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FINANCING GOVERNMENT BUDGET DEFICIT: THE CASE STUDY OF FINLAND

Master's Thesis in Public Management

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ABSTRACT:

Studies on 'government budget deficit financing' have started centuries ago by Classical economists and later continued by Keynesian economists and other schools of economists. However, each school of economists has different views; such as Classical economists are against spending whereas Keynesian are in favour of spending during the budget deficit. Study on government budget deficit gets more popular after the 2000s due to the shortfall of numerous economies around the world. The right way and absolute measures to finance government budget deficit became the hot topic around the world, and since 2008 the word 'Debt', 'Deficit' and 'European Austerity' became recurring terms in the media. Various scholars studied the 'effects of' and 'solution to' budget deficit but only a handful of studies are conducted covering all the major budget deficit financial instruments emphasizing economic growth.

Concepts, effects and financing instruments of budget deficit are discussed in the literature review of this thesis. At the end of the literature review, financing government budget deficit with 'economic growth' approach is presented. In addition, the theoretical part includes the previous study, theoretical framework, and propositions for the analysis part. Next, a case study method is elaborated before the analysis part. Research is based on a single case study i.e. case study of Finland. Case study part contributes to existing government budget deficit literature with robust findings and provides new insights. As a practical implication, government and public manager of present and future can learn from this thesis. Economists and researchers can also use this thesis as the information source of Finnish budget deficit financing.

Case country, 'Finland' has been selected carefully which absolutely fits on budget deficit scenario because Finland is running its budget on the deficit since 2009. All the required information for case analysis were available in web source, government publications, in other academic sources, and media source. Case study method is used as an analysis method, and case data and information are gathered through the secondary sources. Cross-analysis with other countries especially with the USA can be found in some part of the case study and literature, however, main case study only includes the budget deficit behaviour of Finland; and analysis method is not cross-analysis. Therefore, all the findings are based on Finnish budget deficit scenario and activities from 2009 to 2018.

This study contributes to numerous interesting and essential findings. First, the budget deficit scenario of Finland along with the effects of the budget deficit is identified. The role of economic growth in financing budget deficit as a sustainable method is strongly emphasized in this study. This study findings also include the factors of economic growth which promote economic sustainability. The most interesting finding of this thesis is the impact of innovation in sustainable economic growth which can be a breakthrough for any country in reinstating its economy, especially in a current global economic scenario. Furthermore, it is also found that the Finnish government is well familiar with economic growth but is still unable to innovate any significant idea or to make any breakthrough to fix its sustainability gap totally. Last, the case study findings evaluate the budget deficit financing instruments where the contribution of economic growth in financing government budget deficit is found crucial.

KEYWORDS: Government budget deficit, Deficit financing, Economic Growth, Sustainability

1 INTRODUCTION

This introductory chapter focuses on designing a comprehensive picture of this master's thesis to the reader. In the starting of this introductory chapter, background and objectives of thesis study will be presented and it will be followed by presenting the research gap and research problem. After that, research objectives and research question are explained respectively. Lastly, the structure of this thesis is explained briefly.

1.1 Background

To have an economy with lots of employment and security, and higher pay or return have generations to come (GPO, 2013). Strategies for financing debt and deficits and even reducing it are a major concern of today's economist and government. Classically, it can be handled through increasing GDP because the growth of GDP decreases the burden of the budget deficit. Hence, the demand for public services like welfare decline along with higher incomes leads to accumulation of larger taxes. Expanded GDP will minimize the 'debt to GDP' ratio and raising GDP i.e. associated with economic growth is the main responsibility of the government in stabilizing the economy. (Atkinson, 2014: 1).

Economists from centuries are continuously utilizing previously innovated or are developing new financial instruments, theories, and models to deal with the financial crisis and instability. Since the last three decades, the financial instability has been increasing drastically. The impact of the crisis has been spread throughout the universe. (D'Apice & Ferri, 2010: 9). Since 2008 the word 'Debt', 'Deficit' and 'European Austerity' are recurring terms in the media. Moreover, dealing with them has become a hot issue in politics and economics. The deficit is the starting phase of a national debt, if the debt is not handled properly it will create financial instability with economic shocks. (Perry, 2014: 2).

Study and research in government budget deficit financing have started a long time ago before the great depression. Due to the increase in government deficit around the world, the Ricardian Theory of Equivalence has found a core position in macroeconomics study and research (Niple, 2006: 1-2). Bernheim (1989) and Barro (1988) also have highlighted the significance of the Ricardian theory in government budget deficit financing. According to Ricardo, it does not matter if a country elects to finance the deficit by debt financing approach or a tax financing approach. Hence the result will be the same and the theory is described as 'Ricardian equivalence'. For example: collecting 1 million euros by increasing tax is equal to government borrowing of 1 million form either domestic or foreign financial market. (Rose, 2001).

Perry (2014) studied the budget deficit model of Classical economist and Keynesian economists. Classical Model of budget deficits defines the impact of rising meantime consumption of governments and consumers which is equalized by the decline in investment. Classical economists assumed that the decline in saving if the consumption rises result in investment reduction. The circumstances through which budget deficits rise rate of interest and decrease investment is defined as crowding out. However, Keynesian views on the budget deficit study are different. Classical economists are against the deficit spending whereas Keynesian economists are in favor of spending and investment during the recession (Perry, 2014: 9-12). Keynesian economists are against having a balanced government budget because they assumed suitable budgetary policy relied on economic circumstances (see also Nelson, 2006, Bernheim, 1989 & Perry, 2014). This shows the difference in budget deficit handling and financing perspectives. This difference in budget deficit handling and financing perspective will be analyzed in this thesis i.e. which types of budget deficit financing are better?

The focus of this thesis study is on Finish budget deficit resulted from the 2008 crisis, and on study of budget deficit instruments utilized by the Finnish government to finance its budget deficit since 2009. However, the main concern of this thesis is to support economic growth as a self-financing process to the budget deficit. Factors that motivated to choose this topic is my interest in this topic, my previous knowledge and decade-long government budget deficit in Finland. As a student of business administration and public management, it inspired me to write where I can utilize both competencies and at the same time contribute.

Fisher & Easterly (1990) suggested government budget can be financed through four ways: printing money, running down foreign exchange reserves, borrowing abroad and borrowing domestically. The previous study from Dunsire & Hood (1989) found that during the first half of the century, dynamics of financing the fiscal stress started through raising the tax until the tax income is a buyout and by borrowing temporarily if the tax incomes decline. However, cutting down strategy is deployed if borrowing fails or could not finance the deficit. Thus, cutback strategies and tax increase are also crucial instruments contributing to budget deficit financing. The main study of this thesis includes the budget deficit financing instruments and discussed budget deficit financing instruments in this thesis are: 1. Loan and Borrowing, 2. Tax Increase, 3. Cutback strategies, 4. Quantitative Easing 5. Foreign Reserve. Top of that, economic growth is studied as the best and auto-financing measure to rising sustainability gap which is also the main theme of this thesis study.

1.2 Research gap and research problem

Even though there are numerous studies already conducted to understand budget deficit financing processes and tools, they are not enough due to the fact of not having the concrete answer to financing budget deficit without hampering the economy in long-run (see: Dunsire & Hood 1989; Atkinson, 2014; OECD 2016; Fisher & Easterly, 1990). Gale & Orszag (2003) studied the impact of the fiscal policy on the economy and found that it is a long-standing topic of discussion from the time when there was budget surplus during the 1990s and now after 2001 when the shortfall in the economy started with the increment in the retirement of the baby boomers.

Saleh & Harve (2005) & Baker (2011) found that fatal government fiscal deficit and rising debt have become a core attention in both developing and developed countries. Thus, establishing a relationship between budget deficit and macroeconomic variables (interest rate, trade, investment) is a things of concern among economists and policymaker. Similarly, previous studies (see Atkinson, 2014; Fieldhouse & Thiess, 2013; Ezel at. al, 2016; OECD, 2012 has called for more study on financing budget deficit with economic growth focus. Therefore, economic growth seems to be essential for any nation's economy, however, it is a very complicated function when the government is confused with where to focus during budget deficit; thus, confusion could be selecting either Classical model or Keynesian model of deficit financing (see Dunsire & Hood, 1989; Perry 2014).

Nevertheless, this thesis study mainly focuses on economic growth. From an economic growth perspective, the purpose of the study is to study both ‘effect of' and ‘solution for' Finnish budget deficit. In the process, the thesis will mainly focus on economic growth as one and only solution to the sustainable economy. Simultaneously, this thesis will try to reduce the government confusion over financing budget deficit. The significance of economic growth has been argued by Atkinson (2014), Holmström et al.(2014), OECD (2014 & 2016), Dunsire & Hood (1989) and by other various authors and they will be discussed in ‘Previous finding' chapter. However, it is essential to understand how to achieve this sustainable economic growth that provides an auto-financing measure to the sustainability gap. This is the most interesting part of this thesis research gap in which this thesis study will focus. There are very few focuses made with this topic and this context in previous studies.

After the 2008 crisis, Finland is running its budget on a series of the deficit (see OECD 2014 & 2016; Ministry of Finance, 2018). Numerous studies (see Holmström et al. 2014, OECD 2012, 2014 & 2016; Ministry of Finance 2009-2018) on Finnish budget deficit can be found. All these studies have supported economic growth as a primary solution. Apparently, in 2018, the Finnish budget is still running on the deficit and Finnish government is still searching for the breakthrough to bring its economy back (see on Ministry of Finance, 2018).

A theoretical framework of this thesis is based on budget deficit financing, their effect on the economy and economic growth as the best solution to reduce deficit gap. Economic harm caused by piling budget deficit (huge sustainability gap) creates a fatal economic scenario which needs time to recover with the right measure i.e. economic growth. Subsequently, the research problem navigating this thesis study is: *'How Finland can achieve sustainable economic growth that facilitates the auto-financing solution to its long-run budget deficit?'*

1.3 Research objective and question

'Finnish budget deficit financing with economic growth focus' is the main objective of this study. The case country is selected carefully so it would represent the process of budget deficit financing and Finland is running its government budget on the deficit since 2009. Likewise, the thesis main research objective is to find better ways towards sustainable budget deficit financing i.e. economic growth. However, this thesis will also study the sources and effect of the budget deficit. The research problem of this study will be addressed by centralizing on the following research question:

RQ: How to finance government budget deficit without hampering the economy in long run? Which budget deficit financing instrument provides a sustainable fix to the budget deficit?

1.4 Structure of the thesis

Introduction chapter of this master's thesis contains background and motivation behind the study. Following that, the research gap and research problem are explained. The research problem navigates this thesis along with research aims and question. Thus, the research problem assists in addressing the core theoretical and empirical focus. In addition, this chapter of the thesis passes through the whole study structure.

Literature review chapter provides the continuation of the introduction. It will start with budget deficit definitions and concepts in Chapter 2.1 and in same chapter 'revenue and expenditure' of the government is defined. Chapter 2.2 explains the effect of budget deficit on economy. Five budget deficit financing instruments along with the need for economic growth are explained in chapter 2.3. Chapter 2.3.1 presents financing measure through loan and borrowing, chapter 2.3.2 contains the details of financing through the tax increase. Likewise, chapter 2.3.3 present the foreign reserve measure of financing budget deficit, chapter 2.3.5 explains the process of cutting down expenditure i.e. cutback budgeting. After explaining five major budget deficit financing instruments, in chapter 2.3.6 the focus on economic growth is defined. Chapter 2.4 contains the previous study in financing budget deficit, and the theoretical framework and propositions for case study are defined in chapter 2.5 and 2.6 respectively.

Next chapter of this thesis is about methodology. This chapter explains how this study has probed the research question's feasibility. The selected qualitative study method for this thesis' case study will be elaborated in detail in this chapter. Chapter 3.1 discuss the selected research approach for this thesis; chapter 3.2 explains the case study and argue the reason for selecting Finland for the case study. Chapter 3.4 defines the research ethics related to this thesis study; chapter 3.4 explains reliability and validity. At last, in chapter 3.5 generalizability of this thesis study is presented. Thus, this chapter provides a foundation for the next case study part of this thesis study with an overall picture of the topic to the reader.

The fourth Chapter is all about the case study of Finland regarding financing budget deficit. The main aim of this thesis is to present a new and holistic finding of financing budget deficit under challenging circumstances. This main objective of this chapter is to study budget deficit financing, form the financing instrument perspective with economic growth attachment. In this chapter, in-depth case analysis is illustrated and discussed. Chapter 4 and 5 focus on case study of Finland and present budget deficit background, effects of budget deficit on Finnish economy. After that, this chapter analyses the financial instruments implemented by Finland to finance its budget deficit, Finnish approach or agenda to economic growth and measures for reinstating the Finnish economy in a sustainable way. In some part of this chapter, the cross-analysis with other countries' findings and comparison with 1990s Finnish crisis can be found.

Main findings of this thesis will be presented in the discussion chapter and at last, concluding chapter will recap or outline both theoretical and practical impactions discussed and presented in previous chapters. This thesis study contributes to both academic research and government management. For budget deficit management research, this thesis research provides new insights for financing budget deficit focusing on economic growth. These thesis findings are beneficial for public managers and government managers of today and tomorrow. Future public and government managers may find suggestions and guidelines on the budgetary and economic challenges. The next chapter of the literature review will begin the theoretical part of this study.

2 LITERATURE REVIEW

The literature review is presented with budget deficit definitions and concepts focusing on research background. As the main study of this thesis is financing budget deficit and understanding sustainability gap, the thesis moves on with government's revenue and expenditure. Then thesis provides brief glance on the effects of budget deficit on the economy. Lastly, before forwarding to previous studies and theoretical framework, and thesis study propositions; thesis provides a closer look at the budget deficit financing instruments and economic growth is explained.

2.1 Introduction to the budget deficit

Before the start of this thesis, it is important to understand the fiscal deficit and sustainability gap, and the difference between budget deficit and debt. The fiscal deficit is the difference between total income and total spending of a government in a certain year. However, the net borrowings are excluded from total government revenue in fiscal deficit calculation (Gupta, 2007:292). Maltritz & Wüste (2015: 222) remarks excessive fiscal deficits are the main reason for the European crises and future handling of the deficits has the great effect on economic and political integration of Europe.

Another popular term representing budget measurement is ‘sustainability gap'. It is a long-term difference between government revenue and spending, thus, it is an aggregate accumulation of re-occurring budget deficit or surplus over the years. Sustainability gap assessments guide how the central government of the country should consolidate its finances over coming few years to ensure the sustainable balance in public finances. Generally, the sustainability gap is calculated for the upcoming four years (t+4). However, the sustainability gap calculation is not a possible future scenario, it is just a prediction. (Economics Department, 2018: 1).

Government budget deficit and Government debt are two different terms in public economics and practically both have different implications. Government debt means the total amount of money that the government owed to its creditors. It is the total accumulated government deficit of many of numerous years. Whereas budget deficit is the calculation of one certain duration or of one fiscal year and the budget deficit is related with what government receives and spend. However, there is a direct relation between debt and deficit. If the government runs the country in deficit then it may add a pile in debt. Thus, the debt is accumulated due to the unpaid deficit over time. (Keep, 2018: 6; Anderson, 2014). Moreover, Investopedia (2015) has briefed deficit as a tree and debt as a forest.

A government budget is a statement of expected expenditure of the government and the report attaching sources of financing expenditure during a financial year. Such exercise is undertaken much before the financial year starts. Governments at all level i.e. central, state and local prepare the budget.

Expenditures and sources of incomes and finances are planned in accordance with the declared policy objectives of the government. (Gupta, 2007: 290-292). Moreover, the government presents an expenditure plan for a year named as an ‘annual budget' and scholars defines annual budget as an ‘operating budget'. (DiNapoli, 2008:1). Lapsleya et al. (2010:16) write government budget is always a central area of concern for the public finance experts and scholars. Solely, government budgeting is the most essential policy document of the government from which it reconciles and implements the policy’s objective strictly (OECD, 2002: 7-8).

Government Budget deficit has a relation with the spending and revenue of the government (Keep, 2018: 6) and the budget deficit is driven by changes on them (Plosse, 2003). A budget deficit arises when government spending exceeds the revenue or income it collects, and it can occur by both either increase in the expenditure or by the shortfall in income collection (Perry, 2014: 2). Conversely, the budget surplus occurs when government revenue exceeds the expenditure (Alesina, 2000: 4). Similarly, Budget balance occurs when government revenue collections equalized or surpass the expenditure (Pettinger, 2012).

So mathematically, Budget deficit or surplus or balance is calculated by:
“Total Revenue – Total Expenditure = Budget Surplus or Deficit or Budget Balance”

Budget amount is the total of revenue receipts and capital receipts during a year. So, the negative difference in total revenue minus total expenditure is termed as the budget deficit. This is also called total budgetary deficit where the government tries to finance the deficit by borrowing from the reserve banks, increasing the supply of the money and utilizing the money from previous balances. Likewise, Government always transfer the excess receipts from revenue account to capital accounts for performing bigger projects like building infrastructures, repayment of public debts and capital transfers. However, the government always does not have enough money to spend on all the projects and government face deficit. In this case, the government borrows which is the main source of capital receipts to finance the deficit which is known as the capital deficit. (Gupta, 2007: 290-291).

To axe the fiscal deficit both sides: income and spending; government should try to make it balance. For the scientific or logical reason, the differentiation is done between the gross fiscal deficit and net fiscal deficit. Gross fiscal deficit means normally the fiscal deficit as defined above whereas net fiscal deficit is defined as the net figure of ‘loans and advances'. However, here ‘loan and advances do not mean form consumption purpose but for the creation of capital assets. (Gupta, 2007: 292-293).

According to Krajewski (2004: 141-142), structural and cyclical elements can be distinguished in a budget deficit. Cyclical deficit is a portion of budget deficit due to the downturn in the economic

campaign and structural deficit is the remaining part of the budget deficit when the economy is operating at full employment (Arnold, 2008: 233).

Therefore mathematically, Total budget deficit = Structural deficit + Cyclical deficit

Generally, the structural deficit is a current budget deficit that is resulted from the cyclical phenomenon of the economy (Anderson, 2014). Cyclical deficit is the outcome of the cyclical process in economics and does not affect in balancing the deficit over the business cycle. Apparently, structural deficit determines the economy is always imbalance and provides a definite measurement for public finance assessment. (Krajewski, 2004: 141-142, 156).

Actual Government budget reviews the temporary and permanent factors. Temporary effects include the transfer for payments like unemployment insurance increase and decrease during recoveries and recessions respectively, rise and fall in the collection of tax and disaster-related outlays. A permanent factor includes long-lasting elements of income and expenditures and assumes the economy is fully employed and where the inflation is low and stable. Thus temporary components describe cyclical deficits and permanent elements refer to the structural deficit. (Hagemann, 1999: 3).

Government revenue and expenditure

Government forecasts its revenue and expenditure as a budget for a specific period, and the period is a year and it is titled as a fiscal or financial year (Due, 2015). Government revenue and expenditure reflects the economic condition of the country and the standard of living (Hye & Jalil, 2010: 22). Therefore, sound policy is essential for economic growth and policymaker understanding and anticipating the relationship between revenue and expenditure budget deficit to save the nation from a budget deficit (Mehrara et al. 2011: 199). Revenue account includes revenue receipts or revenue in a current account. Revenue expenditure includes the spending on routine consumption of goods and services in a definite year (Gupta, 2007: 290). Marimuthu et al. (2015:1) termed revenue deficit as exceeding of revenue expenditure over revenue receipts.

Taxes are the main source of government revenue. A tax is legally imposed compulsory payment by the government to people. However, taxes are divided into two parts i.e. direct tax and indirect tax. Direct tax includes income tax, interest tax, wealth tax, and expenditure tax. Whereas Indirect tax includes customs duties, services tax, sales tax, and environmental tax. Non-Tax Revenue is the part of revenue receipts that are received from other than tax. It includes fees, fines and penalties, gifts and grants, interest receipts, dividends on profits. (see on Gupta 2007:130-142- & Akrani 2011).

Government expenditures can be classified as revenue expenditure and capital Expenditure. Revenue expenditure is termed daily or routine expenditures and does not create any assets. It includes

expenditures like paying salaries, routine expenses, property maintainers and providing free services to the people like security services and health services. Thus, revenue expenditure is recurring and does not reduce the government liabilities. (see on Gupta, 2007: 290, J.Singh, 2015, ChandSmriti, 2015). However, Capital Expenditure creates assets and is non-recurring. Such expenditures include building infrastructures and purchase of machinery. Capital expenditure also includes repaying borrowing which reduces the liability of a government. (see on Gupta 2007:290-291; ChandSmriti 2015; Akrani, 2011). Although, the government makes plans for its expenses there are lots of non-planned expenses incurred during the fiscal year. Non-planned expenses include expenses during natural calamities, crisis, war, legislature work, increasing military and police services during an emergency. Government is obliged to do expenses for the sake of the people and country. (see on Gupta, 2007: 289-297 & ChandSmriti, 2015).

2.2 Effects of budget deficit

The economics of the budget deficit is either 'inflationary' or 'deflationary' or 'both'. Inflationary means the prices of the goods will be higher against the purchasing power of the money whereas deflationary depressed the investment and slow down the process of economic growth. (Friedman, 1978:1). Undoubtedly, the previous study from Ball & Mankiw (1995) found budget deficit has many effects and all are harmful and disastrous. However, Gale & Orszag (2003) in their study finding mentioned that the main economic impact of the deficit are attached with national saving, the growth of future income and living standards of the individuals. In addition, figure 1 demonstrates the major effects of the Budget deficit on the economy.

Impact on national saving

Deficit decreases the level of national saving. National saving is the sum of private saving and public saving. Private saving refers to the after-tax income of an individual left after household consumption and it occurs when an individual or private entity starts saving than spending more. Public saving denotes to the saving of the government from the income generated through tax and it occurs when the government is running in budget surplus. (see Ball & Mankiw, 1995: 3-6 & Gale & Orszag, 2003: 463-467). During deficit, national saving is negative and that also lowers the national saving below private saving (Ball & Mankiw, 1995:3).

The previous study from Huntley (2014) found that the budget deficit increases the private saving because people expect that the government will raise the tax and cut down expenditure in future to meet the cost for paying interest on additional government debt. Similarly, many policies that increase the huge deficit like tax cuts and increment in transfer payments allow much wealth in the hand of

private individuals. Likewise, additional government borrowing will increase the interest rate which strength the return on saving. (Huntley, 2014: 2-3). Another study from Grauwe (2009) found that the decline in financial wealth encourages people to raise the saving level. This will result in low consumption and if everyone attempts to save then the total national saving will be low. (D'Apice & Ferri, 2010: 13).

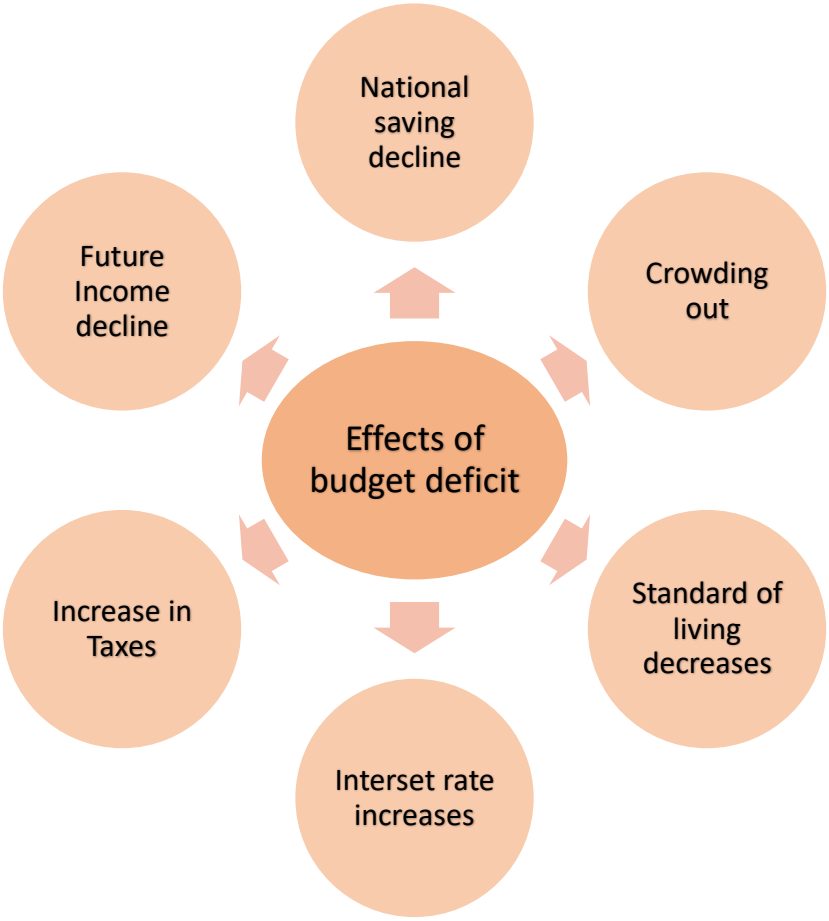

Figure 1: Effects of budget deficit.

