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IMPACT OF PERSONAL REMITTANCES RECEIVED ON ECONOMIC GROWTH IN THE GAMBIA

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This paper adopt the error correction model technique (VECM) to establish the long run and short run relationship between personal received and economic growth in the Gambia during the period 2003 to 2017. In testing for the unit root test properties of time series data, all variables are found to be stationary at first differencing level under the Augmented Dickey Fuller test (ADF). The results of VECM demonstrate the existence of a positive and significant relationship between personal remittances received and economic growth both in the long run and short run. Personal remittances received act as a great source of foreign exchange currency and also help in reducing the level of poverty in the developing countries. Total exports have a positive and significant impact on economic growth in the long run but not in the short run. Total imports have a negative and significant impact on economic growth in the long run but in short run. We recommend that the government should encourage the people who received remittances to invest their money in business and also agriculture especially in poultry and agro base processing. It is also recommended that the government should create more employment opportunities to minimize the number of our able young men and women migrating to overseas in search for a better living standard.

Keywords: VECM, Remittances, Survey, Economic Growth, Migration

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INTRODUCTION

Migration, which is the movement of people from their place of origin to places, has assumed a phenomenal dimension in the world in the last decades. This was due to a declined in economic growth caused by decline in agriculture output, increase in unemployment rate, persistent increase poverty level and unfavourable political atmosphere presented with detain and torture.

In the past 6 to 8 years, there has been an unprecedented increased in emigration to Europe and Middle East by the African youths in search for better standard of living. The increase in migration of African youths to Europe was highly encourage by the discovery of the new rout to Europe across the Ocean in Libya caused by the Libyan civil war after the fall of Mahmud Gadhafi.

These emigrants remit or send a portion of their earnings to their families and love ones back home. Their families and love ones use these remittances to finance their expenses in the area of education, buying and building houses, medical, and establish small micro-enterprises both in the urban and rural area.

Remittances are now the key main sources of capital inflow for investment globally especially in the developing countries. The high growing of remittances inflow to the country of origin in the last decades exceeds Official Development Assistant, Official Aid and Foreign Direct Investment (FDI) to developing countries. These have received great attention among Scholars and policy makers.

More than 200 million migrants are now supporting an estimated of 800 million family members globally. It was projected that in 2017, one-in-seven in the world will be involve either in sending or receiving more than USS 450 billion in remittance. Migration flows and the remittances that migrants send home are having large-scale impacts on the global economy and political landscape according to International Fund for Agricultural Development report 2016.

According to World Bank report 2018, overall remittances grew 10% to US$689 billion including US$528 billion to developing countries. Overall remittance is expected to grow 3.7% to US$715 billion in 2019, including US$590 billion to developing countries. The top remittances recipient countries are India US$ 80 billion, China US$67.4 billion, Philippines and Mexico each US$33.5billion, Egypt US$25.7billion, Nigeria US$ 25.1 billion, Pakistan US$ 20.9 billion, Ukraine US$ 16.5 billion, Bangladesh US$ 15.9 billion, and Vietnam US $ 15.9 billion.

India being the world leading receiver of remittances claimed more than 12% of the world's remittances. As indicated above, remittances to India stood at US$80 billion in 2018, accounting for over 2.8% of the country's GDP. (Encyclopaedia)

Remittances have played an important positive role in the growth of many developing countries, considering the great number of their citizens living in foreign countries. In the event of crisis, remittances stand as the pillar for these countries. They are considered as the primary income for many families in countries under development.

In Africa, remittances play an important role in the reduction of poverty level, by increasing household income of the families of emigrants. Increase in household income, encourages consumer spending, accumulation of assets, promotion of self-employment, and investment in small micro enterprises. At macroeconomic level, remittance facilitates the economic growth by improving the labour productivity through investment in human capital, and investment gross capital formation.

However, data on remittances are under estimated as many emigrants relied on informal channels to send money back home to their families and love ones. Migrants from Africa today are approximately 20 to 30 million adults, who send around US$40 billion annually. For the region as whole, this represents 50% more than the net official assistant (ODA), for most countries, the amount also exceeds foreign direct investment.

According to African Economic Outlook 2017, migrant remittances remain the major and stable source of external finance for Africa. Remittance flows have growing substantially over the last five years, accounting for 51% of the private in flows in 2016 compared to 42% in 2010. (OUTLOOK, 2017)

Over the past decades remittance to and within African have grown by 26% closed to the migration growth pace (29%). Out of 60.5 billion received in 2016, closed 80% of remittance went to five countries: Nigeria (USS 19 billion), Egypt (16.6 billion), Morocco (7 billion), Algeria and Ghana (USS 2 billion) each. Officially recorded remittance flows to Africa according to World Bank had increased from US$9.1 billion in 1990 to nearly US$40 billion in 2010. In relative term, The Gambia and Liberia top the list of remittance receiving countries in Africa and among the top ten in world ranking as a share of their GDP in 2016 (see figure 1). (News, October 18, 2017)

