468	601.016 (73.34%)	531.411 (64.85%)
2016/17	1048.92	837.248 (79.82%)	647.47 (61.73%)
2017/18*	1278	1082.988(84.74%)	770.268 (60.27%)

Source: Ministry of Finance, Economic Survey of respective year

ANNEX - E

Macro Economics Indicator (In Billion)

Fisca Year	Nominal GDP at producer price	Expenses on education	Actual expenses on senior citizen, single women
2009/10	1192.8	39	7.25
2010/11	1367	57	7.84
2011/12	1527.3	63	8.23
2012/13	1695	63	10.21
2013/14	1964.5	80	10.99
2014/15	2130.2	86.03	12.26
2015/16	2247.4	98.64	16.15
2016/17	2599.2	98.64	0.347

Source: Macro Economic Indicators of Nepal, NRB

ANNEX - F
Public Finance and GDP (In Billion)

Fiscal Year	Actual Government Expenditure	Actual Government Income	Deficit
2009/10	259.69	218.49	41.19
2010/11	295.36	245.74	49.62
2011/12	339.16	287.98	51.18
2012/13	358.64	333.93	24.71
2013/14	435.05	396.88	38.17
2014/15	531.56	450.41	81.14
2015/16	601.02	531.41	69.61
2016/17	837.25	647.47	189.79
2017/18*	1082.99	770.27	312.72

Source: Economic Survey at different time period