

**THE IMPACT OF ODA, FDI AND REMITTANCES ON LIVING STANDARDS IN
DEVELOPING COUNTRIES: DOES INCOME LEVEL MATTER?**

By

KACHIWALA, CHIPO GODFREY

THESIS

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
for the degree of

MASTER OF DEVELOPMENT POLICY

2014

**THE IMPACT OF ODA, FDI AND REMITTANCES ON LIVING STANDARDS IN
DEVELOPING COUNTRIES: DOES INCOME LEVEL MATTER?**

By

KACHIWALA, CHIPO GODFREY

THESIS

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
for the degree of

MASTER OF DEVELOPMENT POLICY

2014

Professor Shu-Chin Lin

**THE IMPACT OF ODA, FDI AND REMITTANCES ON LIVING
STANDARDS IN DEVELOPING COUNTRIES: DOES INCOME LEVEL
MATTER?**

By

Chipo Kawchiwala

THESIS

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
for the degree of MASTER OF

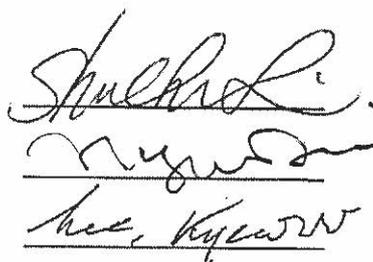
DEVELOPMENT POLICY Committee in

charge:

Professor Shu-Chin LIN, Supervisor

Professor Nyum JIN

Professor Kye-Woo LEE



Approval as of December, 2014

ABSTRACT

THE IMPACT OF ODA, FDI AND REMITTANCES ON LIVING STANDARDS IN DEVELOPING COUNTRIES: DOES DEVELOPMENT AND INSTITUTIONAL QUALITY MATTER?

By

Kachiwala, Chipu Godfrey

Attaining better living standards remains a big challenge for most developing countries. This paper looks at how living standards in developing countries can be improved if external finances such as official development aid (ODA), foreign direct investment (FDI) and remittances are utilized. To establish both long run and short run relationships this paper has utilized data from 113 developing countries over a period of 42 years (1970 – 2012) and applied quantile regression analysis and panel data analysis. When a country's level of development is considered, ODA has a negative and significant impact on living standards in developing countries; FDI is significant and positive on living standards with high magnitude in relatively less developed developing countries; remittances' impact on living standards is insignificant regardless of the country's level of development. When quality of institution is taken into consideration I find out that ODA has a negative and significant effect on living standards however the interaction term for ODA is positive in the long run; institutional quality has no significance in determining FDI's impact on living standards; institutional quality has a negative effect on remittances' impact on living standards.

Key words: Living standards, GDP per capita, Foreign Direct Investment, Official Development Aid, Remittances, and Regulatory Quality

DEDICATION

I dedicate this paper to my nephew Wayne Chakanika

Table of Contents

Table of Contents.....	II
List of Figures.....	III
1. Introduction.....	1
1.1. Hypothesis testing	4
1.2. Relevance of the study.....	4
1.3. Organization of the Study.....	6
2. Literature Review.....	6
2.1. The Impact of ODA on Economic Growth	6
2.2. The Role of FDI in Economic Growth.....	9
2.3. Impact of Personal Remittances on Economic Growth.....	11
2.4. Justification	12
3. Methodology and Data.....	13
3.1. Model Specification.....	13
3.2. Data	14
Table 1: Variable source and definition.....	15
4. Empirical Analysis.....	15
Table 2: Descriptive Statistics	18
4.1. Empirical Results.....	19
4.1.1. Economic Development and the impacts of FDI, ODA and Remittances	19
Table 3: Quantile regression estimates	20
4.1.2. Economic Development and the impacts of FDI, ODA and Remittances: Endogeneity controlled	21
Table 4: IV Quantile regression estimates	22
Plotting coefficients for each regressor by quantiles	25
4.1.3. Institutional Quality and the Impacts of FDI, ODA and remittances: Long run relationship	26
Table 5: OLS Cross section results	26
4.2. Robustness Check.....	27
4.2.1. Economic Development and the impacts of FDI, ODA and Remittances: Short term relationship.....	27
Table 6 reports estimates from panel data regression results.....	28

4.2.2. Institutional Quality and the Impacts of FDI, ODA and remittances: short term relationship
29

Table 7: Panel data results	30
5. Conclusion and Policy Recommendation	31
5.1. Policy Recommendation.....	32
References.....	34

List of Figures

Figure 1 - Remittances to Africa (billion USD, current)	3
Figure 2 - Trend of FDI Inflow to Africa	3
Figure 3 - ODA flow to Africa (This excludes bilateral debt relief and humanitarian aid)	4
Figure 4 - scatter plot of GDP Per Capita and Foreign Direct Investment	16
Figure 5 - scatter plot of GDP Per Capita and Personal Remittances.....	17
Figure 6 - scatter plot of GDP Per Capita and Official Development Assistance	18

1. Introduction

Attaining better living standards through poverty reduction is undeniably the main goal for any legitimate government in the world. While this is the case most developing countries' living standards remain very low with most people living below the poverty line. Neo Classical Growth Model emphasizes the importance of technology and capital in attaining economic growth. Most developing countries lack finances to accumulate capital and develop good technology through Research and Development. External development finances provide developing countries with an opportunity to invest in capital and therefore increasing economic growth. Increase in economic growth improves standard of living. In the past the focus has been on public aid (ODA) and private funds (FDI) as sources of external development finance.

Lately remittances inflow to developing countries has been on the increase and emerging as an important source of external finance in developing countries relative to FDI and ODA. Remittances are basically the transferring of wealth by individual migrants to their home countries. Ever since the world financial crisis of 2008, remittances inflow to developing countries has, relatively to FDI and ODA, been increasing tremendously. It is projected by the World Bank that by 2016 it will US\$516 billion.¹

In contrast to international remittances, public foreign aid programs and, to a lesser extent, FDI, are being challenged on a number of fronts. Many analysts argue that the system of foreign aid in the last few decades has proven counterproductive and failed to accomplish development

¹ <http://www.worldbank.org/en/news/press-release/2014/04/11/remittances-developing-countries-deportations-migrant-workers-wb>

objectives². Foreign aid, it is argued, has fueled corruption, economic failure, and aid dependency in many poor countries.

On the other hand, a number of FDI theorists have been reticent about the true effect of FDI on host countries. They have expressed concern over potential negative social effects of FDI such as corruption³. Yet, countries around the world, especially those with limited domestic resources, compete fiercely to attract FDI with studies looking at the myriad determinants of FDI⁴. Since the early 1990s, FDI flow to developing countries increased rapidly from \$36 billion in 1990 to \$379 billion in 2006. In 2007, international remittances surpassed ODA as source of development financing⁵. Thus an analysis of the three variables will be able to shown which is more important determining living standards and how best they can be utilized to bring about positive impact on living standards.

Figures 1, 2, and 3 show trends of remittances, FDI and ODA flows to Africa respectively

²Bauer P., "Foreign Aid: Mend It or End It?" in Bauer, P., S. Siwatibauand, and W. Kasper, eds., *Aid and Development in the South Pacific*, Australia: Center for Independent Studies, (1991); Chauvet, L. and Guillaumont, P., *Aid, Volatility, and Growth Again: When Aid Volatility Matters and When it Does Not*. *Journal of Development Economics*, 13 (2009): 452–463

³ Hymer, Stephen, "The Efficiency (Contradictions) of Multinational Corporations," *American Economic Review*, American Economic Association, vol. 60(2) (1970): pages 441-48, May

⁴ Sufian Eltayeb Mohamed & Moise G. Sidiropoulos, "Another Look At The Determinants Of Foreign Direct Investment In Mena Countries: An Empirical Investigation," *Journal of Economic Development*, Chung-Ang Unviersity, Department of Economics, vol. 35(2), (2010): pages 75-95, June.

⁵ Ilene Grabel, "The Political Economy of Remittances: What Do We Know? What Do We Need to Know?" *Political Economy Research Institute*, (2008): page 1.

