Foreign Aid and Economic Development

A study of

Foreign Aid and Its Effects and Relationship with Per Capita Income of Afghanistan

BY

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DECLARATION OF AUTHORSHIP

I hereby certify that the work embodied in this thesis project is the result of original research and has not been previously submitted for a higher degree to this or any other University or Institution.

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ABSTRACT

Despite the fact that Afghanistan has been receiving hundreds of billions of dollars of foreign aid since the 1970s, still, the impact of foreign aid on economic growth and particularly on per capita income of Afghanistan has been negligible and most of its population is still living below the poverty line. The rate of development seems misaligned with the level of foreign aid provided to the country. Afghanistan is becoming aid dependent, a fact causing negative consequences both economically and politically. Thus, the objective of this study is to investigate the effects and relationship of foreign aid with per capita income of Afghanistan. And the research question is: Is there any effect and relationship of foreign aid with per capita income of Afghanistan?

The researcher applied quantitative research methods and employed secondary time series annual data for the period of 1970-2016. The study used a larger sample of forty-seven years compared to other studies which best represent the population and provides strong basis for validation and generalization of results. The study conducted the analysis of time series data through ADF to check Stationarity of each variable first and then Johansen co-integration tests to assess the long-run relationship of foreign aid and per capita income of Afghanistan. All analyses were carried out using econometric software package EViews 10. The results of ADF tests showed that variables were stationary at first difference. The Johansen co-integration test authenticated that there is no long-run relationship between foreign aid and per capita income of Afghanistan. The study concluded that reliance on foreign aid is not a long term sustainable approach for the economic growth of Afghanistan and further provides the following recommendations:

- Afghanistan should start working on reducing the dependency on foreign aid and focus on encouragement of foreign direct investments and extractions of mineral mines.
- For short-run, the amount of aid to Afghanistan infrastructure development projects is not enough as required; thus, the Afghan government should work together with donors and allocate enough aid to infrastructure development projects, such as establishment of dams, railway tracks and roads. This will greatly contribute to long-run sustainable economic growth.
- The main barriers, such as corruption, insecurity and bad governance that each contribute to the ineffectiveness of aid, should be comprehensively addressed through full implementation of Afghanistan National Strategy for Anti-Corruption.

Keywords: Afghanistan, foreign aid, economic growth, ADF, Johansen Co-Integration, GDP Per Capita

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ACRONYMS

ADF	Augmented Dickey-Fuller
AIC	Akaike Information Criteria
ANDS	Afghanistan National Development Strategy
ARDL	Autoregressive Distributed Lag
BIC	Bayesian Information Criterion
DAC	Development Assistance Committee (OECD)
DF	Dickey-Fuller
FPE	Final Prediction Error
ECM	Error Correction Model
GDP	Gross Domestic Product
GPC	GDP Per Capita
HQ	Hannan-Quinn Statistics
IMF	International Monetary Fund
LL	Log Likelihood
ODA	Official Development Assistance
ODAPC	Net Official Development Assistance Received Per Capita
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
PCG	Per Capita Annual Growth %
PP	Phillips Perron
SIC	Schwarz Information Criteria
UN	United Nation
UNCTD	United Nations Conference on Trade and Development

UNDP	United Nations Development Programme
VAR	Vector Auto Regression
VECM	Vector Error Correction Model
WB	World Bank

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CHAPTER 1

1. Introduction

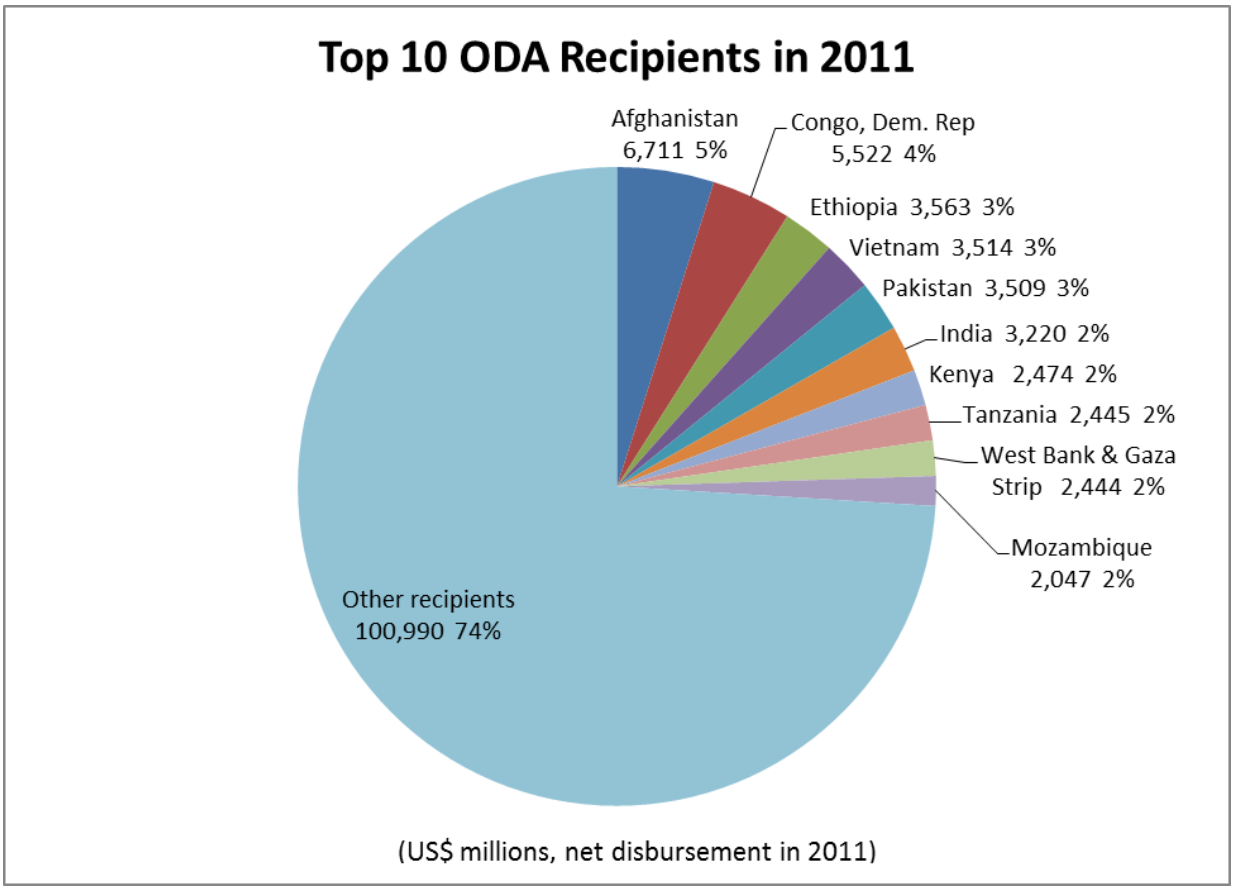
The role of foreign aid in economic development processes of developing economies, such as Afghanistan, is a topic of deep discussions. Foreign aid is an important theme given its implications in poverty reduction in Afghanistan. Afghanistan is among the Least Developed Countries (LDC), where the majority of its population has been living under the poverty line. The recent history of more than three decades of war has further destroyed both the financial and human capital which has led to the country's instability. At present, the core budget of Afghanistan, which consists of its operating and development budgets, is highly reliant on external support in the form of foreign aid. Donor grants partially finance the operating budget, and the development budget is almost totally dependent on the donors' grants.

According to the Oxfam/SCA report, around 66 per cent of Afghanistan's budget in the financial year of 1396 (March 2017-February 2018) was funded through international donor support. Only 33 per cent came from domestic revenues, even though revenue has tripled over the last ten years, from around USD 750 million in 2008/09, to USD 2.5 billion in 2017/18. These figures reflect a continuing high level of aid dependency. Additionally, the report said (with reference to a 2016 Afghan government update, through the Self-Reliance Through Mutual Accountability Framework (SMAF), that 59 per cent of development aid provided by the international community had gone through the government's core budget that year. However, this proportion varies on annual basis: in 2015, for example, of 3.73 billion US$ paid, around 40 per cent was provided through the budget.

