Remittances from Foreigners Have an Impact on Economic Growth, as Indicated by Pakistan's Experience

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ABSTRACT

Purpose: This study's goal is to examine how remittances from expatriates affect economic growth in the setting of Pakistan. Remittances are the funds that migrant workers send home, and they represent a significant source of foreign currency for many developing countries. In Pakistan, expatriates' remittances have grown rapidly in recent years and have become a major contributor to the country's economy.

Design/Methodology/Approach: Pakistan is considered the sixth-highest receiver of remittances in 2020. Remittances are the only source of foreign currency for Pakistan except for exports. Here secondary data has been used for the year 1990-2020 to analyze the relationship between GDP and remittances. Auto-Regressive Distribution Lag (ARDL) approach has been used to see the link between the short-run and long run relationships of the variables.

Findings: Positive impact on GDP has been observed in the case of Pakistan. The findings suggest that the decision-maker should develop such policies with the assistance of which nations may work on them.

Implications: Pakistan is a developing country, therefore an increase in foreign capital inflows will boost investment, consumption, and economic growth there. The remittances that Pakistani residents get are essential to their welfare. The remittance influx has a direct impact on Pakistan's progress in living standards, health, and education.

Originality: This study contributes to the economic development of Pakistan by providing a link between remittances and the economic growth model.

Keywords: Expatriates, Remittances, Economic growth, Impact of Expatriates. ARDL model

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1. INTRODUCTION

Economic growth Pakistan is one of the most remittance-dependent countries in the world. In recent years remittances to Pakistan have increased from $2 billion in 2001 to $ 26.1 billion in 2022 (Economic Survey of Pakistan, 2022). The remittances sent by expatriates in Pakistan are mainly used for household consumption and investment in real estate. The increase in remittances has helped raise many people's living standards in Pakistan, especially in rural areas.

However, even though remittances have a favorable effect on economic growth, some potential negative effects need to be considered. One potential negative effect is that remittances can lead to a reliance on foreign money, which can make the economy more vulnerable to external shocks. Additionally, remittances can also lead to inflation, as more money in the economy can lead to higher prices for goods and services.

Many indicators determine the growth rate. For instance, saving, domestic investment, inflation, population, exchange rate, foreign direct investment, real exports, real imports, foreign remittances, factor productivity, and human capital (Karmakar et al., 2022; Huawei, 2022; Yadeta and Hunegnaw 2022.). However, this study chose foreign direct investment (inflows), inflation, foreign Remittances, and imports.

Given that investment drives any nation's economic growth. A higher amount of foreign direct investment contributes to achieving a higher level of economic growth. Pakistan is a developing nation and for nation, and investment is the only thing that can bring capital into the country which leads to higher economic growth (Chohan, 2020.). It leads to creating employment opportunities, a higher standard of living, an increase in production, and this increase in production leads to higher exports. According to Tahir et al. (2019). Pakistan's economy grows because of a rise in foreign direct investment inflows. Rahman et al. (2019) investigate that remittances have a significant impact on economic growth in Pakistan. They increase foreign exchange reserves, are available for investment, and can help to reduce poverty and income inequality. In 2021 foreign direct investment increased 16 percent to $236 million and GDP rose from 0.5 to 3.5 percent (Citaristi, 2022).

In many countries, high and sustainable growth and low inflation are two of the main objectives of macroeconomic policy. Inflation in any economy leads to worse results. During the last decades, control of inflation has become the main goal of economic policy, especially in Pakistan. According to Khilji (2021) rise in inflation leads to a decrease in the economic growth of Pakistan.

The economy is running on remittances. They are distinct from other forms of capital inflow including grants, loans, and direct investments. Increasing consumption and expenditure is an indicator of economic development since remittances reduce poverty and improve health care and education. Expansion of investment and consumption is a sign of economic development. However, if remittances are being used for consumption rather than for investment as is the case in developing countries, then this can be harmful. It is a sizeable portion of Pakistan’s Economic growth. It gives the ability to developing nations to fund their own instead of taking debt. According to Ajmair, et al. (2018), Remittances have positive as well as significant. Currently, the state bank of Pakistan said that remittances increased by 17% in September. This is the 7th consecutive year when inflows are recorded at their highest peak.

Due to the lack of production Pakistan used to import goods and services, however, it imports ready-to-use products so it’s become expensive plus taxes on it and transportation costs make imports more expensive it imports goods (Imran et al, 2017). Foreign countries it has to pay them in dollars which makes imported goods more expensive it sent their capital to another country which will lead to lower economic growth as the neoclassical model which is mentioned at the start states that economic growth comes from capital. According to Iqbal and Nosheen, 2021) Investigate those imports have a negative and insignificant impact on economic growth. Pakistan Bureau of Statistics release that in March 2021 imports increased by 68.52% from March 2020.