Figure 1 - Remittances to Africa (billion USD, current)

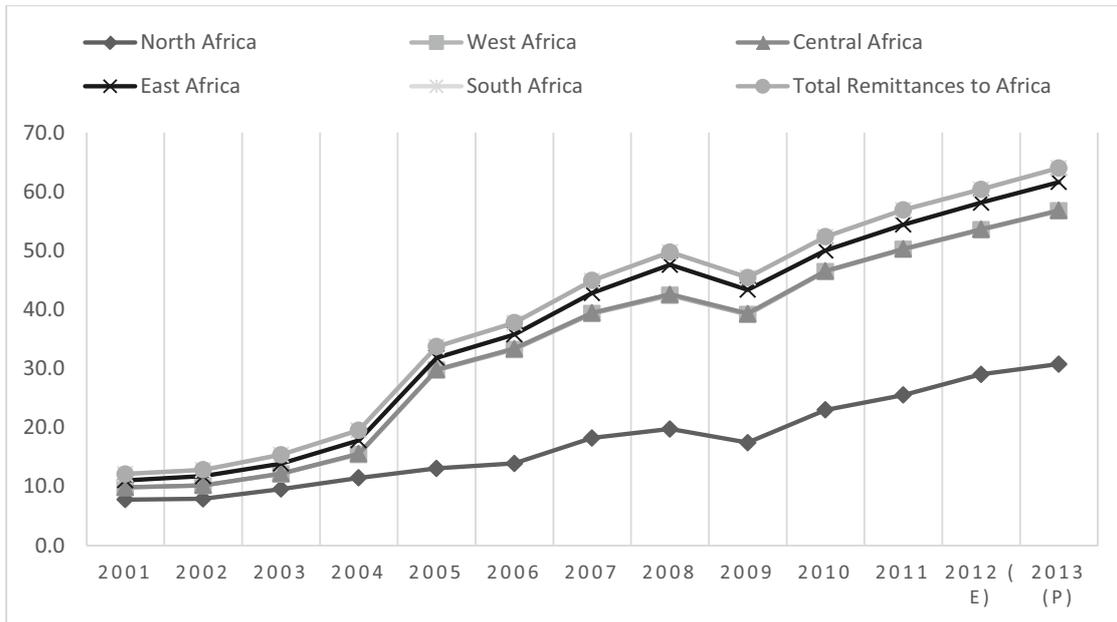


Figure 2 - Trend of FDI Inflow to Africa

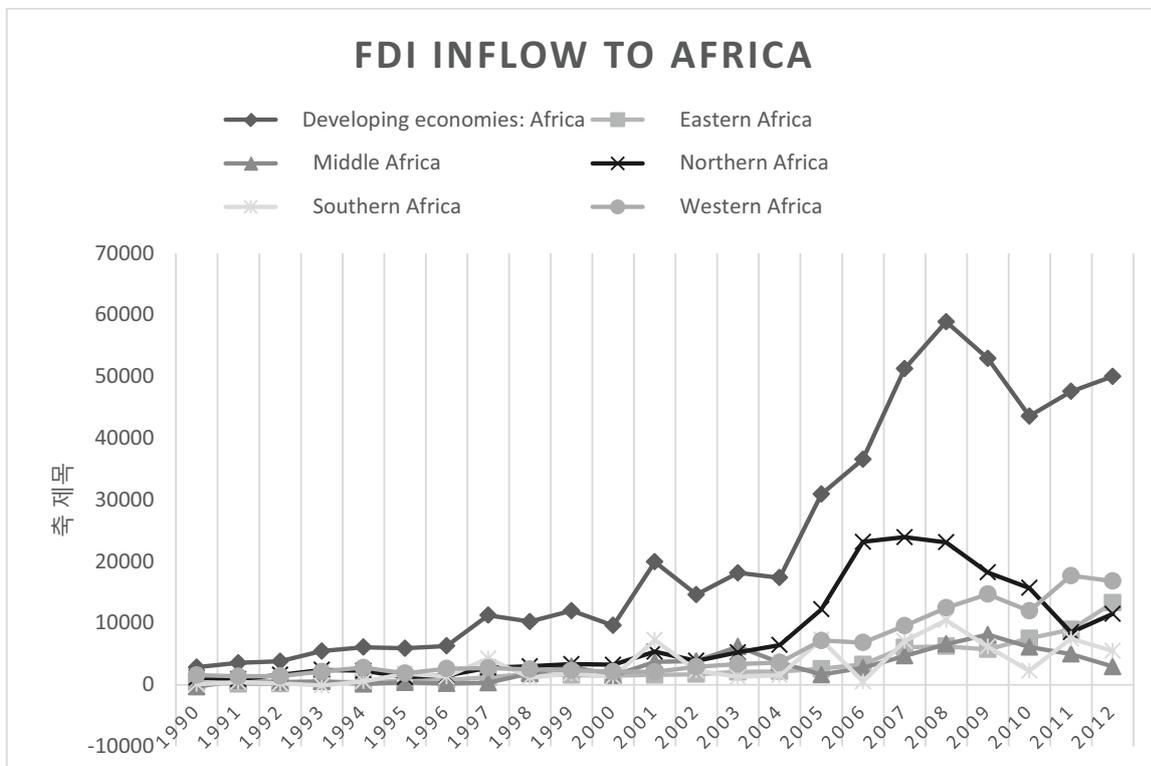
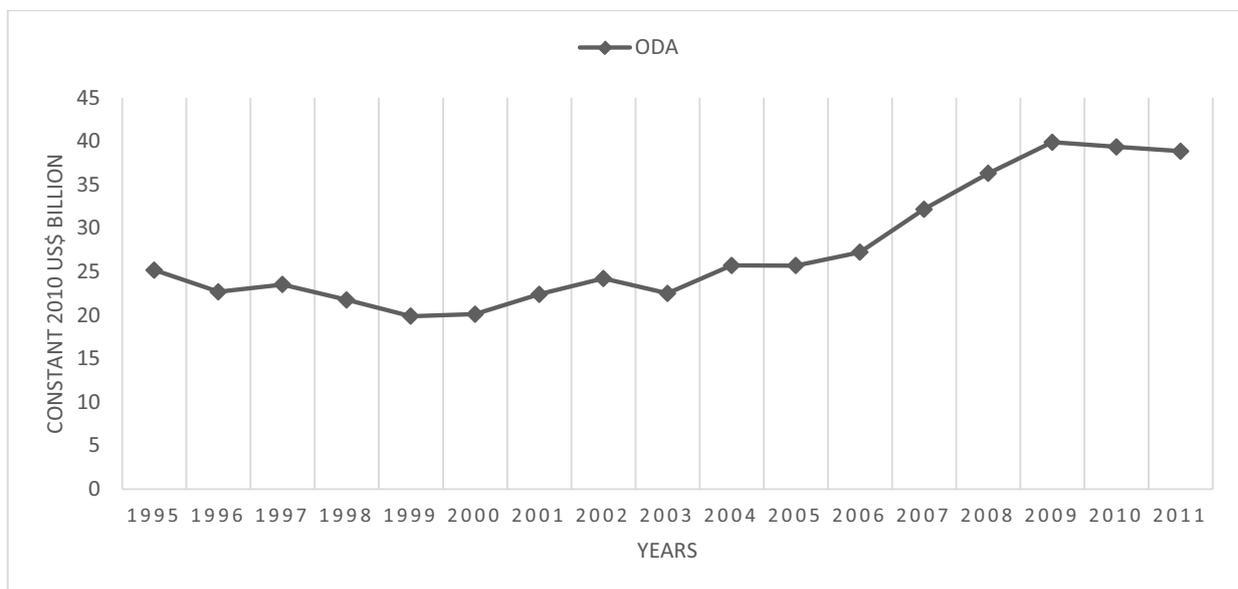


Figure 3 - ODA flow to Africa (This excludes bilateral debt relief and humanitarian aid)



1.1. Hypothesis testing

- I. FDI has an positive impact in determining level of standards in developing countries especially low income developing countries
- II. I expect remittances to have a positive impact on living standards
- III. ODA does not have an impact on living standards unless it is interacted with institutional quality
- IV. Of all three variables I expect FDI to outperform the impact of remittances and aid on living standards

1.2. Relevance of the study

Very few have done an analysis on the impact of FDI, ODA and remittances on GDP per capita. Most recently Benmamoun M. & Lehnert K. and Driffield N. & Jones C., using System-Generalized Method of Moments (GMM) approach, analyzed the impact ODA, FDI and remittances on economic growth and found that FDI and remittances are significantly associated

with economic growth in low income countries.⁶ The Systems Approach however assumes homogeneity⁷ of variables. But in reality economic growth might respond differently depending on the country's level of development and this makes the variable heterogeneous. Systems approach, like most conventional estimation techniques, divides countries based on their income levels. This method however, is less appropriate because income level is endogenous. This paper is going to use quantile regression to estimate the relationship between ODA, FDI and remittances. Quantile regression is more appropriate for this study because it is able to analyze impact at different income levels and also it assumes heterogeneity. Thus my paper's results will give new insights to the current literature FDI, ODA and remittances role in economic growth.

Using relatively new data from 113 developing countries over the period 1970-2012 and applying quantile regression technique to estimate impact effectiveness ODA, FDI and remittances on Real GDP per capita this paper finds that FDI is positively significant in developing countries. Aid has a negative and significant relationship with GDP per capita in developing countries. The relationship between remittances and GDP per capita is somewhat ambiguous though insignificant across developing countries. With several papers emphasizing the importance of institution quality in determining aid, FDI, and remittance effectiveness the paper found that institution quality i.e. regulatory quality has no effect on FDI's relationship with per capita income however it has a negative and significant impact on remittances and ODA's on per capita income.