According to the Ministry of Finance (MoF) of Afghanistan, from 2002 to 2013 the international community pledged around USD 90 billion in aid, from which around USD 57 billion has been already delivered to Afghanistan in terms of development and military aid as support to the Afghan National Army (ANA) and the Afghan National Police (ANP). During this period, a great percentage of Afghanistan's Gross Domestic Product (GDP) has been reliant on foreign aid, amounting to 71% in 2010. Around 51% of the delivered aid has gone directly to the security sector and yet insecurity has increased, compared to the years 2002 to 2005 (MoF - External Assistance to Afghanistan at a Glance, 2010).

Based on OECD data, Afghanistan was ranked as the top ODA recipient in the world in 2011. This raises questions on how effectively these funds have contributed to the economic development of Afghanistan. Afghanistan has received 5% of the world's total ODA in 2011, while the GPC growth has been negligible.

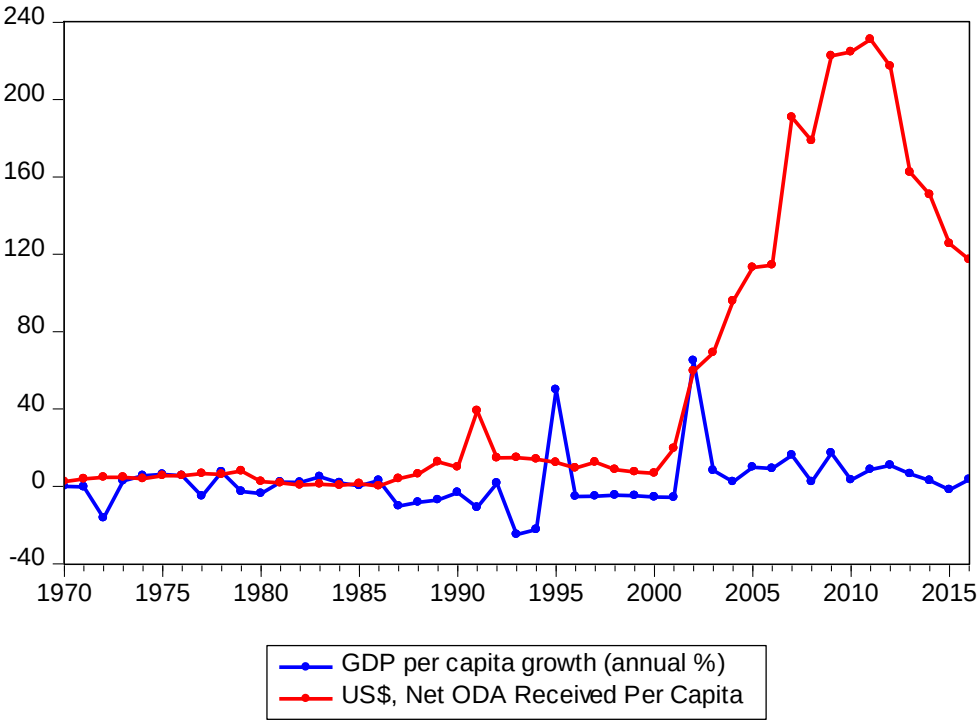
Figure 1.1: Top 10 ODA Recipients in 2011



Data Source: DAC/OESD, Graphical representation by author

The graphical comparison of PCG and ODAPC in Figure 1.2 shows that there was no increase or significant fluctuation in GDP per capita annual growth with increase in ODA per capita from 2000 to 2015. This will cross verify the result produced by Johansen Co-Integration test.

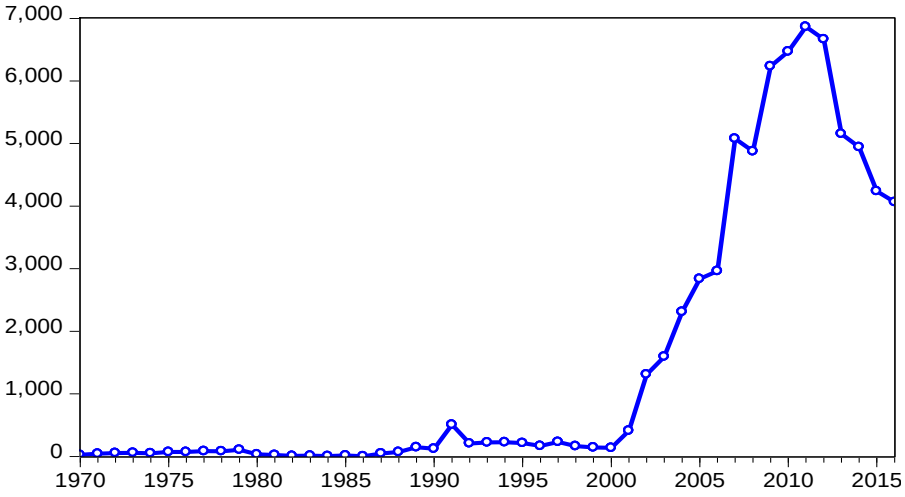
Figure 1.2: Comparison of GDP Per Capita Annual Growth (Annual %) and Net ODA Received (Per Capita)



Source: Author's Calculation

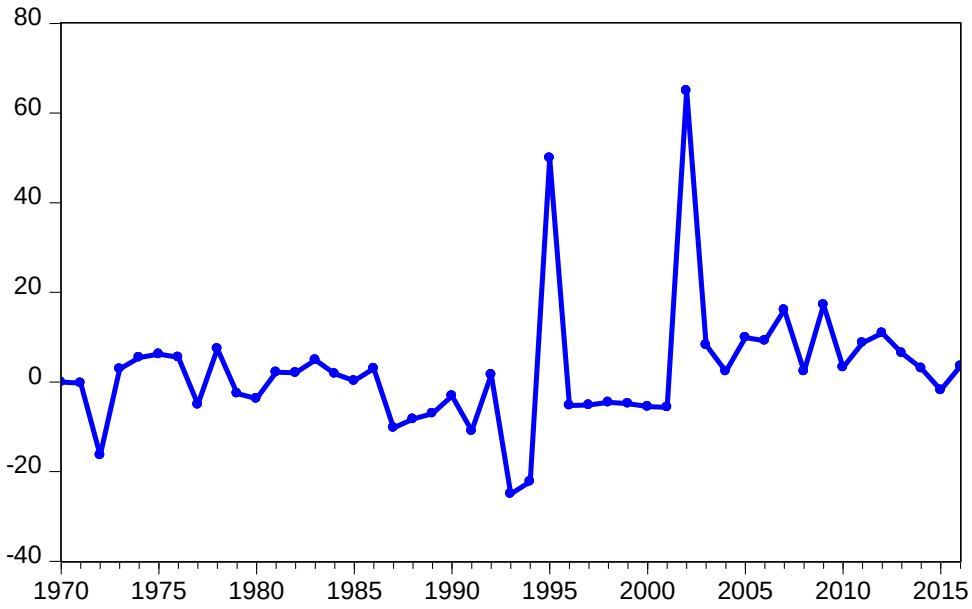
As can be seen in Figure 1.3, there is a continuous rising trend in the amount of foreign aid received from 2000 to 2015, however, the GDP per capita growth curve does not rise simultaneously, as can be seen in Figure 1.4.

Figure 1.3: US$ Millions, Net ODA Received



Source: Author's Calculation

Figure 1.4: GDP per capita growth (annual %)



Source: Author's Calculation

Stephen Brown in his book of "Aid and influence 2006" has studied the reasons and politics of aid and articulated that how donors countries use aid as a mean to influence the developing countries. To support his argument, he has given and provided several statistical proofs and has added that aid has been unsuccessful in reducing poverty and in some cases has even lead to

poverty. Nevertheless, he has added that the increased ownership and good governance of the recipient country leads to the effectiveness of aid.

“Development is essentially a domestic matter. There is ample evidence that development progress depends critically on the way governments manages. The developing countries that are now emerging into middle and upper income status have mostly managed well. They have used facilitators of enterprise and progress. The developing countries that still languish have suffered from poor and inappropriate management (Browne, 2006)”.

Brown in his book says that countries that have learned how to get rid of aid have developed fast. He has provided examples of the Asian tigers – Singapore, Taiwan and South Korea, then Brazil, Chile, Costa Rica, South Africa and next come the emerging donors such as Malaysia and Thailand (Browne, 2006).

Finally he says that “the less aid you have, the better you do” (Browne, 2006). By looking to the multiple channels of funds by the donor countries, the statement provided by him seems to be realistic because the lesser aid a country has the more autonomous a country will be in allocation of resources based on the government priorities and need of population.