Remittances in The Gambia: In 2016, The Gambian emigrants residing in the Diaspora remitted US$181 million to their families and love in the Gambia. These remittances contributed up to 22 per cent of The Gambia's 2016 gross domestic product (GDP) (News, October 18, 2017). The Gambia, like other African countries, relies heavily on external funding for development. However, foreign direct investments and official development aid have been declining over the past years, according to the African Development Bank (AFDB). In the past 7 years both gross domestic product and remittances inflow into the Gambia have been positive and upward trending. Between the years 2010 to 2011, both remittances and gross domestic product fall. This was caused by the global economic crisis felled by the political instability in the Middle East and Northern Africa especially the beginning of Libyan uprising. (See figure 1 and 2a&2b)

The remittances received contribute in the stability of the Gambian economy by acting as one of the greatest sources of foreign currency used for imports. In the Gambia almost everything utilized is imported. In order to import, the Gambian importers or the government of The Gambia needs foreign currency. The Gambia's only sources of foreign currencies before, were from foreign direct investment, official development assistant, official aid, exports of primary agricultural products such as ground nuts, cottons, animal skins, etc., receives from tourist which are unreliable due to high terror treats from around the world. Total exports have been fluctuating a lot in the past years as a result of drought experience in the raining season; because of almost the farmers depend on rainfall 100% for farming and also the emigration of the able young men to the developed world. This caused shortage of foreign currency for imports leading to higher prices of basic food items. But with the high increase of the Personal remittances inflow, the shortage of foreign currency has been minimized and the prices of the basic items have also been stabilized. (see Figure 3)

Like other developing countries, remittances in The Gambia are received in two channels, which are the formal and the informal channels. Remittances sent through the formal channels are sent through the money transfer companies such as money Grams, Western Union, and Ria etc. partnering with the commercial banks. These commercial banks have agents from all

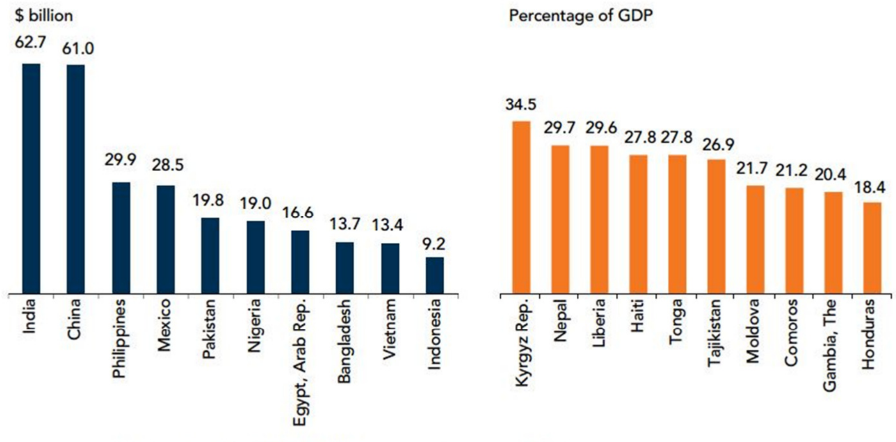

Figure 1. Top Remittance Receivers in 2016
Sources: International Monetary Fund; World Bank World Development Indicators; staff estimates.

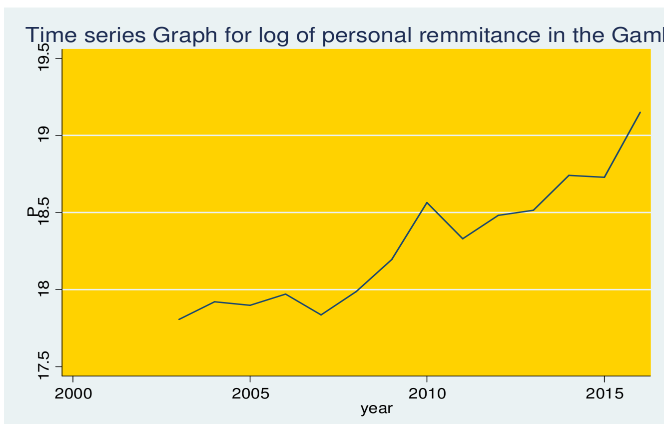

Figure 2a.
Sources: Authors' computation by usine STATA 13.

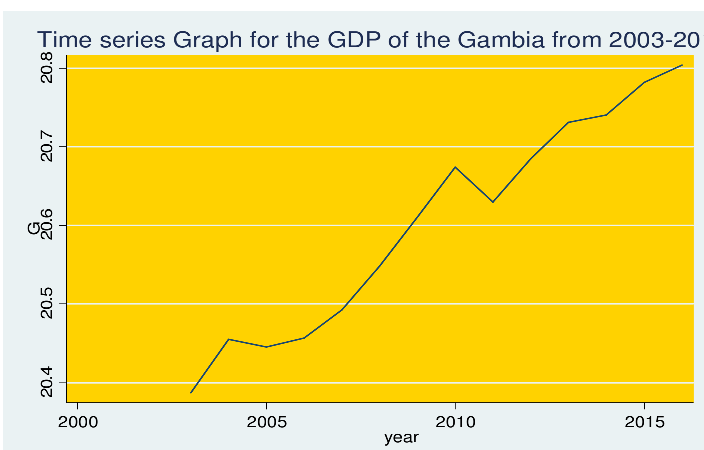

Figure 2b. Time Series Graph of GDP of the Gambia
Sources: Authors' computation by using STATA 13.