⁶ Mamoun Benmamoun and Kevin Lehnert, "Financing Growth: Comparing the Effects of FDI, ODA, and International Remittances." *Journal of Economic Development*. vol. 38, issue 2, (2013): pages 43-65.
Nigel Driffield & Chris Jones, "Impact of FDI, ODA and Migrant Remittances on Economic Growth in Developing Countries: A Systems Approach," *The European Journal of Development Research*, Palgrave Macmillan, vol. 25(2), (2013): pages 173-196.

⁷ The assumption of homogeneity of variance is that the variance within each of the populations is equal

1.3. Organization of the Study

The remainder of the paper will be as follows: Chapter 2 will review the empirical studies; Chapter 3 will define data, specifying the model to be used; chapter 4 will be empirical analysis; and Chapter 5 will be conclusion and policy recommendation.

2. Literature Review

2.1. The Impact of ODA on Economic Growth

The impact of ODA on economic growth in developing has had a mixed reviews with some supporting that with good policies ODA has a significant positive impact on growth while the other camp suggest that aid encourages inefficiencies in developing countries. Economist against aid further argues that aid is wasted on countries that do not have the capacity or administrative ability to absorb and use it properly.⁸ Both camps will be reviewed in this paper since both have statistical evidence for their claims.

Burnside and Dollar introduced the relevance of developing countries' quality of institutions and policy in determining ODA's impact on living standards. Their paper provided evidence that aid accelerates growth in developing countries with sound institutions and policies, but has less or no effect in countries in which institutions and policies are poor. Even when the evidence was revisited using new data and focus on the overall measure of institution quality the results were consistent with their earlier findings and this shows robustness.⁹

Other papers have divided aid into two categories; developmental aid and non-developmental aid. Results have shown developmental aid promotes long-run growth in developing countries. The

⁸ <http://teacherweb.com/TR/IICS/PatriciaHermes/The-Role-of-Foreign-Aid-in-Development.htm>, 2014/07/20

⁹ Burnside, C., and D. Dollar, "Aid, Policies, and Growth," *American Economic Review*, 90(4), (2000): 847-868.

Burnside, C. and D. Dollar, "Aid, Policies and Growth: Revisiting the Evidence," *World Bank Policy Research* (2004): Paper No. O-2834, March, World Bank, Washington D.C.

effect was significant, large and robust to different specifications and estimation techniques.¹⁰ This is consistent with Collier and Dollar who find a significant relationship between aid and increase in Real GDP per capita when the aid allocation is directly towards poverty reduction in developing countries.¹¹

Others scholars have advocated for aid only as a solution to jumpstart an already performing economy from external shock. Chauvet and Guillaumont, find that aid is likely to mitigate the negative effects of external shocks on economic growth (i.e. that aid is more effective in countries which are more vulnerable to external shocks). They further explained that aid, even if volatile, is not clearly as pro-cyclical as is often argued, and, even if pro-cyclical, is not necessarily destabilizing. They measured aid volatility by several methods and assess pro-cyclicality of aid with respect to exports, thus departing from previous literature, which usually assess pro-cyclicality of aid with respect to national income or fiscal receipts. The stabilizing/destabilizing nature of aid was measured by the difference in the volatility of exports and the volatility of the aid plus export flows. Then, in order to take into account the diversity of shocks to which aid can respond, they consider the effect of aid on income volatility and again find that aid is making growth more stable, while its volatility reduces this effect. They finally show through growth regressions that the higher effectiveness of aid in vulnerable countries is to a large extent due to its stabilizing effect.¹²

¹⁰ C Minoiu, and SG Reddy, "Development aid and economic growth: A positive long-run relation", *The Quarterly Review of Economics and Finance* 50 (1), (2010): 27-39

¹¹ Collier, Paul & Dollar, David, "Aid allocation and poverty reduction," *European Economic Review*, Elsevier, vol. 46(8), (2002): pages 1475-1500.

¹² Chauvet, L. and Guillaumont, P., *Aid, Volatility, and Growth Again: When Aid Volatility Matters and When it Does Not*. *Journal of Development Economics*, 13, (2009): 452-463.

Country's level of development which is associated with free market is also seen as key to a positive impact of aid in a country. According to Bandow and Vasquez, contrary to private foreign aid such as international remittances, public foreign aid does not flow according to market-mechanisms in developing countries. Decisions regarding the allocation of public foreign assistances are made by governments and multilateral lending institutions. Yet, after decades of foreign assistances to the world's poorest countries, billions of dollars of aid have rarely achieved their intended aim in terms of economic development and poverty alleviation.¹³ Benmamoun and Lehnert argued that in some instances, dollars were squandered in dubious ways and hardly touched the poor for whom these donated funds were intended. International remittances and market-driven capital flows, on the other hand, meet economic objectives far better than public foreign aid, doing a better job in channeling funds directly to the poor, and often providing the economy with a greater amount of capital.¹⁴

Bauer argued that aid has serious, distorting consequences in the political life of recipient countries. Aid is generally transferred to the government of those countries, which tends to increase the government's power, resources, and patronage relative to the rest of society and, consequently, the stakes in any struggle for control of that power. People will spend relatively more of their time focused on the outcome of political and administrative decisions, thereby diverting attention, energy, and resources from more productive economic activities. That may

¹³ D. Bandow, I. Vasquez, "Perpetuating Poverty: the World Bank, the IMF and the Developing World." Washington, D.C. CATO Institute, (1994)

¹⁴ Mamoun Benmamoun and Kevin Lehnert, "Financing Growth: Comparing the Effects of FDI, ODA, and International Remittances." *Journal of Economic Development*, vol. 38, issue 2 (2013), pages 43-65.

encourage tension and disturbances that can lead to the outbreak of civil armed conflict. In the end aid worsens country's economic performance because of the dependency syndrome.¹⁵

Boone found that aid does not significantly increase investment and growth, nor benefit the poor as measured by improvements in human development indicators, but it does increase the size of government.¹⁶

2.2. The Role of FDI in Economic Growth

Theoretically there are a number of ways in which FDI can cause economic growth. As a starting point the standard Solow-type neoclassical model suggests that FDI increases economic growth by adding to the capital stock. Further, most micro-based analysis of the impact of foreign investment suggested that foreign owned production is more productive than domestically owned production in developing countries.¹⁷ FDI flows have also been linked to the wider literature that embeds endogenous technological change theories into general equilibrium models to analyze the relationship between international trade, technological change and growth.¹⁸

Empirical analysis on FDI has had mixed effects on development financing. Blomstrom and Kokko argued that FDI is not efficient in raising national welfare in developing countries. The main reason is that the strongest theoretical motive for financial subsidies to inward FDI spillovers of foreign technology and skills to local industry is not an automatic consequence of

¹⁵ Bauer, P., "Foreign Aid: Mend It or End It?" in Bauer, P., S. Siwatibauand, and W. Kasper, eds., *Aid and Development in the South Pacific*, Australia: Center for Independent Studies, (1991).

¹⁶ P. Boone, "Politics and the Effectiveness of Foreign Aid," *European Economic Review*, 40, (1996): 289-329.

¹⁷ Haddad M. and Harrison A., "Are there positive spillovers from direct foreign investment?: Evidence from panel data for Morocco", *Journal of development Economics* 42 (1), (1993): 51-74.

Aitken, Brian J., and Ann E. Harrison., "Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela." *American Economic Review*, 89(3), (1999): 605-618.

¹⁸ Romer, M. Paul, "Endogenous Technological Change," *Journal of Political Economy*, University of Chicago Press, vol. 98(5), (1990): pages S71-102.

Aghion, Philippe & Howitt, Peter, "A Model of Growth through Creative Destruction," *Econometrica*, Econometric Society, vol. 60(2), (1992): pages 323-51.

foreign investment. The potential spillover benefits are realized only if local firms have the ability and motivation to invest in absorbing foreign technologies and skills. To motivate subsidization of foreign investment, it is therefore necessary, at the same time, to support learning and investment in local firms as well.¹⁹

Interesting results on FDI were found by E. Borensztein et.al, (1998). They tested the effect of FDI on economic growth in a cross-country regression framework, utilizing data on FDI flows from industrial countries to 69 developing countries over the last two decades. Their results suggested that FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. However, the higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital. Thus, FDI contributes to economic growth only when a sufficient absorptive capability of the advanced technologies is available in the host economy.²⁰ Hsiao and Shen, (2003) noted that FDI inflows are very significant in determining growth in GDP especially in the long run.²¹

Makki S.S. and Somwaru A., (2004) found that FDI and trade contribute significantly towards advancing economic growth in developing countries. When FDI interacts positively with trade and it stimulates domestic investment. They further recommended sound macroeconomic

¹⁹ Magnus Blomstrom & Ari Kokko, "The Economics of Foreign Direct Investment Incentives," (2003): NBER Working Papers 9489, National Bureau of Economic Research, Inc.