Given the importance of foreign aid to the economy of Afghanistan, it is highly vital to understand the foreign aid contribution to economic growth, and more specifically, to the GDP per capita growth in Afghanistan. In order to understand this, this research analyzes the relationship of foreign aid to the per capita income in Afghanistan. These effects are analyzed using time series data for foreign aid and GDP per capita. The study focuses on the time period 1970-2016. The researcher applied ADF tests to check stationarity of variables, then the Johansen Co-Integration test for estimation of a long-run relationship between GPC and ODA.

1.1 Statement of the problem

Despite hundreds of billions of dollars of foreign aid flow into Afghanistan over the past 15 years, the contribution to the growth of per capita income of Afghanistan has been negligible. According to estimates published by the Afghan Government, 42 per cent of Afghanistan's population survives below the poverty line and an additional 20 per cent of people living just above the poverty line are highly susceptible to falling into poverty. Though more than 15 years have passed, the rate of progress appears misaligned with the level of foreign assistance rendered

to the country. Afghanistan is becoming aid dependent, a fact engendering negative consequences both economically and politically.

Previous thematically relevant research conducted by Malik and Girijasankar (2008), "Foreign Aid and Economic Growth: A Co-integration Analysis of the Six Poorest African Countries" research by Nowak-Lehmann et al (2012), and collated in "Does foreign aid really raise per capita income?", a time series perspective shows that recipient countries' real per capita income has been declining or remaining stagnant. Similar other studies have been conducted, but these research papers fail to include Afghanistan in the scope of their research. The researcher believes an examination of Afghanistan, as an empirical case, would make a valuable theoretical contribution to the literature on the economic effects of foreign aid to post-conflict countries.

1.2 Objective

The objective of this study was to investigate the effects and relationship of foreign aid, if any, with per capita income of Afghanistan. And, in light of findings, the research puts forth recommendations for remedial and corrective strategies for policy-makers

1.3 Research Question

Is there any effects and relationship of foreign aid with per capita income of Afghanistan?

1.4 Significance of the study

The Afghan Government is becoming increasingly dependent on foreign aid and yet officials continue to attempt to convince donors to *increase* aid flows with little consideration to suboptimal side-effects and whether the envisaged objectives to stimulate growth are actually met.

No country in history has achieved long-term economic growth due to aid, yet Kabul still insists on asking for more and more aid money. China, for example, pulled more than 680 million people out of poverty from 1981 to 2010, without asking for any foreign aid. Although there is a scientific debate in the economic literature on whether aid does more harm than good to poor countries, in the case of Afghanistan, research is needed to examine whether foreign aid can contribute to achieving long-term sustainable economic development. The urgency and relevance of the question is highlighted by the fact that many of the main beneficiaries of aid money are development workers, private contracting firms that implement development programs, and top-

ranking Afghan government officials. The endemic state of corruption among government officials, too, makes this a very important question to pose.

1.5 Structure of report

This dissertation report is divided into five main chapters:

Chapter I: Explains the introductory discussions of the study, problem statement of the study, objective of the study and significance of study.

Chapter II: This chapter aims to discuss the literature review of foreign aid and economic growth in view of different research papers and books from around the world.

Chapter III: This chapter is focused on introducing the methodology of the research. It explains the nature of study, the econometrics models being used, data collection methods, what sources this data being retrieved from, and then clarifies the scope and limitation of the study.

Chapter IV: This chapter describes the estimation and results of scientific tests that are applied. This further explains which specific tests are applied, step by step, to check stationarity of time series data and to investigate the relationship of foreign aid on per capita income of Afghanistan.

Chapter V: This chapter discusses the conclusion and recommendations provided by the study.

CHAPTER 2

2. Literature Review

2.1 Definition of Terms

2.1.1 Official Development Assistance (ODA)

Aid represented by Official Development Assistance (ODA) was first used by the Development Assistance Committee and Organisation for Economic Co-operation and Development (OECD) for measuring aid. This terminology was used by DAC for the first time in 1969. ODA is intended to encourage the economic growth and well-being of developing countries, especially among less developed countries (LDCs). Loans and credits to countries for military purposes are excluded from ODA.

Several previous literatures described that donor countries provide aid basically for political and economic purposes. Some development assistance might be provided for moral and humanitarian reasons for example, emergency food and shelters programmes or to encourage social progress. However, there is no proof to justify claims that donor countries provide aid to LDCs without waiting for opportunities such as political, economic and/or military advantages in return.

2.1.2 Economic Growth

Economic growth is a rise in the production of goods and services when comparing one period of time to another period of time. The economic growth rates of countries are typically compared by using the GDP ratio to population or per capita income. Economic growth in this study is measured through GDP per capita of Afghanistan.

2.1.3 GDP Per Capita

GDP per capita is derived from dividing the country's gross domestic product by the country's aggregate population. It is a good tool for measuring the country's living standards. It indicates how prosperous a country feels to each of citizens. It is widely used for cross-country evaluation of living standards and economic prosperity. However, it cannot be used for measuring personal income because it does not actually consider the income dissemination in a country.

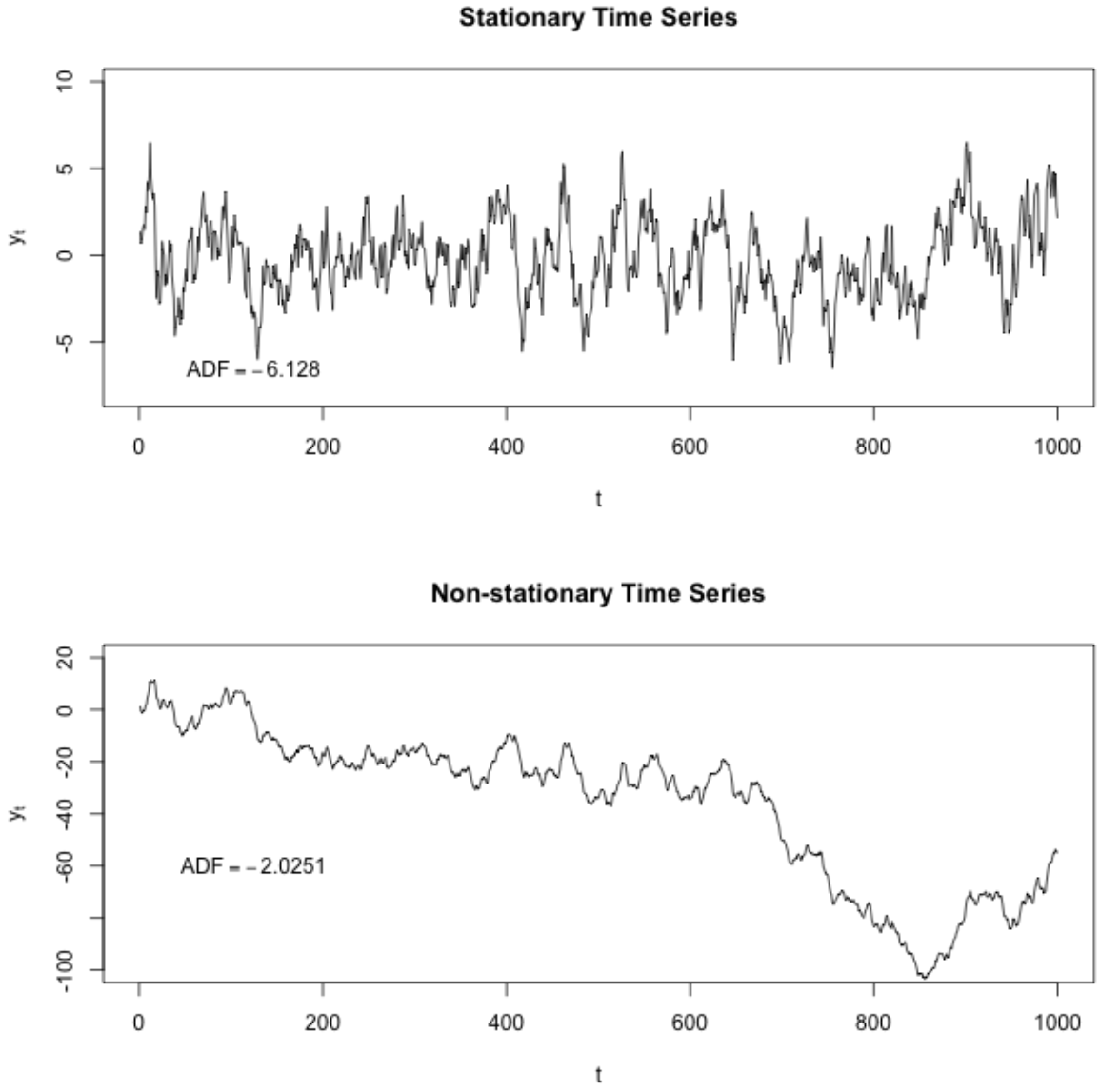
GDP per capita has the similar weaknesses and limitations as gross domestic product in that it does not completely condense a country's growth level or life quality. GDP measurement may

also exaggerate income due to the fact that these may also contain earnings by companies located abroad but which are submitted back to a nation by its foreign investors.