The effect in interest rate

Despite the work of Friedman, the research to conclude the significance/ insignificance of the relationship between interest rate and the budget deficit is going on. Some economists including Friedman assumes there is a positive linkage between interest rate and budget deficit whereas other economists disagree and anticipated such relationship as insignificance (Hubbard, 2012). Gale & Orszag (2004) also traced the difficulty in pinning out the facts concerning the relationship between interest rate and budget deficit.

Nevertheless, the budget deficit influences trade deficit, and eventually turned the country into a net importer and increase the rate of flow of asset to a foreign market. Interest and exchange rates hugely

affect the investment behavior of local firms and foreigners. Decrement in national saving during deficit decrease the loan supply and increases the rate of interest against the loan. As a result, local firms and households decide to reduce the domestic investment. However, higher interest has an impact in the flow of the capital when local assets yield the higher rate of return. Thus, they attract the investors form foreign and home. So, the government raises the interest rate to sell securities to offset the debt and when government interest rate automatically increases the others' rate of return. (Ball & Mankiw, 1995: 6-11).

Effect on tax Level

In a long run, the accumulated deficit will be turned in to debt and government will be forced to raise the tax to cover the debt. If the government does not raise the tax rate then it needs to cut the other services related to social security, health services or other transfer payments to offset the debt. The level of tax increment is related with debt and GDP (Gross Domestic Product) relationship i.e. if the interest rate of the debt is lower than the GDP growth of a year then the debt will be negligible and there might not require the raising of tax level and vice-versa. (Ball & Mankiw, 1995: 11-13).

Crowding out

During deficit, the increase in interest rate creates crowding out of the private investment (Snyder, 2011: 2). Moreover, the term crowing out is defined as the situation where there is the decrement in private investment and consumption due to the rise in interest rates resulting from a budget deficit (cited as Kenynes, 2003: 84; Wernik 2011: 97) (Balcerzak & Rogalska, 2014: 2).

Future income

Budget deficit affects the future income of any country directly. The decline in national saving, government crowding out and, asking for fund and transfer from abroad decrease the future national income along with having the negative impact on future domestic production. (Gale & Orszag, 2004: 102-103).

Effect on the standard of living

Budget deficit decreases the level of national saving in a long run and ‘crowd out' private investment in a long run. Fewer investment results in the low amount of stock capital and low output. Eventually, low output and low level of national saving affect the standard of living of the individuals along with low per capita income. (Huntley, 2014: 2).

2.3 Government budget deficit financing instruments

Financing the budget deficit means fulfilling the gap between government expenditure and revenue. Generally, in western or developed countries financing to the deficit is restored by borrowing.

Financing deficit refers to addition to gross national expenditure due to budget deficit either on the revenue side or capital side. The government required financing the deficit when the accumulated revenue receipts are not enough to cover all the expenditure (Gupta, 2007: 289). In this case, government finance deficit by:

- ✓ Spending from the collected cash balances. (Fisher & Easterly 1990; Gupta 2007:289, 279).
- ✓ Borrowings from the central bank and Public (Gupta 2007: 289 Singh, 2015; Perry, 2014; Barro 1988, 1990 &1996).
- ✓ Printing more money (Expansionary monetary policy or Quantitative Easing) (Ugai H, 2007; Protopapadakis & Siegel, 1986; Thornton, 2010).
- ✓ Issuing Government bond by lowering the Interest rates.) (Ugai H, 2007; Protopapadakis & Siegel, 1986; Thornton, 2010).
- ✓ Increasing the tax (Dunsire & Hood, 1989; Atkinson 2014; Ball, 1995, Barro 1988, 1990 &1996).
- ✓ Running down foreign reserve (Fisher & Easterly, 1990; Goldhill, 2015).
- ✓ Through Cutback Strategies (Dunsire & Hood, 1989; Raudla, Savi & Randma-Liiv 2013).
- ✓ Focusing on Economic growth (see Atkinson, 2014; Gupta, 2007:18; Saleh & Harve, 2005; Barro, 1996).

A study from Fisher & Easterly (1990: 130) suggests government budget can be financed through four ways: Printing Money, running down foreign exchange reserves, borrowing abroad and borrowing domestically.

Therefore mathematically,

Financing Budget deficit = (Quantitative easing + Domestic Borrowing + Foreign Borrowing + Foreign Reserve)

The previous study from Dunsire & Hood (1989: 1-2, 163-178) found that during the first half of the century, dynamics of financing the fiscal stress started through raising the tax until the tax income is a buyout and by borrowing temporarily if the tax incomes decline. However, cutting down strategy is deployed if borrowing fails or could not finance the deficit. Thus, cutback strategies and tax increase are also crucial instruments during budget deficit financing. Therefore, the new application for financing the government budget deficit becomes:

Financing Budget Deficit = (Quantitative easing + Domestic Borrowing + Foreign Borrowing + Foreign Reserve + Tax Increase (Tax reform) + Cut back Management)

Importantly, to have a sustainable economy, the government should focus on economic growth (Atkinson 2014, Saleh & Harve 2005, Roubini & Sachs 1989, Futagami & Shibata 2003). Figure 2 illustrates budget deficit financing instruments focusing on economic growth.

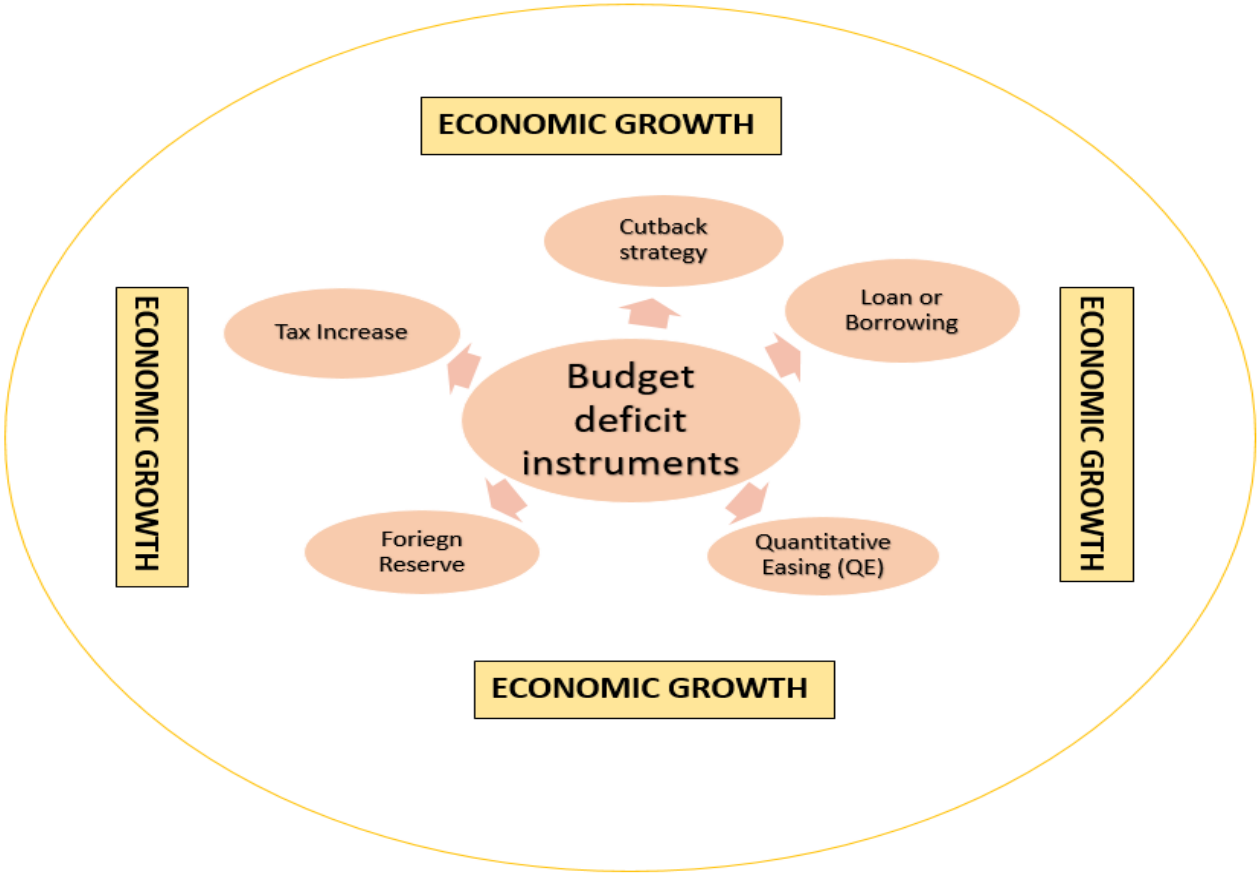

Figure 2: Budget deficit financing instruments with an economic growth focus.

2.3.1 Loan or borrowing

In developed countries, covering deficit is done by creating additional credit through the banking system. Moreover, in these countries, borrowing by governments involves activating the money account deposited in a bank or creating the deposit by selling government bonds and securities to the bank. So, in western countries budget deficit means expenditure surpassing current revenue. Thus, market borrowing is not considered as a part of government revenue whereas, in developing countries like India, it is regarded as a part of government income. (Gupta, 2007:289).

Classical models on debt and deficit termed as ´loanable funds market' which balance saving and investment automatically by addressing the economy near to full employment. Government is not required to spend the deficit because of crowding out effect. Thus, the effect will move the investment towards government consumption and classical based economists are against deficit spending whereas Keynesian economists have observed the situation differently. (Perry, 2014: 9-10).

In capital receipts, government borrowing can be domestic (internal) or external. In Domestic borrowing, the government borrows within a financial market of a country by issuing government securities, bonds, and treasury bills. Moreover, Government also borrows from the public by introducing different schemes like 'Public Provident Fund' and 'National Saving' schemes. In external borrowing includes borrowing from a foreign government, central and inter-governmental, supra-governmental bodies. Although the domestic borrowing is mainly performed by intermediating the banking system but in countries like Brazil and Mexico, the government directly sold the bonds to private sectors. If the domestic borrowing is applied to reduce the risk of inflation and foreign debt crises, if overused then the effect would be 'crowding out' even if the interest rates have been controlled by the government. Likewise, if the country's economy is tied with the international capital markets, government borrowing would force the private sector to borrow more from the abroad. (Fisher & Easterly, 1990: 134-135). Capital receipts can be debt creating when the government borrows from the domestic and external bodies, for building infrastructures and for investment in other projects. Conversely, Capital receipts can be non-debt creating when government gets recovery from its debtors. (Singh, 2015).

As borrowing is divided into two categories viz: domestic and foreign. Foreign borrowing is mainly performed by the countries whose domestic borrowing possibilities are very low like developing countries. External Borrowing damages the export and encourages the import. Constantly, relying upon the foreign borrowing for financing, the deficit can trigger the economy with debt crisis i.e. piles of borrowing can lead to the huge amount of the budget deficit. (Fisher & Easterly, 1990: 134-135).

2.3.2 Tax increase

The government should tactfully introduce new or modified taxation policy to have an optimum effect in long run. An impact of taxation on economic growth and innovation is still an unsolved puzzle. Some economists argue in favor and some in against of it. Furthermore, taxation like higher corporate tax has a harmful impact on innovation and growth. Conversely, taxes levied to individuals and organizations in *'non-traded sectors'* have a lower impact on innovation and economic growth. Thus, the government should mainly focus on individual taxation policies to accumulate more tax but should consider stepping forward only if the taxation has a neutral impact on innovation, productivity, and competitiveness. (Atkinson, 2014:13).

Introducing new taxes

There are numerous ways government increases the income through the introduction of new taxes. Among many, '*border-adjustable business activity tax'* such as a value-added tax can be levied, and it can be featured as 'imports are taxed, and exports are not'. About 150 nations practice '*border-adjustable tax consumption tax*'. The advantage of this tax is that it increases the reasonable incomes and it does not increase the taxes upon exported goods and services. Another income source can be '*small financial tax (Tobin tax)*' which has an impact in decreasing financial speculation and excessive trade and termed as '*short-termism*' (cited as CBO, 2014). Taxes like Carbon tax can be levied which may assist in reducing the consumption of the fossil fuel and carbon emissions and at the same time, it encourages '*clean energy innovation'* (cited as IPCC, 1997). (Atkinson, 2014: 14).

Increase income taxes

Tax rates should be expanded to gain a wider range of income of the individual having a high income. Practically, it has been traced that taxes on the individual have no limitations in work incentives or decrease investment and saving (cited as McClelland & Mok, 2012). According to Leibfritz et al. (1997) under '*new tax responsiveness'* higher rates of taxes are attached with less work for married women, working part-time and higher taxes are associated with a nominal increment in the work. Moreover, the government should raise the rate of the tax on dividends and capital return so that it can be levied as the equal rate with income tax. Some evidence shows tax reduction on dividends minimizes the investment level of the companies as they must pay more earning in dividend payment. The government should disregard the lower rate of tax for carried interest. (Atkinson, 2014:14-15).

Eliminate some individual tax deductions

Government around the world has facilities individuals and corporate taxes with a wide range of incentives. Sometimes it is easier to use tax measures than direct government expenditure to assess the process and to find the objective. Thus, all the tax incentives do not easily assist growth and obtain a social goal. The government must eradicate those deductions such as deducting '*charitable giving'*. (Atkinson, 2014:15-16).

2.3.3 Quantitative Easing (QE)

Pryor (2010) writes quoting the 'Wall Street Journal' that when the government can neither cut nor spend to the national prosperity then it creates the circumstances where it lets the business enterprises, or the market do it themselves for the economic regulation. Thus, it implies that the government of the definite country under such circumstances applies Quantitative Easing or Printing Money. This process is a straightforward process for creating the monetary base by targeting the inflation in the

regular monetarist way respond to the monetized budget deficit. Printing the money over the baseline provides the excess money in the hand of the public. The amount of the revenue that the government obtains by printing the excess money depends upon demand for the base or high-powered money in the economy, the real economic growth rate and balance between the income and the inflation. (Fisher & Easterly, 1990: 131-133).

In response to the monetized deficit, the government increases the credit of central or reserve bank towards the government of the country (Thornton, 2010: 30-31). During the monetized deficit, the government borrows the money by selling the bonds to the central bank either directly from the government treasury or from private financial markets. This open market purchase creates extra currency and bank reserves. Eventually, this will raise the monetary baseline and provide more liquidity to the bank which assists in lending. The process ends up by printing more money against the baseline. Thus, this will increase the money supply of the country. (Protopapadakis & Siegel, 1986): 13-15 & Thornton, 2010: 30-33).

Furthermore, in developing countries, the process is quite direct that the government sell the bond directly to the central bank because the private financial markets are not so developed so the central bank is forced to buy. However, in developed countries, the government debt is sold through the private financial market. The central bank may buy some securities under its monetary policy but is not obliged to buy government debt. Therefore, in developed countries with the developed open financial market, there is no direct relation between deficit and new money creation. (Protopapadakis & Siegel, 1986: 14). Apparently, Japan applied quantitative easing from 2001-2006 and claimed that the Bank of Japan was able to achieve the target and gained 0.5 % interest and able to terminate the deflation (Ugai, 2007). However, most of the researchers (Berkmen, 2012; Ugai, 2007; Andolfatto & Li, 2014; Takahashi, 2013; Arslanalp & Botman, 2015) were not fully satisfied with the applied Quantitative Easing's outcome in Japanese economy.

Previous study from Lozano (2008:2) on monetarist hypotheses; the hypotheses explains the dynamic relationship between budget deficit, inflation and the money supply (printing money) and writes budget deficit financing with printing more money is regarded as exogenous to the central banks or the ministry of the finance; whom so ever have the centralization or decentralization power regarding the conduction of the monetary policy. Nevertheless, money creation is dominated by the government’s financing requirements and price level increase is the consequences of the expansionary conduct of the monetary policy. (Lozano, 20082:3). Another study by Goodhart (1989) found that it is not always compulsory that just the Central bank has major responsibility or power in formulating the monetary policy in all other countries, Ministry of Finance can be more active as well

while conducting monetary policy. For example: in Japan, the Ministry of Finance is more responsible for conducting the monetary policies. (Goodhart, 1989).

2.3.4 Foreign reserve

Government while financing the budget deficit may run down its foreign exchange reserves. The main reason behind using the foreign reserve instead of printing the money is to put the inflationary effect of the deficit and this policy result in the appreciation of the exchange rate. However, utilization of the foreign reserves to finance, the deficit has a limit because it can be run out from the current holding. And when the private organizations' expectation of approaching the limit can provoke the capital flight and can occur balance of payment crises. It is due to the exhaustion of the reserves are deep-rooted with the currency devaluation. (Fisher & Easterly, 1990: 133).

The study conducted by Johnson (2015) on Saudi Arabia found that due to the collapse in the oil prices, Saudi Arabia had a huge amount of budget deficit. For the first time since 2007, Saudi financed its government's budget deficit through its foreign reserve (Al-Khatteeb, 2015). Until October 2015 Saudi Arabia has about 650 billion USD foreign reserve and IMF has warned that the oil prices might still go down and predicted that Saudi Arabia might be in danger of running out of the money including its foreign reserve within five years' time (Goldhill, 2015).

2.3.5 Cutback budgeting

Ermasova (2013: 93) citing Keynes (1924) writes government should try to focus on finding the solution to the problem in short-term rather than expecting market forces to solve it in long run and in addition, he stated that "in long run we all are dead". Cutback Budgeting or Management is the response to the short-term settlement for the fiscal stress. Causes of the fiscal stress can be from both socioeconomic and political drivers. Socio-economic stress described the factors affecting the social and economic activities for having poor government financial management. The activities or the circumstances like economic decline of the industrial foundations, middle class emigration, and lower-class immigration, decreasing tax bases and rise in the demand for the services have an adverse negative effect to the nation and its economy (cited as Muller, 1975; Levine, Rubin & Wolohojian, 1981; Rubin 1982; Pammer 1990). (Savage & Schwartz, 1998: 530-532). Likewise, according to the Savage & Schwartz (1998), political stress is mainly caused by the following three factors: "demand for the public goods, the supply of the public goods and ideological pressures on the public sectors". (Savage & Schwartz, 1998: 543).

However, political leaders and public managers at every level of the government hierarchy and departments design and execute various budgetary strategies and techniques in fighting the fiscal

stress. These remedies are often termed as the cutback management or budgeting. It is defined as the simple formulation of decreasing the spending and looking for the way to increase the revenue; moreover, altering the budgetary procedure to obtain the budget constraints (Savage & Schwartz, 1998: 534-535). Due to the financial crisis and economic depression, and followed by the huge budgetary government deficit, government across Europe are implementing austerity measure such as cutback management (Savi & Randma-Liiv, 2015: 480). Likewise, it is expected that due to the embracement of the cutback management in Europe their noticeable changes in the public management and administration. However, according to Savage & Schwartz (1998: 543-544) study, cutback budgeting is the subset to the border concept of the cutback management.

Government is always in confusion about conducting the cutback strategies and achieving the budget constraints from those strategies because it is always a difficult task to cut the personal and public spending at a possible minimum cost to political objectives. Dunsire & Hood (1989:1-2) have described that the cutback problems can be divided into three different kinds: macro, meso and micro problems. Macro problems are concerned with the confusion of solving the fiscal stress by cutting down the spending or the increasing the revenue; if the decision is to cut down the expenses, then whether to cut uniformly "across the board" or cut selectively, and again there is problem on what to select and in which criteria, and how to handle the consequent unemployment. Meso problem occurs in the departmental level and mainly concern with the organizational problems such preserving the base, maintaining and removing the existing symbiotic patterns, maintain the morale and decision over closing the units like school, machines, projects, and ward. Micro problems are concerned with the impacts over the single worker or a small task-group including the family and social stress. It also includes the effects on employee promotion and career choice and other professional problems. The accumulations of those micro problems in a definite area have the impact upon the local economy and other issues like social health and spirit. (Dunsire & Hood, 1989, p 1-2).

Nevertheless, whatever the problem is, the main fundament of the cutback management is how to cut the public expenditure and it is the process of selecting what must be cut, take away or deduct (Raudla; Savi;& Randma-Liiv, 2013). Raudla, Savi & Randma-Liiv (2013: 12) from their explicit research in the field of the cutback management have suggested three main instruments of cutback.

1. Operational Expenditures
2. Program Expenditures
3. Investment/ Capital Expenditures

Operational Expenditures are divided into two: personnel expenditures and non-personnel expenditure. Personnel cost is cut down by reducing the numbers of the employees, working hours or remuneration. It deals with dismissing the overtime to firing. Other mostly used cutback instruments under this heading are: furloughs, wage freeze (decreasing the rate of salary increase), postponing the promotions, salary cuts, filling the positions with less credentialed and lower paid staffs, cutting the vacation allowances, reduction in salary of the seasonal and part-time job and of vacated job lots, inducing early retirement, hiring freeze and layoffs (cited as Down and Rocke 1984; Levine 1978, 1985; Wolman and Davies 1980). A non-personal cutback instrument includes the measured used to restrict and ban expenditures on utilities, supplies, equipment, travel, and communications (cited as Lewis and Lagalbo 1980, Wolman and Davies 1980). (Raudla;Savi;& Randma-Liiv, 2013: 12-13).

Program expenditures cuts include the reduction in the transfers to the citizens such as entitlements. Other instruments that are related to making the cut under these headings are shortening the reception time, limiting the service hours; reducing the frequency of service provision and number of the service outlets; decreasing the quality requirement for service provisions; termination of the unnecessary or less important programs and projects and engagement of the third-party counterparts in the service provisions. (Raudla;Savi;& Randma-Liiv, 2013:14).

Investment and capital expenditures are mainly implemented by postponing or canceling strategy. Functions like capital spending freeze for the new capital projects, deferral of the less importance capital projects and deferral of maintenance along with the transfer of the cost to private capital (cited as Lewis and Logalbo 1980; Scorsone and Plerhoples 2010). Some authors are against the postponing the maintenance because even though it is helpful in short-term but in long-run, it might be problematic (cited as Behn 1980a: 615). (Raudla;Savi;& Randma-Liiv, 2013: 14). Elimination of unnecessary business programs includes payments and subsidies that are administrated through direct payments, crop insurance along with conservation and disaster subsidies. Businesses and organizations can take the reduction in tax to depend upon the level of production. (Atkinson, 2014:12-13).

Dynamics of cutback

Fundamentally, in response to budget deficit reduction and debt-GDP ratio reduction, government increases the income and decreases the expenditure. Generally, decreased outlays generated by reducing government services, funding, and transfer payments. There are numerous ways of cutting down the government expenditure, however, that must not hamper the productivity, investment, competitiveness and working hours. (Atkinson, 2014: 1-3, 12-13).

Therefore, there is always a concern about whether the government should cut or not. Dunsire & Hood (1989) has argued that government should increase the income rather than reducing the expenditures and again describes cutting is the last arrow that should be shoot when other instruments fail to achieve the constraints of the budget. There is another way of increasing the revenue rather than increasing the taxation and borrowing i.e. increasing the fees and charges to the users of the services rather than imposing to the taxpayers. It has been the idea of the Thatcher government in 1979 of conversion of the ‘free' (paid for out taxation revenue) public provision into goods and services subject to the ‘commercial charges'.