In Pakistan, the trade of goods and services incredibly advanced economic development. It is observed that both imports and exports of the economy are on the local and international levels. The study time series from 2000 to 2010 and Johansen's Cointegration test was used to evaluate the empirical estimation. The study's results showed a large and favorable impact on economic growth, demonstrating the need to support economic development.

The findings are rather vague and don't give a clear implication. This study has been used to support our hypothesis about how remittances affect economic growth.

Q1: What about the Expatriates' payments and the Economic Progress of Pakistan?

Q2: What effect do imports, exports, and foreign direct investment have on Pakistan's economic growth?

2. LITERATURE REVIEW

In general, studies have discovered a link between remittances and Pakistan's economic expansion. For instance, a study by Ahmed et al. (2018) discovered that remittances had a favorable and considerable impact on economic growth in Pakistan and were crucial in lowering poverty and income inequality. Remittances had a positive and significant impact on Pakistan's economic growth, according to a different study by Akbar et al. (2017); the association between remittances and economic growth was stronger in the regions with higher rates of poverty and lower levels of human development.

Ahmad and Khan (2021), Examine how foreign direct investment (FDI) and remittances from outside affect Pakistan's economy. The study uses annual data from 1990 to 2018 for this purpose. The data is made up of a variety of factors, such as economic growth, foreign direct investment, and remittances from abroad. The data was analyzed by using ADF, PP, ARDL, and Bound tests. Results demonstrate a long-term connection between Pakistan's economic growth and FDI, foreign remittances, and both.

Ali and Yasmin (2020), focus on how well remittances from abroad impact both inflationary pressures and expansion. The information used in this study was gathered on an annual basis from 1972 to 2018. For this motive, the study uses Annual Data for 35 years from 1972 to 2017. The data comprises different variables including, GDP, Inflation, Investment, GFCF, Trade, Labor Force, and Remittances. The data was analyzed by using ADF, PP, ARDL, and Bound tests. According to the study's findings, overseas remittances have a positive and significant relationship with Pakistan's economic expansion. The study at hand concluded that remittances boost economic growth by increasing individual spending. The dependent variable, whereas FDI, inflation, currency rate, and foreign remittances are the independent variables. When the Augmented Dickey-Fuller (ADF) test is used to determine whether any variables are stationary, it is discovered that all of them are at the level. The Ordinary Least Squares method is used to investigate the relationship between these variables. The results demonstrate that while inflation and the exchange rate Foreign direct investment has a little but favorable association with Pakistan's GDP. A 1%.

Elahi and Omer (2020), examine how remittances from employees might help Pakistan's economy flourish. For this motive, the study uses Annual Data from 1976 to 2017. The data comprises different variables including, Remittances Received, FDI, Money Supply (M2), Inflation, Population Growth, Investment, and Economic Growth. The data were analyzed by using the Generalized Method of Moments (GMM). The rise in low-income beneficiaries' spending may be the main factor behind the per capita GDP increase. Although the study was unable to determine the effect of remittances on investment activity, this consumer demand likely encourages it. Seriño and Ratilla (2018) explore that either remittances increase or decrease poverty in developing countries. For panel data analysis 66 developing countries were taken and data across the period 1981-2005. To check the significance of remittances on poverty, the pooled ordinary least square method is employed. The finding revealed that remittances have a negative relationship with poverty alleviation. Remittances are helpful to reduce poverty in developing countries.

Additionally, imports have been found to have impeded Pakistan's economic growth. In addition, it has been found that imports have hindered Pakistan's economic expansion. The right steps should be taken by policymakers to enhance to achieve long-term economic growth.

The study conducted by Afshan and Ali Sabeen (2017) looks at the ad hoc connection between direct investment and growth. The findings indicate that all variables have a positive influence on economic growth. The growth rate of agriculture and consumption has positive and considerable effects, whereas foreign direct investment. Only the agricultural rate and consumption are significant after using the block of homogeneity test. The Johnson and Johansson, Juselius Maximum, and ADF Unit Root tests are applied. Population, inflation, education spending, foreign direct investment, exports, and currency rate are all considered explanatory factors in Iqbal and Yasmeen's (2018) study. After estimating, the author discovered that imports and population. The Spending on education, the FDI, the currency rate, and exports all show negative indicators. Regression, the unit root test, and the time series econometric approach are employed. Ajmair et al. (2018) important predictors of economic growth are discovered to be remittances received, gross national expenditures, and inflation. Based on these empirical findings, the authors of the study argue that when developing any policies about the subject sector,

After reviewing earlier research, Junejo, Fiaz, et al. (2021) discovered that different nations had variable outcomes because of varied locations and levels of development. The author used time series data to assess secondary data. According to the author's research, tax income has a big and positive influence on GDP, but imports and inflation have a significant and negative impact. To remove the empirical analyses, the unit root and OLS approaches are utilized. Since 2021, Ghafoor and Ufaq have shown a trade openness has a favorable relationship with GDP growth in the services sector and a negative correlation between inflation and FDI. To produce foreign currency through the export of goods, the government should promote trade openness and the services sector.