2.1.4 Stationarity

The data is stationary when arithmetical properties, for instance mean, variance, autocorrelation, do not change over time. It is a pre-requisite for time series data analyses. Stationarity can be well-defined in specific mathematical languages, but for us, we mean a smooth and flat looking series, and without trend. Following in ***Figure 1.5*** is a graphical representation of how a stationary and non-stationary data series appear:

Figure 1.5: Stationary and Non-Stationary Time Series



Source: Protonk (talk), (2011)

2.2 Empirical Literature

There is large literature available on the relationship between foreign aid and economic growth in other countries. The studies have produced mixed empirical results. Whilst some research have reported positive significant effects, some others claimed no significant effects, and few others have also reported adverse significant effects of ODA on economic development in developing countries.

A recent piece of research by MM, Albiman, (2016) analyzes the impact of foreign aid on economic growth. The research uses time series analysis by applying the Dynamic Ordinary Least Square (DOLS), standard unit root test of Augmented Dickey Fueller Test (ADF), and Philips and Perron test (PP) to test whether the data are stationary or not. For the economic growth model, the study used independent variables such as FDI (LFDI), foreign aid (LAID), export of goods and services (LEXP), labor force (LPOP) and Human capital stock (LH). The paper concludes that foreign aid has negative impact on the economic growth. Furthermore, in short-run, the research has found that foreign aid does not cause economic growth. The results suggest that, the government has to reconsider the type of foreign aid that is received.

Eregha et al. (2016), published a study which analyzed the effectiveness of official development assistance on per capita GDP growth for the different regions in Sub-Sahara Africa. The study uses data for a period of 1970-2013 for thirty-three Sub-Saharan African countries. It employs the panel data co-integration and panel data error correction modeling approach. The study concludes that ODA was found to have a positive and insignificant effect on West Africa, East Africa and non-oil exporting countries, but the effect was positive and significant for Southern Africa, Central Africa and oil exporting countries. For West Africa, the effect became significant on growth only when macroeconomic policy environment variables are captured.

Appiah-Konadu et al. (2016) analyze the effect of foreign aid on Ghana's economic growth. The study finds out the short- and long-run relationship between foreign aid and economic growth. The study uses time series data from 1972-2012 and applies the ARDL and error correction term approaches to test the relationships. The study finds that capital, labor and government expenditures had positive effect on the economic growth in Ghana both in short- and long-run. However, interest payments and foreign aid had negative effects on economic growth of Ghana.

The research paper by Rajarshi Mitra et al (2015), investigated the connection between aid and per capita economic growth in thirteen Asian countries that have historically been some of the largest recipients of foreign aid. The paper found that both short-run and long-run effects of foreign aid on economic growth are significantly negative: a 1% rise in aid (in share of GDP) results in 0.18% fall in per-capita real income in the long-run; thus, if the aid-dependent Asian countries continue to receive foreign aid, then over time, per-capita economic growth in those countries will decline. Co-integrating relationships also indicate significantly positive long-run effects of trade openness and domestic investment on per-capita economic growth.

In Matthijs Lof, (2015) this paper reproduces the results conducted by previous empirical literature reported by Nowak-Lehmann et al (2012). The authors uncover that these previous papers used co-integration regressions which were not suitable for the casual effect of foreign aid and income. This led to the misguided conclusions by the previous literature of the mentioned authors. This paper applies another mode of VAR and the results show positive and significant effect of aid on the income.

Another paper by Fazily, (2014) investigates the impact of official development assistance on economic growth in conflict affected countries, more particularly, Afghanistan. The paper found that ODA is a major factor in reconstruction of conflict-affected economies. ODA, without closely monitoring its efficiency and results for infrastructure and production, is not a solution for economic growth recovery. It would, rather, reduce ODA to a short-term tool to boost economic recovery – without reaching a sustainable level of GDP growth.

Tra (2014) investigates the relationship of foreign on economic growth in Vietnam for a period of 1993-2012. The author uses Autoregressive Distributed Lagged (ARDL) technique to see the direct impact of aid on final economic outcome. The study concludes that foreign aid has had a significantly positive role in promoting economic growth in Vietnam.

There is more research conducted by Adamu, P.A. (2013) which explores the impact of foreign aid on economic growth in member countries of the Economic Community of West African States. The researcher uses panel data for 1990-2009 periods and a three-equation simultaneous-equations model. The paper concludes that effects of foreign aid on economic growth among these ECOWAS countries was found to be positive and strong. The results from the equation on

foreign aid indicated that domestic investment, exports, and international reserves have a positive relationship with foreign aid.

Delessa (2012) studies the impact of foreign aid on economic growth in Ethiopia for the period of 1969-2011 by applying the multivariate co-integration analysis. The result of co-integration test, using Johansen co-integration approach, shows that there is long-run relationship among the variables entered in the specified growth model. The estimated short-run model shows that the current and past level of aid inflow, entered alone, has a negative impact on economic growth. Similarly, current level of aid interacted with policy has also negative effect on economic growth. However, in the long-run foreign aid inflow, entered alone, has a negative and significant impact on economic growth. Whereas, aid interacted with policy appears to have a positive contribution to economic growth of Ethiopia in the long-run.

Nowak-Lehmann et al (2012) estimate the relationship of foreign aid on the per capita income. The paper uses annual data and five-year averages and examines the time series data. It uses the panel estimations with dynamic feasible generalized least-squares (DFGLS) model to estimate the relationship between foreign aid and per capita income. The paper finds out that in long-run, foreign aid does not directly affect the per capita; however, foreign aid indirectly affects the per capita in the long-run through domestic savings, investment and real exchange rate.

Shaikh (2011) investigates the relationship and contribution of foreign aid to the economic growth of Pakistan. The paper use time series data through applying the co-integration and OLS estimation methods. The results show that there is a long run relationship between ODA and per capita GDP.

Lehmann D, Felicitas et al (2010) explore the relationship between the foreign aid and per capita income for a maximum of 131 countries over a period of 1960-2006. The authors employ annual data, five-year averages, and use time panel techniques (panel unit-root tests, panel co-integration tests, and panel dynamic feasible generalized least-squares estimation [DFGLS]). The results show that there is direct impact of aid on per capita income, which is statistically insignificant or negative.

Ekanayake et al (2010) investigate the effects of foreign aid on economic growth of eighty -ive developing countries, using panel data series of 1980-2007, considering the regional and income

level differences. The authors conclude that foreign aid has mixed effects on economic growth of developing countries. The authors further explain that foreign aid has adverse effects on economic growth of these countries.

Nowak-Lehmann et al (2010) analyze foreign aid and its effect on per capita income. The paper uses time series data from 1960-2006 of 131 aid recipient countries through applying the panel DFGLS tests, unit root test and panel co-integration tests. The paper finds out that the direct effect of foreign aid on per capita is statistically insignificant or negative.

Abou al Foul (2008) examines the relationship between foreign aid and real per capita GDP in Egypt and Jordan. The paper uses data from (1960-2005) for Egypt and (1965-2005) for Jordan by applying the co-integration test of Autoregressive Distributed Lag (ARDL). The author concludes that there is a long-run relationship between the variables for Jordan; however the result shows that there is no evidence to support that a long-run relationship was applicable for Egypt. The Granger causality test supports a long-run causal relationship between foreign aid and GDP in the case of Jordan. However, in the case of Egypt, the results show no support of Granger causality between foreign aid and GDP.