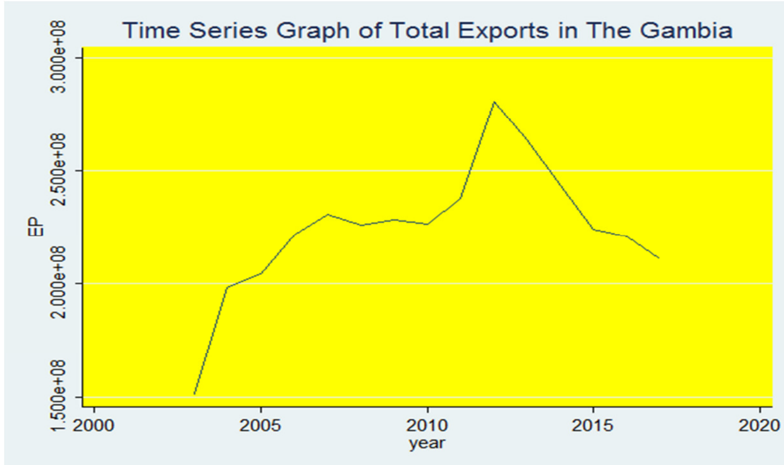

Figure 3. Total Exports in the Gambia
Sources: Authors' computation by usine STATA 13.

corners of the country. These help facilitate the distribution of remittances received by these commercial banks to the families of the emigrants. Data on remittances received through formal channels are record by the commercial banks and later hand over to the Central Bank on weekly or monthly basis. The remittance sent through the informal channels is usually sent to the local agents in the Gambia and they are not capture or recorded, since they are difficult to trace and are never reported.

Major part of remittances received in the Gambia are used for household consumption and only a smaller percentage of it is invest in business as shown by the survey results in section3.

However, development experts believe remittance inflows can help reduce poverty and increases economic growth.

There have been many empirical papers written on the impact of remittances on economic growth in many African countries. But we are yet to find a paper written on the impact of remittance on economic growth in the context of The Gambian economy. Therefore the main objective of this paper is to determine the impact of remittances on economic growth in Gambia.

The next sections of this paper are as follows: section 2.Literature review, 3. Survey Results, section 4. Methodology and the econometrics model, section 5.Regression and analysis, and section .6.Conclusion and Recommendation and section.7. Reference

LITERATURE REVIEW

Theoretical Review

Definition of Remittances: Remittances are financial resources flow from cross-border movement of nationals of a country. The narrowest definition is ''unrequited transfers'' refers primarily to money sent by migrants to family and friends on which there are no claims. (Kapur, April 2004)

In recent years, the world has experience enormous amount of migration to the west all in the name of searching for the greener pasture. These migrants remit or send a portion of their earnings to their families and love ones back home. Their families and love ones use these remittances to finance their expenses in the area of education, buying and building houses, medical, and also establish small micro-enterprises both in the urban and rural area.

The impact of remittances on the country's economic growth, depend on the development of country's financial system and financial market; as well as on the specific economic condition. Remittances promote additional expenditures in the country, and this influences the opportunity to investment. Remittances are a source of foreign currency, encouraging higher saving and economic growth. If remittances create a higher demand the country is unable to meet, they also increase imports, which create a variety of goods and services. In this case it worsens the prosperity of households that do not received remittances.

There are two contrasting views regarding the effects of international remittance on the economy of the labour sending country, the optimistic view and pessimistic view. The first one views remittance as a mechanism for economic development while the other one perceives remittances as an "illness" that weakens the economy (Cattaneo, 2008). According to Capistrano and sta Maria (2007), the beneficial and detrimental effects of migration and overseas remittances can be classified using three perspectives, at macro or national level, at community level and at the household level. At national level, one of the most significant benefits of the inflows of remittances to a country is that, it increases the foreign exchange earnings of the labour exporting country (Ratha, 2003, pernia, 2006).

One of the relationships between economic growth and diaspora remittances is that remittances are cash inflows that increase the foreign reserves of a country considerably. Remittances spent by any given recipient can create multiplier effects for national economics: i.e. every remittance dollar spent in local markets creates demand for services and products as well as the jobs required to provide them, thus contributing to overall economic growth.

According to Hason and woodruff (2003) and Cox-Edwards and ureta (2003) have found evidence for “forward” linkages between remittances and human capital formation in Latin America.

Remittances recipient’s experiences direct benefits such as reduced expenditure constraints through income augmentation. This additional income expands recipient household’s options for consumption, reducing poverty and improving standards of living.

Remittances also reduce poverty in the recipient economy since it augment the income of the recipient household and it provides resources for poor households, which in turn affect their welfare and poverty level through indirect multiplier effects.

Remittances can improve a country’s creditworthiness and there by enhance its access to international markets for financing infrastructure and other development projects.

Empirical Review

(Dietmar Meyer, Adela Shera, 2016) Study Impact of Remittances on Economic Growth using panel data set of six high remittances receiving countries, Albania, Bulgaria, Macedonia, Moldova, Romania and Bosnia Herzegovina during the period 1999–2013. Their results showed that remittances have a positive impact economic growth. And that this impact increases at higher levels of remittances relative to GDP.

(Kristina Matuzeviciute and Mindaugas Butkus, 2016) Study the impact of remittances on long-run economic growth. Using an unbalanced panel data covering a sample of 116 countries with different development levels over the period 1990–2014, they studied the interaction between remittances and the level of economic development, as well as its impact on long-run economic growth—because the impact of remittances could be influenced by the development level of the receiving countries. They found out that remittances generally have positive impact long run economic growth, but the impact differ base on the country’s development level, and the volumes of remittances received by the country.