Selective cuts, priorities and equal misery are the main way of cutback. Crecine (1969), Shick (1971) and Glassberg (1978) support that when the cuts become compulsory or unstoppable then it should be performed across the board on the equal bases throughout the departments and programmes. Thus, it is fair, simple and easier to conceal. However, Glassberg (1978) distinguish between incremental and quantum cuts by stating the argument of the instrumentalism by Dahl and Lindblom (1953), ‘man is not that much rational that they can select from the alternatives which are totally different from the present reality’. Nevertheless, the alternative is created when the existing reality is not satisfying and have the greater risk than the formulated alternative. (Dunsire & Hood, 1989: 168-169).

Glassberg (1978) writes Wildavsky's (1964) section of "Defending the case" that describes the concept of the ‘guarding against the cuts in the old program'. The concept defines that the major strategy resisting the cutback need to be developed in such a way that they can be put back. During the 1950s and 60s, the trend was that the cut could survive, good times would come again (during that time cutback is taken as a temporary phenomenon because the economy was in the climate of the growth) and the best solution is to offer the fairy gold approach i.e. cutting on growth. (Glassberg, 1978). During 1922, the Geddes committee targeted the biggest spenders and the approach was selective and arbitrary as well. Thus, that was done because that amount of money can be collected only from those bigger spenders. (Dunsire & Hood, 1989: 169).

The most elegant cutback model of Torben Beck Jørgensen cutback model (1982, 1985, 1987) starts from the Glassberg's thoughts about the climate of the cutback circumstances. Incremental cutback style has the short tenure, cuts are easy to select and convenient to implement or put in practice. This style also maintains the existing power relationship as far as possible by decreasing the conflict and have no lasting negative impact. These types of cutbacks make percentage cutback all round, prune budgets at the edges, clamp down on the requirement and deferring the expenditures. Beck Jørgensen writes about the managerialism approach describing that the government authorities that try to 'regulate the boundary between the organization and its environment’. Government performs it to

smooth out the input such as formalizing access by clients, standardizing forms and treatments, establishing the quotas and raising prices; for level down the outputs like reducing various service task, fixing quality of treatment, reduction in the degree of inspection, decreasing the number of service outlets; and to export costs to clients and suppliers like raise in the waiting time, delaying the payments and item charge for their services. These cutbacks are the expensive one with limitations and also required to pay decreasing dividends.

When authorities realize that the required cuts cannot be achieved with the high level of efficiency through shifting burdens at the margin then the cutback process enter into the 'strategic' stage. Strategic cuts are about objectives, not methods, priorities not of the efficiency, about the cost and benefits of one object of expenditure rather than other. It is all about rationally selecting between the activities i.e. which service to give less importance, which project to end and which agency to close down. Compare to the Incremental and Managerial style of cutback, this style of cutback required more social and economic data and information on which the decisions are made, more time is engaged with more expertise and cost.

Undoubtedly, protecting one agency, service and programme at the expense of terminating and shifting will involves high costs and more research. The very first stage of the cutback includes the fundaments of prioritization and abandoning cuts are identified with the high search, transaction costs, and even the high savings benefits. Strategic is directed to detect the significance or even the large cuts is plain. However, massive cuts in the resources would not have the strategic approach, cuts should be started as simple as possible i.e. Phasing. Phasing in the cutback management is very essential for the systematic and scientific implementation of the cutback budgeting. Phasing denotes to doing the task step by step with a strategic planning. (Dunsire & Hood, 1989: 163-178).

2.3.6 Economic growth

To have an economy with lots of employment with secure and higher pay have generations to come. (GPO, 2013). Strategies for financing debt and deficits and even reducing it are the concern with increasing GDP because the growth of GDP decreases the burden of a budget deficit. Expanded GDP will minimize the 'debt to GDP' ratio which is the main responsibility of the government to stabilize the economy. (Atkinson, 2014: 1-2).

Since many years developed countries like the USA is facing the budget deficit. And the budget proposals are mainly centralizing or concern on an absolute budget deficit. However, proposals omitted the budget to debt ratio, centrally mentioned deficit decrement as the main concern. And to perform as per objective, government focus mainly on cutting down the spending and increasing the

taxes despite rethinking about the effect on growth. Axing public investment along with increasing business taxes, slow down the economic growth, and affects merely into expenditure side and decrease the tax revenue. Probably, the action would minimize the budget deficit letting the increase in the investment deficit along with the decline in the innovation and hamper productivity growth rate. Such behavior would increase the trade deficit by making countries exporters less competitive. Consequently, total budget saving would decrease than which could have been accumulated by lowering the actual 'non-investment' expenditure. Therefore, the strategies for managing budget deficits should not isolate economic growth. The government should centralize by selecting the approaches to budget deficit by adopting the policies that will strengthen the economy as well. In a short run, the government can concentrate also on reducing unnecessary costs and increasing taxes on individuals. (Atkinson, 2014: 1-3).

Study of 100 countries over 30 years (from1960 to 1990) by Barro (1996), provides the necessary economic growth determinants. They are per capita GDP, government consumption, inflation, political rights and freedom, life expectancy, education, fertility rate, and trade situation. Barro (1996) writes growth of real per capita of GDP is advanced by higher literary and schooling rate, higher life expectancy, lower fertility, lower government consumption, sound execution and implementation of rule of law, higher political right and freedom, low level of inflation, higher standard of living, healthy trades and higher investments (crowding in). Similarly, Atkinson (2014) has described the strategies that can be followed to reduce the budget deficit along with keeping the economic growth in track are as follows:

Increase investment and cutting business taxes

Encouraging production and investments to private and public organizations is foremost for the growth-oriented plan. It includes decreasing taxes on business especially on investment and increasing the government expenditures in the sectors that strengths the economic growth, for example, R&D and capital investment. As a result, it decreases the debt-GDP ratio in the long run, although it expands the budget deficit in the short run.

Reduce effective business taxes

Increasing business tax incentives meanwhile reducing the corporate rate assists the country to shift from '*consumption-centered economy'* towards '*investment centered'*. It will also lead to the gain in *'productivity', 'innovation'* and *'competitiveness'*. This will also increase productivity, innovation, and competitiveness. Reduction effective business taxes can be achieved through:

- *Increase Tax Incentives for Investment:* It includes investment in research and development (R&D), new plants and machinery training to the workforce
- *Lower the Statutory Corporate Tax Rate:* Research done by Djakov et al (2008) show that huge corporate tax rates decrease the growth of the economy and competitiveness in the international arena; '*10% rise in the first-year effective corporate tax declines the average investment to GDP ratio by about 2%*'

Increase outlays: investment in R&D, education, infrastructure and government efficiency

Government Public investment means spending that government made recently which produces the return for net present value (NPV) higher than the cost of spending - the spending is termed as the investment. Hence, these heading policies would expand the deficit as well but have some similar dynamics as mentioned above recover the cost in long run and contribute in reducing the debt-GDP ratio.

- *Investment in science and technology:* It includes investment in university research and in other R&D related to science and technology.
- *Investment on education and skills:* ILO (2010) highly educated and trained manpower assist in the economic growth of the nation especially in highly knowledge-based economy. Along with increasing R&D tax, expenditures on labor training is required. Main areas of education that can be the target for investment are Science, Technology, Engineering and Mathematics education as the USA does.
- *Investment Surface Transportation Infrastructure:* Government is required to adopt the policies that encourage and enable '*public-private partnership and toll facilities'*.

  Investment in Government IT (Information Technology): Strategy for strengthening the productivity of the government need to be a core part of any of the deficit reduction strategy (Atkinson, 2014: 8). Bouvard, Dohrmann, & Lovegro (2009) founds that '*15% improvement in the efficiency of the federal government operations could generate 1.3 trillion dollars in savings over the next ten years*'. From the effective and efficient IT operation government can be able to dispatch the same service at a minimum cost. Per Atkinson (2014: 8), the government should reform the personnel regulation, particularly for the underperforming public service providers.

Policies to increase work hours

GDP can be strengthened by '*boosting productivity'* and '*increasing working hours'*. Investment and tax reduction in these elements are critical for strengthening productivity. However, for budget deficit

concern without a reduction in expenditure and tax increment, it will be best to adopt policies boosting working hours. It can be done in two ways:

- ✓ By increasing the working age population through immigration.
- ✓ By raising the working hours of the existing worker's life.

The first option raises the GDP but is less effective in terms of raising GDP per head when particularly if the government policy is focused on bringing low-skill immigrants whose income is less and it adds the number of consumers to the nations. The second option is more effective because it increases the output and taxes and reduces the consumption of the public services. Workers staying one or a couple of years in the labor market also bring positive effects on deficit reduction agenda and GDP growth. Practically it is possible to increase the total working hours of the developed nation in a year. For example, the USA already started working more hours than any other developed nations. Despite increasing or searching the labor force, the government can also increase the participation of the people in work that are not caring babies and increasing the retirement age results person working for more years which will reduce the use of social services like social security healthcare, etc.

Increase prime age residents' work rates

Increasing incentives for workers to retire after more years is not enough, thus the increase in prime-age workers is required. Each worker leaving the labor force creates a '*double-drag'* towards economy: these people are non-payer of tax and receiving benefits from the government. (Atkinson, 2014: 10). According to Autor & Duggan (2006), the government should ensure the disability benefits only paid to the truly needed one or one who basically cannot work, and benefits should be granted on '*case by case*' basis in which financial decision depends upon the opinion of the applicants' medical practitioner rather than on '*objectivity- verifiable diagnostic criteria'*.

(Atkinson, 2014: 2-11)

2.4 Previous study: financing government budget deficit

Before moving forward to research methodology and case study. It is better to recall the purpose of this thesis study at this stage of the thesis again. The research question of the thesis was *'How to finance government budget deficit without hampering the economy in long run? Which budget deficit financing instrument provides a sustainable fix to the budget deficit?'* Primarily, the case study supposed to reveal how can budget deficit be financed sustainably. Secondly, provide the framework to select the suitable financing instrument and sector that can contribute case country's economic growth. It is interesting to study the case country's budget deficit strategies and practices, and it is extremely compelling to look over the budget deficit financing instruments implemented by the case country. Likewise, it is exciting to see the existing relationship of economic growth with the budget deficit and its financing instruments.

The previous studies from Saleh & Harve (2005) and Baker (2011) found that fatal government fiscal deficit and rising debt have become a core attention in both developing and developed countries. Thus, establishing a relationship between budget deficit and macroeconomic variables (economic growth, interest, trade deficit, etc) is a major issue of concern among economists and policymaker. However, this thesis study is mainly focused on economic growth as a sustainable fix to the budget deficit.

Printing money to financing the budget deficit is the very old trend (Fisher & Easterly, 1990; Dominguez, 2012). The study from Fisher & Easterly (1990) found that printing money does generate the revenue in short-term through maximizing the monetary base but it does not guarantee to minimize the budget deficit. In contradiction, in long run, it could lead to hyperinflation. During 1980s countries like Bolivia, Nicaragua and Peru adopting quantitative easing suffered from hyperinflation (Fisher & Easterly, 1990). Likewise, another study conducted by Saleh & Harve (2005) found that increasing the money stock could lead to hyperinflation in long run. The Japanese case study on quantitative easing performed by various authors (Andolfatto & Li, 2014, Takahashi, 2013, Arslanalp & Botman, 2015, Harding, 2016) has also provided the ineffectiveness of quantitative easing. From the year 2001, Japan introduces three quantitative easing process to boost its economy with different motives and none of them brought the desired result. First quantitative easing (2001-2006) was ended with deflation in the economy (Andolfatto & Li, 2014). Second quantitative easing (2010-2012) process also could not bring the price stability at the desired rate and the policy was terminated due to the change in government (Takahashi, 2013). Third quantitative easing policy (2013-2015) is undertaken by the government but again ended with below expectation (Arslanalp & Botman, 2015; Economist, 2015). In 2016 Japan adopted the negative interest rate as it fails the

quantitative easing implemented with the aim of lifting up its economy and subsidy its budget deficit and debt for the third time in a row (Harding, 2016). Since study conducted by (Andolfatto & Li, 2014), (Berkemn, 2012), (Takahashi, 2013) and (Arslanalp & Botman, 2015). From the study conducted by these authors, it can be concluded that expansionary policy cannot subsidy overlapping budget deficit and public debt. Moreover, it can leave the economy with high inflation. However, a study from Gupta (2007) found fiscal debt- financing in the western world is less inflationary compared with developing nations and fiscal deficit reduction holds distinctive characteristics and importance in every well-created government budget.

David Ricardo, British neoclassical economist, in his theory of equivalence stated that it does not matter whether country selected to finance the deficit by debt financing approach or a tax financing approach, the result will be the same. For example, accumulating 20 million euros by increasing the tax is equal to government financing 20 million euros from either domestic or foreign borrowing. However, Ricardian theory state that applying debt financing policy (domestic and foreign borrowing) would increase the future tax rate. Thus, the government raises the tax to pay off the borrowed money. (Rose, 2001) . Similarly, economists John Maynard Keynes in his work of "The General Theory" expressed denial of full crowding out. He believes the economy should perform partial crowding out during the recession to prevent higher interest rate. The higher interest rate has a negative impact on private investment since the initial spending amount for investment also increases. Higher crowding out result in a decline in income as well. In contrary, government expenditures should encourage financial innovations and bring more investments to support the budget deficit financing program. Such phenomenon is termed as ‘crowding in'. (Perry 2014, Bernheim 1989, Nelson 2006). Another study conducted by Barro (1990) and Berheim (1989) shows debt-financed government spending has no impact on interest rate and consumption. Since the increase in demand of the loan capital or government deficit can be equalized by raising the supply of loan capital by the same amount (through saving for projected future taxes) without alternation in interest rate (Barro1990 & Bernheim 1989). In addition, Stiglitz (2000) writes in long run, through borrowing, government forwards the burden of low consumption on future generations. Since the future output is lowered due to a decline in the investment.

Instead of borrowing and printing money, the country can use its foreign reserve to have a positive effect in inflation and exchange rate in the short-term (Dominguez, 2012). However, Fisher & Easterly (1990) find out that applying this method of financing the budget deficit devaluates the money and may not help in adjusting the inflation in the long run. Immediate consequences stated by Krugman (1979) is a balance of payment risk by losing foreign reserve hold. Sooner or later, it might

increase the deficit level. For example, the exhaustion of foreign reserves in Mexico due to the loss of the fiscal control, the deficit loss rises from 14 percent in 1981 to 18 percent in 1982. (Fisher & Easterly, 1990:133).

As discussed in the literature before, taxation is a major source of government revenue and financing the budget deficit by raising the tax is the most common government procedure. Sherlock (2011) has emphasized on 'taxation' as the policy for financing the budget deficit. However, from the evidence provided by Cebula et al (2014), US personal tax increase in 2013 was due to the increase in unemployment rate, a decrease in yield on government bonds and reduce per capita real income. Even though US government adopted this measure of budget deficit financing, the end result was a reduction in economic growth, reduction in job growth, lowered private investment and lost in productivity (Cebula et al. 2014). Roubini & Sachs (1989) with equilibrium model of fiscal policy studied budget deficit determinants in OECD countries, found that tax increase did not assist in reducing budget deficits in many countries and also found that large budget deficit in those countries was due to rising government spending and political instability, and tax increase imposed in those countries brought increase in unemployment rate and slow downed economic growth. Likewise, Likewise, Broadbent & Daly (2010) in their study found that tax- based deficit financing usually fail to balance the government budget and worsen the economic growth.

Nevertheless, Atkinson (2014) from his study suggested that government should increase the tax in such area where harm to the economy is zero or nominal. Similarly, from economic research by Baker D. (2011) shows that the UK increases financial speculation tax from 0.25 to 0.3 in 2007. As a result, UK managed to collect the huge amount of revenue with less difficulty and Board of Inland Revenue claimed that administrative cost to collect this cost was lower than any other tax. And the introduction of this tax has not hampered UK financial market at all. Importantly, the success of such taxation on stock trades encourage the government to innovate similar tax introduction which does not have any harmful impact over the economy. (Baker D, 2011).

Stiglitz (2014), one of the influential economist of this generation, studied the impact of tax reform on economic growth and government revenue. He found that the budgetary crisis is due to the effect of political and economic failure. He further suggests to get economy in track government must raise the top marginal income tax rates which contribute to collecting the government revenue and in another hand, it minimizes the huge and harmful social inequality. Likewise, he suggests that the government reform in other taxes so that government receives full value while selling public services and assets. (Stiglitz 2014). Likewise, Carbone et.al (2013) investigated the impact of introducing a carbon tax as a part of revenue collection for financing the overlapping budget deficit on a long-term

basis. These authors found that in the USA Carbon tax can generate 1.6 trillion to 3.6 trillion tax revenue in 10 years, carbon tax helps to lower other taxes burden and with a carbon, tax deficit is paid down faster than without carbon tax.

Apparently, financing the budget deficit and overcoming the debt using the short-term instrument of cutback strategies and principles have prioritized by Glassberg(1978), Dunsire & Hood (1989) Raudla, Savi & Randma-Liiv (2013 & 2015). Per Raudla, Savi & Randma-Liiv (2013 & 2015), basics of Cutback is to cut down government expenditure. However, Dunsire & Hood (1989: 1-2) stated that government is always in confusion what to cut and it is always difficult task to cut personnel and public spending at the possible low cost to political agenda. The study conducted by various author (Raudla, Savi & Randma-Liiv 2013, Dunsire & Hood 1989, Papenfuß 2014, Baker, 2011) demonstrate that such cut resulted from fiscal stress has a positive impact for short period. However, in long run, it prevents economic growth, raise the unemployment rate and increases the risk for future crisis.

Dunsire & Hood (1989) and Raudla, Savi & Randma-Liiv (2013) found that cutback is a complex procedure as there is not any right guidance to cut down the cost. From the research conducted by Raudla, Savi & Randma-Liiv (2013) of the ‘cutback budgeting’ literature published from the 1970s to1980s founds bitter past cut back experiences. These researchers also found that cutback has increases costs in long-term due to short-term saving, aroused complexity in decision making, reduction in innovation due to less workforce and tight resources, caused experts and employee overburdened and demotivated, and was hard to deliver more with less resources that eventually caused a loss in productivity and supply of adequate services. Likewise, the study from Dunsire & Hood (1989) provided cutting down the cost with these opportunities approached by the politicians and the bureaucrats eventually disturb the internal organization and the distribution of the power. Apparently, report prepared by US Committee on Homeland Security and Government Affairs for deficit reduction found that the USA can save 1.4 trillion in 10 years from cuts which include workforce cuts, benefits cuts, cuts in costly government contracts and projects, health care cuts and other services cuts. However, Digitalization and information technology have played a huge role in subsidizing those cuts somehow. Likewise, about 130 billion USD saving was predicted through cuts alone in the year 2012. (US Senate, 2011).

In contrast, Fieldhouse & Thiess (2013) from their research found that some of the US government spendings should return back to its level i.e. defense department spending for economic recovery. Authors suggest government try to create more jobs to get people back in work for the sustainable economy. These authors found that ‘back to work' strategy assists in economic growth and finance

budget deficit in the medium term. Such strategy also encouraged the rise in investment, increase in government revenue, sustainable fix to debt and long-term economic growth. (Fieldhouse & Thiess, 2013). Fieldhouse & Thiess (2013) study the positive impact of the labor force and employment in economic growth. From the economic analysis, these authors predicted during the fiscal year 2013-2016, US government could decrease budget deficit of 863 billion USD (the USA had 1.3 trillion budget deficit in 2013) through 'back to work' program. These authors also found out that employment and economic growth are self-financing. (Fieldhouse & Thiess, 2013).

After studying budget deficit financing instruments i.e. printing money, running down foreign reserve, tax increase, domestic and external borrowing, and cut-back approach, it can be concluded that none of the instruments has a sustainable fix to overlapping budget deficit and debt. All these instruments have only a positive effect in the short run. However, due to the study of various authors presented above, in long run, all these measures have worsen the fiscal stress. Likewise, from the study above, it is also clear that all the financing instruments cannot be implemented by the government. It depends upon the suitability and availability of the financing instrument during the crisis period. However, along with utilizing those financing instrument for short-term benefits, the government should focus on economic growth for long-term fix (Atkinson, 2014).

Due to lesson from the past, numerous economist such as Atkinson (2014), Saleh & Harve (2005), Roubini & Sachs (1989), Futagami & Shibata (2003) (Barro,1996), (Fieldhouse & Thiess, 2013), Gabor (2013), Stiglitz (2014), Van & Sudhipongpracha (2015) are more concern on economic growth. If a nation wants to strengthen the productivity, innovation, and competitiveness, it must shift from a consumption economy to investment economy e.g. discouraging policies that decrease investment in the housing bubble (Atkinson, 2014). Former study form Roubini & Sachs (1989) within OECD countries during the year1960-1973, found that countries having an increasing rate of budget deficit over the years had a low or decreasing rate of economic growth and high unemployment rate. Saleh & Harve (2005) writes government spending has a positive effect on economic growth. Nevertheless, if the spending is not productive then, it expands the budget deficit and increases the trade deficit. And the 'twin-deficit effect' adversely affect the economic growth. Therefore, the government should encourage more investments and do rational spending (Saleh & Harve, 2005). Likewise, the government should also cut off unnecessary spending on employment-related tax benefits such as healthcare and transportation tax benefits in the short run (Atkinson, 2014). Futagami & Shibata (2003) studied the relationship between government budget deficits and long-term economic growth and found that the modest budget deficit has a contribution in economic growth. These authors also stated that debt to be sustainable, the budget deficit must not be huge. Barro (1996)

cross-country studies of endogenous growth theory have discovered that new ideas and innovation are crucial for sustainable growth.

Lambertini (2003) conducted the test using two budget strategy model with US quarterly data from 1960 to 1996 and 16 OECD countries' annual data from 1960 to 1992 to find out whether budget deficit strategy is followed seriously during budget formulation or not and either strategic models have any impact over budget formulation? However, the author did not find any direct correlation between budget deficit formulation and budget deficit strategy use. The author found out that political leaders are more concerned about their voting out in the election than following budget deficit strategy during budgeting. The same author also concluded that either having conservative government or liberal government in office does not provide the information regarding whether government runs the budget deficit or the budget surplus. Thus, the author concludes that budget decisions result from the sophisticated political process rather than following strategic models. Thus, it demonstrates that budget formulation is more power game than following the formal strategic process. (Lambertini, 2003).

Studies of 56 nations performed by Ezell et al. (2016) in terms of innovation found that strong innovation is utmost for economic growth. Report from these authors found that countries having higher per capita income supports more innovation. Thus, although suggest increasing the innovation capacity, the government need to build robust mechanisms that do more contributions and less detraction. Thus, the authors found a strong correlation between innovation contribution and innovation success. Likewise, Atkinson (2014) also supports the idea of innovation economics. Another interesting finding form Gabor (2013) suggests the government should consider Intellectual Property rights (IPR) seriously for economic growth and minimize the budget deficit. According to Gabor (2013), IPRs assists economic growth through protecting companies from counterfeiting, unhealthy competition and additional costs for IPR related investigation.

Various authors (Hule & Sutter 2003, Atkinson 2014, Dunsire & Hood 1989 and Raudla, Savi & Randma-Liiv 2013) have studied the negative economic impact by the aging population in developed countries. Such a huge aging population slows down the economic growth in the future. Hule & Sutter (2003) in their report mentioned that for EMU-members, European Monetary Fund (EMU) has designed the program, ‘The Stability and Growth Pact' to guarantee healthy public finance and to avoid the hindrances in budget deficit cycles with self-financing budget deficit financing button. Another study by Atkinson (2014) found that economic growth can be boost by increasing the working hours and raising retirement age.

Bartolini & Lahiri (2006) studied the twin-deficit effect in US economy for 20 years found that massive budget deficit has a negative impact in national saving and consumption, as a result, it stretches current account deficit. These authors found that changes in national saving and private consumption in the USA for 20 years, investment was reduced, the fiscal deficit was expanded, and foreign borrowing became necessary to finance the budget deficit.