²⁰ E. Borensztein , J. De Gregorio, J-W. Lee, "How does foreign direct investment affect economic growth?" *Journal of International Economics*, 45, (1998): 115–135

²¹ Hsiao, C. and Shen, Y. "Foreign Direct Investment and Economic Growth: The Importance of Institutions and Urbanization," *Economic Development and Cultural Change*, Vol.51. No.4, (2003): p.83-896

policies and institutional stability as necessary pre-conditions for FDI-driven growth to materialize.²²

Alfaro L. et.al, (2004) indicated that FDI alone plays an ambiguous role in contributing to economic growth. They however, found a very strong correlation between countries with well-developed financial markets and growth that is associated with FDI. The results are robust to different measures of financial market development, the inclusion of other determinants of economic growth, and consideration of endogeneity.²³

Overall from the existing studies that have been reviewed, despite differences on FDI's impact, there is enough evidence supporting the significant positive relationship between FDI and Real GDP per capita.

2.3. Impact of Personal Remittances on Economic Growth

Literature on remittances has had a mixed view when it comes to its relationship with economic growth. This is due to the fact that most remittances are spent on consumption as opposed to investment in developing countries. Scholars such as Chami R. et.al, (2003) using a new panel data set on remittances and find a robust negative correlation between remittances and GDP growth. This is contrary to expectation of external finances flowing to developing countries. They however, concluded that remittances may not be intended to serve as a source of capital for economic development.²⁴

²² Shiva S. Makki and Agapi Somwaru, "Impact of Foreign Direct Investment and Trade on Economic Growth: Evidence from Developing Countries" *American Journal of Agricultural Economics*, vol. 86, issue 3, 2004: pages 795-801

²³ Alfaro Laura, Areendam Chanda, Sebnem Kalemli-Ozcan, and Selin Sayek. "FDI and Economic Growth: The Role of Local Financial Markets." *Journal of International Economics* 64, no. 1, (2004).

²⁴ Chami Ralph, Connel Fullenkamp and Samir Jahjah, "Are Immigrant Remittances Flows a Source of Capital for Development?" (2003), International Monetary Fund Working Paper 03/189. Washington, DC.

Adams R.H., (2006) analyzed the economic impact of international remittances on countries and households in the developing world. He found that while the level of poverty in a country has no statistical effect on the amount of remittances received, for those countries which are fortunate enough to receive remittances these resource flows do tend to reduce the level and depth of poverty.²⁵

Katsushi S. Imai et.al, (2013) reexamined the effect of remittances on growth of GDP per capita using annual panel data for 24 Asia and Pacific countries. The results generally confirmed that remittances flows are beneficial to economic growth. However, their analysis also showed that the volatility of capital inflows such as remittances and FDI is harmful to economic growth. This means that, while remittances contribute to better economic performance, they are also a source of output shocks. Finally, remittances contribute to poverty reduction – especially through their *direct* effects. Migration and remittances are thus potentially a valuable complement to broad-based development effort.²⁶

2.4. Justification

This paper is very important for developing countries and its findings would significantly contribute to the current literature. This paper is one of few to bring ODA, FDI and remittances into one study and is the first one to utilize the quantile approach to the analysis. Quantile regression is more appropriate for this study because it is able to analyze impact at different

²⁵ Richard H. Adams, "International Remittances and the Household: Analysis and Review of Global Evidence," *Journal of African Economies*, Centre for the Study of African Economies (CSAE), vol. 15(2), (2006): pages 396-425, December

²⁶ Imai, Katsushi S et.al, "Remittances, growth, poverty: New evidence from Asia countries," *Journal of Policy Modelling*, Elsevier, vol. 36(3), (2014): pages 524-538

income levels and also it assumes heterogeneity. Thus my paper's results will give new insights to the current literature FDI, ODA and remittances role in economic growth.

3. Methodology and Data

3.1. Model Specification

To check whether Foreign Direct Investment, Personal Remittances and Official Development Assistance would affect GDP Per Capita and whether country's level of development and institutional quality plays a role in determining the impact on GDP Per Capita, the paper estimates the following quantile regression model, OLS and panel data regression model:

Linear model for the τ th quantile below has been utilized to establish if the level of countries development has an impact on the performance FDI, remittances and ODA on GDP per capita in the long run

$$y_i = x_i^T \beta_\tau + e_i$$

$$\ln g d p p c_i = \beta_\tau + \beta_\tau \ln f d i_i + \beta_\tau \ln p r_i + \beta_\tau \ln o d a_i + \beta_\tau \ln g c f_i + \beta_\tau \ln i n f l_i + \beta_\tau \ln s e p r i_i + \beta_\tau \ln g f c e_i + \mu_i$$

Panel data analysis below will establish if regulatory quality affects the performance ODA, FDI and remittances on GDP per capita in the short run. To do so the main variables have been interacted regulatory quality to form the following interaction terms $\ln f d i_r e g q_i$, $\ln p r_r e g q_i$, and $\ln o d a_r e g q_i$.

$$\ln g d p p c_i = \beta_1 + \beta_2 \ln f d i_i + \beta_3 \ln p r_i + \beta_4 \ln o d a_i + \beta_5 \ln g c f_i + \beta_6 \ln i n f l_i + \beta_7 \ln s e p r i_i + \beta_8 \ln g f c e_i + \beta_9 \ln f d i_r e g q_i + \beta_{10} \ln p r_r e g q_i + \beta_9 \ln o d a_r e g q_i + \mu_i$$

where $i = 1, 2, \dots, n$ is a country index, τ is n^{th} quantile of the dependent variable. $\ln g d p p c$ is the income levels of countries, $\ln f d i$ is an indicator of private source of external development finance expressed as a percentage of GDP, $\ln p r$ is an indicator of source of external finance expressed as a percentage of GDP, $\ln o d a$ is an indicator of public source of external development finance expressed as a percentage of Gross National Income, $\ln g c f$ is an indicator of private investment expressed as a percentage of GDP, $\ln i n f l$ is the annual GDP deflator expressed in percentage, $\ln s e p r i$ is an indicator of human capital expressed as a percentage of annual gross school enrollment, and $\ln g f c e$ is an indicator of government expenditure expressed in real term. μ is the disturbance term. We expect that $FDI > 0$: the more the FDI inflow, the higher the GDP Per Capita; $remittances > 0$: the higher the remittances levels the better the GDP Per Capita; $ODA > 0$: the higher the aid flow the better the GDP Per Capita; $GCF > 0$: we expect investment to have a positive impact on GDP Per Capita; $GDP\ Deflator < 0$: GDP deflator rids all increase on GDP Per Capita associated with inflation, $SEPRI > 0$: we expect human capital to have a positive impact on GDP Per Capita; $GFCE > 0$: the higher the government expenditure the higher the GDP Per Capita.

3.2. Data

To explore whether FDI, remittances and ODA would improve living standards, our dataset consists of 113 developing countries and is taken from the World Bank's World Development Indicators and World Governance Indicator (2014). This paper will use *GDP Per Capita* as a measure of living standards. All the variables have been averaged for over a period 1970-2012.

The paper has also included control variables to mitigate the effect of omitted variables. These are Gross Capital Formation (*gcf*) to control impact of private investment on GDP Per Capita,

Inflation GDP deflator (infl) to control inflation's effect on GDP Per Capita, School enrollment (sepri) to control impact of human capital on GDP Per Capita, General government final consumption expenditure (gfce) to control impact of government expenditure on GDP Per Capita and Regulatory Quality (regq) which reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. *All the variables except regulatory quality have been transformed to natural logs to deal with issues of outliers and different measurement units*

Table 1: Variable source and definition

Variable	Source	Variable Definition
gdppc	WDI	GDP per capita (constant 2005 US\$)
fdi	WDI	Foreign direct investment, net inflows (% of GDP)
pr	WDI	Personal remittances, received (% of GDP)
oda	WDI	Net ODA received (% of GNI)
gcf	WDI	Gross capital formation (% of GDP)
infl	WDI	Inflation, GDP deflator (annual %)
sepri	WDI	School enrollment, primary (% gross)
gfce	WDI	General government final consumption expenditure (constant 2005 US\$)
regq	WGI	Regulatory quality: Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance)