(Adela Shera / Dietmar Meyer, (2013))The result showed that remittances have positive and statistical effect on the GDP per-capital of these countries. According to their finding, a 1% increase in the remittances of an Albanian economy would result in about 0.14% increase in the average per capital income. Similarly, a 1% increase in investment in human capital as measured by the percentage of secondary school enrolment increases GDP per capital by 0.64%.

(Khathlan, 2013) Study the Link between Remittances and Economic Growth in Pakistan: A Boon to Economic Stability. He used the Auto-regressive Distributed Lag model (ARDL) and Error Correction Model (ECM) to test for the long run and short relationship between variables. The result of his findings revealed existence of a positive and significant relationship between Remittances and foreign direct investment on economic growth both in the long run and short run. He also states that remittances act as an important source of foreign capital

(Samer Abdelhadi & Ala’ Bashayreh, 2017) Study Remittances and Economic Growth nexus: evidence from Jordan. Applying the co-integration test and the Error Correction Model, their results revealed that there is a stable long run relationship between GDP percapita and remittances in Jordan as well as in the short run. As a result, the study confirms the positive significant effect of remittances on economic growth. In other words, remittances of Jordanians enhancing economic growth for local Jordanians which improve standards of living and participate in reducing level and depth of poverty in Jordan. The study recommends cutting fees on remittances transfers and to direct Jordanians to invest remittances in productive projects in order to achieve high economic growth, increase employment, and eventually improve the standard level of living. (Umaima Arif, Abdul Quayyum, Muhamed Javid, January 2008) They study the impact of remittances on economic growth and poverty in Pakistan. Their result showed that in the long run remittances and GDP are positively related, but negatively related in the short run. However the magnitude of the variables is small. Their finding also showed that remittances and economic growth are positive and significant.

(John C. Anyanwo, Andrew E. Oerhijakpo, winter 2008 to summer 2009) They study the International Remittances and Economic Growth in Africa. They found out that international remittances have a strong/statistical significant impact on increasing economic growth in Africa. Government consumption and population growth rate strongly reduce the economic growth, whereas human capital increase the economic growth.

(B. Fayissa, C. Nsiah, Feb. 2008) Study the Impact of Remittances on Economic Growth and Development in Africa. The result showed that boost economic growth in countries in countries where financial systems are less developed by providing an alternative way to finance investment and helping overcome liquidity constraints. They also showed that remittance positively impact

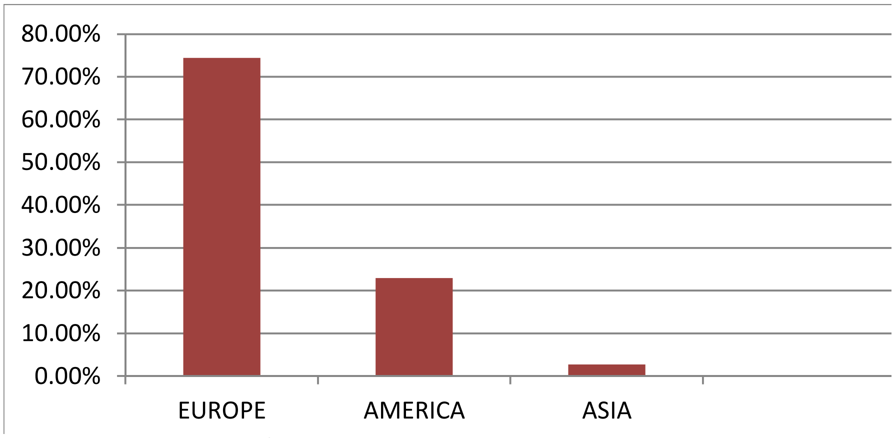

Figure 4. Percentage of Familyis/Relatives in abroad and Locations
Sources: Author Computation from Micro of Excel

economic growth in African countries. They found that a 10% increase in remittances lead to 0.3% increase the GDP per capital income.

(Abdulaev, May, 2011)Study the Impact of Remittances on Economic Growth in selected Asian countries and former Soviet Union Countries. The results of his empirical regression analysis indicate that remittances have positive impact on the per capital income growth of 10 countries. The result also states that remittance have no impact on physical capital accumulation but have positive impact on human capital accumulation and economic growth in these countries.

(Tassew Dufera Tolcha, and Dr. P. Nandeeswar Rao, 2016) Study The Impact of Remittances on Economic Growth in Ethiopia. Given such important literature their study was undertaken to add on existing literature by assessing the impact of remittances on Ethiopian economic growth over the period 1981 – 2012. ARDL model was used for time series estimation. An empirical result from the study reveals that there is a short run significant impact of remittances on economic growth while it affect the economy negatively in the long run.

(Shapan Chandra Majumder and Zhang Donghui, 2016) We adopted Auto regressive Distributed Lag (ARDL) models or dynamic linear regressions which are widely used to examine the relationship between remittances and economic growth in a country. In testing for the unit root properties of the time series data, all variables were found stationary at first difference level under the ADF and PP stationary tests. The result of their finding revealed that there exist a statistically significant long run positive relationship between remittance and economic growth of gross domestic product in Bangladesh.