Van & Sudhipongpracha (2015) studied the impact of the budget deficit on economic growth and found mixed remarks. They concluded budget deficit contributes in higher tax rates, reduction in productivity and lower private investment. In contrary, extra government spending provides the base for business investment and stimulates financial and economic activities. Likewise, authors study of Vietnam case has found that government reform in policy can bring economic growth in a country. Form these authors study, it was found that Foreign Direct Investment (FDI) can play a crucial role in one country's economic growth and finance the budget deficit. (Van & Sudhipongpracha, 2015)

For this thesis, previous finding and studies provide the essential information for budget deficit financing. Findings also provide the budget deficit financing methods and processes from various economists and governments. Importantly, cross-country analysis provides the knowledge of financing instrument used, and its pons and cons over the economy. From the previous study, it is also clear that the only way to tackle the piling budget deficit is ‘economic growth’. Hence, it would be interesting to study the uses and consequences of these financial instruments in the Finnish economy, as the case study is focused on Finnish budget deficit financing and empowering the Finnish economic growth.

Gorodnichenko et al. (2012) studied the causes of Finnish Great Depression (1991-1993) found that the causes of the crisis were due to the surge in energy cost, heavy investment in restructuring production sector by government and collapse trade with the Soviet Union. Again, Finland encountered another crisis in 2008. This crisis leads to higher unemployment (OECD 2012), banking failure (Nygård et al. 2013), large budget deficit, rising debt and slow down economic growth (Economics department 2010, OECD 2012, Ministry of Finance 2018).

According to the report prepared by Economics Department (2010), Finnish robust economy was triggered by the economic crisis and put it into the deep recession at the end of 2008. Finnish Government budget deficit in 2010 was 3.5% of GDP which breached the 3% EU budget deficit level presented by EMU Stability and Growth programme. During the deep recession, Salam (2010) stated that OCED urged Finland not to raise the corporate tax to finance its budget deficit. However, due to the aging population, fiscal stimulus, wide budget deficit, and slow economic growth have made the

Finnish government in a difficult situation without raising the tax. (Salam 2010). However, Comparing to the budget deficit and economic growth of 2009, now in the year 2018, Finland has acquired economic growth and uplift the deficit. However, the Finnish government budget is still running in 3.1 billion deficit as per budget report prepared by the Ministry of Finance (2018). Thesis study is focused on financing the remaining Finnish budget deficit and maintaining the sustainable economic growth to counter such deep recession Finland is struggling since 2008.

OECD (2012) survey states the Finnish economy is still struggling for growth with a rising in unemployment and GDP was remained below 3 %. The study from Nygård et al. (2013) shows Finland has used austerity measure from 2012 to cut public expenditure. These authors also found that the Finnish economy needs structural reforms to counter the crisis. Likewise, Kuosmanen & Vataja (2014) found that Finland is massively influenced by financial crises. They also found that Finnish central banks could not figure out any monetary policy tools due to crisis tension followed by zero interest rate policy. They also found the strong correlation between the stock market and economic growth.

Korkeamäki et al (2007) also studied the relation between introducing and strengthening investors protection law during the Finnish economic crisis. This study was also the part of the Finnish government's program countering economic and banking stress. Authors stated that among all the crisis financing policies, implementation of legal reform was one of the most successful measures. Likewise, these authors found the positive result that such law reform in Finland increased the corporate value and increased return in stock. (Korkeamäki et al 2007). Later, Laina et al. (2015) studied the systematic banking crisis in EU particularly focusing on Finland found that loan-to-deposits and housing price are the best indicators signaling the crisis. Nevertheless, they did not find much connection between current account deficit and economic crisis.

Makkonen (2013) studied the government science and technology expenditure during the crisis and found that innovation expenditure numbers were increasing in EU countries despite the crisis. Makkonen (2013) writes Finnish government during the massive crisis in the 1990s invested more in innovation that provided the strong platform for Finland economic recovery.

2.5 Theoretical framework

This master thesis' theoretical framework is based on the literature review stated above. The case study will follow the research question and research problem and focuses on the ways of financing budget deficit through economic growth approach. Budget deficit financing instruments presented in the literature review will be reflected in the case study. Apart from various deficit financing

instrument, thesis case study will look over the probability of gaining the sustainable economy through economic growth approach.

Thesis follows the fundamentals of the budget deficit that government budget deficit is a negative difference between government revenue and expenditure. Likewise, as mention in the literature above when budget deficit expands, it increases debt and worsens the economy. And such deficit has various effect on the nation's economy. Those effects can be: 1. Decline in national saving 2. Increase in interest rate 3. Crowding out 4. Decrease in standard of living 5. Increase in Taxes 6. Decline of future income. Apparently, the budget deficit can be financed through numbers of instruments as already mentioned in literature above. Such as 1. Tax increase 2. Cutback Budgeting 3. Foreign Reserve 4. Printing Money 5. Loan and Borrowing. However, all these instruments should lead to economic recovery and economic growth side by side. Previous studies are mainly focused on one of these five instruments. However, many authors Saleh & Harve 2005, Roubini & Sachs 1989, Futagami & Shibata 2003, Barro1996, Fieldhouse & Thiess, 2013, Gabor 2013), Stiglitz 2014, Van & Sudhipongpracha 2015, Atkinson, 2014) have agreed that without economic growth, economic sustainability does not exist. Thus, this is the main theme of this master's thesis i.e. 'economic growth brings sustainability'. Following figure 3 is a summary of the overall literature and provides an understanding of the entire context and theory discussed in this master's thesis so far.

This master's thesis mainly agrees with the economic growth approach mentioned by Atkinson (2014) and Holmström et al (2014). Where writers have defined budget deficit and increasing national debt are 'means not an end'. Debt reduction strategies and plans must centralize to increase the economic growth and decrease debt-GDP ratio. Economic growth can be achieved by raising investment, decreasing corporate tax, reducing expenditures and by raising the rate of tax to individuals and organizations not involved in trading (see economic growth section above). However, many authors (Saleh & Harve 2005, Roubini & Sachs 1989, Futagami & Shibata 2003, Barro1996, Fieldhouse & Thiess, 2013, Gabor 2013), Stiglitz 2014, Van & Sudhipongpracha 2015) have defined economic growth as the main driver for economic and political stability i.e. sustainability.

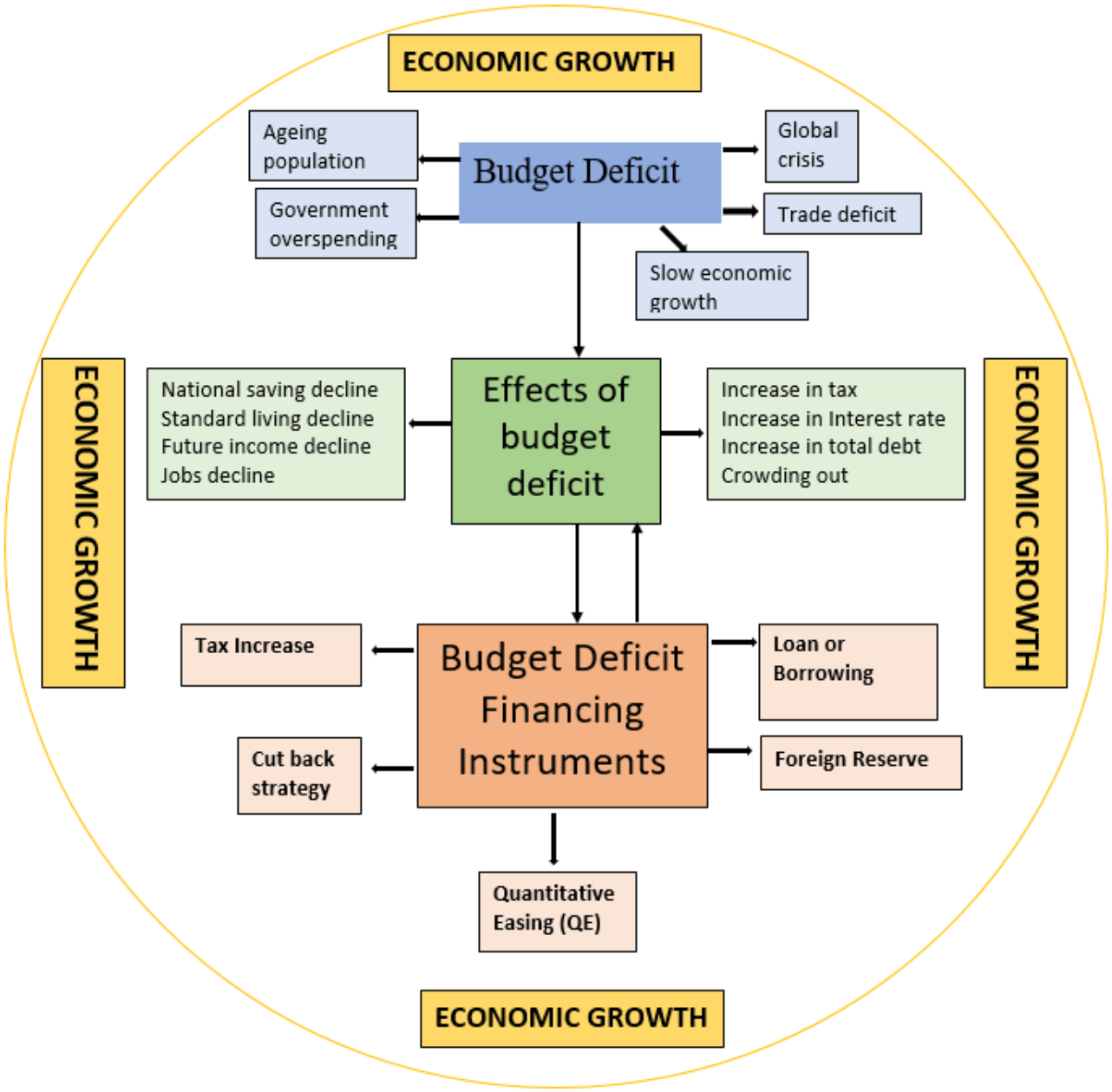

Figure 3: Summary of literature review.

Theoretical framework (as shown in figure 4) demonstrates the relationship between economic growth and budget deficit financing. All the financial instrument used by the case country will be examined and the relationship of those deficit financing instruments with either economic success or failure will be measured. This master thesis will mainly examine the sources of the budget deficit and instruments used to finance the budget deficit. Current Finland's recession started at the end of year 2008 (see OECD, 2012). Since the government has applied various policies and financing tools to keep the deficit and debt as low as possible. It is interesting to find which financing instrument works better and contributes to long-term economic growth.

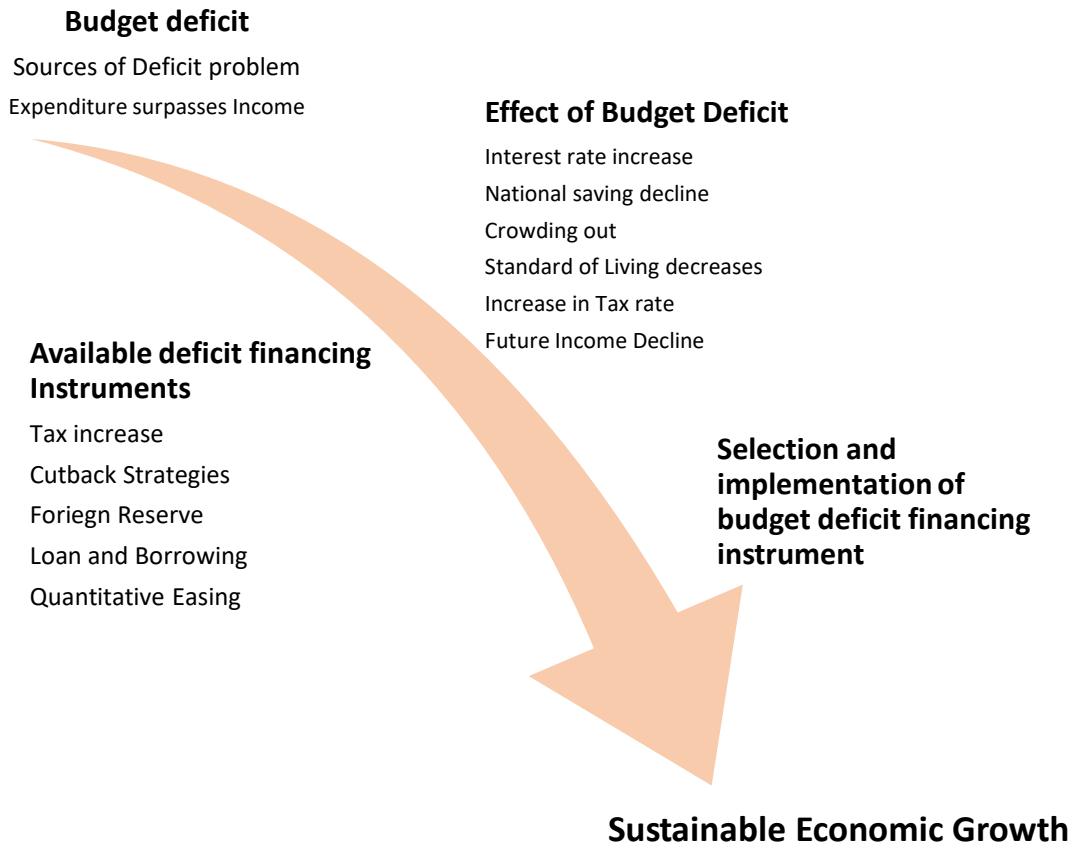

Figure 4: Framework for financing budget deficit and sustainable economic growth.

2.6 Propositions for case study

Literature review and previous studies in financing budget deficit have assisted in constructing study propositions for the case study of this master thesis. As a result, four propositions have been chosen for the case study as piling budget deficit has a negative impact on the economy and increases the public debt (Bartolini & Lahiri 2006). Thus, a study from Boskin (1987) found that fiscal policy affects real economic activity. So, the 1st proposition of this thesis study is:

Study proposition 1: Budget deficit increases the public debt and has a negative effect on the country's economy.

Stiglitz (2000) study shows the debt-financing method forward burden to future generations. It is interesting to observe the short-term and long-term impact of financing instrument over the economy. However, from the literature review and previous findings above, it was found that merely almost all mentioned deficit financing instruments has a positive short-term effect but negative effects in long-term. Therefore, the thesis 2nd proposition will be:

Study Proposition 2: Ineffective implementation of Budget deficit financing instruments placed the economic burden for future generations.

Various studies (Dunsire & Hood 1989, Raudla, Savi & Randma-Liiv 2013, Papenfuß 2014, Baker, 2011) has confirmed that it better to cut than to increase the tax, to run down foreign reserve, borrowing and printing money. A study from Biggs et al. (2010) also found strong proof that spending cuts are more effective consolidation than revenues increase. And these writers also found that expenditure cuts are a crucial determinant of economic success than tax increases. Typically, the Tax increase cannot balance the government budget and worsen the economy. (Roubini & Sachs 1989, Broadbent & Daly, 2010). So, our third proposition is as follows:

Study Proposition 3: Cutback Strategy is better than other deficit financing instruments.

Previous findings and literature have provided the platform for financing budget deficit and granted the possibility of sustainable economic growth. And confirmed that without economic growth, the economy cannot sustain in long run. (Saleh & Harve 2005, Roubini & Sachs 1989, Futagami & Shibata 2003, Barro1996, Fieldhouse & Thiess, 2013, Gabor 2013), Stiglitz 2014, Van & Sudhipongpracha 2015, Atkinson, 2014). Therefore, the fourth proposition is:

Study Proposition 4. Economic growth is the only way to gain robust budgeting and sustainable debt-ratio.

3 RESEARCH METHODOLOGY

This chapter contains the specifically selected research paradigm that is going to be used throughout the case study and this chapter contains reasons for selecting research methodology. The thesis research method is qualitative approach and data collection method is secondary. Likewise, before the case study, research ethics will be discussed, generalizability will be evaluated, and validity and reliability will be tested.

3.1 Research approach

Fundamentally, there are two types of research approaches. They are either qualitative or quantitative. Qualitative research usually focuses on data, numbers, and statistics quantities for evaluation. On the other hand, qualitative studies are performed for in-depth understandings. (Patton, 2002: 4). Silverman, (2013: 199) writes most of the qualitative studies are based on asking respondents questions or making observations in the field, and conducting the interview is the most natural thing in the world. In addition, most of the qualitative analysis is of interpretative nature. However, Patton (2002:4-5) writes qualitative research also contains descriptions, quotations, and excerpts from documents (secondary data). Denzin & Lincoln (2005:2) explains qualitative research as faculty of investigation within its own right and it crosscuts disciplines, fields and subject matters.

Nelson et al (1992:4) define qualitative research embraces two tensions at the same time. First, it draws a broad, interpretive, post-experimental, postmodern, feminist and critical sensibility; second, it draws narrower defined positivist, post-positivist, humanistic and naturalistic conceptions of human experience and its analysis. Moreover, these tensions can be brought together in the same project bringing both postmodern and naturalistic, or both critical and humanistic perspectives to bear. (Denzin & Lincoln, 2005:7). This thesis includes the broad and interpretive government budget analysis of the country, Finland. This thesis aims to have an in-depth knowledge of Finland budget scenario and the financing instrument its government has implemented. As per thesis research objective and for in-depth study, the qualitative method is applied to elaborate the budget scenario of the case country. Moreover, the qualitative approach also provides a better understanding and assists in understanding the deficit financing instruments utilized by the Finnish Government over the years. However, quantitative Finnish government budget data will also be studied to gain the holistic understanding.

Study reasoning can be inductive or deductive. The inductive approach uses previous theories to build the research hypotheses and propositions. In converse, the inductive approach is innovated from the data and information. (Saunders et al. 2000). The main study of this thesis will be deductive rather than inductive because thesis study follows the previously founded theory and data.

Likewise, the source of the data can be two: 1. Primary data and 2. Secondary data. Primary data denotes to first hand or real-time data collected by the researcher him/herself for definite research goal. Whereas Secondary data refers to the information already gathered by another person or reuse of past data. (Hox & Boeije, 2005). In this thesis analysis, data and information are gathered from secondary source. The main sources of secondary data used in thesis' empirical part are: the reports and publications from the Ministry of Finance, OECD reports, tax office publication and other working papers and sources. These secondary sources provide enough understanding of the situation of Finnish economy. In addition, Finnish government budget reports are transparent to common people as well (OECD 2010, 2012; Economic department 2010; Ministry of Finance, 2009-2018). Therefore, those reports and publication from governmental and supra-governmental organizations provide a comprehensive overview, data, and information required for the thesis analysis. One of the reasons behind selecting qualitative research method of this thesis is that most of the secondary data consists of qualitative data (Hox & Boeije, 2005). The quality of research is not compromised even though the source of data collection is secondary. The past information and data are selected carefully totally the thesis research problem. And this kind of study (when the data are information are of governmental, official and administrative nature in time series) usually follow the secondary data collection method when researcher requires to perform the analysis by overviewing many years data and information. (Hox & Boeije, 2005). Likewise, the use of the secondary data is cheaper, easily available and it is more useful than primary data while conducting longitudinal research (Cowton, 1998). Since the documentary research method is applied in this thesis, reports, and the publication written by someone else earlier is used to gain understanding. Mainly electronic databases and electronic document files are used as an information source while conducting the case study of this thesis. (Fisher C., 2007).

3.2 Case study

A case study in research is somehow the best way to elaborate on the phenomenon and concept that is centralized for the research. However, the best in class case study also required to prove the case is representing the excellent results. (Abrahamsson, 2003: 20-21). Since 1900's case studies have evolved as one of the main streams for teaching and research, and it has gained the popularity constantly from the origin. Moreover, researchers from various disciplines have used case studies as their solution. (Barros, 2003). Gerring (2004: 342) defines case study is conducted with the qualitative approach if the research is ethnographic, clinical, participant-observation or field study (cited as Yin, 1994) which is featured by process tracing. Likewise, Abrahamsson (2003: 20) writes referring Yin (1989) that case study is something that investigates the contemporary phenomenon within its real-

life context when the boundaries between the phenomenon and context are not clear, and in it, various sources of proof are utilized.

Per Gerring (2004: 346-347), to understand what the case study is, it is better to understand what it is not. There is the clear differentiation between study and case study. The case study is defined as an ‘ideal-type' rather than a process with ‘hard and fast rules'. The fact being case study a fuzzy does not demonstrate that it lacks distinctive features. Defining case study as ideal means it shows the strength and weakness in relation to its across-unit cousin. Thus, case studies are applicable to distinguish the inference is descriptive or causal and the scope of the proposition such as breath, depth, and boundedness, the strategy of the research is either exploratory or confirmatory. Furthermore, Juga (2003: 75-76) writes collecting empirical evidence is challenging and differentiate with the survey. In the survey, much concentration is given to questionnaire formulation and sampling whereas in case of study core concentration is given to the case company(s), access to the informants, interview process including the interview coverage (Gerring, 2004). As the theory of case study, when the topic of study is new and research demand qualitative approach then the company with the required knowledge regarding the subject matter should be selected. Generally, any definite grades and parameter are not required while selecting the company for the research. And the researcher needs to trail whether research required one or multiple cases (Abrahamsson, 2003: 20-21). Previous studies from (Yin, 2003) suggest that when the case study is rare and critical, the single case study need to be considered, but both single and multiple case study follow and represent the similar research paradigm.

The empirical part of this thesis consists of a case study of Finland. Hence, this thesis performs single case analysis because the research topic is critical, and thesis will study Finnish 10 year's budget performance from the year 2008-2018. This single case study also provides the comprehensive study of a single country. Importantly, Finland case of the budget deficit is suitable for the thesis case study because Finland is seeking economic recovery from a deep recession started at the end of 2008 (OECD, 2012) and exercising its government budget in deficit since then (Ministry of Finance, 2018). Likewise, another reason for selecting the Finland budget deficit case as a thesis study is that this thesis' study is conducted by living in Finland. In addition, this thesis tends to deliver the comprehensive understanding of Finnish government budget deficit financing processes and tools i.e. implemented after the Finnish economy deeply infected by the recession in 2008 (OECD, 2012). Nevertheless, the objective of this research is to provide a solution to the research problem: *How to finance the government budget deficit without hampering the economy in long run? Which budget deficit financing instrument provides a sustainable fix to the budget deficit?*

Reddy & Agrawal (2012: 4-7) have classified case study using secondary data as Case study II and case study using the primary source as Case study I. These authors suggest things to consider while performing Case Study II are:

1. *Select the research topic.*
2. *Find relevant the sources to collect secondary data for a research topic.*
3. *Carefully sort and classify data and information according to the research problem.*
4. *Prepare draft of the case as per research case.*
5. *Edit and finalize the case draft according to research purpose.*

While developing the case study for this thesis, the Case study II measures provided by Reddy & Agrawal (2012) were followed carefully. The study purpose and selected research methodology are directly influenced by the research question. Similarly, the case of Finnish government budgeting seeks a platform to finance its recurring budget deficit with sustainable fix i.e. economic growth (OECD 2012, Economic department 2010 and Ministry of Finance, 2018). Thus, both the Finnish government and this thesis's research objectives agree over financing government budget deficit with sustainable economic growth in mind. Thus, current Finland's budget deficit scenario fits right inside the research objective of this thesis. However, this thesis studies Finnish government's budget scenario from the year 2009 to 2018.

3.3 Research ethics

Pimple (2002: 192) suggests that the research ethics in any field can be divided into three different areas: 'Truth, Fairness, and Wisdom'. The first parameter evaluating the facts concern with social interlinkage to the 'physical world'. Issues like authorship and plagiarism explain the degree of the truthiness and if the data are fabricated and falsified then it is not true. Second metrics, 'fairness' social interlink with the world of research. It also consists of authorship and plagiarism. Apart from that, it is related to human rights, animal rights, government law, agreement with the case company and funding organization. Third measurement criteria describe the 'wisdom' of the research. Moreover, the meaningfulness of the research to the society and humankind in the present and future scenario. Fundamentally, it describes the 'wisdom' criteria examine whether the research conducted is beneficial to society, institution or to the human or not? Whether research bring the positive change or the negative change? (Pimple, 2002: 192-193).