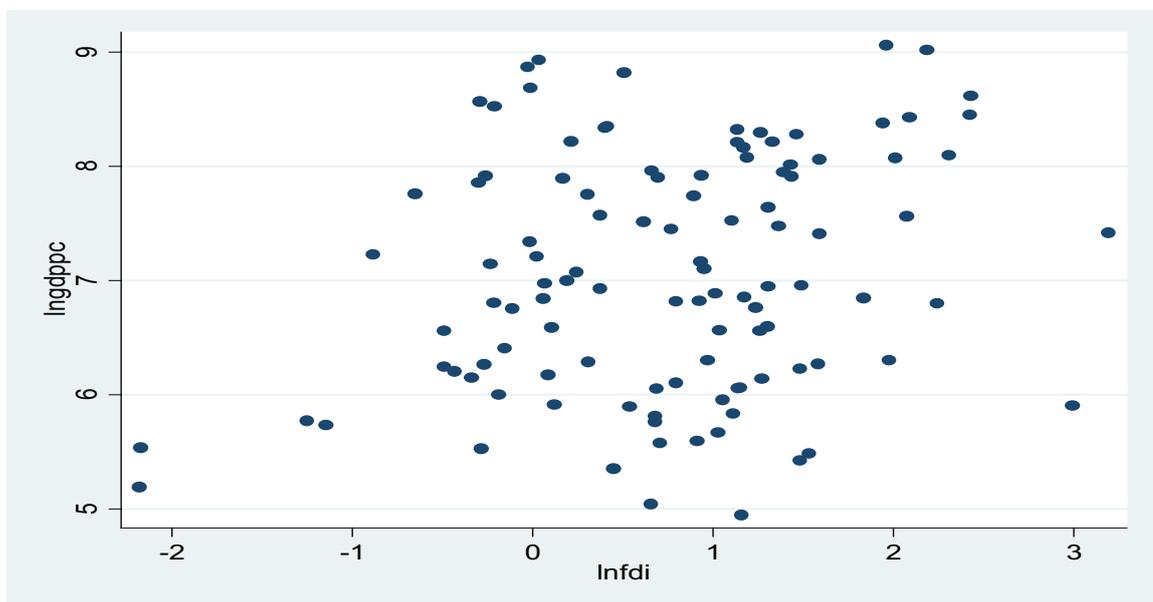
4. Empirical Analysis

Empirical analysis is conducted to establish the kind of interaction that exist between GDP per capita and the main independent variables in 113 developing countries of different income levels: to do so this paper has employed the quantile regression estimates. With several papers emphasizing the importance of institution quality in determining aid, FDI, and remittance effectiveness the paper used regulatory quality to create interaction terms between the main

independent variables and regulatory quality. To control for endogeneity a two stage quantile regression has been employed. To strengthen the findings other estimation techniques have been employed using the same data.

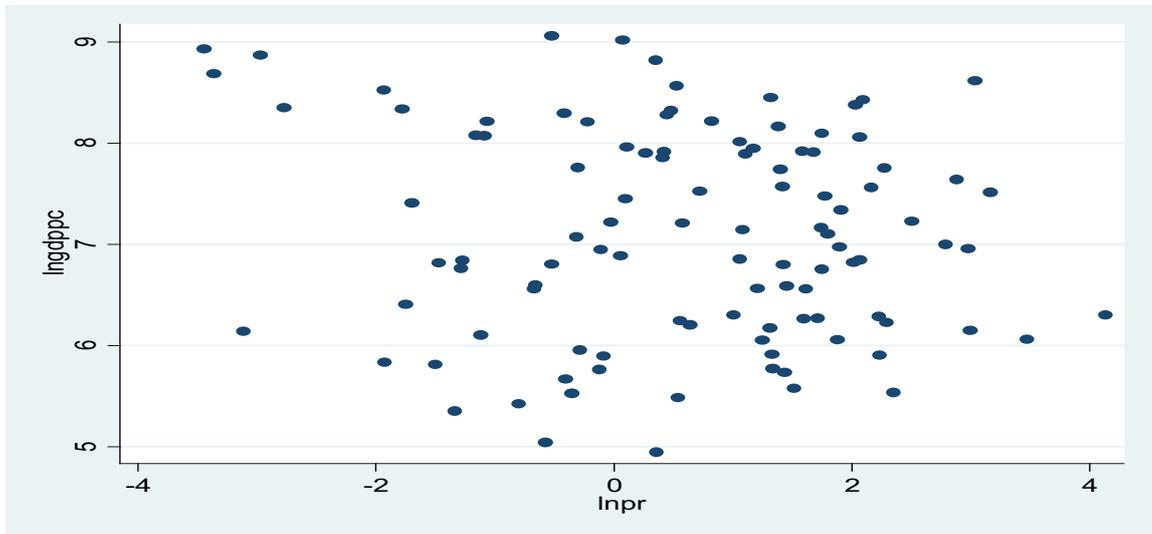
The first part of the empirical analysis looks at the basic relation between `gdppc` and the main determining variable. It also pays attention to the data dispersion from the mean among variables

Figure 4 - scatter plot of GDP Per Capita and Foreign Direct Investment



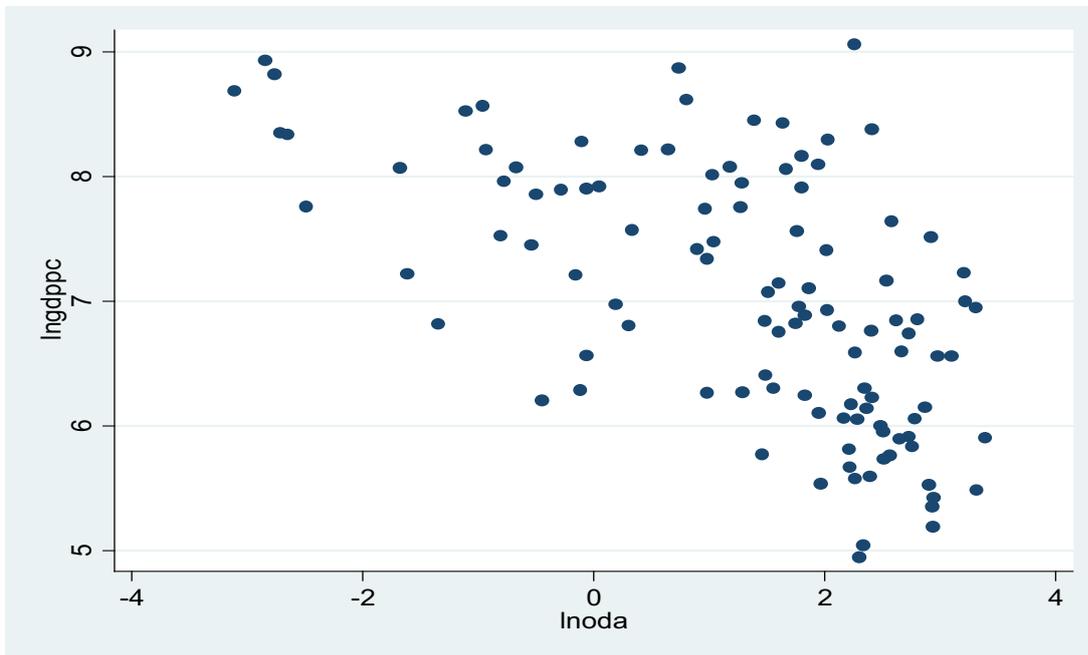
The scatter plot shows that there is a positive relationship between FDI and GDP per capita however it is clear that there is a huge variation in their interaction. This interaction prompts a further exploration to determine the significance of this interaction.

Figure 5 - scatter plot of GDP Per Capita and Personal Remittances



Contrary to my expectation, the scatter plot showing relationship between GDP per capita and personal remittances shows that the relationship is negative. However, there is a huge interaction variation between the two variables. Further analysis is needed to determine the extent of the relationship

Figure 6 - scatter plot of GDP Per Capita and Official Development Assistance



There is a clear negative relationship between aid and GDP per capita with less interaction variation. This however, contradicts the expected relationship between ODA and GDP per capita.

Table 2 shows the descriptive statistics and correlation matrix of variables. All the variables have stable standard deviations which mean the sample means are close to the population means.

Table 2: Descriptive Statistics

<i>lngdppc</i>	<i>lnfdi</i>	<i>lnpr</i>	<i>lnoda</i>	<i>lngcf</i>	<i>lninfl</i>	<i>lnsepri</i>	<i>lngfce</i>
----------------	--------------	-------------	--------------	--------------	---------------	----------------	---------------

Panel A: Summary Statistics

<i>Mean</i>	7.06743	.74358	.601166	1.30422	3.08856	2.82409	4.61008	20.9951
<i>Median</i>	6.97312	.84301	.769651	1.78672	3.07835	2.33124	4.60689	20.9090
<i>Std dev</i>	.097620	.09042	.15301	.150191	.026289	.132733	.118670	.180582
<i>max</i>	9.05984	3.1900	4.1313	3.3927	6.3749	6.7996	17.4611	25.8477
<i>min</i>	4.948826	-2.1824	-3.4481	-3.1071	2.393373	1.03575	3.002348	16.13607

Panel B: Correlation Matrix

<i>lngdppc</i>	1.000							
<i>Lnfdi</i>	0.2447*	1.0000						
<i>Lnpr</i>	-0.1215	0.1115	1.0000					
<i>Lnoda</i>	-0.5955*	0.1514	0.3760*	1.0000				
<i>Lngecf</i>	0.3809*	0.2138*	0.1865	-0.1082	1.0000			
<i>Lninfl</i>	0.0073	0.2032*	-0.0045	-0.1890	-0.0090	1.0000		
<i>Lnsepri</i>	0.0355	-0.0664	0.0108	-0.0298	-0.1390	-0.0359	1.0000	
<i>Lngecfce</i>	0.3811*	-0.213*	-0.301*	-0.789*	0.1063	0.2105*	-0.0076	1.0000

Note: * indicates significance at the 5% level.