SURVEY RESULTS

FAMILIES/RELATIVES IN ADROAD AND LOCATION

The results show that 74.4% of the survey sample has their familyis/relatives living in Europe. Nearly one quarter have familyis/relatives in United States of America, while 2.7% have familyis/relatives living in Asia. Nearly three-quarter of those familyis/relatives residing in Europe are living in Italy and Germany. The high number Gambians presence in Italy and Germany is as a result of the recent illegal migration through the back way. (Figure 4)

SAMPLE PROFILE

The table 1 showed that out of the survey sample, 55.5% of the household interviewed are working. Whiles 45.5% are not working. Majority of the remittances receivers in the rural area working are seasonal farmers and gardeners in their 50s and 60s. Most of the women grow vegetables in their gardens located in the ‘’FAROS’’, whereas the men who are the farmers depend heavily on rainfall for farming. Places like Badibu Kerewan, there are no youths to be found, because almost 90% of the youths from that end have embarked on a dangerous journey (back way) to Europe in search for a better living standard. The only people spotted both in the street and compounds during the survey, were the old men and women.

Table 1. Sample Profile

GENDER	NUMBER	PERCENTAGE%
MALE	84	42
FEMALE	116	58
WORKING		
YES	111	55.5%
NO	91	44.5%

LENGTH OF TIME MONEY IS RECEIVED FROM ABROAD

Almost halff of the Gambians who receive money from abroad are likely to receive money at least once every month, 46% of them. That is, over the last 12 months before the survey, 15.5% receive money once in every two or three months, 5% once every six months, 9.5% two or three times in a month. The other common time periods of receiving money, are two or three times in a year (13%), once in year (10%), and almost every week (1%). (see Figure 5)

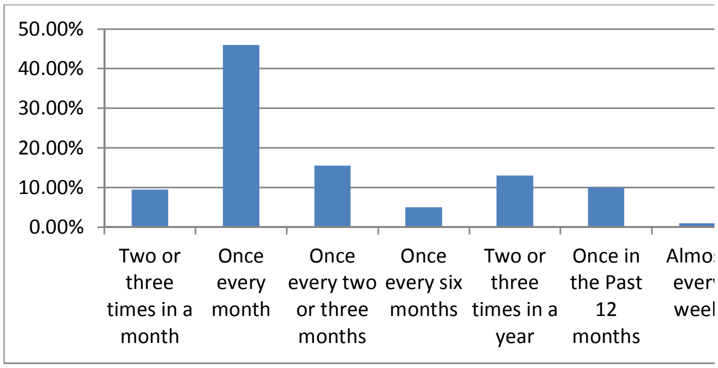

Figure 5. Frequency of receiving remittances
Sources: Author Computation from Microsoft Excel

AVERAGE AMOUNT OF MONEY TYPICALLY RECEIVED ON A SINGLE OCCASION

The money from overseas to familyis/relatives in the Gambia on a single occasion is not likely to exceed D 10000.00(US$204.08). The most common amount of money sent to relatives GMD 3000.00 received more than GMD 10000.00. (See Figure 6)

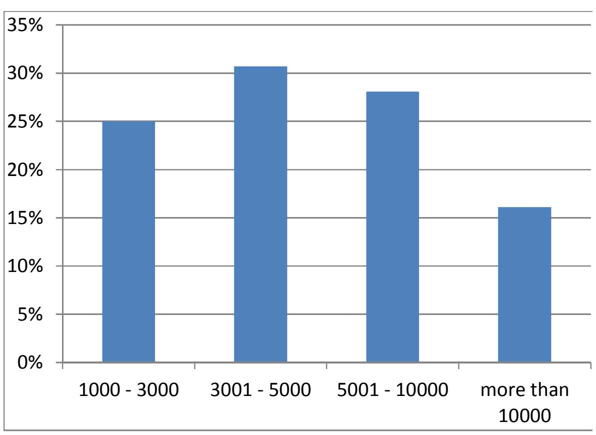

Figure 6. Average amount of money on a single occasion
Sources: Author Computation with Microsoft Excel

HOW IS MONEY FROM OVERSEAS TYPICALLY RECEIVED

Base on the survey results, we can say that approximately half of the Gambians who received money from abroad have the money brought by either a relative, family member or a friend that is 50% of the sample. 46% pick up the money directly from the bank or other financial institutions where as 3.1% say they picked their money from the post. (see Figure 7)

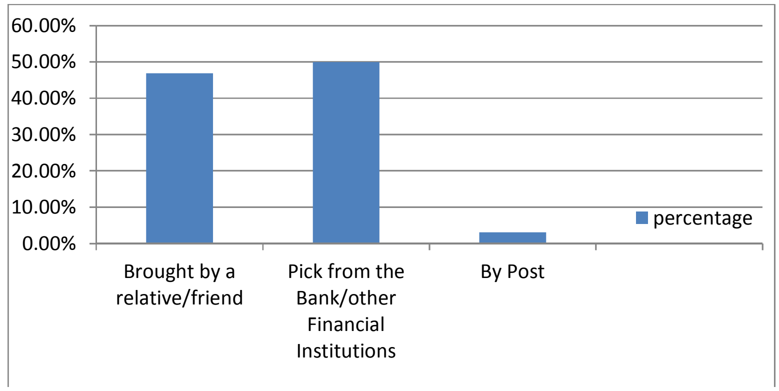

Figure 7. Percentage of how Money from Overseas is received
Sources: Author Computation with Microsoft Excel