This thesis research is based on reports and publication from governmental and supra-governmental organizations. So, there is no question of having the false information. Moreover, the information

was analyzed with care so that information and data do not get fabricated. Plagiarism and authorship are also considered seriously in this thesis. Especially, the literature review part is done through paraphrasing and numeric data has been transmitted into the academic language without losing the true meaning of information obtained. And this thesis hope to bring the positive changes in Finnish economy and assists in narrow down its sustainability gap.

3.4 Reliability and validity

Morse et.al (2002), from their study found that without rigor in the research there is no science and utility. As a result, reliability and validity attracted the attention of the researchers in their methods. During the 1980s, cited as Guba and Lincoln discovered the parallel theorem of "trustworthiness" which is consist of different aspects: Credibility, transferability, dependability, and confirmability. Guba & Lincoln further mentioned that all the research should consist of ‘truth value', ‘applicability', ‘consistency' and ‘neutrality' to term it as ‘worthwhile' (cited as Guba & Lincoln, 1991,1982 & 1985) (Morse et.al, 2002: 2). Long & Johnson (2000: 30) (cited as LoBiondo-Wood & Haber 1998: 558) described reliability in qualitative research is described as the measurement instrument for consistency or constancy. Which means there should be consistency, stability, and equivalence in the research to have a trustworthiness. Stability in the research is gained through posing the identical questionnaire to different respondents with the outcome of similarity in response to the similar kind of issue. Consistency deals with the integration of the subject matter from a single interview resulting the respondent's response on a heading remain agreeable. Thus, the most important notion among all in ‘reliability’ is stable data collection method. (Long & Johnson, 2000: 30-31). Mainly, validity tests the instrument utilized during the research about what is it intended to or not. Thus, the validity of the research is accepted if it satisfies all the criteria it has promised. Moreover, validity is constructed with the combination of three main features: ‘content validity', ‘criterion-related validity' and ‘construct validity'. Content validity depends mainly on the sampling and sound formation of the instrument and addressed to entire research performed under the very investigation. Criterion-related validity is termed as the comparison between actual performance and measured performance considering the instruments and outcomes with establishing the pre-determined standards. Construct validity is concerned with the instruments’ proximity to the construct in the questionnaire. (Long & Johnson, 2000: 31-32).

The main data and information sources are the reports and publications form governmental and supra-governmental organizations. Therefore, the reliability and validity of data source are high and consistent since those reports and publications are prepared with careful consideration of true data and information. Likewise, these types of reports and publications are prepared by highly professional

researchers and practitioners where consistency and trustworthiness of data are absolute. Content validity from those types of reports and publication provides worthiness and applicability of the information.

3.5 Generalizability

Lee & Baskerville (2003: 22) writes generalizability is a core concern for anyone doing and using the research. To clarify, it denotes to the validity of the theory, and the research lacking the generalizability also lack the usefulness. Likewise, Morse (1999: 5-6) also support with (Lukka & Kasanen, 1995) that when the researcher is confident about generalizing the outcome then the research gains more usefulness and significance. Likewise, become more powerful, increase in citation, popular to get fund as research becomes more feasible. Generalizability applied in one condition can be applied to another condition as per the grounded theory. (Morse, 1999: 5-6). Lukka & Kasanen (1995: 71) pointed out that if the case studies are properly conducted and are of high quality, then such case study has a higher possibility of bringing generalizability.

Usually, the independent type of case study does not produce generalization because the research subject use to be literally small and single case study makes it difficult to generalize. However, this thesis provides comprehensive financing instruments within budget deficit scenario that can be generalized in the country facing a similar scenario of economic recession and reoccurring budget deficit. Likewise, this thesis findings are compared with previous findings to test the generalizability. Furthermore, any government or nation seeking to finance its government budget deficit with sustainable fix can embrace the result of this thesis. In the contraction, having a small data size, all the results obtained from the study cannot be generalized in all types of countries since the case study is conducted in Finland, the result may only apply to the countries facing similar budget deficit problem like Finland. However, a result of this can be generalized within Nordic countries and other welfare nations in the world having similar budgetary and governmental policies and approaches.

4 CASE STUDY OF FINLAND

This part of the thesis includes case analysis of government budget deficit and deficit financing instruments of Finland. In the methodology part above, the reason for selecting single case country, selecting definite case-country and methodology of case analysis are already discussed. Therefore, this chapter moves forward with the detailed overview of the budget deficit scenario of case country (Finland). Thus, this chapter provides the comprehensive overview of the case country's budget deficit background, utilized budget deficit financing instruments, and their impact on Finnish budget deficit from the year 2009 to 2018.

4.1 Finnish budget deficit overview

Finland's fiscal budgetary process begins every year at the end of December or at the start of the January with involved ministries submitting a pre-budget request to the Ministry of Finance in the form of expenditure and finances for the upcoming year, and assumption for another three years. Finland has an extraordinary budget journey. In past, Finnish budgets are balanced and Finland used to have the lowest debt level among OECD nations. (Blöndal et. al 2002: 121-123). Finland's economic growth rate after 1900s' downturn untill 2007, was the same as Sweden, and higher than Germany (Holmström et al. 2014). However, Finland experienced an economic crisis in the early 1990s due to economic burst and collapse of the Soviet Union market. That time, Finland gained economic recovery and gain budget surplus through expenditure cuts and economic growth packages. (Blöndal et. al 2002: 121). Again, during the year 2008, world experience another economic crisis that results in the worst economic downturn after the great depression. Majority of the economists blamed housing bubble burst that caused liquidity problems all around the world followed by stock markets crash. By the year 2012, the economy somehow showed positive recovery sign. However, during the same year, economic tension from Greece, Italy, and some other European nations provided an alarming sign for world economic recession again. (Hausman & Johnston, 2014: 2267-2268). World crisis also affect Finland, and at the end of the year 2008, Finland hit by another deep recession. Again, budget deficit widened, public debt rose (OECD, 2014). In addition, the figure 5 below demonstrates the Finnish Government Budget and Debt scenario from 2008-2017.

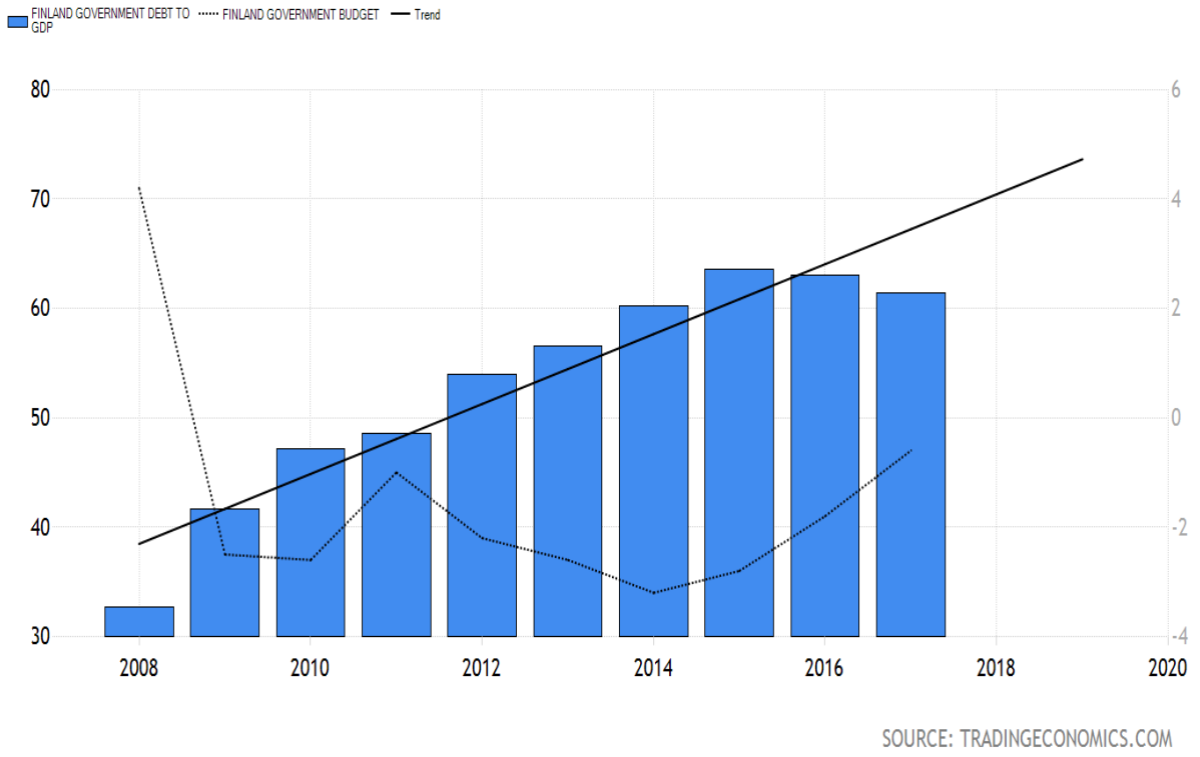

Figure 5: Finnish government budget and debt to GDP (Trading Economics, 2018).

4.1.1 Sources of Finnish budget deficit

A decade before the 2008 crisis, Finland was experiencing robust economic growth guided by the high-tech sector. Nevertheless, due to the impact of the world crisis, Finnish GDP decreased by 9 % approximately in 2009. (Holmström et al. 2014: 1-2). In addition, increase in government expenditure since 2009 especially due to rising aging population and health care i.e. social security cost, followed by slower economic growth and infected trade due to losing competitiveness in electronic and forestry industries even worsen the Finnish economy (OECD, 2014). As a consequence, Government expenditure exceeded the revenue. Since the year 2009, the Finnish government budget is running in deficit (see on OECD, 2016; Holmström et al. 2014; Ministry of Finance 2018). The main sources of Finnish Budget deficit (i.e. Expenditure exceeding Revenue) are as follows:

Ageing population

The study from Heikkilä (2012: 2) shows Finnish age-group population of 65 years and above is increasing and other age groups are declining. Same author's study found that the working population is diminishing at the speed of 30000 persons per year since 2010. The statistic from 'Statistics Finland' (2015) also demonstrates that the dependency ratio in Finland is increasing. It is estimated that by 2030, the proportion of the aged population will be 26 percent of the total Finnish population and it will reach 29 percentage until 2060. Thus, the very phenomenon is creating pressure in Finnish

Public Finance. (Statistics Finland, 2015). Another obvious fact is that the Finnish population is aging swiftly than other OECD countries which raised government spending on pension and health care, and in other human resources related costs (OECD, 2014: 2). Likewise, another report from OECD (2016) showed that government expenditure was more compared to Finnish GDP. From 2008 to 2014, Government expenditure was raised by 10 percentage and half of it went to social benefits payment related to aging and unemployment. (OECD, 2016). Ministry of Finance (2017) finding shows that government expenditure continues to rise due to the aging population in the future too.

Trade deficit

Industrial restructuring and trade deficit are the two of the main source of Finnish budget deficit over the decade (see Ministry of Finance, 2018, Holmström et al. 2014). As shown in Figure 6, the Finnish trade deficit began in 2009. In the year 2015, the trade deficit gap was narrowed but it again widens from 2016. Even though the trade deficit was less during the year 2015, export growth was not better due to the recession in Russia, and low demand for Finnish goods in the international market (OECD, 2015: 127-128). The main reason of Finnish trade deficit is due to the collapse of two of the main export products: electronics and forestry business along with the loss of business with Russia (see OECD, 2014: 8-9; & see also on 2016 and Holmström et al. 2014). These scenarios deteriorated the economy and decreased the output which formed severe pressure to Finnish Public Finance. Collapsed of the electronics sector decreased the value added from 6 % (2007) to little more than 1% (2014) mainly due to the Nokia losing its electronic market to its competitors. Likewise, wood and paper industry also lost its demand in the market and metal price fall of the metal product in international market hamper the profitability (OECD, 2014: 9-10; see also on Holmström et. al 2014). Other reasons for Finnish trade deficit were growing labor cost in Finland than other European countries and decreasing price of electronic products in the market. Such phenomenon loss of cost advantage and rising labor cost damaged the Finnish international competitiveness. (See on OCED, 2014 & 2016; Holmström et al, 2014). Furthermore, from ILO's Global wage report (2016), emerging countries like China and India obviously have low labor cost i.e. competitiveness advantage over developed countries like Finland). Thus, the overall main Finnish manufacturing sector having good competitive hold in their respective international business market prior 2008 recession suffered a sharp decline in their businesses. Such a structural crisis of main exporting Finnish businesses adversely affects the Finnish Economy (Holmström et. al, 2014).

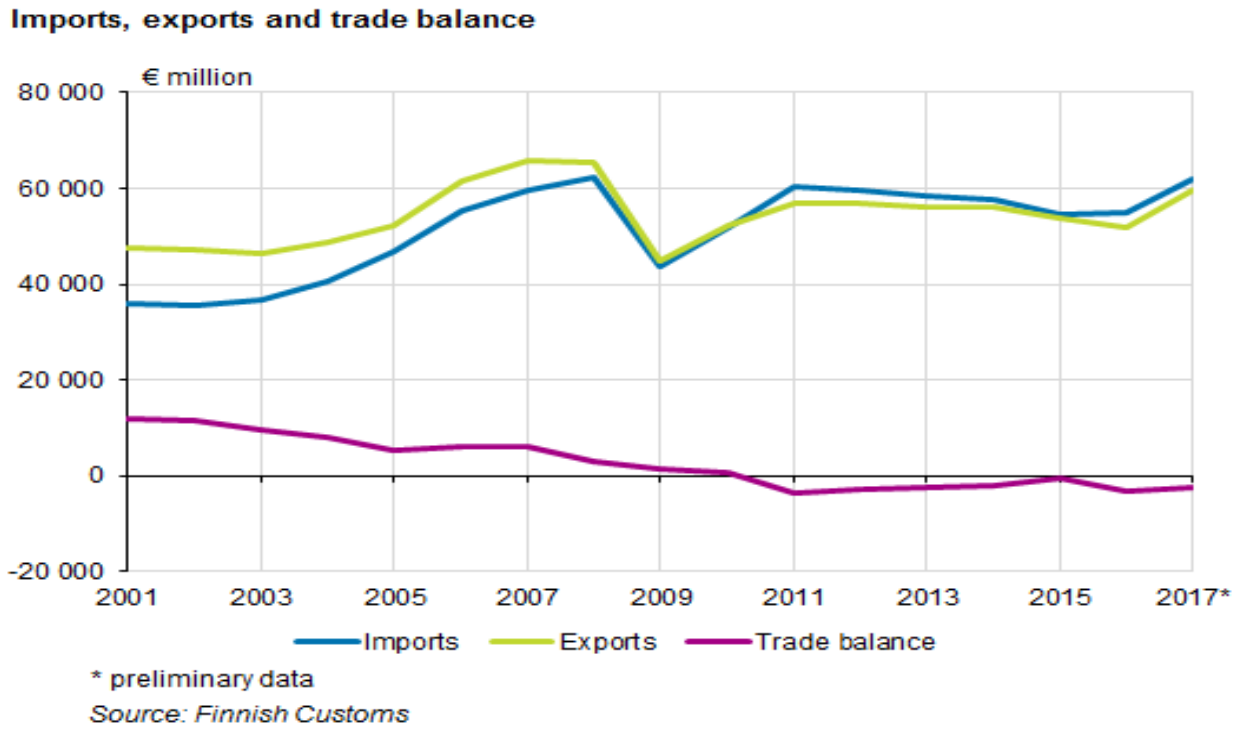

Figure 6: Finnish balance of trade 1995-2017 (Statistics Finland, 2018).

Slower economic growth

Previous studies from Holmström et al., (2014) and OECD (2015) shows Finnish fiscal deficit was raised due to the weak economy due to the sharp decline in output of the manufacturing industries. Finnish economic situation takes nosedive and GDP was declined by 9% in 2009 (Holmström, 2014: 1-2). Apart from losing that share of government revenue, the Finnish economy could not generate economic growth through other alternatives. In 2015, after four years of declination in the economy, it started to grow with very less rate (see also figure 7) (OECD, 2015 & Ministry of Finance, 2015) and the growth rate was sluggish in 2016-2017 as presented in Figure 7 (Ministry of Finance, 2017). Slow economic growth could not assist in Finnish budget deficit recovery. Therefore, in 2018, Finland is still running its government budget in deficit.

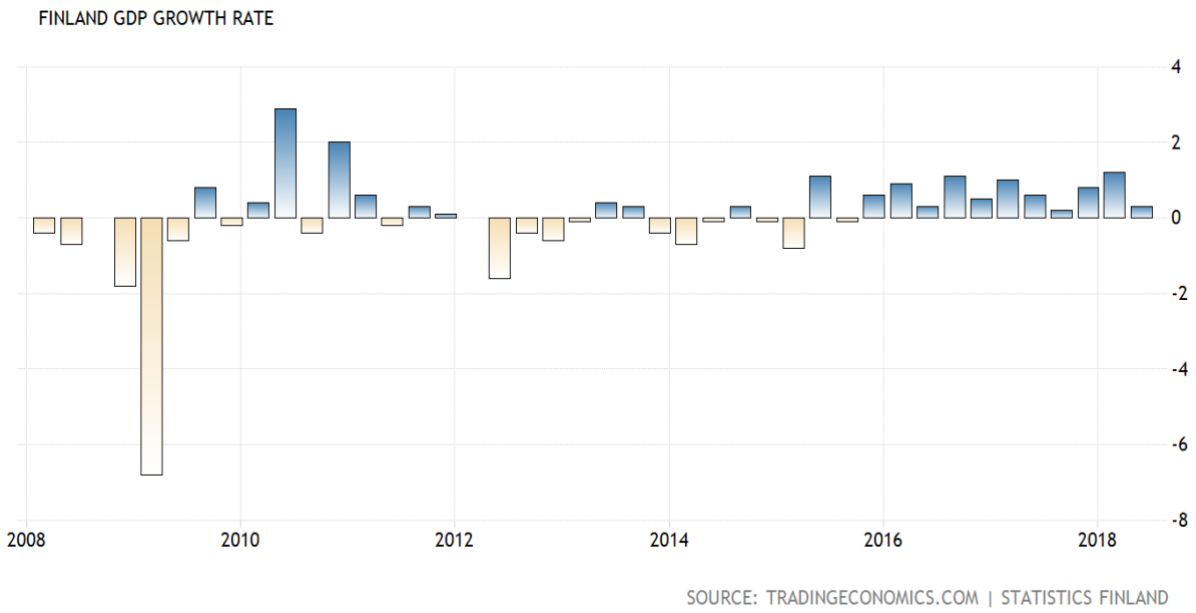

Figure 7: Finland economic growth rate (Trading Economics, 2018a).

Other planned and non-planned sources raising government expenditures

Government expenditure in defense is increasing since 2010 (see on Ministry of Defence, 2018 & Forss et. al 2013). Likewise, Finland unemployment rate is higher compared to other Nordic countries (Ministry of Finance, 2017) and a huge amount of government spending goes to unemployment benefits payment (see on OECD, 2014, 2015 & 2016; Ministry of Finance, 2015 & 2018). During the year 2008-2010, tax revenue was declined which exerts more burden in Finnish public finance. Likewise, overheads such as development works, foreign grants, R&D and Social protection costs contributed to widening the Finnish budget deficit at some point (see on Ministry of Finance 2015, 2017 & OECD 2012, 2014, 2015, 2016).

4.1.2 Effects of the budget deficit on Finnish economy

Finnish economy was adversely affected by the budget deficit resulted from the 2008 recession. The major effects of the budget deficit on the Finnish economy are below:

Crowding out

Mainly, during the year 2009 and 2010, private investment started crowding out due to fear of interest of repayment on loan will increase in the future. (Ministry of Finance, 2010 & OECD, 2014). There was a sharp decline in investment after 2009 (Ministry of Finance, 2010) due to the sharp fall in Finnish export. Likewise, the trade deficit on Finnish major products and slow economic growth also discouraged the private investment (Ministry of Finance, 2010: 17-19). Eventually, due to trade deficit import surpassed the export (OECD 2014: 6-13, OECD 2016: 7-8; see also Ministry of

Finance, 2010 & Statistics Finland, 2018). Finnish export decrease was more than compare to the 1990s crisis. In addition, investment decrease by 12 percentage in 2009 (Ministry of Finance, 2010: 18)

Increase in tax

Tax increase is the result of the budget deficit (see also figure 8). To finance the budget deficit, the Finnish government increased the tax (See on OECD 2014: 16-18; OECD, 2016: 6-22 and Andre & Hwang, 2018: 5-9). More detail on the tax increase is presented in 'Financing budget deficit' section below.

Increase in private saving

In 2009, household saving started to increase due to the risk of unemployment, and assumption of the increase of tax rate in the future. In 2009, private consumption was decline by 2%. As a result, national saving declined (see on Ministry of Finance, 2010: 18-20, 39)

Increase in unemployment

Another sector affected by ruined Finnish economy was human resources. In 2009, 80000 people lost their jobs (including fixed-term lay-offs) and the number of hours worked decreased by 7%. As a result, the unemployment rate increased to 8.5%. (Ministry of Finance, 2010). The motivation for returning at employment is affected by the raised tax in income and in return by Finnish Government (OECD, 2018).

A decline in the standard of living

Decrease in output due to the trade deficit, decline in private consumption, rise in unemployment and services cut down by the government has reduced the Finnish standard of living. (See on OECD 2014; Ministry of Finance 2010; Holmström et al. 2014).

Increase in interest rate

After the 2008 crisis, the central government interest burden raised. As a result, the Finnish central government assumed the rise in interest rate from 2010 to 2013. (See on OECD 2014 & Ministry of Finance, 2010: 42, 50).

Decreased in future income

The decrease in investment, trade deficit, and increase in private saving prevent the future yield of returns and incomes. Similarly, after 2014, yield interest rate of Finnish long-term bond was low due to a decrease in short-term interest. ECB assets purchase program and near zero percent interest rate increased the burden on Finnish household and companies (See on OECD 2016: 9-12).

Increase in debt

Budget deficit provided the long-lasting mark on public finance and Finnish debt ratio and it was assumed that the debt ratio would rise to 56 % in 2013 (Ministry of Finance, 2010: 10). Since 2009 due to the impact of budget deficit, debt begins to rise and reached 63% in 2016. Interestingly, GDP never goes down below 60% after the year 2014. (Andre & Hwang, 2018: 15-16). It was below 60 billion debt in 2008 but in 2018, the expected rise in debt is 109 billion (Ministry of Finance, 2018: 10).

4.1.3 Financing Finnish budget deficit

This section of Chapter 4 discussed the budget deficit financing instruments adopted by the Finnish Government after the Finnish government revenue becomes short to meet the government expenditure.

Tax revenue

In 2009, due to the massive damage of Finnish Economy from the deep recession of 2008, the Finnish government gross tax revenue decreased by 9.6 % than last year. Following year, VAT accrual drop by 8.5 % due to low private consumption and corporate tax revenue fell by 33.1 percentage compared to the year 2008 tax revenue collection. (Verohallinto, 2009: 7-8). Consequently, in the year 2010, to recover the tax revenue to finance the deficit, the government increases the tax rates. The VAT was raised by 1 percent. Likewise, the government increases the general tax rate to 23% and other taxes such as entertainment tax and tax on animal foodstuffs were increased. Tax audit on gambling also assisted in generating more income the following year. As a result, the government was able to raise the gross tax revenue by 1.8 percentage. (Verohallinto, 2010: 5, 20-21). Finnish government also reduced income tax by cutting down social security contributions, but the average tax was remarkably higher (Ministry of Finance, 2010). As a result, the year 2011 experienced the massive rise in tax revenue, 7.7 % more than last year and almost the same amount in the year 2008. The main revenue contribution came from corporate income tax, revenue increased by 24 % than last year. Taxes on energy expected to increase in 2011 (Ministry of Finance, 2010: 49-51). In the year 2011, new VAT was introduced in the construction sector, tax on the value of real estates was revised (property tax) and tight tax introduction for construction workers was introduced to fight against the grey economy which helped the government to collect massive tax revenue during the same year. (Verohallinto, 2011: 5-6). Tax revenue continued to increase in 2012, increasing the tax to debt ratio as shown in figure 8 below. The major revenue received that year was from capital income taxes and from VAT increase. However, the corporate tax rate was decreased to 24.5 % from 26, as a result, corporate tax revenue declined by 19 % (Verohallinto, 2012: 7, 12). Nevertheless, tax audits related to transfer

pricing add tax income. The new progressive tax was practiced in 2012 with many changes including raising capital income tax to 30%. Similarly, a new tax system under the inheritance and Gift Duty Act was introduced. (Verohallinto, 2012: 5-7).