Malik, (2008) in a paper of Foreign Aid and Economic Growth: A Co-integration Analysis of the Six Poorest African Countries, looks at the effectiveness of foreign aid on economic growth. The paper uses time series data by applying the Augmented Dickey Fuller test for stationary checks and Johansen co-integration test for checking the co-integration between variables. The paper concludes that there is long-run relationship between the per capita income, foreign aid and investment. The paper further adds that the long-run effect of foreign aid on economic growth was found to be negative.

There is also a contemporary expansion in the aid and growth literatures. It is the analysis of different modalities and categories of aid on development. Researchers are now changing their approach from investigation of effect of aggregate aid to the examination of diverse components of aid. Rajan and Subramanian (2008) propose the four different bases of differentiating aid. The study states that it should comprise: First, reasons and motive of aid e.g. why? Second, who is providing aid? Third, the sectorial wise aid assistance in other words, what sector the aid is channeled through for example, social, health, education and or technical assistance?). Fourth,

impact timing, when? However, they advised that differentiating between aid categories will lead to fungibility. This terminology is used to explain how aid and other government funds are moveable through sectors. This might not be contingent to the explicit purpose the aid which was meant for or the intention behind it nevertheless what matters pertaining to the theory is how sound the beneficiary country interprets all spending to growth.

Karras, G. (2006), in study of foreign aid and long-run economic growth, explores the relationship of foreign aid and growth on per capita GDP. The study use annual data for a period of 1960-1997 for a sample of seventy-one aid recipient developing countries. The study finds that foreign aid affects the economic growth positively and is statistically significant. The study further adds that a rise in foreign aid of a recipient country by twenty US dollars per person results in a permanent increase of the growth rate of real GDP per capita by approximately sixteen percent.

Feeny (2005) investigated the effects of ODA on economic development in Papua and Guinea. The researcher used data for the period 1965 to 1999. The study explored options to see whether foreign aid is effective conditionally on the level of good governance and policies. The study applied ARDL approach to test Cointegration. The test result provided little evidence that ODA has contributed to the economic development. However, the researcher found the ODA was more effective at the time when a WB structural adjustment program was carried out.

Iyoha (2004) concludes that an extensive aid flows to Africa have done little to help the economic development and reduce poverty. However, other researchers perceive aid as the ethical responsibility of wealthy countries for reducing poverty in developing countries (Sachs 2004). There are also some other economists who are of the view that aid has no effect on economic growth. For example, Easterly and Levine (2001, 2003), Friedman (1995), and Bauer (1971), they are of the view that aid has led into corruption, bad governance and have also raised the poverty. Thus they called for eradication of aid.

On the contrary, some other researchers who are supportive of the concept of aid argue that even though aid has failed to stimulate growth, it has facilitated to reduce poverty. For example, see Stern (2002), (Stiglitz (2002), and Sachs et al. (2004). To validate this point, Radelet et al. (2004) state that since aid became prevalent from the last four decades, poverty indicators have dropped

in several countries in world and health and education indicators have grown quicker than any other forty year time in human history.

In a paper conducted by Burnside and Dollar (2000) used a new database of foreign aid and neo-classical theory as analytical framework. The paper concluded that there is a positive relationship between foreign aid and growth within the existence of good monetary, fiscal, and trade policies, while less impact was detected within the existence of poor policies. In addition, the study added that foreign aid affects growth subject to the existence of a good macro-economic policy environment. The study recommended that funders should consider the aid recipient country's policy environment.

Some studies have criticized the importance of foreign aid in development by using different kinds of political, economic and strategic justifications in supporting their case. Boone (1996) stated the foreign aid, and its importance to growth, as money 'down the rat hole'. The study added that aid is wasted when it is granted to countries that do not have appropriate technical and administrative capability to manage and use it wisely. Foreign aid is usually not used for the intended purpose in most of the developing countries. Several other researchers argued that foreign aid does not contribute to economic development. For example, study by Dollar and Easterly (1999) concluded that foreign aid is ineffective in raising investments in Africa.

Jepma (1997) provides a broader survey of the literatures from seventies forward. He concludes that, aid crowds out private savings, backing public consumption and has no significant positive effect on the receiver country's macroeconomic policies and development. His study nevertheless, appropriately indicates the methodological flaws of primary literatures. A crucial question is the "Chicken and the egg" problem. In case someone perceives a relationship between foreign aid, poverty and bad governance, does it mean that aid is misused or it is used to relieve the pain of people with economic problems?

Griffin and Enos (1970) detected a negative relationship between economic growth and foreign aid, enough though the researchers admitted the limitation of available data. The study criticized the typical growth model assumptions that investments rise by the similar amount of ODA inflows, which leads to greater level of capital accumulations. The study claimed that ODA inflows replace, rather increase, domestic savings. Furthermore, ODA inflows encourage

government and private entrepreneurs not to confine their own consumption. This way government will also abstain from raising taxes. In other words, ODA will become a replacement for tax reforms and as long as the cost of ODA inflows is lower than the incremental capital output ratio, country will continuously borrow and will reduce domestic savings.

Summary of Literature

The overall literature conducted by author shows that 12 papers have found positive effects and relationship of aid on growth, 9 papers have found negative effects of foreign aid on growth and 10 papers have founds no effects and relationship of foreign aid on growth. Below is the summary of overall literature

***Table A.1*: Summary of Literature**

S#	Author(s) / Year of publication	Results and Conclusion
1	MM, Albiman, (2016)	Aid has negative impact on growth
2	Eregha et al. (2016)	Aid has positive but insignificant impact on growth
3	Appiah-Konadu et al. (2016)	Aid has negative effects on economic growth
4	Rajarshi Mitra et al (2015)	Short-run and long-run effects of foreign aid on economic growth are significantly negative
5	Matthijs Lof, (2015)	Aid has positive and significant effect on economic growth
6	Fazily, (2014)	Paper found positive relationship and states that aid is a major factor in reconstruction of conflict-affected economies
7	Tra (2014)	Aid has had a significantly positive role in promoting economic growth in Vietnam
8	Adamu, P.A. (2013)	Positive effects of foreign aid on economic growth
9	Delessa (2012)	Aid has negative and significant effects on economic growth
10	Nowak-Lehmann et al (2012)	In long-run, foreign aid does not directly affect the per capita. however, foreign aid indirectly affects the per capita in the long-run through domestic savings, investment and real exchange rate
11	Shaikh (2011)	Paper found positive long run relationship between Aid and

		growth
12	Lehmann D, Felicitas et al (2010)	There is direct impact of aid on per capita income, which is statistically insignificant or negative
13	Ekanayake et al (2010)	Foreign aid has adverse effects on economic growth
14	Nowak-Lehmann et al (2010)	Direct effect of foreign aid on per capita is statistically insignificant or negative
15	Abou al Foul (2008)	The author found long run relationship between aid and growth for Jordan but no evidence to support that there is long run relationship between aid and growth of Egypt.
16	Malik, (2008)	The author found that the long-run effect of foreign aid on economic growth was negative
17	Rajan and Subramanian (2008)	The authors propose different modalities for analysis of aid and growth. They propose the four different bases of differentiating aid. First, reasons and motive of aid e.g. why? Second, who is providing aid? Third, the sectorial wise aid assistance in other words, what sector the aid is channeled through for example, social, health, education and or technical assistance?). Fourth, impact timing, when?
18	Karras, G. (2006)	Foreign aid affects the economic growth positively and is statistically significant
19	Feeny (2005)	The test result provided little evidence that aid has contributed to the economic development
20	Iyoha (2004)	Extensive aid flows to Africa have done little to help the economic development and reduce poverty
21	Easterly and Levine (2001, 2003), Friedman (1995), and Bauer (1971)	Economists who are of the view that aid has no effect on economic growth. They are of the view that aid has led into corruption, bad governance and have also raised the poverty. Thus they called for eradication of aid

22	Stern (2002), (Stiglitz (2002), and Sachs et al. (2004), Radelet et al. (2004)	Researchers who are supportive of the concept of aid argue that even though aid has failed to stimulate growth, it has facilitated to reduce poverty
23	Burnside and Dollar (2000)	Aid has positive relationship on growth with the existence of good policies. Foreign aid affects growth subject to the existence of a good macro-economic policy environment.
24	Dollar and Easterly (1999)	Foreign aid is ineffective in raising investments in Africa
25	Jepma (1997)	Aid has no significant positive effect on the receiver country's macroeconomic policies and development
26	Boone (1996)	The study adds that aid is wasted when it is granted to countries that do not have appropriate technical and administrative capability to manage and use it wisely
27	Griffin and Enos (1970)	Found negative relationship between economic growth and foreign aid

2.3 Theoretical Framework

The theoretical framework was developed based on two variables which included one dependent variable and one independent variable. The dependent variable is the GPC and the independent variable is the ODA. These variables are first explained through the schematic diagram and then hypotheses are developed.