Remittances Receivers With/Without Bank Account

Base on the survey we can say more than half of the Gambian people who received remittances do not have bank account – that is 52.1% of the survey sample. Only 46.9% have bank Account. In the rural area, more than 70% of the people who received remittances do not have bank account. The large number of people in the rural area without bank account is as result of unemployment and the absence of the financial institutions in the rural area. Since the remittances received are used mainly for household expenses such as food and school fees etc., majority of the remittances receivers are left with no surplus cash for savings. (see Figure 8)

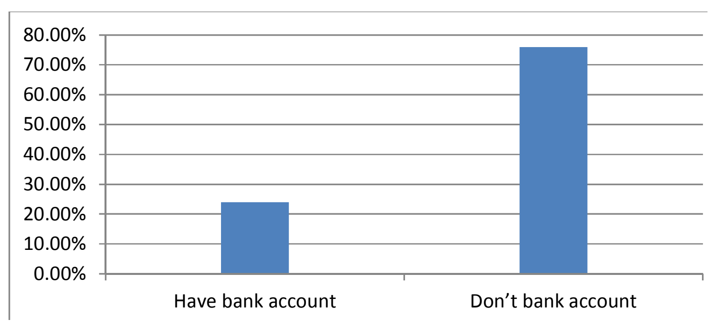

Figure 8. Remittances Receivers with/without bank Account
Sources: Author Computation with Microsoft Excel

Main Purposes for Which Remittances Received Are Use for

The money received from overseas is mostly spent on household expenses such as food, water and electricity. Almost 90% of the survey sample says they depend on remittances for their daily feeding. Whiles In the rural area, the entire hundred households interview said that they 100% depend on remittances for survival. They claimed that before they started receiving remittances, life was very hard for them but thanks to their families and relatives in abroad who send them money, they no longer worry about whether a bag of rice would stand in their compound at the month. Since their families or relatives in overseas are the one in charge of that responsibility.

Base on the survey results we found out that almost 80% of the remittances received in the Gambia are used in the following areas feeding, education, entertainment, and religious festivals. 10% is used for buying and properties and construction of houses, 7% for savings and 4% is use invest in a business. The amount of money from overseas use for saving and investment is very small compared to food and education. This is because most of the money sent is purposely meant for consumption. There is zero percent on saving from remittances in the rural areas among the households interviewed during the survey. They claimed that they never experience any cash surplus from the remittances after all Household expenses are been met. The figure 9 showed how remittances are use in The Gambia.

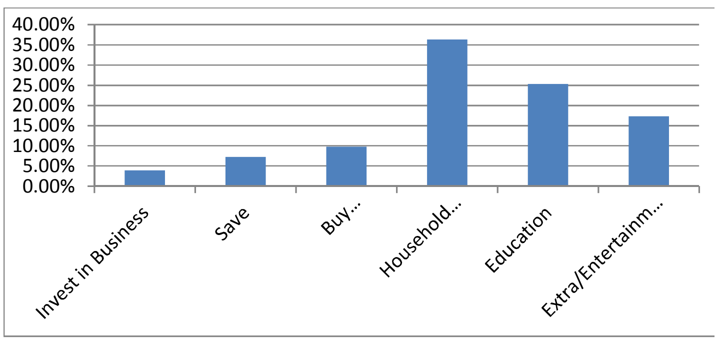

Figure 9. Main Uses of Remittances
Sources: Author Computation with Microsoft Excel

Number of Years They Have Been Receiving Money from Abroad

More than half of the survey sample said they have been receiving remittances for more than five years. 24% of them have been receiving remittances for a period of three to five years, 20% between one and three years and 3% said that they started receiving remittances less than a year as indicated in figure 10

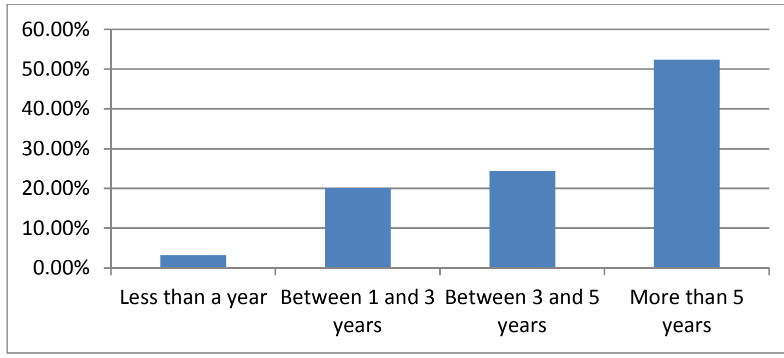

Figure 10. Number of years started receiving remittances
sources: Author computation

METHODOLOGYAND ECONOMETRICS MODEL

Data: This study analyses annual Time series data for, Personal Remittances Received, Total import, and Total export, and economic growth (gross domestic product) from 2003 to 2016. Data for all the variables were obtained from World Bank World Development Indicators website.