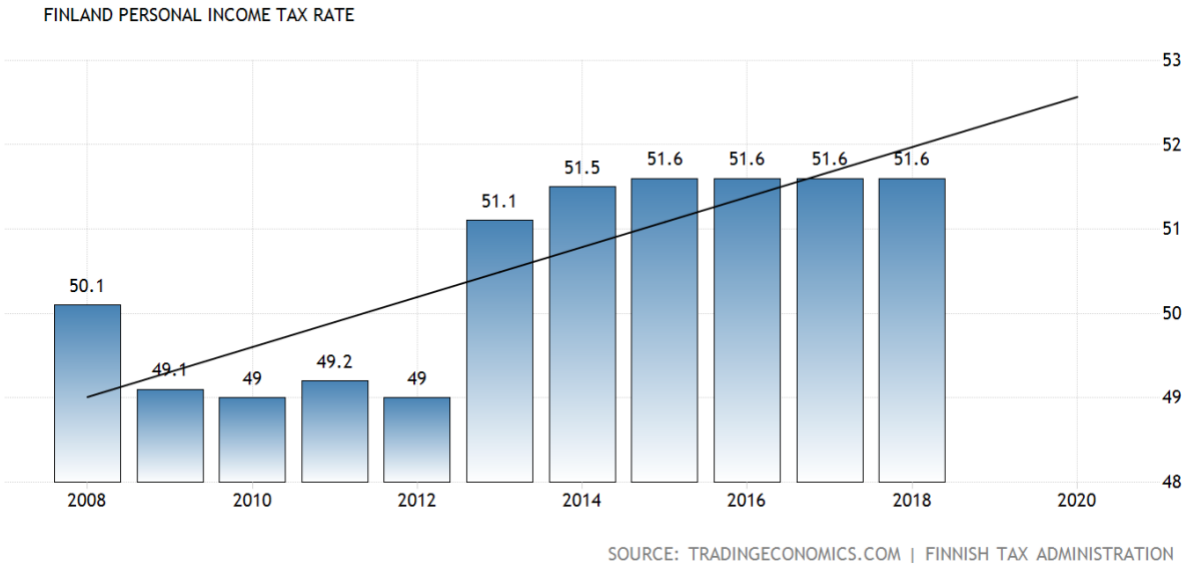

Figure 8: Finnish personal income tax rate (Trading Economics, 2018b).

Increase in average tax rate (see figure 8) continued to raise the government tax revenue in 2013 which was increased by 3.6 % than last year. The main tax revenue contributors for the year 2013 were from the increase in VAT revenue, corporate tax revenue, the introduction of the new bank tax, and rise in real estate taxes. (Verohallinto, 2013: 10-11). Tax ratio in 2014 reached the highest after the 2008 recession. The increase in revenue was contributed by the increase in the real estate tax, more social security contribution was added, the transfer fee was increased, and bank tax introduced in 2013. (Verohallinto, 2014: 28-29). Tax revenue broke the record again in 2015 with 2.1 percent increment to last year. The main contributors were income tax revenue and corporate tax revenue. (Verohallinto, 2015: 31). Bank of Finland (2015) predicted that the tax to debt ratio will stay constant over upcoming years (2016-2018) (see figure 9). Likewise, Finnish environmental tax rate (tax on harmful products for health and environment) is above EU average (European Commission, 2018: 17) which has grown by 2.8 % every year reaching 6.1 billion on collection during the year 2015 (Statistics Finland, 2017). In 2017, it was expected that the fuel price will be increased by 2.5 cents per liter as a new tax revision 2018. Other increments in taxes will be Municipal taxes, tax for heating fuel, tobacco tax, sweets tax and the new tax on pleasures crafts and motorcycles. (Helsinki Times, 2017).

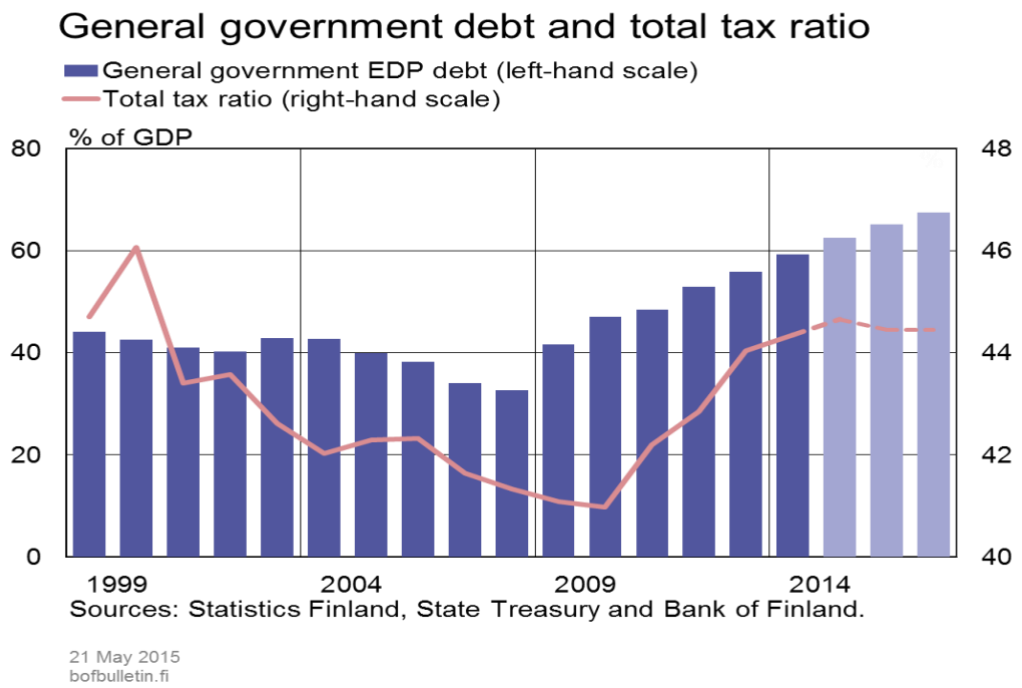

Figure 9: Finland debt-tax ratio 1999 to 2018 (Bank of Finland, 2015).

Loan or borrowing

Finnish government after exercising long streak of budget surplus, in 2009, Finnish government budget begins to run on a deficit. As a change, the Finnish government adopted a stimulus package. Government revenue was declined by 2,867 million euros in 2009. Consequently, the Finnish government forwarded 8 billion euros net borrowing requirement on the table to subsidy the budget gap. (Treasury Finland, 2009). In 2010, the Finnish Government gross borrowing requirement was 29 billion euros. Finnish central bank issued 3 new bonds and 17 billion euros borrowing was allocated through long-term bond issuance. Likewise, Finnish government net borrowing in 2011 was 27 billion euros as a result government debt reached 84 billion euros at the end of the year. In 2011, Government issued two new euro bonds to raise the borrowing. Same year Finland was ranked 5th in a survey conducted by Euromoney as the best borrower nation. (Treasury Finland, 2011). In 2012, the fiscal deficit was deeper due to less collection from tax revenue. To narrow such gap, the Finnish government relied on supplementary budgeting with the issuance of the short-term and long-term bond. (see on the Republic of Finland, 2012). From figure 10, both gross and net borrowing compared to 2009 has declined in recent years. However, financing the budget deficit through borrowing is going on. In 2017, the gross government borrowing reached 20.2 billion. Government borrowing of that year includes 11.60 billion in serial bonds, 6.84 billion in Treasury bills and 1.74 billion in other long-term issuances. (Treasury Finland, 2017).

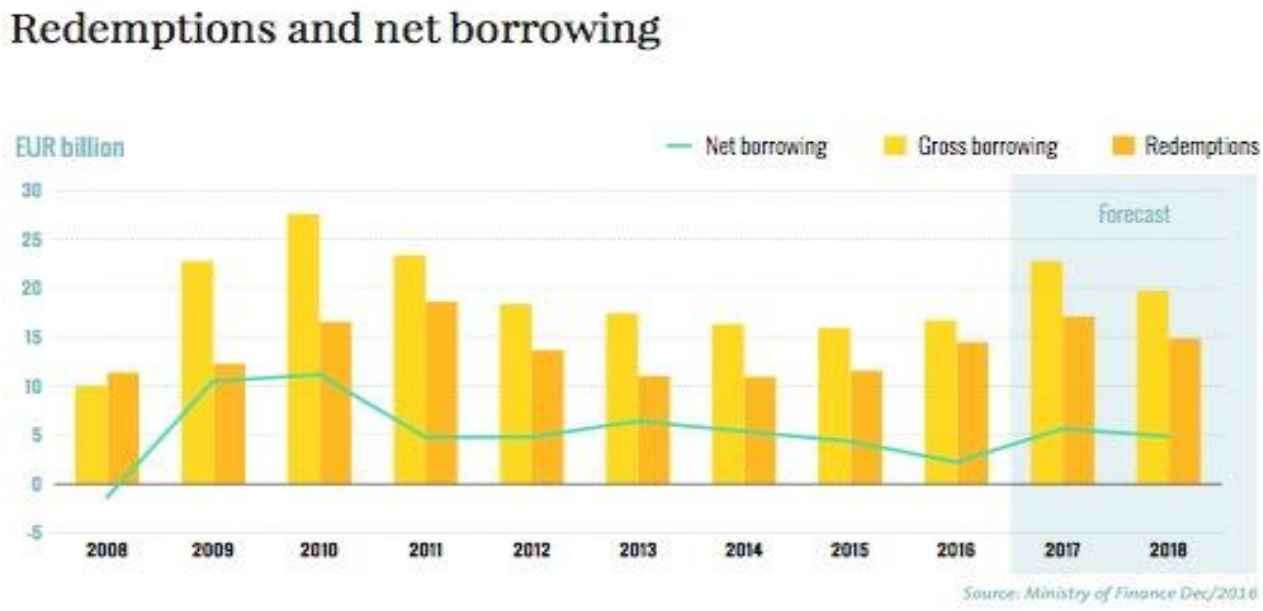

Figure 10: Redemptions and net borrowing (Republic of Finland, 2016).

Cutback budgeting

After the 2008 recession, as the government spending was surpassed government revenue over the years (see figure 11), the Finnish government was looking for the structural change to narrow the budget gap. As an austerity measure adopted by the Finnish government, the government arranged strategic cross-cutting programs across many social security overheads such as health, employment, education, children well-being, and other social expenditures to downsize the spending. (OECD, 2009: 12). In 2009, the government planned to cut down 9600 staffs by 2011. Similarly, under productivity program, Finnish government planned to cut down 4800 more workers during 2012-2015. Due to the very consequences, the worker numbers in central government would decrease by 12 % from 2005 to 2015. (Ministry of Finance 2010: 43-44).

Finnish parliament purposed to cut down paper and energy usages and parliament agreed to operate only on its own premises to reduce the parliament operation cost. (Finnish Parliament, 2009: 3, 14). It was predicted that the general level government spending from 2010 to 2013 would not increase due to high interest rates and increased in government debt. (Ministry of Finance, 2010: 42). In 2012, Finland adopted 2.7 billion euros austerity program where the government aimed to cut down municipal government expenditures by 631 million euros and cut down defense spending by 49 million euros. Likewise, the tax rate increased to supplement the austerity program. (The European Institute, 2012). In the year 2013, the six-party government agreed to cut down the expenditure and to increase tax rates to capitalize the debt by 5 billion euros. During the year 2015, Juha Sipilä

implemented the austerity program (predicted to be implemented until 2019) to reduce the budgetary gap. The aim of the program was to save the 10 % of government spending through cutting down public, social and education expenditure. Likewise, the government limits the expenditure in childcare overhead which provided 193 million euros of saving. Cut in educational spending was amounted to 584 million and social and health services received the cut of 806 million euros. Combined saving from social transfers and study benefits will be 1 billion euros. Similarly, 1.3 billion saving will be raised by cutting down employment services and other regional aids. (Kangas & Kalliomaa-Puha, 2017: 1-2). In 2015, the Finnish government under Sipilä proposed radical austerity step of 10 billion expenditure cuts until 2020 (Khan, 2015). In 2015, Finnish government announced to cut 500 million euros fund of Educational institutes, and 100 million euros cut in research over 4 years term (Helsinki Times, 2017a). Finnish government decided to implement massive cuts in education and research, but the strategic investment program is applied to fund essential projects (OECD, 2016: 39). The government budget for tertiary education was planned to cut by 4 % through the prime minister's office meeting in 2015 (OECD, 2016: 31).

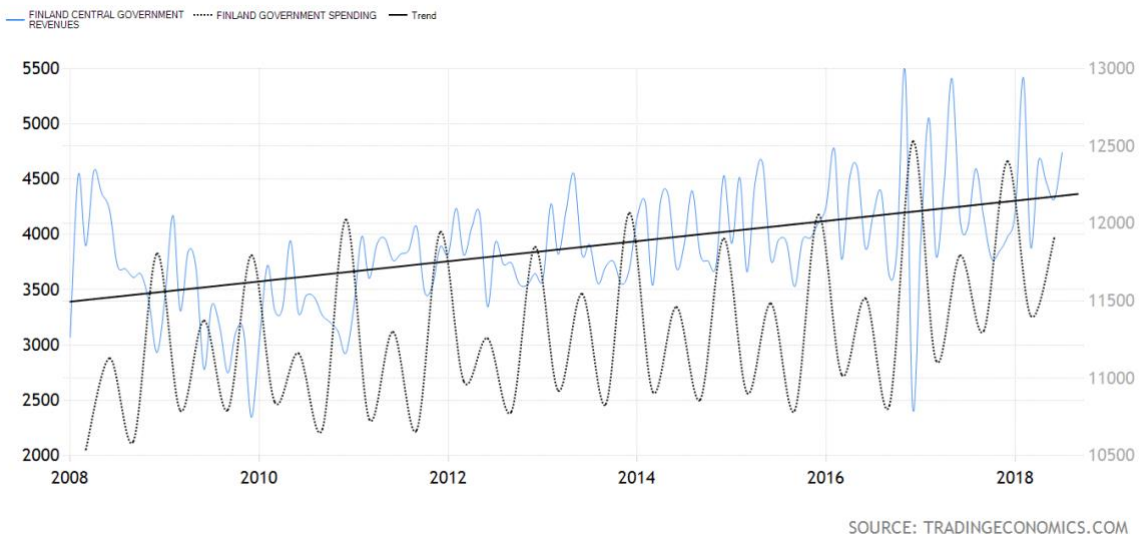

Figure 11: Finnish government revenue & expenditure (Trading Economics, 2018c).

Foreign reserve

As a budget deficit measure, Finland mainly relied on tax reforms, borrowing, and cutback budgeting. Therefore, the Finnish government did not feel the necessity to run down its foreign reserve. Instead, the Finnish government invested reserve currency in short-term securities. Likewise, the Finnish central government did not take any exchange rate risk under its new debt management portfolio. The liquidity situation of Finland was strong and continued its cash reserve investment in short-term maturities. Likewise, a portion of both public and private statutory employment pensions of wage

were accounted in a reserve. (Republic of Finland, 2011: 29-32). In 2012 as well, Finnish government debt was not exposed to exchange rate risk because of currency exchange rate is very volatile and there is always a risk of insolvency and rise of debt serving expenditure. In 2014, government set up the new framework for foreign currency cash flow management where instead of private exchange agencies, State Treasury Finland will perform on government's behalf with access to Foreign exchange market, and with the motive of having more hold in the foreign currency market. However, from 2014, the reserve of foreign currencies was used to do smaller payments. (Republic of Finland, 2014: 24,34-37 & 2016: 9,35).

Quantitative easing

Since Finland does not have its own currency, the central government cannot print money to raise its monetary base. However, the euro depreciation since 2014 has helped Finland to regain competitiveness slowly (OECD, 2016:11). As a quantitative easing process, Finland relied on ECB backed program of purchasing its assets and securities, and near-zero interest rate assisted Finland to raise budget deficit funding in short-term (OECD 2016:11). In 2014, ECB launched asset purchase program (APP) and later in 2015 it expanded the asset purchase program (EAPP) with the motive of purchasing the assets and securities value of 1,740 billion euros to take control of inflation inside the euro area. (Haavio et al. 2017). ECB purchase 14.9 billion value Finnish sovereign bond from March 2015 to September 2016 (planned) through Public Sector Purchase program (PSPP) (Claeys et al. 2015). In 2017, ECB held a quarter of Finnish sovereign debt through AAP and EAAP program (The Star online, 2017). Such security purchasing move from ECB has benefited Finland to raise the revenue to finance its deficit and increase Finnish GDP in short-term. (Haavio et al. 2017: 3-4).

4.1.4 Analysis of Finnish budget deficit instruments

Before moving forward to ‘economic growth’, it is better to understand the impact of implemented budget deficit instrument over the Finnish economy. From above, it is confirmed that the Finnish government mainly relied on Austerity measures (cut-back tax increase) and borrowing to finance its budget deficit. Quantitative easing program of assets purchasing by ECB and the near-zero interest rate helped Finland to raise the revenue to subsidy deficit burden somehow (OECD 2016: 11). Finnish government did not run down its foreign reserves to finance the budget deficit, instead, it invested currencies in short-term and less risky securities.

As Finnish Government mainly adopted cutback budgeting, tax increase and borrowing measures to finance the budget deficit, this analysis section of chapter 4 studies the impact of these three measures. From the literature, it is already understood that these measures forward burden to future generations. The government lowered down its corporate tax to encourage the business and investment activities

but increases and introduced new taxes on environment and health damaging products. Likewise, the Finnish Government mainly increased the indirect tax such as VAT and Energy taxes rates to raise the tax revenue. However, the average marginal individual income tax rate has risen since 2008 (see figure 8 above). The government itself reviewed that such acts of tax increment would hamper the economic growth (Ministry of Finance, 2010). Likewise, the government expenditure cannot be funded always through tax revenue or through increasing tax rate (Holmström et al. 2014). Finland tried out 'tax-increase' and 'expenditure cut' approaches to decrease the budgetary gap. However, since 2009, there is no any significant reduction in budget deficit, and the deficit excluding pension funds has also reduced (see figure 12). Thus, such scenario demonstrates lack of economic sustainability in those two deficit financing approaches. Likewise, the future increment in Finnish population age structure change is quicker compared to other EU nations, and change in population structure change exerts more pressure in pension and health care spending. Therefore, tax increase alone is incapable to fund it. (Ministry of Finance, 2017).

Financial reports austerity measures taken by the Finnish government distorted the economic growth, lowered the exports demand and productivity. Where exports declined by 0.4 % and private consumption decrease by 0.5%. Thus, this Finnish austerity measures dragged Finland into 'triple-dip recession'. (Financial Times, 2013). Likewise, due to massive cuts in educational and academic research sector by the Finnish government, over 1000 educated professional already left Finland between the year 2005 to 2015 (Helsinki Times, 2017a). Attempt to cut down holidays and wages by Prime Minister Juha Sipila in 2015 was hugely criticized by the public through massive strikes and protests (Rosendahl & Ercanbrack, 2015). Likewise, in 2015, a group of professors hired to examine the economic policy alarmed the slow Finnish economic growth through the tax increment and expenditure cuts (Helsinki Times, 2015).

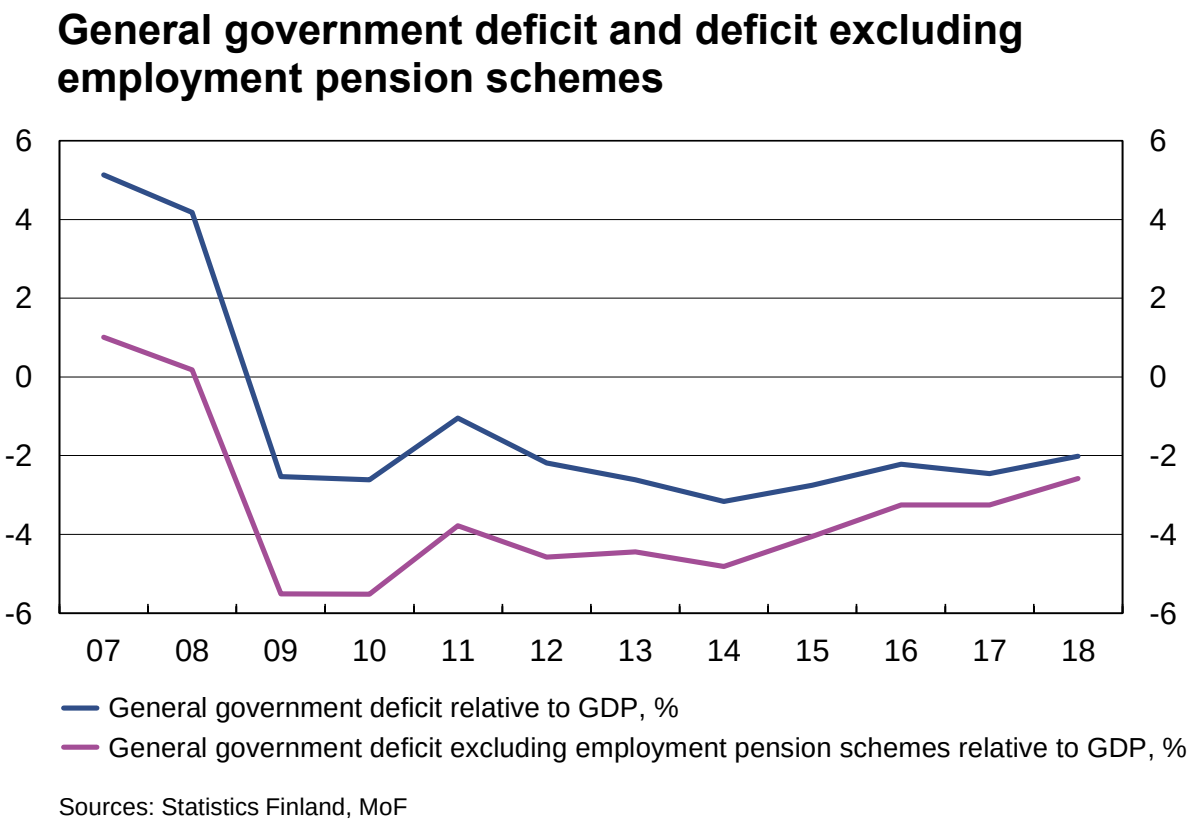

Figure 12: Finish government deficit scenario relative to GDP % (Ministry of Finance, 2017).

Finnish government during the recession borrow to finance deficit through issuing the various bond in the national and international market (see on Treasury Finland 2009, 2011& 2017). Likewise, ECB also purchased Finnish debt insecurities (see on Claeys et al. 2015: 5-11). Loan or Borrowing exerts pressure in public finance through laying down burden for next generation through a rising in debt (see figure 5, 9 & 10). In Finnish scenario, the public debt has not decreased since the year 2009 when borrowing started massively with increasing public debt in the same proportion (see figure 10). From the case study of Finland and literature review above, it has been identified that to repay the borrowing, government increases tax and apply spending cuts. Similarly, at the starting of recession in 2009, borrowing requirement was 8 billion euros which resulted in private crowding out, increase in corporate tax until 2014, decrease in export demand for Finnish product and productivity, and decrease in private consumption (see on Ministry of Finance 2010 & 2017, OECD 2014 & 2016; Verohallinto, 2015). Likewise, Quantitative easing in Finland has not met the inflation targeted by ECB, and Central bank reducing the interest rate did not bring expected result as well (see: Haavio et al. 2017: 3-4 & OECD, 2016: 11). As Finland has used its foreign reserve just for making a small payment in foreign currency (see on Republic of Finland, 2014 & 2016), however, previous studies

from Fisher & Easterly (1990) and Goldhill (2015) have found that running down foreign reserve always threaten the insolvency of the country and increases balance of payment risk.