4.1. Empirical Results

4.1.1. Economic Development and the impacts of FDI, ODA and Remittances

Differences in the level of countries' development may have an effect on how the inflow of ODA, FDI and remittances would impact living standards. To assess these impacts the quantile regression estimation technique has been employed. Table 3 below reports both estimated cross section OLS and quantile regression results with OLS and quantile estimators. The first column displays OLS the estimates using the whole sample countries. Column 2 to 6 display quantile estimates at 10th quantile, 25th quantile, 50th quantile, 75th quantile, and 90th quantile respectively.

As expected FDI has a significant positive association with GDP per capita in countries with relatively low GDP per capita. These results are consistent with the findings of Benmamoun & Lehnert and Driffield & Jones who using System-Generalized Method of Moments (GMM) approach, found that FDI has a significant impact on GDP per capita in low income countries.²⁷

²⁷ Mamoun Benmamoun and Kevin Lehnert, "Financing Growth: Comparing the Effects of FDI, ODA, and International Remittances." *Journal of Economic Development*. vol. 38, issue 2, (2013): pages 43-65.

Nigel Driffield & Chris Jones, "Impact of FDI, ODA and Migrant Remittances on Economic Growth in Developing Countries: A Systems Approach," *The European Journal of Development Research*, Palgrave Macmillan, vol. 25(2), (2013): pages 173-196, April.

FDI however has an ambiguous relationship with GDP per capita in countries with relatively high income developing countries. There is a positive relationship between FDI and GDP per capita but not significant.

Remittances have the expected positive sign except for the developing countries with the highest level of GDP per capita. Despite this positive relationship, remittances impact of GDP per capita is not significant. The most plausible explanation is that remittances, though categorized as development finance source, is not really development finance. Despite the huge inflow of remittances to developing countries over the past decade, a huge proportion is used for consumption and education as opposed to savings and investment.

Aid has on the other side does not have the expected sign. It is negative and significantly associated with GDP per capita in developing countries. Other papers have suggested that this is the case because the relationship between ODA and GDP per capita is non-linear and suggested to square ODA. This approach still yields the same result with ODA having a negative relationship with GDP per capita. The most probable explanation to this finding is that ODA increases inefficiency in developing countries which result in less productivity. According to Burnside and Dollar the other most probable explanation is that most developing countries have weak development aid institutions. Burnside and Dollar found that quality of institution has a positive effect on how aid impact economic growth.²⁸

Table 3: Quantile regression estimates

	Whole countries					
Model	OLS	(q10)	(q25)	(q50)	(q75)	(q90)

²⁸ Burnside, C., and D. Dollar, "Aid, Policies, and Growth," *American Economic Review*, 90(4), (2000): 847-868

lnfdi	.3356*** (.0804834)	0.313* (0.157)	0.488*** (0.123)	0.474** (0.192)	0.216 (0.219)	0.289 (0.271)
lnpr	.0316854 (.0434073)	0.071 (0.099)	0.098 (0.089)	0.007 (0.073)	0.001 (0.106)	-0.015 (0.096)
lnoda	-.515*** (.0726999)	-0.584*** (0.080)	-0.487*** (0.116)	-0.564*** (0.114)	-0.305** (0.148)	-0.243 (0.182)
lngcf	.3124272 (.2817252)	0.239 (0.490)	-0.259 (0.732)	0.869 (0.609)	0.608 (0.647)	0.712 (0.507)
lninfl	-.1455*** (.0544918)	-0.229 (0.150)	-0.330** (0.154)	-0.286** (0.116)	-0.121 (0.119)	-0.129 (0.083)
lnsepri	.9446*** (.2562391)	0.895* (0.488)	1.108* (0.612)	0.640 (0.536)	1.295** (0.579)	1.523** (0.651)
lngfce	-.1217** (.0583232)	-0.166 (0.129)	0.020 (0.118)	-0.088 (0.113)	0.070 (0.097)	0.041 (0.113)
cons	5.164*** (1.778315)	6.244** (2.879)	3.169 (2.995)	4.475* (2.607)	-1.014 (3.525)	-1.601 (3.615)
Obs	97	97	97	97	97	97
R²	0.6407	0.3920	0.4221	0.4783	0.4549	0.4173

*Notes: The standard errors are reported in parentheses. ***, ** and * indicate significance at 1%, 5% and 10%, respectively.*

4.1.2. Economic Development and the impacts of FDI, ODA and Remittances: Endogeneity controlled

There is a strong evidence of reverse causality between FDI and economic growth or increase in GDP per capita and this brings the problem of endogeneity. It is argued that FDI leads to economic growth and high economic growth attracts FDI to a country. To curb problem of endogeneity the paper has utilized instrumental variable regression since an instrumental variable that is not affected by the reverse causality. The instrumental variable used is the initial value for FDI. Table 4 below reports two stage quantile regression estimates

Table 4: IV Quantile regression estimates

Whole countries						
Model	OLS IV	(q10)	(q25)	(q50)	(q75)	(q90)
lnfdi	.9001*** (.2351)	.804*** (.0817)	.8448*** (.0646)	.7937*** (.0583)	.833*** (.0638)	.6718*** (.0797)
lnpr	.0039 (.0583)	-.0082 (.0998)	.05811 (.0789)	.02976 (.0713)	-.0094 (.0779)	-.0594 (.0974)
lnoda	-.468*** (.0929)	-.472*** (0.163)	-.508*** (.1288)	-.4588*** (.1163)	-.448*** (.1272)	-.387** (.159)
lngcf	-.0996	-.3985	-.8252* (.1288)	-.7744* (.1163)	.30402	1.238** (.159)

	(.4212)	(.6267)	(.4956)	(.4476)	(.4896)	(.6116)
lninfl	-.294***	-.1654	-.3155***	-.349***	-.237***	-.1411
	(.0813)	(.1141)	(.0902)	(.0815)	(.0892)	(.1114)
lnsepri	.895***	.9369	1.142**	.9603**	.3261	.38004
	(.322)	(.5711)	(.4515)	(.4078)	(.4461)	(.557)
lngfce	.10718	.1907	.0859	.1444	.1303	.06488
	(.0976)	(.1417)	(.1120)	(.1012)	(.1107)	(.1383)
cons	1.814	-.3888	3.057	2.9403	2.948	1.3488
	(2.362)	(4.061)	(3.210)	(2.9001)	(3.172)	(3.963)
Obs	73	73	73	73	73	73

*Notes: The standard errors are reported in parentheses. ***, ** and * indicate significance at 1%, 5% and 10%, respectively.*

Initial value for FDI has been used to as an instrumental variable

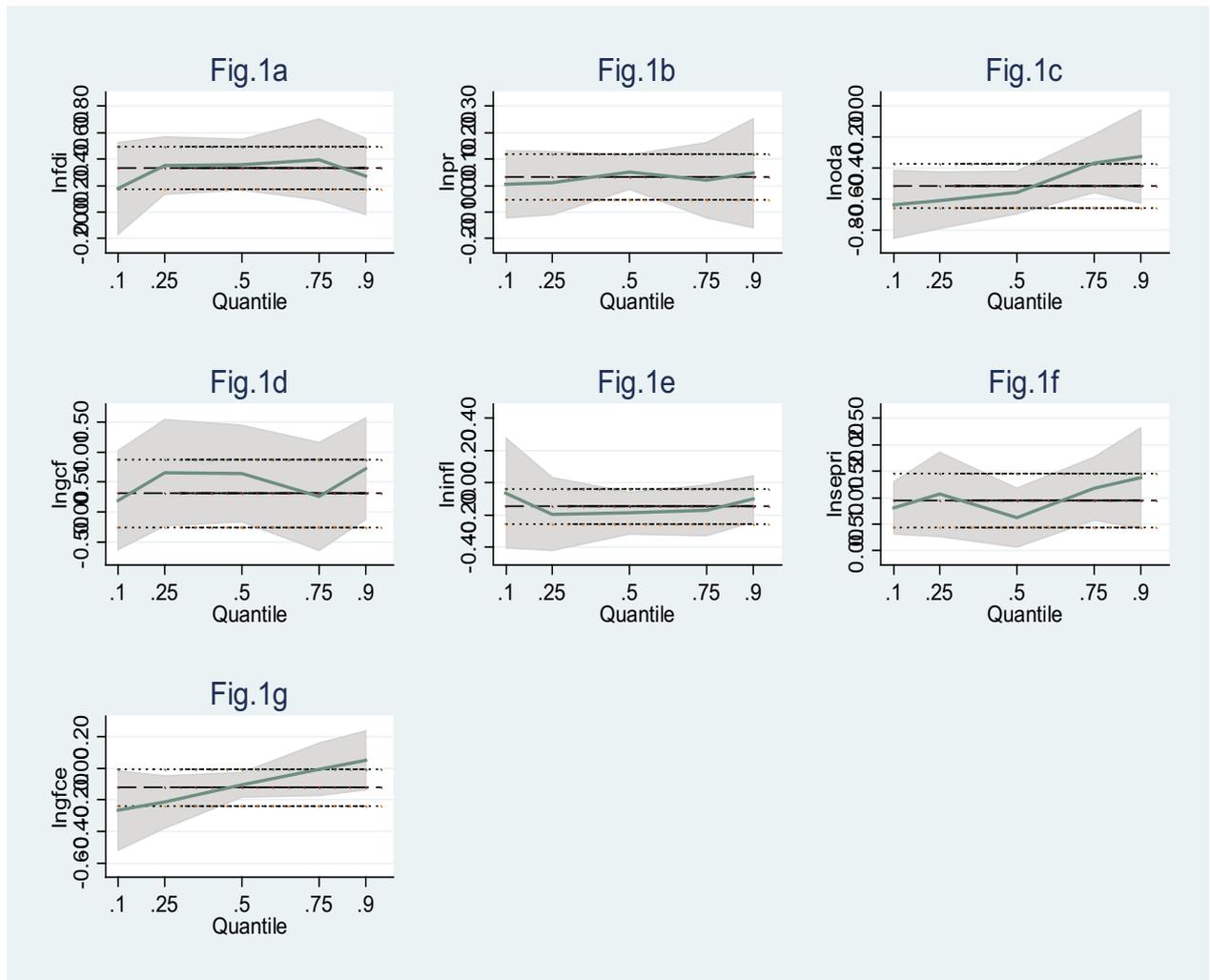
Results from the two stage quantile regression show that FDI is very significant and positively associated with GDP per capita in developing countries. One important thing to notice is that the beta coefficients, which indicate the percentage change in GDP per capita as a result of a percent increase in FDI, are quite high. This makes FDI not only statistically significant but also economically very significant. These results are somewhat different from the quantile regression results I reported in table 3. Unlike the results presented in Table 3, after controlling for endogeneity, FDI is significant across all countries.