Schematic diagram of theoretical framework

Based on the above theoretical framework, the following hypotheses for this research are developed:

H0: There is no co-integration equation (No long-run relationship)

H1: Greater than zero co-integrating equation (A long-run relationship exists)

2.4 Model Specifications

Earlier models for the identification of the foreign aid and economic growth relationship were based on the Harrod-Domar growth models that were developed in the 1930s and 1940s. They emphasized that aid increases physical capital accumulation due to economic growth. The Harrod-Domar model determined that aid fills the saving gap in developing countries. The Harrod-Domar growth model was strengthened by the research of Chenery and Strout (1966). The combined result of these studies specified 3 gaps as constrictions to the growth that were required to be filled by external assistance or ODA to encourage investment. These gaps were: 1: Fiscal gap 2: Savings gap, and 3: Trade balance gap,

This study empirical model is consistent with the basic model of Shaikh (2011)

$$ln\ (GPC_t) = \beta 0 + \beta 1\ ln\ (ODA_t) + \varepsilon_t$$

The study takes GDP per capita (GPC) in US$ and foreign aid represented by official development assistance (ODA) as Net ODA received in US$.

Where,

ln (GPC $_t$): *= Natural log of gross domestic product per capita time (in US$)*

ln (ODA $_t$): *= Natural log of Net official development assistance received (in US$)*

ε_t : = *Standard Error term*

β1 is the estimated coefficients of related variables. β1 measures the percentage variation in GPC connected with one percent change in ODA [Greene (2002)]. The usage of GDP per capita instead of aggregate GDP is to consider the population/labor effect in growth. Shaikh, (2011)

CHAPTER 3

3. Research Methodology

3.1 Nature of Study

The researcher applied a quantitative research method where secondary time series data for a specific period of 1970-2016 was used. The study used a larger sample of forty-seven years of data compared other studies which provides a strong basis for scientific time series data analysis. This sample best represents the period of Official Development Assistance to Afghanistan provided by the international community.

3.2 Unit of Analysis

The unit of analysis of this research is the secondary data which was collected from different credible sources.

3.3 Population and Sampling

The population of the study is Afghanistan and a sample of forty seven years of time series data were used in study.

3.4 Econometrics models

The data was analyzed quantitatively. The study conducted the analysis of time series properties of data which included unit root tests to check the stationarity of each variable first, and then Johansen co-integration tests, to assess the long-run relationship of foreign aid and the GDP per capita of Afghanistan. All analyses were carried out using the econometric software package EViews 10.

3.5 Data Collection and Sources

All-time series data analyzed here was obtained from secondary sources. The researcher used online websites and databases to access the data. It included data from the World Bank's Development Indicators, the UN Data website, and the UNCTAD Stat (United Nations Conference on Trade and Development) website. For the dependent variable, the GDP per capita of Afghanistan, with a range of actual data from 1981-2000, was missing in the World Bank's database. However this data was included, as estimates, in the UN Data and UNCTAD websites. Therefore, those estimates were assumed in the calculation for the missing period. This data was

possible to be retrieved from other sources, too, but the researcher considered the mentioned sources since these were considered the most reliable and accurate sources as they have also been used by many other studies.

3.6 Scope and Limitation

The scope of this study was originally designed more broadly, however, due to the following challenges, the scope was restricted and "squeezed" and narrowed down.

Firstly, Time: Lack of time has been the main limitation for this study, given the prominence of a formal deadline set by the university.

Secondly, Secondary Data: Even though the researcher was able to get a larger sample size of the population, availability of other critical data was a major reason to reduce scope. The study was originally intended to also investigate the effect of donors funding modalities, i.e., funding through On and Off Budget systems on per capita income, which was assumed as a mediating variable. However, this data was not available in these sources, or any other public domains. The availability of such data and analysis would have produced more concrete and accurate results and interpretations on the effectiveness of these donors funding modalities, in particular, and in general, to aid effectiveness.

Thirdly, Variables: This study has only concentrated on checking the effects and relationship of two variables, namely GPC as the dependent variable, and ODA as the independent variable. Some literature has used different (other) independent variables, in addition to GPC, which this study has not done, due to the realities of the time limitation, and to keep the study more concentrated on the investigation of a relationship between these two variables.

CHAPTER 4

4. Analysis and Results

This section explores the estimation and interpretations of results. The research question asked: Is there any effect or relationship of foreign aid on per capita income of Afghanistan? To test this relationship, there are number of scientific tests performed. Scientifically, a set of time series data needs to be tested for stationarity step by step before any co-integration tests are performed. There are different methods of testing the stationarity of time series data, however, the study employed an ADF test to check stationarity. Moreover, the study used the Johansen Co-integration test to check the long-run relationship of ODA and GPC. These are the most commonly used tests in the existing literature.

4.1 Unit Root Test

There are different types of tests to check whether a variable is stationary or not, such as Augmented Dickey-Fuller, Dickey-Fuller GLS (ERS), Phillips-Perron, Kwiathkowski-Phillips-Schmidt-Shin, Elliot-Rothenberg-Stock Point-Optimal, Ng-Perron. However, the researcher uses the most commonly used, the Augmented Dickey-Fuller Test (ADF) approach, for conducting the unit root test to determine the stationarity of individual variables. There are two ways to understand whether a variable is stationary or non- stationary: With Null Hypothesis testing, and by a comparison of t-values with a Test of Critical-Values.

As the study focuses on checking the relationship between two main variables, GDP per capita as dependent variable, and Foreign aid as Independent variable (also represented as Official Development Assistance) therefore, the researcher conducted the following two separate Stationarity tests, for each variable.

4.1.1 Unit Root Test for GDP Per Capita – Dependent Variable

The researcher develops the following hypotheses for testing whether GDP Per Capita is stationary or not, at different levels:

H0: GPC has unit root (non-stationary) at Level

H1: GPC does not have unit root (stationary) at Level

The result in Table A.1.1 shows that the Probability Value 0.8076 is insignificant, and is not less than 0.05. This indicates that GPC is not stationary at Level; therefore, Null Hypothesis cannot be rejected. In another way, a t-value (in absolute form) of 0.807045 is also less than the Critical Values, which can be interpreted that the variable is not stationary.

***Table A.1.1*: Unit Root Test for dependent variable (GDP Per Capita) at Level**

Null Hypothesis: GPC has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.807045	0.8076
Test critical values:	1% level	-3.581152	
	5% level	-2.926622	
	10% level	-2.601424	

*MacKinnon (1996) one-sided p-values.

As Null Hypothesis was not rejected at the stated levels, the researcher further attempts to check the stationarity of data at First Difference and develops the following hypothesis:

H0: GPC has unit root (non-stationary) at First Difference.

H1: GPC does not have unit root (stationary) at First Difference.

The result generated by EView 10 shown in *Table A.2* indicates that data is stationary at first difference since the Probability Value 0.0000 is significant and is less than 0.05. In addition t-value 7.422072 (in absolute form) is greater than the Critical Values, which means that variable is stationary.

Therefore, Null Hypothesis at first difference can be rejected and alternative hypothesis can be accepted.

***Table A.2*: Unit root test for dependent variable (GDP Per Capita) at First Difference**

Null Hypothesis: D(GPC) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.422072	0.0000
Test critical values:	1% level	-3.584743	
	5% level	-2.928142	
	10% level	-2.602225	

*MacKinnon (1996) one-sided p-values.

4.1.2 Unit Root Test for ODA – Independent Variable

The researcher forms the following hypotheses for testing to see whether ODA is stationary or not, at different levels:

H0: ODA has unit root (non-stationary) at Level

H1: ODA does not have unit root (stationary) at Level

The result in *Table B.1* shows that the Probability Value 0.7899 is insignificant and is not less than 0.05. This indicates that ODA is not stationary at Level, therefore, Null Hypothesis cannot be rejected. In other way, t-value (in absolute form) 0.865331 is also less than the Critical Values, which can be interpreted that variable is not Stationary.