Model Specification and Operational Definitions of Variables: We began our study by modelling the relationship between economic growth and personal remittances received as follow:

Economic Model: $\boldsymbol{GDP} = F(PREM, IMP, EXP)$ ....eq. (1)

Econometric Model: $\boldsymbol{GDP_t}$ = $α_t$ + $\beta_{t1}PREM_t$+ $\beta_{t2}IMP_t$ +$\beta_{t3}EXP_t$+ ε_t........eq. (2)

GDP = Gross domestic product.
PREM = Personal remittances received
IMP = Total Import
EXP = Total Export.

Steps in estimating Econometrics Model

Stationary Problem

Unit Root Analysis: Most time series data is trended either upward or downward. This trend of data gives rise to stationary problem. Augmented Dickey Fuller (ADF) test is applied to examine this problem (M. Shafiq, I. Ul Haq, A. Khan and S. Khan, 2012).

Co-Integration: One of the statistical properties of time series data is co-integration, it is define as if each series share a stochastic drift then these series are co-integrated. This drift is because of behaviour as time series share a certain degree of long-term fluctuations. It is not necessary for co-integration that two or more time series are related or move together. . (M. Shafiq, I. Ul Haq, A. Khan and S. Khan, 2012)

Causality and Vector Error Correction Model (VECM): Granger causality theorem postulates that if two variables are integrated of same order then they must cause each other. This implies that first variable must granger caused second or second variable must Granger cause first. When co-integration is found among variables then

Table 2. Result of the Unit Root by (ADF)

Variables	Level (P-value)	First Difference (P-value)	5%CV-3.000
GDP		0.00000 (1)	-4.946**
PREM		0.0053 (1)	-3.627**
EXP	0.0153 (0)	0.0153 ((1)	-4.689**
IMP	0.0001 (0)	0.0050 (1)	-3.348**

** indicates 5% significance level

Table 3. Results of Johansen Tests for the Number of Co-integrating Relationships

Maximum rank	Trace Statistic	5% Critical Values
0**	446.0884	47.21
1	43.8733	29.68
2	11.1852*	15.41

Table 4. Long Run Coefficients from the VECM Estimation

Variable	Coefficients	Standard Errors	Z	P-value
_ce1		-		-
CONS	26351.669			
PREM	-3.327906	0.3180816	-10.46	0.000 **
EXP	-8.815154	0.3876332	-22.74	0.000 **
IMP	.9838496	0.2641476	3.72	0.000 **

Vector Error Correction Model (VECM) is applied for causality. This model separates long and short-run parameters. According to the Granger Representation theorem, when variables are co-integrated of I (1), there must also be an Error Correction Model (ECM) that describes the short run dynamics or adjustments of the co-integrated variables towards their equilibrium values. The Error Correction Model Produce both the long run and short run coefficients by separating them. (M. Shafiq, I. Ul Haq, A. Khan and S. Khan, 2012).

VECM Models:

$$\Delta GDP_t = \sum_{i=0}^{p}(\alpha_{i1}\Delta GDP_{t-1}) + \sum_{i=0}^{q}(\beta_{i1} PREM_{t-1}) + \sum_{i=0}^{q}(\gamma_{i1}\Delta EXP_{t-1}) + \sum_{i=0}^{q}(\Delta IMP_{t-1}\Delta) + a_1\text{˜}E_{t-1} + \acute{\varepsilon}_{i1} \quad \textbf{....eq. (3)}$$

$$\Delta PREM_t = \sum_{i=0}^{p}(\alpha_{i2}\Delta GDP_{t-1}) + \sum_{i=0}^{q}(\beta_{i2}\Delta PREM_{t-1}) + \sum_{i=0}^{q}(\gamma_{i2}\Delta EXP_{t-1}) + \sum_{i=0}^{q}(\Delta IMP_{t-1}\Delta) + a_2\text{˜}E_{t-1} + \acute{\varepsilon}_{i2} \quad \textbf{...eq. (4)}$$

$$\Delta EXP_t = \sum_{i=0}^{p}(\alpha_{i3}\Delta GDP_{t-1}) + \sum_{i=0}^{q}(\beta_{i3}\Delta PREM_{t-1}) + \sum_{i=0}^{q}(\gamma_{i3}\Delta EXP_{t-1}) + \sum_{i=0}^{q}(\Delta IMP_{t-1}) + a_3\text{˜}E_{t-1} + \acute{\varepsilon}_{i3} \quad \textbf{..................................eq. (5)}$$

$$\Delta IMP_t = \sum_{i=0}^{p}(\alpha_{i4}\Delta GDP_{t-1}) + \sum_{i=0}^{q}(\beta_{i4}\Delta PREM_{t-1}) + \sum_{i=0}^{q}(\gamma_{i4}\Delta EXP_{t-1}) + \sum_{i=0}^{q}(\Delta IMP_{t-1}\Delta) + a_4\text{˜}E_{t-1} + \acute{\varepsilon}_{i4} \quad \textbf{...eq. (6)}$$

RESULTS AND ANALYSIS

Unit Root Test: the Problem of stationary is detected through Augmented Dickey Fuller test. The results of Dickey Fuller test are shown in the table 2**.** It is evident from the table 2 that the variables GDP and PREM are not stationary at level but became stationary after the first difference was taken. The variables such EXP and IMP are stationary both in the level and in the first difference. C (0) indicates integration at level and C1) indicates integration after first difference.

Johansen Co-Integration Test: When Johansen co-integration test was applied to test for co-integration, we found out that all the series are integrated because the trace statistics of rank (0) are greater than the critical values 5% significant level. Thus this shows that a long run relationship exists among the variables (see table 3).