Contrary to results from quantile regression, two stage quantile regression shows a negative but insignificant relationship in 10th, 75th, and 90th quantile between remittances and GDP per capita. On the other hand 25th and 50th quantile shows an insignificant positive relationship between remittances and GDP per capita. The most plausible explanation is that remittances, though categorized as development finance source, is not really development finance. Despite the huge

inflow of remittances to developing countries over the past decade, a huge proportion is used for consumption and education as opposed to savings and investment.

Two stage quantile regression results are similar to the quantile regression results I reported in table 3. Aid has a negative significant impact on GDP per capita in developing countries with less magnitude in developing countries with relatively high income levels as seen. Based on the estimates from the quantile regression and two stage quantile regressions it is clear that FDI is very vital in improving living standards in developing countries.

Plotting coefficients for each regressor by quantiles



The results from table 4 also show that the economic significance of FDI is high in relatively low income developing countries and less in developing countries with high income. This is an important finding because of its policy implication. It is therefore recommended that developing countries with low income should put in place policies that attract FDI. On the other hand country's level of development does not really determine the impact of remittances and ODA on economic growth.

4.1.3. Institutional Quality and the Impacts of FDI, ODA and remittances: Long run relationship

To assess whether institutional quality affects the relationship between per capita and the main explanatory variables the paper has interacted regulatory quality with FDI, ODA and remittances and employed OLS cross section technique.

Table 5: OLS Cross section results

VARIABLES	(1) IV results	(2) IV results
lnfdi	0.900*** (0.280)	0.724*** (0.186)
lnpr	0.00390 (0.0751)	-0.0330 (0.0526)
lnoda	-0.468*** (0.0722)	-0.378*** (0.0811)
lngcf	-0.0996 (0.555)	-0.00795 (0.455)
lninfl	-0.294*** (0.0830)	-0.223*** (0.0674)
lnsepri	0.895*** (0.344)	0.846*** (0.257)
lngfce	0.107 (0.0936)	0.0912 (0.0814)
lnfdi_regq		0.0739 (0.122)
lnoda_regq		0.206** (0.0855)
lnpr_regq		-0.182*** (0.0696)
Constant	1.814 (2.026)	2.024 (1.795)
Observations	73	73
R-squared	0.570	0.698

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Column (2), which reports instrumental variable regression results, shows that FDI does not depend on regulatory quality in the long run as seen in the insignificance of the interaction term.

This implicitly, shows a linear relationship between FDI and per capita income.

The interaction term for ODA has a positive and significant relationship with per capita income. Column (1) of Table 5 shows that ODA has a negative and significant relationship with per capita income. This shows that the effectiveness of ODA on per capita income is conditioned on the level of regulatory quality in the long run.

In the long run remittances have a negative and significant effects on per-capita income, and the effect is stronger (weaker) for countries with higher (lower) levels of institutional quality as the interaction term is negative and significant.

4.2. Robustness Check

To check for consistency in my findings, the paper has analyzed the same data using different technique: panel data analysis fixed effects. The results been reported in tables 6 and 7 below

4.2.1. Economic Development and the impacts of FDI, ODA and Remittances: Short term relationship

To assess if economic development affect short run relationship between the GDP per capita and the independent variables the panel data estimation technique has been employed and the following are the results.

Table 6 reports estimates from panel data regression results

Table 6: Panel data estimates

Model	Whole countries	Lower income countries		High income countries
	Column (1)	IV Estimates (2)	IV Estimates (3)	IV Estimates (4)
<i>lnfdi</i>	.0266*** (.0091)	.6281*** (.1138)	.141*** (.0478)	.6889 (.8568)
<i>lnpr</i>	-.00471 (.00883)	-.03749 (.0317)	-.0428*** (.0151)	-.0495 (.0637)
<i>lnoda</i>	-.1778*** (.01404)	-.424*** (.0395)	-.112*** (.0211)	-.0903 (.1918)
<i>lngcf</i>	.1761*** (.0426)	.04391 (.169)	.195*** (.0348)	-.3364 (.7409)
<i>lninfl</i>	-.0271** (.0116)	-.0527 (.0532)	.0174 (.0186)	.09118 (.2254)
<i>lnsepri</i>	.1488** (.0641)	-.4277 (.2686)	-.0585 (.0978)	.6412* (.3569)
<i>lngfce</i>	.0654*** (.0108)	.06499 (.0376)	.144*** (.0377)	.0063 (.0517)
<i>Cons</i>	4.679*** (.3524)	7.764*** (1.339)	3.94*** (.892)	8.25*** (2.29)
R ²	0.4986	0.4803	0.4088	0.0994
Obs.	484	361	236	125

Notes: The standard errors are reported in parentheses. ***, ** and * indicate significance at 1%, 5% and 10%, respectively.

In table 6 column (1) reports panel data regression estimates and show that FDI is positively associated with GDP Per Capita and statistically significant at 1%. Coefficient for personal remittances has a negative sign indicating a negative association with GDP per capita however, the relationship statistically insignificant. ODA is statistically significant at 1% but has a negative sign which is consistent to the results I have reported in Table 2 and 3.

Column (2) reports IV regression results for developing countries. IV regression has been used to control reverse causality between GDP per capita and FDI. To do so the initial variable for FDI has been used as an instrument to control endogeneity. After controlling for endogeneity, FDI has a statistically significant positive relationship with GDP per capita. Contrary to cross section IV regression results, remittances have a negative but still insignificant relationship with GDP per capita. Aid has a negative but very significant relationship with GDP per capita.

Column (3) reports estimates for developing countries with lower income levels. FDI has a positive but insignificant relationship with GDP per capita. Remittance is negatively associated with GDP per capita and it is significant at 10%. Aid is negatively associated with GDP per capita and the relationship is very significant.

Regression results for developing countries with relatively high income levels, which are reported in column (4), show that FDI's relationship with GDP per capita is positive and statistically very insignificant. Remittances have a negative but statistically insignificant relationship with GDP per capita. Aid is significant at 1% and negatively associated with GDP per capita

In the short run, country's level of development does determine the impact of FDI on economic growth. As reported in the column (3) and (4), FDI is significant in developing countries with low income levels and insignificant in developing countries with relatively high income levels.

4.2.2. Institutional Quality and the Impacts of FDI, ODA and remittances: short term relationship

To assess whether the impact of ODA, FDI, and remittances depends on the extent of institutional quality in the short run panel data analysis has been employed. The main

explanatory variables, which are ODA, FDI and remittances, have been interacted with regulatory quality and the following are the regression results.