2.1. Theoretical Framework

A study by Akbar, et al. (2017) found that remittances had a favorable and considerable effect on Pakistan's economic progress and that there is a connection between external debt and economic growth. was stronger for provinces with higher levels of poverty and lower levels of human development.

However, other research also discovered contradictory findings. Aslam, et al. (2015) observed, for instance, that although remittances had a beneficial effect on economic growth in Pakistan, this association was not statistically significant. According to a different study by Zaidi et al. (2015), the association between remittances and economic growth in Pakistan was not statistically significant, and the effect of remittances on economic growth varied among provinces.

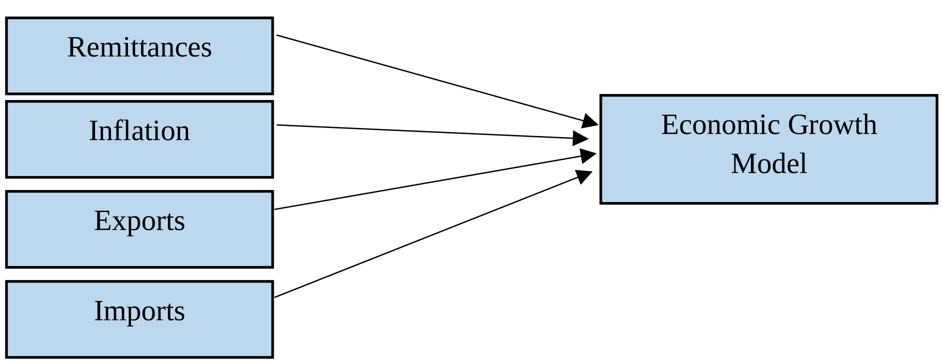

Figure 1. Theoretical Framework

2.2. Materials and Methods

In this study, the statistical information for thirty years has been utilized for the years 1990- 2020. The data is WDI (World Development Indicators). The variables used in this study are Inflation, imports, exports, foreign direct investment (inflows), Industrial share, Agriculture share, and personal remittances (received). We are taking the variables in the percentage of GDP except for Inflation which is in the GDP deflator. Here, GDP is employed as a proxy of economic growth and is used whereas inflation, imports, exports, industrial share, agriculture share, Fdi, and expatriates' remittances are used as independent variables. We have taken the growth model and our main objective.

3. RESEARCH METHODOLOGY

This section describes some basic econometric issues such as data stationarity, autoregressive distributed lag model, and bound test process. The sequence of integration is examined using the Augmented Dickey-Fuller (ADF) test. ADF testing should be used to support the use of the ARDL model. The autoregressive distributed lag model (ARDL) is the only one that may be employed if some of the variables are integrated like I (0) and some are integrated like I (1). Otherwise, when all variables are integrated into I (0), the simple least squares (OLS) method is usually used. The Johansen cointegration method, on the other hand, is used only when all variables are integrated into I (1).

Econometric Model

$$GDP_t = \beta_0 + \beta_1(inf_{t-1}) + \beta_2(inf_{t-2}) \ldots\ldots.. + \beta_n(inf_{t-n}) \ldots\ldots. + \alpha_0 + \alpha_1(fdi_{t-1}) + \alpha_2(fdi_{t-2}) \ldots\ldots + \alpha_n(fdi_{t-m}) \ldots\ldots + \emptyset_0(imp_{t-1}) + \emptyset_1(imp_{t-2}) \ldots\ldots.. + \emptyset_n(imp_{t-o}) \ldots\ldots.. + \theta_0 + \theta_1(exp_{t-1}) + \theta_1(exp_{t-2}) \ldots\ldots + \theta_n\left(exp_{t-p}\right) + \cdots \ldots\ldots \psi_o + \psi^1 + \psi^2(rem_{t-2}) \ldots\ldots. \psi_n(rem_{t-9}) + \epsilon_t$$