RESULT FROM ERROR CORRECTION ESTIMATION

After finding that all variables co-integration, it is better to apply VECM for multivariable regression, to capture the short run as well as long run relationship between the dependent variable and independent variables. The error correction term shows how much disequilibrium will be adjusted in each equation. Table 4 shows that, in long run both total export and personal remittances received have positive impact on economic growth whereas total import has a negative impact on economic growth. The long run coefficient of personal remittances received tells that if there is one unit increase in personal remittances received, economic growth will increase by 3.3 units. Similarly, the coefficient of total export tells that one unit increase in total export, economic growth will increase by 8.8 units. Whereas one unit increase total import, economic growth will decrease by 0.98 units. All variables are significant at 5% level.

DIAGONASTIC TEST

Table 5. Serial Correlation

Test	P-value
Serial Correlation	0.9540

HO: No Serial Correlation,
H1: Serial Correlation
Interpretation: since the P-value is greater than critical Value at 5% significance level, therefore we fail to reject the null hypothesis, that there is no Serial correlation among variables.

Table 6. Heteroskedasticity

Test	P-value
Heteroskedasticity	0.3725

HO: Constant variance,
Interpretation: Since the P-value is greater than the critical value at 5% significant level, then we fail to reject the null hypothesis which states that there is constant variance.

Table 7. Specification

Test	P-value
Specification	0.9540

HO: model has no omitted variables
Interpretation: Since the P-value is greater than the critical value at 5% significant level, therefore we fail to reject the null hypothesis which states that the model is correctly specified

CONCLUSION AND RECOMMENDATION

Remittance is among the hottest topics in the world today which needs special attention especially in The Gambia. The main aim of this study was to examine impact of personal remittances received on economic growth both in short and the long run. Annual time series data from 2003 to 2016 was used. Augmented Dickey Fuller (ADF) test was applied to check stationary problem. Johansen co-integration test showed that there are two (2) systems of co-integrated equations. Result of VECM revealed that personal remittances received have a positive and significant relationship with economic growth both in the long run and short run. Total exports have a positive and significant relationship with economic growth both in the long run and short run. Total imports have a negative and significant relationship with economic growth in the long run. But there was no the short run relationship found between total imports and total exports on economic growth.

Therefore we conclude that remittances as the main variable of study have a positive and significant relationship with economic growth both in the long run and the short run.

We recommend that the government should encourage the people who received remittances to invest their money in business and also agriculture especially in poultry and agro base processing. It is also recommended that the government should create more employment opportunities to minimize the number of our able young men and women migrating to overseas in search for a better living standard. If higher youth employment is realized in the Gambia, the high dependence on remittance for household expense will reduce and that will encourage remittances receivers to invest the money received in business and also to save for the future at old age.

REFERENCES

Abdulaev, R. (May, 2011). Impact of Rmittances on Economic Growth in selected Asian countries and former Soviet Union countries. *School of Economic and Management*.

Adela Shera / Dietmar Meyer. ((2013)). Remittances and their impact on Economic Growth. *periodica polytechnica : Social and Management Sciences*.

B. Fayissa, C. Nsiah. (Feb. 2008). impact of Remittances on Economic and Developement in Africa. *Department of Economic and Finance*.

Dietmar Meyer, Adela Shera. (2016, July 14). The impact of remittances on economic growth: An econometric model. *EconomiA*.

John C. Anyanwo, Andrew E. Oerhijakpo. (winter 2008 to summer 2009). International Remittances and Economic growth in Africa.

Kapur, D. (April 2004). REMITTANCES: THE NEW DEVELOPMENT MANTRA? *G-24 Discussion Paper Series*, 11-13.

Khathlan, K. A. (2013, August 6th). The Link between Remittances and Economic Growth in Pakistan: A Boon to Economic Stability. *British Journal of Economics, Management & Trade, SCIENCEDOMAIN international*.

Kristina Matuzeviciute and Mindaugas Butkus. (2016, December 1). Remittances, Development Level, and Long-Run Economic Growth. *Economies*.

M. Shafiq, I. Ul Haq, A. Khan and S. Khan. (2012). The Role of Foreign Remmitances and Economic Growth in Poverty Alleviation: Time Series Evidence from Pakistan. *World Applied Sciences Journal 19 (3): 366-369,*, 3-5.

Samer Abdelhadi & Ala' Bashayreh. (2017, December 12). Remittances and Economic Growth Nexus: Evidence from Jordan. *International Journal of Business and Social Science*.

Shapan Chandra Majumder and Zhang Donghui. (2016). Relationship between Remittance and Economic Growth in Bangladesh: an Autoregressive Distributed Lag Model (ARDL). *European Researcher www.erjournal.ru, Vol. 104, Is. 3, pp. 156-167, 2016*(since 2010).

Tassew Dufera Tolcha, and Dr. P. Nandeeswar Rao. (2016, May 2). THE IMPACT OF REMITTANCES ON ECONOMIC GROWTH IN ETHIOPIA. *Indian Journal of Commerce & Management Studies ISSN: 2249-0310 EISSN: 2229-5674*.

Umaima Arif, Abdul Quayyum, Muhamed Javid. (January 2008). Impact of REmittances on Economic Growth and Poverty. Evidence from Pakistan.