Table 7: Panel data results

VARIABLES	(1) Fixed Effects	(2) Fixed Effects	(3) IV Fixed Effects
lnfdi	0.0266*** (0.00911)	0.0571*** (0.0109)	.1814*** (0.0572)
lnpr	-0.00471 (0.00884)	-0.0205* (0.0111)	-0.0222* (0.0123)
lnoda	-0.178*** (0.0140)	-0.212*** (0.0144)	-0.210*** (0.0195)
lngcf	0.176*** (0.0426)	0.143*** (0.0398)	0.109** (0.0474)
lninfl	-0.0271** (0.0116)	-0.0208* (0.0108)	-0.0393*** (0.0131)
lnsepri	0.149** (0.0641)	0.177*** (0.0595)	0.239*** (0.0630)
lngfce	0.0654*** (0.0108)	0.0556*** (0.0100)	0.0475*** (0.0103)
lnfdi_regq		0.0499*** (0.0130)	-0.0121 (0.0151)
lnoda_regq		-0.0947*** (0.0173)	-0.0822*** (0.0253)
lnpr_regq		-0.0314* (0.0167)	-0.0379* (0.0219)
Constant	4.679*** (0.352)	4.818*** (0.327)	4.917*** (0.341)
Observations	484	484	361
R-squared	0.503	0.576	0.495
Number of country	101	101	73

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Column (3) reports instrument variable regression to control reverse causality between FDI and economic growth. FDI has positive and significant effects on per-capita income, and the effect is not dependent on the level of institutional quality as the interaction term is not significant.

Remittances have a negative and significant effects on per-capita income, and the effect is stronger (weaker) for countries with higher (lower) levels of institutional quality as the interaction is negative and significant. The most plausible explanation to this relationship is that fact that in most developing countries

ODA has negative and significant effects on per-capita income, and the effect is stronger (weaker) for countries with higher (lower) levels of institutional quality as the interaction term is negative and significant.

5. Conclusion and Policy Recommendation

This paper has been analyzing the impact of FDI, ODA and remittances on living standards of which GDP Per Capita has been as its proxy in the analysis. To establish both long run and short run relationships this paper has utilized data from 113 developing countries over a period of 42 years (1970 – 2012) and applied quantile regression analysis and panel data analysis. When country level of development is considered, ODA has a negative and significant impact on living standards in developing countries; FDI is significant and positive on living standards with high magnitude in relatively less developed developing countries; remittances' impact on living standards is insignificant regardless of the country's level of development. Using panel data analysis the paper incorporated the institution quality in form of regulatory quality, which reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development, to see if it affects the

effectiveness of FDI, ODA, and remittances. After interaction regulatory quality with the main independent variables, the paper finds that regulatory quality has no effect on FDI's relationship with per capita income however it has a negative and significant impact on remittances and ODA's on per capita income.

5.1. Policy Recommendation

While it is clear from the analysis that FDI is more important in increasing GDP per capita and therefore improving the standard of living in developing countries policies should be determined the level of a country in terms of developed countries. Relatively high income countries should focus more on putting in place policies that will encourage domestic companies' efficiency and productivity. For developing countries with low income levels FDI related policies will be important to improve the living standards because they need capital inflow.

Despite remittances not being as significant, fewer developing countries such as Philippines, Ethiopia, and Lesotho among others have benefitted from remittances by putting in place policies that encourages migrants to remit and for commercial banks to invest in infrastructure and other businesses as opposed to just consumption. When South Korea was a developing country, to encourage remittances it provided higher interest rate on remittances. With World Bank projecting US\$516 billion remittances flow to developing countries, a better living standard can be attained if this money is invested than just consumption. Also developing countries should stop taxing remittances to encourage inflow using formal channel.

Aid has for some time been criticized for not achieving the intended purpose. Burnside and Dollar found strong evidence of aid effectiveness and quality institutions. For governments in developing countries to achieve better living standards they should start with improving their institutions. Institution quality goes beyond regulatory quality, it looks at macroeconomic

management and sustainability of reforms; structural policies for sustainable and equitable growth; policies for social inclusion; and public sector management. For developing partners, they should consider aligning aid to developing countries' development agenda and should start implementing aid based performance unless it is relief aid.

Lastly I would recommend developing countries to also consider policies that would improve literacy levels. This was outside the scope of the paper however, literacy level as a control variable has been consistent in increasing GDP per capita. In addition, education in countries that have successfully transitioned from low income to high income seem to be the key determining factor.

References

- Aghion, Philippe & Howitt, Peter. "A Model of Growth through Creative Destruction," *Econometrica*, Econometric Society, vol. 60(2), March 1992: 323-51.
- Aitken, Brian J., and Ann E. Harrison. "Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela." *American Economic Review*, 89(3) 1999: 605-618.
- Alfaro, Laura, Areendam Chanda, Sebnem Kalemli-Ozcan, and Selin Sayek. "FDI and Economic Growth: The Role of Local Financial Markets." *Journal of International Economics* 64, no. 1, October 2004.
- Bauer, P. "Foreign Aid: Mend It or End It?" in Bauer, P., S. Siwatibauand, and W. Kasper, eds., *Aid and Development in the South Pacific*, Australia: Center for Independent Studies 1991.
- Bradford, Barham and Stephen Boucher. "Migration, remittances, and inequality: estimating the net effects of migration on income distribution" *Journal of Development Economics*, Vol. 55, 1998: 307-331
- Burnside, C. and D. Dollar. "Aid, Policies and Growth: Revisiting the Evidence," World Bank Policy Research Paper No. O-2834, March, World Bank, Washington D.C. 2004.
- Burnside, C., and D. Dollar, "Aid, Policies, and Growth," *American Economic Review*, 90(4), 2000: 847-868.
- C Minoiu, and SG Reddy. "Development aid and economic growth: A positive long-run relation", *The Quarterly Review of Economics and Finance* 50 (1), 2010: 27-39
- Chami Ralph, Connel Fullenkamp and Samir Jahjah. "Are Immigrant Remittances Flows a Source of Capital for Development?" *International Monetary Fund Working Paper* 03/189. Washington, DC 2003.
- Chauvet, L. and Guillaumont, P. "Aid, Volatility, and Growth Again: When Aid Volatility Matters and When it Does Not". *Journal of Development Economics*, 13, 2009: 452-463.
- Collier, Paul & Dollar, David. "Aid allocation and poverty reduction," *European Economic Review*, Elsevier, vol. 46(8), September 2002: 1475-1500.
- D. Bandow, I. Vasquez, I. "Perpetuating Poverty: the World Bank, the IMF and the Developing World." Washington, D.C. CATO Institute, 1994.

- E. Borensztein , J. De Gregorio, J-W. Lee. "How does foreign direct investment affect economic growth?" *Journal of International Economics*, 45 1998: 115–135
- Haddad M. and Harrison A. "Are there positive spillovers from direct foreign investment: Evidence from panel data for Morocco", *Journal of development Economics* 42 (1), 1993: 51-74
- Hsiao, C. and Shen, Y. "Foreign Direct Investment and Economic Growth: The Importance of Institutions and Urbanization," *Economic Development and Cultural Change*, Vol.51. No.4, 2003: 83-896
- <http://teacherweb.com/TR/IICS/PatriciaHermes/The-Role-of-Foreign-Aid-in-Development.htm>
- <http://www.worldbank.org/en/news/press-release/2014/04/11/remittances-developing-countries-deportations-migrant-workers-wb>
- Hymer, Stephen. "The Efficiency (Contradictions) of Multinational Corporations," *American Economic Review*, American Economic Association, vol. 60(2), May 1970: 441-48.
- Ilene Grabel. "The Political Economy of Remittances: What Do We Know? What Do We Need to Know?" *Political Economy Research Institute*, October 2008: page 1.
- Imai, Katsushi S et.al. "Remittances, growth, poverty: New evidence from Asia countries," *Journal of Policy Modelling*, Elsevier, vol. 36(3), 2014: 524-538
- Magnus Blomstrom & Ari Kokko. "The Economics of Foreign Direct Investment Incentives," *NBER Working Papers* 9489, National Bureau of Economic Research, Inc. 2003.
- Mamoun Benmamoun and Kevin Lehnert. "Financing Growth: Comparing the Effects of FDI, ODA, and International Remittances." *Journal of Economic Development*, vol. 38, issue 2, , 2013: 43-65
- Nigel Driffield & Chris Jones. "Impact of FDI, ODA and Migrant Remittances on Economic Growth in Developing Countries: A Systems Approach," *The European Journal of Development Research*, Palgrave Macmillan, vol. 25(2), April 2013: 173-196.
- P. Boone. "Politics and the Effectiveness of Foreign Aid," *European Economic Review*, 40, 1996: 289-329.
- Richard H. Adams. "International Remittances and the Household: Analysis and Review of Global Evidence," *Journal of African Economies*, Centre for the Study of African Economies (CSAE), vol. 15(2), December 2006: 396-425.

- Romer, Paul M. "Endogenous Technological Change," *Journal of Political Economy*, University of Chicago Press, vol. 98(5), October 1990: 71-102.
- Shiva S. Makki and Agapi Somwaru. "Impact of Foreign Direct Investment and Trade on Economic Growth: Evidence from Developing Countries" *American Journal of Agricultural Economics*, 2004, vol. 86, issue 3, 2003: 795-801
- Sufian Eltayeb Mohamed & Moise G. Sidiropoulos. "Another Look At The Determinants Of Foreign Direct Investment In Mena Countries: An Empirical Investigation," *Journal of Economic Development*, Chung-Ang Unviersity, Department of Economics, vol. 35(2), June 2010: 75-95.