Subsequently, in long-run, it is confirmed that all the above-mentioned instruments have a negative impact on the public finance and nation's economy. Likewise, all these measures have not brought a significant decline in Finnish government budget deficit and debt either. Hence, the debt has risen massively since 2009 (see figure 5 & 10). Therefore, the only way to make the country's economy and public finance sustainable is: ‘Economic Growth'.

4.1.5 Finland on economic growth agenda

Reinstating economic growth and bringing back the workforce are major essentialities in restoring public finance. Only through spending cuts and tax increment, economic recession and budget deficit spiral cannot be broken. (Holmström et al. 2014: 1,2 & 6). From the analysis above, it has been already understood that after the massive recession in 2008, Finnish economic growth got a huge shock. The nightmare continues with the downfall of leading electronic company: Nokia's losing its market. As an aftermath of recession, Finnish export and investment declined. The government used many measures to gain the economic recovery but could not achieve as predicted. Therefore, this section of this chapter 4 examines the economic growth efforts led by the Finnish government its impacts. Interestingly, despite attempting different deficit financing instrument to reduce the budgetary gap, Finland over the years is very much concerned in economic growth (see on Ministry of Finance 2010, 2018, 2017 & OECD 2012, 2014, 2015 & 2016).

Finland lost most of its economic hold due to industrial collapse and decline in manufacturing industries' efficiency occurred from the 2008 crisis. Finnish export was massively declined in 2009 and since 2009 Finnish economic growth is very slow compare to average growth of the market. Following year, high-tech exports contribution to the Finnish economy was declined from 20% to less than10%. (Holmström et al. 2004: 5). In 2010, Finnish export decreased by about 25% compared to 2009. This downfall in export was more than 1990s recession. (Ministry of Finance, 2010:18). Finland's deficit reached 3.5 % of the GDP violating the EU Stability and Growth Pact (Ministry of Finance, 2010: 5). During the 1990s crisis as well, the fast-economic growth was not expected. However, during that time, Finnish electronic and technical product demand rose extremely in the international market which led to the massive increase in exports and productivity of electro-technical products. Such accomplishment contributed in re-achieving robust Finnish economy in 2000, making Finland as one of the fastest increasing economies in Europe. (Ministry of Finance, 2010: 9, 22).

Now, there is a discussion among the economists, policymakers, and the public about whether Finland economy can bounce back in a same trend or style. Unfortunately, the 2008 crisis is more severe and is significantly different than the 1990s crisis. Because the latter crisis has many complexities, one of them is trouble in innovating economic growth ideas and another is, this crisis demands more time and effort to gain the economic recovery back in track. (Holmström et al. 2014: 1). And the new field of robust economic growth contributor has not identified or appeared in the Finnish economy yet (Ministry of Finance, 2010: 9). Nevertheless, Stability update report of 2009 states Finland mid-term objective for public finance is to achieve structural surplus 0.5% of GDP and a budget deficit of 2 % of GDP in the year 2013 (Ministry of Finance, 2010: 5, 26). Hence, this objective was not achieved in 2013 (see figure 6). Interestingly, 0.5 % budget surplus cannot safeguard the Finnish economic sustainability. Hence, the required budget surplus to insured economic sustainability is about 4% (Ministry of Finance, 2010: 11). Finland expected slow economic growth in GDP in 2010. Due to the high rate of unemployment, a massive decline in exports, and lack of new ideas, Finnish economy went bad to worse and this crisis will leave a significant mark in Finnish public finance and debt ratio (see figure 10). Therefore, from the above-mentioned scenario, Finnish public finance recovery become a huge challenge. And in coming years this challenge will be more complex due to the increase in the aging population of Finland which will create the labor shortage and prevent economic growth (Ministry of Finance, 2010: 9-10, 13).

Finland economy in 2009-2010 was weaker than EU average. At that time, the main factors slowing down the growth in Finnish economy were low rates of capacity utilization, low employment, and a decrease in asset pricing including house prices, and an increase in household indebtedness. Due to these factors, investment and consumption declined and economic growth was under 1%. (Ministry of Finance, 2010: 14,17). Likewise, public expenditure was very high after 2008 due to the rise in labor pay and various government projects. During the year 2009, government expenditure was 55%. (Ministry of Finance 2010: 41).

Finnish Government has realized that reinstating the growth has become crucial to uplift the declined living standard and distorted public finance sustainability. Therefore, the government has proposed reforms and improvements to increase the productivity and public Finance (as cited Government of Finance, 2013 in OECD 2014: 17). Finnish Government attempted to bring back the economy and the 2010 budget was forwarded. The proposals to increase the investment with the objective of cutting off the unemployment rate was forwarded. Likewise, innovation, information technology advancement, and environment and climate concerned were emphasized during the budget preparation. (Ministry of Finance, 2010: 42). In 2013, the Government announces municipal reform,

raising employment, increasing productivity growth, raising national tax and social and healthcare reforms as key priorities areas. Along with that, Government continued to invest in technology and provide strong support to banking and finance sector. (OECD, 2014:12, 16-17).

Thus, the Finnish government mainly focused on the following areas (see figure 13) to reinstate the economy after the 2008 recession:

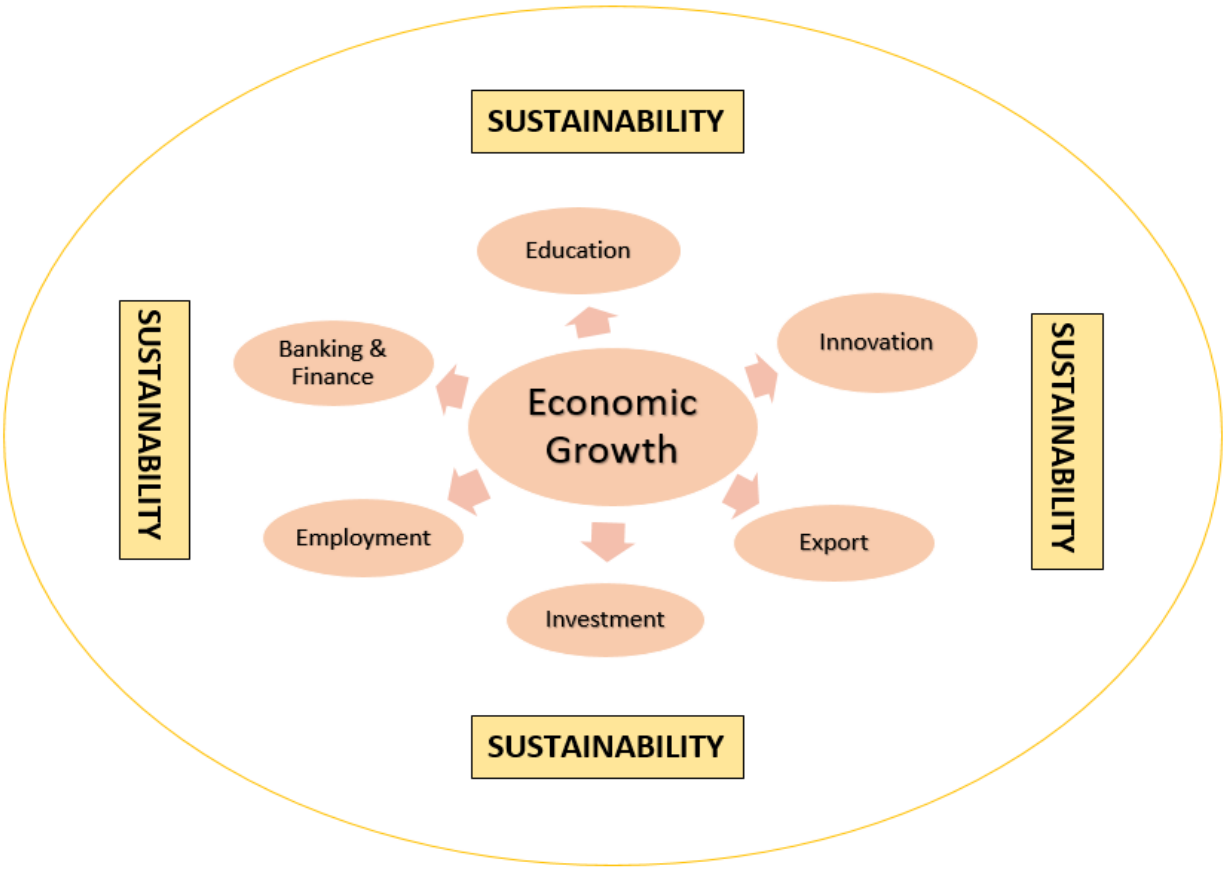

Figure 13: Factors of economic growth.

Innovation

Finnish innovation has declined since 2012 (OECD 2016: 31). However, despite the crisis, the Finnish government did not stop funding on innovation through the Finnish Funding Agency for Technology and Innovation (Tekes). Finland is also high-ranked (rank 4th in Cleantech Innovation index) clean technology innovator. Finnish cleantech business generated the value of about 25 billion, almost equal to the forest industry in 2014. Likewise, cleantech projects planned to generate 50 billion turnovers by 2020. However, Tekes support for green technology was less effective compared to ICT output performance as growth in the former sector is hard to achieve. Above 60% Finnish Cleantech companies earned their 50 % of their revenue from exports. Cleantech sector shares 0.4 % of the Finnish GDP, employs around 50000 workers and has planned to create more jobs by 2020. (OECD,

2014: 12-13). Government programmed to invest 1.6 billion between 2016-2018 to encourage innovation mainly through spending in technology and digitalization. (OECD, 2016: 26). In 2015, budget amount to 250 million were accounted for economic growth agendas, in which most of the funding went to investments related to innovation. (Ministry of Finance, 2015a: 8). Furthermore, in Finland, start-ups innovation is promoted by Alto Entrepreneurship society, Startup Sauna, and Slush events. Such events have attracted global attention and brought foreign investors in Finnish start-ups. (Holmström et al., 2014: 10).

Thus, Government encouraging innovation from education and research, and supporting business innovators with funding, global promotion, network building, and counseling. Likewise, the Finnish public also has tremendous support for innovation. As Government role in Finland had played a crucial role in developing the ICT sector over the last 10 years but government support for innovation in other sectors is not high. Innovation is crucial to reinstate Finnish competitiveness and economic growth. However, less R&D funds and patents in non-ICT areas are considered as the major hurdle for the Finnish innovation system. Finland's R&D funding start declining significantly from 2011 and government funding for R&D was cut by 14 % between 2010 and 2014 and Tekes budget for innovation funding is contracted by around quarter since 2010. Since R&D expenditure has affected by expenditure cuts, it could slow down the economic growth (OECD, 2016: 30-32).

Investment & export

Finnish budget falls into deficit after about 20 years of running into the budget surplus. This deficit was worsened with the decline in investment and export. Due to the loss in electronic and forestry sectors exports, Finnish trade went into deficit. Simultaneously, other growing business sectors could not capitalize on the trade deficit and increasing labor cost damaged the price competitiveness. (OECD, 2014: 9). In 2016, Finnish output was declined by 7 % compared to 2007. Export is an important factor for a small economy country like Finland, and Finland economy highly rely on exports. However, as per the 2016 OECD survey, Finnish export declined by 20% compared to the pre-crisis figure. (OECD, 2016: 7-8). Other factors contributing decline in Finnish exports are less demand for Finnish specialized products in the foreign market and Russian crisis upsetting Finnish exports, and it reduced GDP by 1.5 %. However, the decline in export was mainly because of non-cost factors and Finland losing its impact on international markets (OECD, 2016: 10). Furthermore, the demise of Finnish mobile business, decline in paper industries business and decreased of demand in other Finnish electronic products reduced Finnish GDP by 6% lesser in 2015 than 2008 (Ministry of Finance, 2017; 11). Finland has benefited through integrating its goods and services into global value chains (GVCs) since the 1990s. However, after the crisis, Finland faced the challenges in taking

advantage from integration in GVCs due to massively fragmented goods and services inside GVCs. Traditional Finnish industrial sectors such as chemicals and metals are already well integrated into GVCs but new development areas are not still fully integrated inside GVCs. (OECD, 2014: 10-11).

In 2013, the Finnish Government introduced the tax concessions for investors and firms to strengthen the economic growth and investments (OECD, 2014: 34). Likewise, in 2014, the corporate tax reduced to 20 % form 24.5% (Verohallinto, 2015). Likewise, in 2016, Government planned to increase public investment through mainly spending on transportation, energy, and water supply projects and infrastructures. Therefore, investment was increased during the year but distortions in global financial market raised the public financing cost. (OECD 2016: 8). Through Team Finland, the government encouraged to support exporters and Finnish branding through numerous government-funded institutions. Thus, the recovery button of the Finnish economy mainly deployed in domestic demand. In recent years, export prospects are not showing any significant improvements. Apparently, competitiveness pact encourages the exports but alone this is not enough to obtain the desired rise in exports, and the tax incentives tied with Competitiveness Pact will increase the sustainability gap before showing its positiveness over the Finnish economy (Ministry of Finance, 2017: 13). The government supported entrepreneurship and start-ups through improving the loan availability, and ensuring exports for SMEs which eventually raised the investment (European Commission 2018: 16). Similarly, the Finnish government raising the VAT does not decrease the competitiveness of the local export companies. It is so because VAT is imposed on export product and services. (Ministry of Finance, 2017: 24). Likewise, increase in construction investment since 2015 has boosted the private investment which was under capital depreciation in past years, but, future investment growth in electronics and other sectors may not be seen in (VATT, 2017: 47, 76). Finnish central government interest rates are low to encourage the investment, and low-interest rates are beneficial if future payback from the investments is enough to subsidize the initial costs (VATT, 2017: 120). In 2016, Finnish economy starts growing due to the growth in investment especially in machinery and equipment sector, increase in domestic demand, growth in exports, but the investment performance in most of the sector are lower than other EU countries. (European Commission, 2018: 4-5). Finnish government lowered labor cost to boost the cost competitiveness and labor cost was further reduced in 2017. (European Commission 2018: 10). However, interlinking wage increment with output progress has resulted in raising the wages and improvement of cost competitiveness slowly. It is done by raising the annual working tenure without providing extra incentives and part of social security contributions is moved towards the workers. Thus, this is defined under Competitiveness pact related to competitor economics (European Commission 2018: 10).

Furthermore, staring from 2017, the retirement age will be raised from 63 to 65 by increasing 3 months every year until it reaches at 65 years in 2025 (Yle, 2017).

As Finland is a beneficiary of European Structural and Investment Funds (ESI funds), it has the possibility to get 3.7 billion euros until 2020 to support investments, and develop domestic business and raise export. By end of the year 2017, EU support provided 2.1 billion euros to strength Finnish investment and export projects. During the process, around 1900 institutions received supports where 630 organization introduced new products, likewise, 840 start-ups were supported and around 8900 new jobs were created through such support, 2200 agricultural based investment projects and other numerous infrastructural investment projects were supported by EU support. ESI funds also provided finance possibilities and guaranteed 240 SME loans. Thus, Finland uses European Fund for strategic investments. (European Commission, 2018: 13).

Employment

Increasing employment with well-functioning labor market and investment in education and skills is the most sustainable way of achieving long-term economic growth (cited as Pareliussen, 2016 in OECD 2016: 6). Unemployment in Finland starts rising slowly since 2012 (OECD, 2016: 7). In 2016 employment rate begun to rise and reached 68.9% and Ministry of Finance estimated that the employment will rise to 70 % in 2019 (Ministry of Finance, 2017:15), however, the 72 % target set by Finnish government is still under-achieved (VATT, 2017: 76) and employment rate target for 20-64 years old was 74% (European Council, 2018: 2). Finnish unemployment rate is higher than other Nordic countries which cost 6 billion euros unemployment allowances for the Finnish government in 2015. The figure of long-term unemployed is at the highest rate since the 1990s recession (Ministry of Finance, 2017: 9). Recently, the Finnish social security fund is in deficit due to rising unemployment (Ministry of Finance, 2017: 16). The unemployment insurance fund (part of Finnish social security fund) borrowed 1 billion euros in last few years to cover rising unemployment benefits. (Economic policy, 2017: 19). Nevertheless, Government is hopeful in strengthening public finance by 2 billion euros by the year 2021 (Ministry of Finance, 2017: 23).

Education

In addition, the Finnish education system is one of the best in OECD and has high PISA ranking. Finland ranks second among OECD countries in adult education skills. (OECD, 2016, p.28). Basically, the education level of Finland has increased but numerous people lack suitable skills and education required in the workplace. The unemployed people are either with no skills and no education required by the job or highly qualified (Ministry of Finance, 2017: 39). On November 7th,

2016, ‘Finnish Ministry of Education and Culture, the Ministry of Social Affairs, the Ministry of Economic Affairs and Employment, the Ministry of Interior and the Ministry of Defense' co-operated to launch cross-sectoral work, to decrease youths, not in education, employment or training (NEET). NEET agenda mainly includes vocational education and training reform to promote qualification and competencies required at work. Likewise, to enhance the immigrant's integration process, the government-issued integration program for 2016-2019. The program includes more working-life orientations, vocational education and training, and fast-track employment of immigrant's trial to speed up employment of immigrants. The Employment and Economic Development (TE) is authorized to select job seekers for right training, and to provide information regarding desired and suitable job for job seekers, and information about participated employers available in TE service network. (Valtiovarainministeriö, 2017: 16-19).

Finland meets the EU target for all level of education. In 2016, Ministry of Education and Culture agreed with universities to speed up placing students into job life for the period 2017-2020. Such an agenda was funded by extra government spending. The aim of funding is to collaborate respective universities with digitalization perspectives, education improvement, and student orientation. (Valtiovarainministeriö, 2017: 30-31).

Finance and banking Sector

Financial soundness indicators demonstrate overall Finnish finance and banking system is robust and Finnish banking sector is the backbone of the economy and its performance has a major impact in overall internal and external economic activities of the country (European Commission, 2018: 18-19). Finnish Banking sector is dominated by other Scandinavian banks, and banking and finance were resilient during the crisis. Top-five operating banks in Finland have three times more assets than Finnish GDP and holds 80% of market share (cited as Blundell-Wignall and Roulet, 2013 in OECD 2014: 15). Surprisingly, the Finnish financial system was robust during the crisis, and financial circumstances were supportive as well. Public and corporate bank loans interest rates were record low. However, business sector credit growth was gloomy due to low investment and high loan uncertainty limit. Thus, the bank credit was replaced by bond issuance as a long-term financing measure. Likewise, household debt rose significantly in the last 10 years. (OECD 2016: 12-13). In addition, banks in Finland provide easier finance opportunities to SMEs compared to other EU countries (European Commission, 2018: 19).

As the Finnish banking system is robust, there is very less chance of asset bubbles. Nevertheless, Finnish banking system is strongly connected with other Nordic and Baltic countries, and banking

crisis on those countries might have systematic effects on Finnish banking system. Similarly, structural build-up of Finnish banking system is also vulnerable to a global liquidity crisis. (OECD 2016: 12-13; European Commission 2018: 18). Banks in Finland need to follow capital and liquidity regulation made by Systemically-Important Financial Institutions (SIFIs). SIFIs has been established during 1990s crisis to prevent the Finnish banking crisis including systematic fall of the banking system and SIFIs existence led banks in Finland to avoid banking major crisis since the 2008 recession. Finnish banks capital ratio during the crisis was high but the capital to assets ratio was low than other OECD countries. (OECD, 2014: 13-16). Nordea, one of the major banks operating in Finland decided to move its headquarters from Sweden to Finland by the end of 2018. This will raise banking sector capital to 420% of GDP and will provide the extra systemic risk tension to the Finnish regulator. (European Commission, 2018: 19).

4.1.6 Reinstating Finnish economic growth

Major factors contributing to Finnish economic growth are already discussed in the last section of this chapter, however, this part of the thesis provides conclusion and recommendation to Finnish economic growth. In general, Finland made economic growth offerings through business development, well-designed labor market, funding in R&D, investing in education, promoting innovation and establishing robust banking and finance system (see on OECD 2014 & 2016; Holmström et al., 2014; Ministry of Finance, 2015). Indeed, the robust economy has a sustainable self-financing approach to piling budget deficit and debt (see on Atkinson, 2014 & Holmström et al., 2014, Ministry of Finance, 2015). However, from the case study of Finland, it is found that Finland is struggling to reinstate its economic growth. (Holmström et al. 2014: 8-9). Likewise, form this thesis study as well, it is confirmed that Finland requires sustainable economic growth to gain budget surplus again. Nevertheless, study form Holmström et al. (2014: 1, 14) demonstrates that there is no any way to bring back economy swiftly. Therefore, Finland needs sustainable long-term approaches to reinstate its economic growth, which can auto-finance its budget deficit.

Finnish pre-crisis economic strength was based on technological and ICT innovation. Finland is no more a model country as an innovative high-tech exporter after the 2008 crisis. (Holmström et al. 2014: 6). Therefore, Finland strongly needs to re-establish innovation and business competitiveness to reinstate foreign trade and investment to settle down the distortions in public finance. (OECD 2014: 6; OECD 2016:16). Numerous government institutions are supporting business innovation and development, and rationalization are required to gain the efficiency. Similarly, substantial efficiency can be achieved through reorganizing higher education and research system. And Tekes funding might be restored by private funding. (OECD, 2016: 32). Furthermore, Finland still has an educated

and skilled labor force, advanced ICT capabilities, and business leaders with the exposure of the global market. So, through this platform, Finland has a high probability in regaining output and competitiveness that it has lost over the decade. Finland also possesses the comparative advantage in IT sector, which can be used to promote or branding its ICT products and services. Likewise, Finland is well reputed in digitalization including automation and robotics which can be utilized to increase labor output and performance. Finnish government should consider technology and innovation competition to promote the innovation. These types of events have been able to make bigger innovations like self-driving cars other advance robotic innovations. Such a unique innovation technologic breakthrough will surely uplift the Finnish economy. Finland medical databases are globally renowned for medical research, and this competitiveness should be promoted through worldwide commercialization. Likewise, start-ups are essential for innovations and economic stability. Therefore, the Finnish Government should promote and invest in them which will eventually bring more jobs and increase productivity. In the USA, out of top 20 companies, 6 started with the venture fund assistance. Finland should also believe in themselves and do not live in a misconception that innovation requires huge funding. More than 50% of the top 500 US-based companies get started when the American economy was down, and another example is re-emergence of Nokia during the Finnish Crisis. Therefore, to promote innovation a huge amount of funding is not necessary. Similarly, Finland can learn from the success story and ideas across the globe and transform them into the Finnish system. Such practices save research time and funding, assists economic improvement. Expert money is lacking in Finland so does the expert investors because Finnish start-up activities are at the pre-amateur stage. These kinds of experts provide money and their expertise, and same time provide networking. Networking is very essential and satisfies the law of exponential growth. Likewise, Finland also does not possess many venture capitalists, and it has placed scarcity in financing start-ups and company growth in Finland. Foreign investors in Finland as well do not have an extensive investment portfolio and they do not have a serious commitment towards Finnish start-ups. Finland should try to encourage the domestic entrepreneurs and start-ups, and global dynamic innovation chain needs to establish in Finland to have a growth spiral. (Holmström et al., 2014: 6-10).

Finland needs to integrate its newly developed areas like electronic games, bio-technologies, and green technologies and other promising areas which could provide significant economic gains. Hence, GVCs raised the specialization and increase output globally. With well-structured education, active labor force, robust social security, Finland has competences to re-capture benefits from GVCs. (OECD, 2014: 10-11).

Apparently, to achieve profitable businesses and investment, and to explore new innovations, investment in R&D is foremost. Hence, in Finland, investment in R&D began to decline since 2010, however, the fall of Nokia is one of the contributing factors in R&D spendings declination in Finland. Likewise, fewer R&D spendings have significantly lowered total productivity in Finland after the 2008 crisis. (VATT, 2017: 49). Research universities and institutions alliance with companies is one of the best among OECD countries. Such attributes can be used to promote innovation and to encourage entrepreneurship. (OECD, 2016: 26).