***Table B.1*: Unit Root Test for Independent variable (ODA) at Level**

Null Hypothesis: ODA has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.865331	0.7899
Test critical values:	1% level	-3.588509	
	5% level	-2.929734	
	10% level	-2.603064	

*MacKinnon (1996) one-sided p-values.

As Null Hypothesis was not rejected at level for ODA, therefore the researcher has the option to further check the Stationarity of data at First Difference. Following hypotheses are developed for testing:

H0: ODA has unit root (non-stationary) at First Difference.

H1: ODA does not have unit root (stationary) at First Difference.

The unit root test result generated by EView 10 as shown in *Table B.2* indicates that data is stationary at first difference since the Probability Value 0.0000 is significant and is less than

0.05. In the meantime, t-value 9.289942 in absolute form is greater than the Critical Values, which implies that that ODA data is stationary.

From the empirical test results, the researcher finds that ODA data is stationary at First Difference, and therefore, Null Hypothesis at first difference can be rejected and alternative hypothesis can be accepted.

***Table B.2*: Unit Root Test for Independent variable (ODA) at First Difference**

Null Hypothesis: D(ODA) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.289942	0.0000
Test critical values:	1% level	-3.584743	
	5% level	-2.928142	
	10% level	-2.602225	

*MacKinnon (1996) one-sided p-values.

4.2 Lag Length Selection

As the process of examining of stationarity of variables is finished, the tests concluded that all variables are stationary and are appropriate for conducting further tests and analyses. Lag Length Selection is said to be a pre-requisite for conducting co-integration tests.

To choose appropriate lag length, many tests are conducted, such as the Log Likelihood (LL), the Schwarz Information Criteria (SIC), the Akaike Information Criteria (AIC), Final Prediction Error (FPE), Bayesian Information Criterion (BIC), and the Hannan-Quinn Information Criteria (HIC). The best Lag Length for this research is selected by using the Akaike Information Criteria, as this method has been supported by most empirical research to be efficient compared to other tests. Liew, Venus Khim−Sen (2004), in a paper of "Which Lag Length Selection Criteria Should We Employ?" concludes that Akaike's Information Criterion (AIC) and Final Prediction Error (FPE) are superior to the others as they reduce the chance of under-estimation, whereas it maximize the chance of recovering the true Lag Length. Other empirical studies have also shown that the AIC have been commonly used in economic research. For example, Sarantis (1999, 2001) and Baum et al (2001) and Baharumshah et al (2002) used the AIC and Sarno and Taylor (1998), who effectively used the AIC and SIC models.

Based on the Akaike Information Criteria (AIC), the VAR estimate with the lowest AIC, in absolute form, is the most efficient one and can be chosen confidently. Accordingly, the result in Table C.1 suggests that optimal Lag Length used is one and VAR (1) is suitable to carry out the Co-integration test.

***Table C.1*: VAR Lag Order Selection Criteria**

VAR Lag Order Selection Criteria
Endogenous variables: GPC ODA
Exogenous variables: C
Date: 11/07/18 Time: 10:33
Sample: 1970 2016
Included observations: 43

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-114.9450	NA	0.789438	5.439303	5.521220	5.469511
1*	-30.36525	157.3577	0.018613	1.691407*	1.937156	1.782032
2	-27.25083	5.504553	0.019428	1.732597	2.142178	1.883638
3	-23.39683	6.453219	0.019633	1.739387	2.312801	1.950845
4	-21.72442	2.644736	0.022026	1.847648	2.584894	2.119521

indicates the lag order selected by the criteria used in this research

4.3 Estimation of Long-Run Relationship through Johansen Cointegration Test

The results of unit root tests show that all the variables are non-stationary at level. Therefore, the tests were conducted at first difference to see if the variables are stationary. The unit root test results at first difference showed that variables are stationary. Theories describe that conducting econometric analyses with non-stationary variables do not make sense, with the exception being when there are linear combination results in a stationary series.

To investigate the long-run relationship between ODA and GPC, the study applies Johansen Co-integration test. This method of co-integration determines the maximum likelihood procedure to define the existence of co-integrating vectors in a vector autoregressive system. There are two ways to interpret the results of the Johansen Co-integration Test. First, development of hypotheses and testing; second is the comparison of Trace Statistic Value, with 5% Critical Value. The following hypotheses are developed:

H0: There is no co-integration equation (No long-run relationship)

H1: Greater than zero co-integrating equation (A long-run relationship exists)

The result in Table D.1 shows that the Trace Statistic value at none is less than the 5% Critical value and also is insignificant, which denotes that there is no long-run relationship between ODA and GPC, hence, the null hypothesis can be accepted and the alternative hypothesis can be rejected. The maximum Eigen likelihood test confirms the same result. It indicates that the null hypothesis of cointegrating relation is accepted, and the alternative hypothesis is rejected.

***Table D.1*: Johansen Co-Integration Test**

Date: 11/07/18 Time: 22:06
Sample (adjusted): 1972 – 2016
Included observations: 45 after adjustments
Trend assumption: Linear deterministic trend
Series: GPC ODA
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.085959	4.944165	15.49471	0.8147
At most 1	0.019792	0.899579	3.841466	0.3429

Trace test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.085959	4.044586	14.26460	0.8546
At most 1	0.019792	0.899579	3.841466	0.3429

Max-eigen value test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

CHAPTER 5

5. Conclusion and Recommendations

5.1 Conclusion

The Afghanistan Government is largely reliant on foreign aid and officials continue to attempt convincing donors to increase aid flows – with little consideration to sub-optimal side-effects.

No country in history has achieved long-term economic growth due to foreign aid, yet Kabul still insists on asking for more aid money. China, for example, pulled more than 680 million people out of poverty in from 1981 to 2010, without asking for foreign aid. Although there is a scientific debate in the economic literature on whether aid does more harm than good to poor countries, in the case of Afghanistan, this study was needed to examine whether foreign aid can contribute to achieving long-term sustainable economic development. No similar studies based on scientific approach have been conducted in Afghanistan, so far, therefore, this was the first ever scientific study on time series data analysis in Afghanistan.

The objective of this study was to investigate the relationship of foreign aid with the per capita income of Afghanistan. The research question was: Are there any effects and relationship of foreign aid with the per capita income of Afghanistan?

The researcher applied quantitative research methods where secondary time series data, for a specific period of 1970-2016, was used. The study selected a larger sample of forty-seven years of data, compared other studies, which best represents the population and provides the strong basis for validation and generalization of results. The data was analyzed quantitatively. The study conducted the analysis of time series property of the data, which included unit root tests to check Stationarity of each variable, first, and then Johansen co-integration tests, to assess the long-run relationship of foreign aid and per capita income of Afghanistan. All analyses were carried out using econometric software package EViews 10. The results of ADF tests showed that variables were stationary at first difference. The Johansen co-integration test substantiated that there is no long-run relationship between foreign aid and per capita income of Afghanistan. The findings of this study are consistent with some other literature already done from around world. For example, Nowak-Lehmann D., Felicitas et al (2010) and Nazima and Mehboob (2011) describes the the effect of foreign aid as “foreign aid seems to be an unimportant factor for economic growth in long-run because of its inefficient utilization in developing countries,

poor financial services, along with infrastructure, the problem of bad governance, and fiscal policy."

Reliance on foreign aid is not a long term sustainable approach for the economic growth of Afghanistan since the foreign aid inflows are channeled to sectors that may not be the ANDS priorities, but instead aligned with the priorities for a donor agency. Lack of coordination between the Government of Afghanistan and the international community is another factor which leads to the potential for duplications of initiatives. "Aid effectiveness is reduced when there is too many duplicating initiatives especially at country and sectorial levels" OESD (2008). Another contributing factor is the lack of transparent monitoring mechanisms over the utilization of aid. A huge portion of foreign aid is spent by donors through off budget systems and programmes that are outside the government's control and oversights. These programmes are mostly not aligned with the priorities of the Afghanistan National Development Strategy.