Where,

GDP= Gross domestic product

Inf = Inflation

Fdi = Foreign direct investment

Imp = Imports

Exp = Exports

Rem = Remittances

Auto-regressive distribution model derivation

Equation (1) specifies the following econometric model:

$$\boldsymbol{GDP_t = \beta_0 + \beta_1 inf_t + \beta_2 fdi_t + \beta_3 imp_t + \beta_4 exp_t + \beta_5 rem + \epsilon_t}$$

The natural logarithm is applied to both sides of Equation (1) to eliminate the effect of different measurement units, to minimize the difference between the GDP, which is the dependent variable, and the inf, FDI, imp, exp, and rem, which is the independent variable (2).

$$\boldsymbol{\mathrm{L}GDP_t = \beta_0 + \beta_1 Linf_t + \beta_2\, Lfdi_t + \beta_3 L\, imp_t + \beta_4 Lexp_t + \beta_5 Lrem + \epsilon_t}$$

4. RESULTS AND DISCUSSION

The co-integration bound test indicates the long-term relationship between the variables. The results suggest a long-term relationship between these variables. The table below provides a summary of the bound testing for co-integration outcomes.

Table 1. Bound Test Result

F-statistic= 5.653539	Lower bound I (0)	Upper bound I (1)
Significance 10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

The critical values of the upper and lower bounds, I (1) and I, are displayed in the table above (0). We reject the null hypothesis and accept the alternative hypothesis, which states that there is a long-term link between the variables because the observed F-Statistic value of 5.653539 is bigger than the upper bound of F-Statistics.

ARDL MODEL:

Table 2. Long Run Table.

Variables	Coefficient	Std. Error	t-Statistic	Prob.
Exports	2.88**	0.17	16.23	0.03
FDI	0.93**	0.04	20.67	0.03
Remittances	0.34**	0.01	22.76	0.02
Inflation	0.28**	0.01	16.04	0.03
Imports	-1.00 **	0.07	-14.30	0.04
R-squared		0.999900		
Prob(F-statistic)		0.008263		
Durbin-Watson stat		2.867008		

ARDL RESULT:

The above table shows the estimated long-term coefficients using an ARDL approach to co-integration. To estimate the ARDL equation 4 lags of each variable have been taken. Automatic selection and according to the above table if exports increase by 1% GDP Other things held constant if foreign direct investment increases by 1% GDP increases by 0.93%. If Remittances increase by 1% GDP rose by 0.34%. With an increase of 1% in inflation GDP increases by 0.28%. Other things remain the same on average GDP decreases by -1.00.

5. CONCLUSION

The study examines how remittances from expatriates affect the economic growth of Pakistan using time series data spanning the years 1990 to 2020. To ascertain if variables are stationary, the augmented dicky fuller (ADF) method is applied. The variables are stationary at both levels and the starting difference, according to the results of this approach. The ARDL technique is then used to examine the relationship between the dependent (GDP) and independent factors, after a stationary check (inflation, remittances, fdi, imports, and exports). According to the ARDL statistics, remittances from expatriates have a positive and significant impact on economic growth. Imports have a major negative impact on the economy's growth. Foreign direct investment and exports both positively and significantly affect economic growth. economic development Exports and foreign direct investment have a favorable and considerable effect on economic growth. Inflation has a favorable and considerable effect on economic growth. The outcomes are in line with the study conducted by Ajmair et al (2018) Since greater levels of spending are assumed to be risky for economic growth, positive inflation suggests that a modest level of inflation is required to stimulate consumption. Second, inflation is preferable to deflation since the latter results in a recession. Additionally, inflation promotes increased production, which raises exports.

5.1. Policy Recommendations for future

Pakistan is a developing country, therefore an increase in foreign capital inflows will boost investment, consumption, and economic growth there. The remittances that Pakistani residents get are essential to their welfare. The remittance influx has a direct impact on Pakistan's progress in living standards, health, and education. Individuals become more effective and have higher earning potential as a consequence. A skilled labor force acts as an ambassador in other nations and helps build up foreign exchange reserves as the working population growth rate grows. To increase foreign exchange flows in the economy and spur investment and economic progress, the nation requires visionary leadership. The decision-maker should develop such policies with the assistance of which nations may work on them.

5.2. Limitations and Future Research Directions

Due to several limitations, this study leaves the potential for more investigation. As a result of its limitations, this study was limited to the case of Pakistan. However, in the future, it may be applied to other countries or groups of countries that are affected by the economic growth model or may experience issues as a result of certain variables, such as imports and exports, as it is well known that these variables have a significant impact on the economy of every nation. Any county's economic growth depends on the political climate. A stable political environment in a nation fosters investor confidence, attracting more capital into the nation that advances the nation's health and education systems and boosts exports.

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