After the 2008 crisis, the capital stock of the firms did not rise at all. Finnish business organization was pessimistic about the future income since the crisis, and most of the companies did not dare to invest in new capital. Thus, investment over the years did not increase due to very low productivity growth. (VATT, 2017: 46). And to increase innovation and establish a profitable investment, spending on R&D is essential (VATT, 2017: 49). Investments on human capital is an integral activity to decrease the unemployment. Thus, in Finland case, providing refugees and immigrants with language and other technical skills stimulates the economic growth through an increase in skilled labor force and output. Hence, Hangartner & Sarvimäki (2016) from their Swedish case study found that education and training assist immigrants to find work. (VATT, 2017: 74-75). Likewise, the Finnish employment rate of 55-64 years old men is 60 % whereas Sweden has 77%, which is a burden to Finnish public finance. Thus, early retirement or exit of this age group should not be promoted and such kind of process should be demolished (Ministry of Finance, 2017: 29).

Nevertheless, global banking and financial regulation need to be followed by the Finnish Banking system too. Basel III's requirement for liquidity and capital needs to be coordinated with SIFIs. Similarly, SIFIs should cooperate with Nordic countries to formulate undisputable regulations which may help in creating a mutual credible resolution, that assists in normalizing public finance risk. (OECD, 2014:13-16). Likewise, strengthening the liquidity buffers decrease Finland's vulnerability exposure to possible global financial disruptions (OECD 2016: 13).

5 DISCUSSION

This master's thesis framework contained various economic distortions encountered by Finnish government during Finnish budget deficit journey originated from the 2008 global crisis. Thus, a case study of this thesis provided the opportunity to study a decade (2009- 2018) of economic stimulus of Finland resulting long-lasting budget deficit and huge debt. This case study of Finland is purely based on secondary sources. However, this thesis has been able to sketch a complete diagram of the budget deficit from beginning to recovery. The thesis has mainly studied the financing instruments' processes and their impact over economy. Apart from the 2008 global crisis effect, the main sources of Finnish budget deficit detected form the study was: increase in aging population, decrease in trade and investment and overspending by the Finnish government. Simultaneously, all previous findings reviewed in the thesis and thesis findings agree that overlapping budget deficit has negative impact on the economy.

Comparing with the 1990s Finnish crisis findings of Gorodnichenko et al. (2012), Nygård et al (2013), Economics department (2010), OECD (2012) and Ministry of Finance (2018) with this thesis findings, it is found that current economic crisis of Finland has similar characteristics as of 1990s crisis. The difference is that during the 1990s crisis, energy cost hugely surged and banking crisis aroused, but in this 2008 crisis, energy cost did not increase significantly, and banking crisis was not experienced. In both crises, the common source was the collapse of trade with Russia, rise in unemployment, overspending by the government in infrastructure, loss of productivity and competitiveness. Banking and Finance sector in Finland were found in a strong position after the establishment of SIFIs.

Interestingly, this thesis study found that the government's way of budget deficit financing has changed over the years. One example is inflation targeting measure to raise the budget revenue i.e. quantitative easing has not been so much effective financing tool in this modern crisis anymore. Japanese quantitative easing failure discussed in the ‘previous study finding’ chapter is a perfect example of QE failing to bring desired result. Likewise, in the Finnish case also decreasing interest rate does not bring any significant positive economic outcome. From the previous studies conducted by Fisher & Easterly (1990) and Dominguez (2012) has also confirmed that QE just brings the positive result in short-term, and in long run, it will end up an economy with hyperinflation. Thus, financing a budget deficit through printing money is outdated. The Finnish central government lowering the interest rate was also not much effective, such process disturbed the economy with higher household debt (see OECD 2016; 9-13). Finnish budget deficit financing method was less

inflationary, and this finding agrees with Gupta's (2007) finding of developed world where budget and debt financing is less inflationary.

Similarly, in Finnish case, QE did not bring any significant changes to the economy, however, in short term, it provided extra financing backup through ECB asset purchase program. Finland did not rundown its foreign reserve to finance the budget deficit, but just part of foreign reserves was used to do smaller payments. Finland relied heavily upon borrowing, tax increase and cutback budgeting to finance its budget deficit. Apparently, Finland invested its reserve money into securities to strengthen its future income. Since Finland did not use 'QE' and 'Foreign reserve' as the major tools to finance its budget deficit, through a case study of Finland, studies on these instruments in response to Finnish budget deficit could not be done extensively.

Reflection of David Ricardo's theory of deficit financing is found in Finnish government's deficit financing technique, where Finnish government raised the tax rate to pay the borrowed money. When the tax income come short, Finnish government massively started cutting down expenditure i.e. since 2012. This thesis findings agrees with the previous findings of Dunsire & Hood (1989), that the government deployed cutback if borrowing and tax increase could not finance the deficit.

Another thesis finding comparing with Cebula et al. (2014) finding on US perspective found similar negative changes due to the tax increase. In both economies, tax increase led to the increase in unemployment, decrease in the yield of government bonds, reduction in per capita income, slow economic growth, and low private investment and loss in productivity. Therefore, this thesis findings and past authors (Cebula et. al, 2014; Broadbent & Daly, 2010; Roubini & Sachs,1989) findings related to 'impacts of tax increase on economy' are found similar.

Thesis agrees with Atkinson (2014) that the government should increase the tax in such areas where harm to economy is zero. The thesis also supports the Finnish government strategy of raising the indirect taxes rather than direct taxes, introducing new energy and environment tax, and lowering corporate tax. Finland introducing new taxes and raising indirect tax rates to raise the tax revenue resembles with the finding of Atkinson (2014) where this kind of tax reform does not hamper the export since VAT is imposed only on imports. Other environmental taxes like carbon tax has reduced the fossil fuel consumption in Finland and Finnish society has become more environmentally friendly and motivated to innovate clean technology in Finland. In addition, thesis findings agree with the previous finding of (Baker D, 2011) on financial taxes on speculation and gambling.

First study proposition of this thesis was that increase in the budget deficit will simultaneously raise the debt, and such a phenomenon hamper the economy. This proposition is proved right from the case

study of Finland. Due to massive sustainability gap, Finnish debt to GDP percentage went all-time high (above 60 %) and the downfall of the Finnish economy begun after the huge budget deficit in 2009 resulting declination in all sources of Finnish government revenue. Literally, this thesis findings on ‘effects of budget deficit on economy' have high extend of similarity with the previous findings.

From the case study of Finland, it was found that private investment crowding out due to fear of interest rate increases in future, and investment declined due to fall in export and lack of trust in Finnish companies after the fall of Nokia. Due to government's cutback strategies, Finland lost many professionals. Cutting down people from jobs led to highest unemployment rate after the 1990s crisis. The interest rate was also high from 2010 to 2013 but started decreasing from 2014. One of the reasons in decreasing Finnish future income is due to the decrease in yield of Finnish bonds and securities.

Second study proposition of the thesis was that the ineffective utilization of budget deficit financing instruments places the economic burden to the future generation. Ineffective implementation of budget deficit instruments by Finnish government (increasing massive tax, cutting down irresponsibly and huge borrowing after 2008 crisis) led Finnish debt to rise all-time high and placed economic burden to a future generation which will take time to recover. Nevertheless, all the financing instruments generated finance to budget deficit, but in short-term and in long-run they left the burden to the future generation. Thus, thesis agrees with the previous finding of Stiglitz (2000) i.e. debt-financing method forwards the debt burden to the future generation.

Third proposition of this thesis study was to find whether cutback strategies provide better and long-term financing option to the sustainability gap. Well, in Finnish scenario, it does provide the huge saving. In contrary, due to massive cuts, Finland lost many professional, unemployment level went all-time high and productivity went down. Thus, cutback brought a mixed result in the Finnish economy. However, the Finnish Government after 2012, took cutback budgeting as the major financing instrument to its rising budget deficit. Our finding agrees with previous studies of Dunsire & Hood (1989), Raudla, Savi & Randma-Liiv (2013), Papenfuß (2014) and Baker, (2011) that cutback strategy serves better than other financing instruments to the economy, as it happened in the Finnish economy. Cutting spending has brought a massive decrease in government expenditure and brought huge saving in government’s current account.

Finland situation of borrowing reflects the twin- deficit effect in US economy studied by Bartolini & Lahiri (2006) where due to decrease in national saving and consumption, the government expanded its current account deficit, investment was reduced, annual deficit expanded, and foreign borrowing

became a necessity. However, borrowing did not treat the Finnish economy well. It results in tax increase and massive cut and raised the debt burden. Likewise, austerity measures (taxation and cutbacks) works for Finnish economy in short term, but in long term, they provide numerous hurdles to economic growth. Thesis fourth study proposition viewed economic growth as an optimum solution to fix and maintain the sustainability gap. Thesis findings on economic growth in response to budget deficit agree with the findings of previous findings of Atkinson (2014), Barro (1996) and Stiglitz (2014). Likewise, Finland need for economic growth is realized in this thesis and supports the study and findings (concerning Finnish economy) by Holmström et al. (2014), OECD (2014 & 2016) and Ministry of Finance publications from 2009 to 2018.

This thesis disagrees with the cutback strategies, tax financing options of Ricardo and borrowing to fix the sustainability gap. Hence, this thesis focuses on a long-term economic fix rather than mid-term and short-term. Thesis supports the ideas of Keynesian economists of spending and investing more during the recession; where beneficial multipliers' effects through raised expenditure outweigh all the economic burden and crowding out influences (see Perry 2014). Hence, from this thesis study, it was found that cut back does not provide financing in long-run. It raises the unemployment due to labor cutoff and same time decreases innovation due to cutting down of R&D funding. In contrast, thesis agrees with the previous study of Saleh and Harve (2005) on spending in the productive areas for economic gain.

Thesis finding agrees with economic growth determinates explain by Barro (1996), as similar finding was found from Finland case study. It was found that Finland encountered numerous challenges in reinstating economic growth. Thesis agrees with the problems placed by the aging population over the Finnish economy. Various authors (Hule & Sutter 2003, Atkinson 2014, Dunsire & Hood 1989 and Raudla, Savi & Randma-Liiv 2013) and numerous Finnish government's publication have mentioned negative impact driven by aging population problem in the Finnish economy. Similar findings are noticed in this thesis. Aging population has increased the Finnish government expenditure due to rise in social security cost on them, retiring population from workplace has resulted in income tax increase of working population and triggered the shortage of experienced labor force in Finnish labor market.

Another challenge found during reinstating Finnish economic growth was decline in exports and private investment. Various economists (see on Holmström et al, 2014; Saleh and Harve 2005; Atkinson, 2014; Fisher & Easterly 1990) have found the same result that trade deficit and low private investment hamper the economic growth significantly. Likewise, lack of enough innovation and its marketing has been found as a major driver for declining export and investment in Finland. Thesis

supports the Finnish government encouraging clean technology innovation; however, thesis disagrees with the Finnish government idea of the less R&D spending in other innovation areas than ICT. Finnish government's less spending in R&D has posed the threats to innovation as many professionals left Finland for better opportunities in other countries. Thesis disagrees with the massive labor force cut by Finnish government during the crisis period and its obvious impact on the economy raised the unemployment rate and decreased productivity. In contradiction, thesis finding supports the previous study of Fieldhouse & Thiess (2013) idea of reinstating the economy through bringing labor force back in work and agrees with Atkinson (2014) finding of raising the working age. Thesis findings also support the idea of Ezell et. al (2016), Atkinson (2014), Barro (1996) that new ideas and innovation is a most essential factor for economic growth. Since Finnish pre-crisis economic strength was heavily based on innovation (Makkonen, 2013). Another finding through which Finland can reinstate its economy is from goods and services integration into GVCs (see OECD, 2014).

Lack of outbreaking innovation, increase in unemployment, an aging population problem, trade deficit and decline in private investment were found as the main challenges in re-establishing Finnish economy. It was found that re-establishing process is only possible with creating innovation and through raising employment because innovation will provide more investment opportunities, raise the exports and creates new jobs which will bring more tax revenue at optimum tax rate, and raised employment and increase the productivity; which all will eventually decrease the government spending on unemployment benefits and other social benefits. (See on Ezell et. al, 2016; Atkinson 2014; Barro 1996; Makkonen, 2013). In addition, thesis findings and the study of US Senate (2011) are similar that the IT and digitalization plays a crucial role in generating saving and keeping productivity in track during cutback budgeting.

Previous studies presented in the thesis explain the behavior of the employment and innovation over economic growth. Numerous authors such as Fisher & Easterly (1990), Atkinson (2014) and Holmström et al. (2014) were concerned about the economic growth to make economy sustainable. Likewise, many measures for economic growth were discussed in this thesis, however, Finland did not implement all the measures discussed in the literature, since all the measures are not applicable in the Finnish case due to the nature of the crisis. This finding shows the variation of theoretical review and empirical findings.

From this case study, it was found that the Finnish government is well familiar with the possibilities and know-how of economic growth. Finnish government approach to the Economic growth totally reflect the Atkinson's (2014) economic growth resolution. However, it seems that none of the measures and strategies bringing the desired results (budget surplus/ rapid economic growth) in the

Finnish economy. Therefore, still in the year 2018, the Finnish government budget is running a deficit. Fortunately, the study from European Commission (2018) explains the positive changes and improvement of the Finnish Economy since 2017, however, Finland government is still searching for the breakthrough to get its 2% budget surplus target.

After presenting and discussing case study's findings, now it is time to summarize the results and present the accomplishment of this master's thesis and its contribution to the academic and practical level. Before, moving forward to conclusion chapter, budget deficit financing process and its impact over economy and budget are presented in table 3 below. After all, the last chapter will conclude the study by collecting all the most essential themes discovered during the case study.

	Financing Process	**Impact on Economy & Budget**
Borrowing	• Securities, Treasury and Bond issuance • Borrowing from national and international banks	• Increase burden to the future generation • Increase tax to pay rising debt • Spending cuts • Provide Finance Short-term or mid-term
Tax Increase	• Increase in Income tax • Introducing new taxes • Increase in a VAT and other taxes (indirect taxes)	• Increase in saving • Decrease in consumption • Decrease in production • Provide finance in short-term
Cutback strategies	• Cutting down government expenditure by cutting down unnecessary workers and projects.	• Decline in exports • Professional loss • Reduction in services • Rise in unemployment • Provide Finance in short and mid-term
Quantitative Easing	• Printing money • Assets buying program • Lowering the interest rate	• Leads to hyperinflation • A decrease in future income • Increase in private debt • Short-term finance
Foreign Reserve	• Running down foreign exchange reserve	• Decrease the nation's currency hold • The balance of payment risk • Short-term finance
Economic Growth Agenda	• Increase in Employment • Increasing Investment & Export • Raising Innovation • Providing Education & training • Tax reform	• Sustainable economic growth. • Healthy sustainability gap. • Lower debt burden. • Well, prepare for an economic crisis. • Provide finance in long-term

Table 1: Process of financing instruments and their impact over economy and budget.

6 CONCLUSION

In this final chapter, the summary of the main findings of this thesis is presented. In addition, theoretical understanding of previous findings on budget deficit financing is included. Subsequently, practical implications and recommendation for probable future study are presented. Re-calling the research problem and research question is useful during summarizing the case study findings. Apparently, this chapter includes the main findings of this thesis, but it is advised to explore the analysis chapters to obtain an overall view of the case study and its accomplishment.

The research problem of this thesis was *'How Finland can achieve sustainable economic growth that facilitates an auto-financing solution to its long-run budget deficit?'* and research question was *RQ: How to finance the government budget deficit without hampering the economy in long run? Which budget deficit financing instrument provides a sustainable fix to the budget deficit?*

First, it was found that economic growth is the only way to achieve the sustainable economy and it is self-financing measure available for sustainability gap reduction (Atkinson 2014; Holmström et al, 2014). Increasing employment, raising investment, spending on education, increasing exports and, encouraging and creating innovation was found as a positive driver in reinstating economic growth. Thus, all those drivers are directly proportional to economic growth. Second, it was found that all the budget deficit instrument bring positive impact in the short and mid-term. Third, it was found that piling budget deficit hampered the economy adversely. Likewise, accumulated debt will leave a long-lasting mark on the economy as it happen in Finnish economy. Therefore, it can be concluded that the economic growth is the best and self-financing solution to the sustainability gap.

Effects of Budget deficit found from case study were crowding out, rise in unemployment, decrease in standard in living, increase in tax, increase in private saving, decrease in national saving, increase in debt and raise in the interest rate. Effects of the budget deficit on economy explained in the literature and case study findings on respective topic are similar. Hence, this thesis finding and previous finding agrees with each other in this context, and it is also proved that the budget deficit has a hazardous effect on the economy.

Main challenges found in Finnish economic growth were aging population followed by declining private investment and exports, rising unemployment, spending and labor cuts on R&D and rising social security cost. Likewise, sources of Finnish budget deficit apart from 2008 global crisis was a massive decline in electronic and forest sector exports, the downfall of Finland main company i.e. Nokia, rising cost to an aging population and slower economic growth, and other government's spendings. Surpringly, during the crisis, Finnish banking and Finance system found robust and

resilience against the crisis. Both private and corporate loan were easily available with the low-interest rate in order to boost productivity and consumption.

Finland mainly used three financing instruments to finance its budget deficit: borrowing, tax increase, and cutbacks. Finnish government mainly borrowed through issuing bonds and securities, and received funding from ECB for trade and investment projects. Finnish government mainly increased the indirect tax i.e. VAT and introduced the new environmental tax. Actually, these types of taxes brought a positive result in Finnish economic growth. However, after 2014, the Finnish government reduced corporate tax to encourage trade and business. Mainly after 2012, after-tax revenue and borrowing were not enough to finance the sustainability gap, the Finnish government started to cut down labor and spending to ease the current account deficit. This massive cut obviously brought huge saving but in loss of professionals and output. Likewise, it raised unemployment and reduced per capita. Borrowing accumulated huge debt, and tax revenue too did not bring any significant positive change in Finnish economy.

In addition, Finnish government did not run down its foreign reserve to finance the budget deficit and quantitative easing aslo did not work well for Finland. Central government decreasing the interest rate reduced the yield on bond and stock, and increased the household debt. Assest purchasing program of ECB assisted Finland to raise the current asset in short-term but did not bring any significant benefits since ECB holding Finnish bond and securities did not insure any huge return. As any financing option could not bring a significant result, Finnish government required to find new sources of economic growth i.e. create innovation to regain increase in export and investment (OECD, 2016, p.16). Nevertheless, economic growth barriers are so deep-rooted in the Finnish economy, it will take time to recover. Finnish government needs to raise the employment level, spend more on R&D and create more innovations.

From the analysis, it was found that all the budget deficit financing instruments have negative effects on economy. Borrowing increases the debt burden to the future generation. Raising the tax to cover the borrowing reduces the private saving, consumption and productivity. Likewise, cutback strategies also leads to job, productivity and services reduction. Low-interest rate results low return on investment and securities, increases private debt, and place the risk of hyperinflation. Running down Foreign reserve has a balance of payment risk and inslovency risk.

Interestingly, it was found that neither in the previous finding nor in our thesis finding, any of the budget deficit financing instruments has brought long-term positive effect on the economy. Therefore, after careful analysis, it is concluded that without economic growth focus, sustainability is impossible.

Economic growth has a self-financing button without hampering the economy. Our thesis finding totally agrees with the previous findings of Atkinson (2014) and Holmström et al. (2014) wherein both academic journal have suggested to focus on economic growth while financing budget deficit. Likewise, this thesis findings also supports the Keynesian model of spending more during the crisis and disagree with Classical model which is against spending.

Currently, Finland is implementing cutback as an integral part for its deficit reduction program. Therefore, this thesis recommends Finnish government to follow the Torben Beck Jørgensen cutback model and strategic style cutback mentioned in Dunsire & Hood (1989) Book : '*Cutback Management in Public Bureaucracies'* and consider the findings of Hule & Sutter (2003), Atkinson (2014), Dunsire & Hood (1989) and Raudla, Savi & Randma-Liiv (2013). Nevertheless, the Finnish government needs to spend on the areas that can generate sustainable income in long-run. If the government cut down spending, simultaneously, it reduces jobs and productivity (see on Atkinson, 2014; Holmström et al., 2014; Ezell et. al, 2016). The government should only cut down unnecessary spendings (Dunsire & Hood, 1989). In addition, government should raise the tax in such areas where there is zero or nominal effect; like Finland raised VAT and introduced new energy taxes (Atkinson, 2014).

Since, both, the debt-financing and tax-financing method of budget deficit has a negative impact on the economy. So, government from some point of the crisis should start focusing on economic growth, and should spend on productive areas and on innovation. Keynes suggested that the government should increase the expenditure during the recession and decrease the tax, and the government should not try to balance the budget quickly because the high expenditure of government will eventually increase the demand volume. Consumption will be higher since people spend additional income generated through lower tax. (see on Perry, 2014; Nelson 2006 and Bernheim, 1989). Likewise, the government should encourage investment in the innovation of new technologies (Barro, 1996; Ezell et. al, 2016). These phenomenons describes the self-financing nature of the economy through investment in productive areas, eventually which in return, brings the economic sustainability.

As a conclusion, this thesis study presents a holistic view of Finnish budget deficit journey. The research finding supports previous theories (see Atkinson, 2014; Holmström et al., 2014; OECD 2014 & 2016; Fieldhouse & Thiess, 2013; Stiglitz 2014; Saleh & Harve, 2005; Fisher & Easterly 1990; Barro,1996) of financing budget deficit with economic growth focus. Majority of previous studies were focused mainly on investment, trade, and employment as the main driver for economic growth. This thesis agrees with those findings, however, this thesis discovered the essentiality of innovation is utmost in the current economic scenario to gain economic growth and stability. This

thesis mainly focused on the post-crisis senario of Finnish 2008 crisis and therefore the findings are based on the post-crisis activities of Finnish economic behaviour.

Holistic in-depth analysis and findings of this thesis study provide essential information for practitioners as well. As a practical implication, this thesis emphasized the way of achieving economic growth in response to budget deficit. The thesis has also highlighted the possible challenges that government can encounter during the economic growth process, and this thesis act as a guidebook for financing sustainability gap in a sustainable manner. Strategically, innovation is the main economic growth generator, and finding suggests investment and encouragement in innovation paybacks in sustainable manner.

In-depth analysis and findings of this thesis assist government to select suitable budget deficit financing instrument through reviewing their impact on the economy. This thesis has provided a various way of fixing the sustainability gap, but the government and public manager should identify themselves with the risks and return associated with them. The selection and implementation of financing instrument and economic growth approaches depend upon the country's crisis scenario, available financing instrument options, and its applicability over that country's economy. To the general readers, this thesis act as a handbook of financing government budget deficit.

This research contributes to new theoretical implications in the field of government budget deficit financing literature. Most of the previous studies are not strongly focused on ‘innovation for economic growth’. Thus, this thesis providing the platform for this direction of deficit financing research. Many previous studies were found to be economic growth focused, however, all those studies have not considered the overall picture of financing budget deficit instruments. Likewise, previous studies have not evaluated all the budget deficit financing option in one single study. Thus, there are very few studies are conducted with combining budget deficit and economic growth with innovation This thesis has combined all three above mentioned aspects to deliver perfect budget deficit financing option(s).

Furthermore, this thesis is limited to the single case study. So, further research on the same topic can be conducted with multiple case study and with a comparative approach. Similarly, evaluation of budget deficit instruments requires more research in the future since the nature of crisis and instruments to finance it alter in accordance. Likewise, during this master’s thesis writing, just few researches and studies were found on Finland prospective concerning budget deficit financing instruments, so, further study in this area is also suggested. Nevertheless, this thesis finding is just based on 2008 Finnish post-crisis scenario, therefore, to get a more concrete and explicit answer over

deficit financing and its nature, study with a larger sample of information and data, and with multiple-country can be conducted. This thesis topic has been able to illustrate the entire picture of ‘financing budget deficit’, therefore, this thesis' research problem and question well-deserved to be studied in the future.

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