5.2 Discussions

A general inference evolving from this study is that heavy reliance on foreign aid is not a long term sustainable approach for economic development of Afghanistan. The empirical results of the present study also imply that fluctuations in aid inflow have not had any significant implications and effects on the GDP per capita of Afghanistan, and in some periods, even with increases in aid, the per capita GDP curve has declined. Thus, the conclusion was drawn that foreign aid has not had any relationship, and no effects on the per capita GDP of Afghanistan. The findings and results of this paper are consistent with other literature and studies conducted around the world. For example: MM, Albiman (2016) in his paper analyzes the impact of foreign aid on economic growth of Tanzania. The study concluded that foreign aid has had a negative impact on the economic growth of Tanzania. Furthermore, in short-run, the researcher found that foreign aid does not Granger Cause the economic growth. The study suggests that government has to reconsider the type of aid that is received.

Another paper by Rajarshi Mitra et al (2015), investigated the link between ODA and per capita growth in thirteen Asian countries that have historically been the largest recipients of aid. The paper concluded that both short- and long-run effects of foreign aid on economic growth are significantly negative, and further adds that a 1% rise in aid results in 0.18% decline in per capita

income. However, the paper found that trade openness and domestic investments have positive effects on per capita growth.

Similarly a study by Nowak-Lehmann et al (2012) found results that are also consistent with this study. This paper determined that foreign aid does not directly affect the per capita income however it indirectly affects the per capita income through domestic savings, investments and real exchange rate.

The findings of this study are also supported by Ekanayake et al (2010). Their study found that foreign aid has adverse effects on the economic growth of developing countries.

There are many other examples of literature that have provided the same result, however the researcher believes that the above mentioned literature could be deemed as supporting evidence for the conclusion of this study.

The result of this study is concrete and supported by several other studies as well; however this study has some limitations, as also mentioned in section 3.6.

The availability of credible data in a war-torn country such as Afghanistan is not easy. The study scope was initially designed more broadly. One of the assumptions was to check the donors' funding modalities, i.e. on-budget and off-budget systems and their effect on the relationship to the GDP per capita income. However no such time series data was available. The inclusion of such data into tests would produce more concrete and accurate results on the effectiveness for each funding modality. Furthermore, the study has only concentrated on investigation of relationship between foreign aid and GDP per capita income whereas; the study has ignored the other attributing factors toward economic growth. For instance, investment or savings, thus, the study suggests inclusions of such variables in future studies.

Even though this study confronts some limitations, the researcher believes that this study has provided an inclusive analysis of foreign aid and economic growth relationship for the case of Afghanistan. Therefore, the study assures the applicability of its findings in certainty and paves the way for future in-depth researches.

5.3 Recommendations

The study proposes the following policy level recommendations:

- Afghanistan should gradually reduce its foreign aid dependency and focus on sustainable growth modals because no country has in history has achieved long term economic growth through foreign aid. The study recommends encouragement of foreign direct investments through ensuring their security and providing a comfortable investment environment, as well as expanding extraction of minerals which have got very special attention from international investors. Due to the fact that Afghanistan is hugely dependent on foreign aid, the reduction of aid dependency will need sufficient time, and will also need to go through a gradual transition period since a sudden stoppage of aid can have serious consequences to the formal and informal economy.
- The amount of foreign aid to Afghanistan infrastructure development projects is not enough as required, thus; the Afghan Government should work together with donors and allocate enough foreign aid to infrastructure development projects, such as establishment of dams, railway tracks, and roads. This will greatly contribute to long run sustainable economic growth. The dams can produce hydroelectricity that can be an economical foundation of the energy sector in Afghanistan, which in turn will save great amount of aid that is spent on the import of fuel in Afghanistan. This can further encourage the development of the industrial sector in Afghanistan.
- The main barriers such as corruption, insecurity and bad governance that lead to ineffectiveness of foreign aid should be comprehensively addressed.
- To address some of these main challenges, the Afghan Government, with the joint support of international community, should continue supporting an independent body as Independent Joint Anti-Corruption Monitoring and Evaluation Committee (MEC) which can monitor and evaluate the efficiency and effectiveness of aid within on-budget and off-budget programmes and regularly report to the public about the state of effectiveness of aid.
- For fighting corruption, the Afghanistan National Strategy for Combating Corruption, adopted in October 2017, should be fully implemented. This Strategy has five key priorities: "(i) providing political leadership and empower reformers; (ii) end security sector corruption, especially in the Ministry of Interior; (iii) replace patronage with merit in the civil service; (iv) prosecute the corrupt; and (v) follow the money to make funding flows transparent, traceable, and subject to audit under a national charter of accounts." Full implementation of

this Strategy would ensure the efficient and effective use of foreign aid; ensure accountability, rule of law, and good governance.

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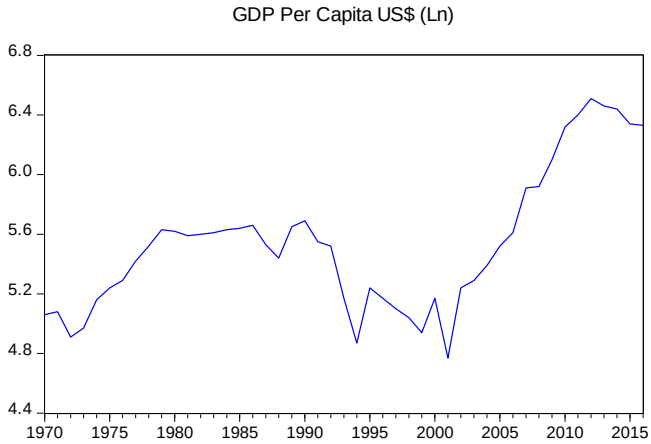
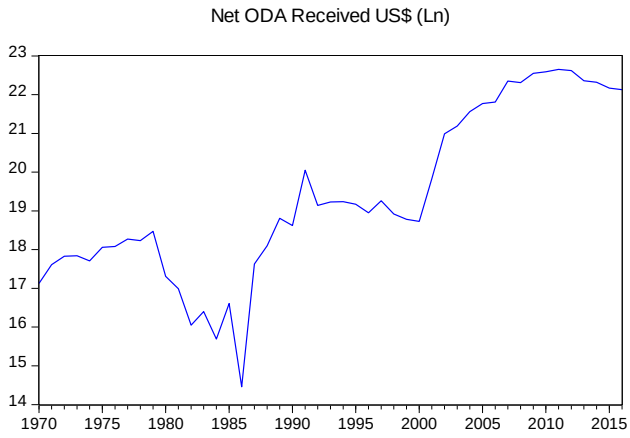
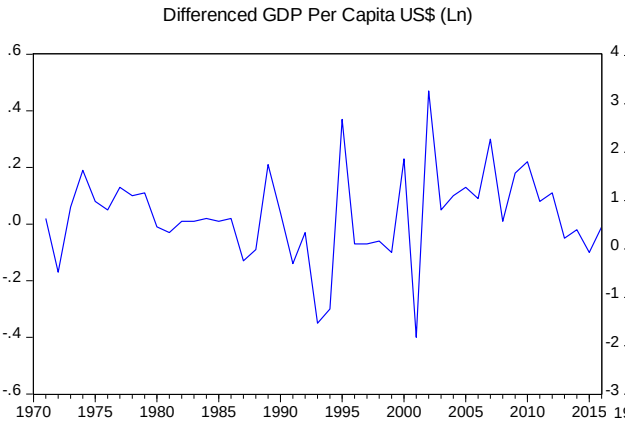
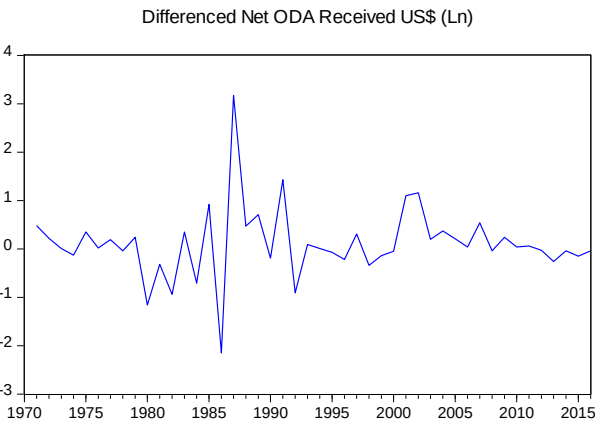
Appendices

Appendix A: Plots of research variables

I. Graphs of research variables at Level:





II. Graphs of research variables at First Difference: