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THE ROLE OF REMITTANCES IN PAKISTAN ECONOMIC GROWTH AND FINANCAIL STABILITY

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Abstract
This research study performed to empirically examine the role of worker remittances in determination of economic growth and financial stability in case of Pakistan. The study selected GDP growth rate and financial stability as dependent variables while personal/ worker remittance as independent variable. The study took data on annual basis. The study followed with the quantitative approach and developed research questions that lead toward research hypotheses. The current study selected with the annual data from 1985 to 2024. The current research study applied the data with the time series regression model using E-view as software. The results of the study revealed that there is a significant impact of personal remittance on GDP growth rate with coefficient value of -1.2955 along with significance value of 0.0003. This clearly shows that for every unit increase in personal remittances there is a decrease of GDP growth rate approximately by 1.30 units keeping all other factors constant. The study also revealed that there is a significant impact of lag of personal remittance on GDP growth rate with coefficient value of 1.3617 along with significance value of 0.0002. The positive relationship and significant impact of lag of personal remittances on GDP growth suggests that remittance inflows contribute to economic growth over time instead of its immediate impact. Similarly, the study also revealed that there is a significant impact of personal remittances on net foreign assets with significance value of 0.0043 along with coefficient value of 1.9054. This positive association of personal remittances and net foreign assets (NFA) translates with the role of remittance inflows in strengthening a country's external financial position like for Pakistan. The study also found that lag of the personal remittances has significant impact on the net foreign assets with coefficient value of -2.37938. This shows that lag of the personal remittances significantly determines net foreign assets in case of Pakistan. The negative relationship of lagged personal remittances on net foreign assets explains that remittances initially boost external reserves.

1. INTRODUCTION

Background

The economic literature hasreported with significant attention on work remittances in explaining macroeconomic indicators and overall economic performance (Khan et al, 2024). Developing counties have been found with the key input of home remittances in determination

of exchange rate balances and its ultimate impact on economic stability and key macroeconomic indicators (Rehman & Hysa, 2021). An empirical study revealed that approximate 700 billion dollars' migrant remittances reported in 2020 that is consider for developing countries to meet up their economic deficits and weaker position not only but also considerable for the low and middle income economies to support their Gross Domestic Product (GDP) (Chuc et al, 2022). There are two different school of thoughts, one of them explains the positive impact of remittances on economic growth while other observed with the negative impact (Islam, 2021). An empirical study revealed that worker remittances come up with positive economic growth along with financial stability and development of the key performance indicators (Basnet et al, 2021).

Furthermore, the literature has also reported that remittances come up with pivotal role in economic growth and inflation control with an inflow of foreign currency via remittances (Ahmad et al, 2022). The work remittances have been observed with stimulation of consumption and investment in an economy (Miao & Qamruzzaman, 2021). The recent statistics showed that remittances flow to low and middle income countries reported around 626 billion dollars in 2022 that significantly surpassed foreign direct investment along with the aids moved to developing countries for development purposes (Wu et al, 2023). The key input to determine the remittances is the labor migration to abroad usually in seek of higher pay scale or in case of worsening local currency value along with job lay-offs. In addition, the input of the technological innovation has resulted in transfer of money in easier manner with satisfaction and security of the dealing parties (Aslam & Alibuhtto, 2023).

Similarly, another study revealed that an inflow of the work remittances brings up with fostering of domestic demand and support to small and medium enterprise in a developing economy (Ngoma et al, 2021). The resultant outcome of the fostering of domestic demand comes up with job creation and economic expansion process (Aslam & Alibuhtto, 2023). Another study also revealed that there is a positive correlation of worker remittances to the GDP growth in developing countries (Chuc et al, 2022). Another empirical study also found with the significant positive association of the worker remittances to the economic growth int eh developing countries (Yadeta & Hunegnaw, 2022). Literature has also found that financial stability also comes up with the inflow of the worker remittances for a receipt country (Islam & Alhamad, 2022). The input of the remittance also brings up with investment in human capital and its role in improving the education quality and healthcare. This results in shift of skill set and its role in economic development process in long through human capital development (Azizi, 2021).

The role of worker remittances has also been found fostering of financial inclusion and economic diversification (Chowdhury et al, 2023). The role of the worker remittance has also been found with fostering of savings and investment culture (Usman et al, 2022). The studies in case of developed countries have also revealed that positive correlation of remittances flow to financial development observed promoting financial system (Saydaliyev et al, 2022). The role of the remittances has been observed in addressing economic challenges in developing countries (Azizi, 2021). The constructive role of worker remittance observed in mitigating the adverse impact of the economic shocks and commodity price fluctuations in case of external financial crises by contributing with buffer against income volatility (Eftimoski & Josheski, 2021). The input of the financial sector also found useful to translate the documentation of the economy and its input in optimization of the fiscal returns (Usman et al, 2022). Hence the current study, considering this level of importance of the worker remittance to an economy, investigate with its role in determination of the economic growth and the financial stability in the present work in case of Pakistan. There are number of studies conducted to explain the role of the worker remittance in definition of the financial stability for the recipient country in empirical terms

(Olanipekun, 2024). Worker remittances have been found relatively more stable as compare to foreign direct investment or portfolio investment specifically in case of economic downturn. Literature has described remittances as key pillar for maintaining financial stability for a recipient country (Chowdhury et al, 2023).

Research Context

There is critical importance of the worker remittances in case of country with Balance of payment issues and trade deficit (Basnet et al, 2021). Worker remittances input its balancing part to bring up with foreign exchange stability and support the aggregate demand of the country to come up with steady household consumption pattern and manage the market equilibrium (Miao & Qamruzzaman, 2021). The input of the worker remittance is also critical to determine the performance of the macroeconomic indicators and its role in building up job opportunities in local market (Wu et al, 2023). Pakistan is a country with significant number of residents abroad with significant portion of the worker remittances sent back to the country that is considerable part of the source of income for the country (Khan et al, 2024). Pakistan is a country with striving economic condition and mostly consider with significant reliance on the worker remittance to manage the aggregate demand and its role in channelization of the funds through financial sector to come up with financial stability (Rehman & Hysa, 2021).

An empirical study in case of Pakistan revealed that worker remittances come up with an improved level of household income and foreign exchange reserve position not only but also its input in overcoming poverty challenge (Chowdhury et al, 2023). Similarly, the level of research work to investigate the broader macroeconomic effects on economic growth and financial stability in long term observed less attended in term of its implications (Usman et al, 2022). The existing literature has revealed with the role of the worker remittances in short term to provide relief to recipient households and promote domestic consumption while the long term impact of the worker remittances on the sustained economic growth however its long term impact has found muted with limited impact on productive investments (Ahmad et al, 2022). Moreover, the association between remittances and the steadiness of the financial system in Pakistan has found less explored.

The input of the worker remittances has been found much needed to bring up with liquidity to the financial system in the condition of the intense inflationary pressure and in situation of the volatile exchange rate situation (Islam & Alhamad, 2022).

Research Gap

Although the association of the worker remittances to the macroeconomic growth and foreign exchange volatility extensively investigation in literature but less attended with its association to the financial sector development process and financial stability is a country (Khan et al, 2024). Financial stability is critical to an economy to report its credibility and its economic position while the role of the worker remittance have been found quite critical in this context (Rehman & Hysa, 2021). The worker remittance has been found with its potential crowding out effect with determination of the domestic saving and its role in determination of the financial stability (Ahmad et al, 2022). Furthermore, the input of the worker remittances has been found quite critical to understand its influence over the exchange rate along with the inflationary pressure on the recipient of it (Aslam & Alibuhtto, 2023). The innovative dimension of the exchange rate over financial inclusion and fostering entrepreneurship also found less explored. This depicts that the key aspects of the worker remittances on the economic and financial dimension are of critical importance to come up with its role in definition of the its importance to investigation in case of developing and striving economies like Pakistan to optimize its outcomes over the economy with effective policy inputs (Islam & Alhamad, 2022).

Research Problem

The conducted studies have revealed that there are various aspects of the worker remittances to

perform its role in case of Pakistan (Usman et al, 2022). An empirical study has revealed that worker remittances bring up with its positive impact on the countering of poverty and household welfare along with macroeconomic growth and financial stability of the country (Azizi, 2021). The conducted studies have also explained that worker remittances not necessarily translate into long term growth due to consumption driven nature of the economy instead of investment driven aspects (Chowdhury et al, 2023). A quantitative study revealed that financial literacy and role of the remittance is quite essential in supporting small local businesses (Islam & Alhamad, 2022). Another study also explained that there is a balancing role of the worker remittances in enhancing the balance of payment and stabilizing Pakistan's foreign currency reserves with definition of the foreign exchange position of the country (Aslam & Alibuhtto, 2023).

Although there is significant level of work that has bene done to explain the role of the worker remittances but there is lack of comprehensive research to investigate the role of the remittances in the definition of the financial stability and sustainable economic growth (Ahmad et al, 2022). There is quite significant need of the investigation to understand the role of the worker remittances to explain input on Pakistan's economic structure also (Rehman & Hysa, 2021). In this context, it has been found that worker remittances are quite critical to the economy of the Pakistan due to challenges balance of payment conditions and high foreign debt to fulfill maturing debt obligation with inflow of the worker remittance not only but its inducement to come up with action that results in promotion of the economic growth along with the determination of the financial stability of the country also (Khan et al, 2024). In this manner the problem statement of the study has been stated below:

"To investigate the impact of the worker remittances on the economic growth and financial stability in Pakistan."

Research Objectives

The objective of the current research study is to examine the role of the worker remittances in case of Pakistan to empirically explain its impact on the economic growth and financial stability

Research Questions

The research questions of the present study are mentioned below:

- What is the impact of the worker remittances in determination of its impact on the economic growth in case of Pakistan?
- What is the impact of the worker remittances in determination of its impact on the financial stability in case of Pakistan?
-

Research Significance

The significances of the current research study are mentioned below.

- The current study helps the student of economics and finance to understand with the role of the worker remittances in empirically understanding over the economic growth in the country along with its input in determination of the financial stability.
- The study also brings up the attention of the researchers toward a critical area to come up with more in-depth investigations and enrich the body of the existing literature.
- The current study also input the policy makers with the valuable insight to bring up with more practical implications and up-lift the economic position and also overcoming the facing challenges.
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Research Scope

The current study focuses on the economy of the Pakistan with the consideration of the annual data from State bank of Pakistan website and internal forums like World data bank. The collected data is applied with the econometric time series techniques along with the collection of the data for the period from 1985 to 2024.

2. LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Worker Remittances and Economic Growth

The literature has described the worker remittances as money that is transferred by the migrants from abroad to their families in their home countries (Rehman & Hysa, 2021). In simple words, this is the amount that is transferred beyond the judiciary of a country into the country. Although there are both traditional and non-traditional channels of this movement. The traditional one includes Hundi that is common method in which agents in different countries interact and make the channelization of the funds that is consider as an element of the non-document approach of money transfer while public bodies and regulatory bodies are in active engagement to bring up with its documentation considering its positive outcomes on the macroeconomic indicators that have been extensively investigated in literature from different context (Basnet et al, 2021). The input of the worker remittance is quite significant in determination of the exchange rate volatility along with its role in creating an inflationary cohesion to the middle class of the economy to provide with a safety net to their purchasing powers (ELazhary et al, 2023).

The theory has also explained with the role of the worker remittances in explaining in global perspective to mitigate with the vicious poverty circle. The input of the worker remittances is also considerable in the economic development process with local job creation and business volume for the small and medium size businesses (Miao & Qamruzzaman, 2021). The theoretical foundations have revealed the role of the worker remittances in describing the income of families in developing countries with its role in determination of the country's GDP (Wu et al, 2023). The growth of the worker remittances has been described as the largest financial flow to developing countries. The volume of the worker remittances has been found exceeding over the foreign direct investment (FDI) and official development aids to countries (ODA). The part of the worker remittances has been found supportive to volatile economies or having so significant trade structure to attract foreign currency (Ngoma et al, 2021).

The key input to determine the remittances is the labor migration to abroad usually in seek of higher pay scale or in case of worsening local currency value along with job lay-offs. In addition, the input of the technological innovation has resulted in transfer of money in easier manner with satisfaction and security of the dealing parties (Aslam & Alibuhtto, 2023). An empirical study revealed that approximate 700 billion dollars' migrant remittances reported in 2020 that is consider for developing countries to meet up their economic deficits and weaker position not only but also considerable for the low and middle income economies to support their Gross Domestic Product (GDP) (Chuc et al, 2022). There are two different school of thoughts, one of them explains the positive impact of remittances on economic growth while other observed with the negative impact (Islam, 2021).

There is significant impact of the worker remittances on the economic growth through consumption. Remittances usually result in an increase in income of the recipients that brings up with greater consumption of goods and services hence found with validation of the consumption smoothing hypothesis along with cushion to household to mitigate income shocks (Yadeta & Hunegnaw, 2022). This results in reduction of the impact of the poverty and an increase in welfare. Another study also revealed that remittances indirectly contribution to economic growth with its multiplier impact that results in an increase in consumption to stimulate the local demand and production (Ahmad et al, 2022). The input of the remittance also brings up with investment in human capital and its role in improving the education quality and healthcare. This results in shift of skill set and its role in economic development process in long through human capital development (Azizi, 2021).

2.1.2. Worker Remittances and Financial Stability

The era of digitalization has resulted in more critical contribution of the remittances movement in understanding its influence over the economic process and financial sector performance also (Saydaliyev et al, 2022). The role of the worker remittances has also found critical to target the market for the developing countries and perform with the cross selling to increase financial sector returns (Rehman & Hysa, 2021). The input of the financial sector also found useful to translate the documentation of the economy and its input in optimization of the fiscal returns (Usman et al, 2022). Literature has described the financial stability as condition in which financial system operates in an efficient manner to ensure proper functioning of the institutions and market in an economy to come up with mitigation of the risk to overcome financial crises and excessive volatility (Wu et al, 2023). A study revealed that there is significant association between the worker remittances and financial stability in an economy to come up with its ultimate outcomes over the economy (Yadeta & Hunegnaw, 2022). There are number of studies conducted to explain the role of the worker remittance in definition of the financial stability for the recipient country in empirical terms (Olanipekun, 2024).

A key association between the worker remittance and the financial stability has translated in stabilization of the exchange rate with prediction of the currency movements to optimize the economic returns not only but also helping the financial sector to strategic employ the remittance movement on their performance (Islam & Alhamad, 2022). Worker remittances have been found relatively more stable as compare to foreign direct investment or portfolio investment specifically in case of economic downturn. Literature has described remittances as key pillar for maintaining financial stability for a recipient country (Chowdhury et al, 2023). The input of the remittance has been found very important in situation of payment crises i.e. worsen balance of payment situation. The remittances help in easing of pressure on the foreign reserve of the country and result in stable financial condition for an economy (Eftimoski & Josheski, 2021). Another study also revealed that worker remittances helps during global financial crises to overcome local economic turmoil as worker remittances come up with inflow of funds from workers working abroad from their home country and support their families (Usman et al, 2022).

The input of worker remittance also found in overcoming the sharp devaluation of the local currency with the reduction of the risk of debt crises and helping to overcome financial volatile condition with financial stability (Pal et al, 2022). Remittance also come up with liquidity to the local economy and its role to support the financial system of the developing or underdeveloped countries (Azizi, 2021). The inflow of the remittance also results in support to the domestic consumption and investment actions along with economic growth and stabilization of the financial system of the country. The role of the remittance also found counter-cyclical in a financial flow to bring up with support to the source of funding and come up with mitigation to the condition of the economic and political instability (Saydaliyev et al, 2022). The input of the worker remittance is significant in influencing the domestic savings and investment behavior with its ultimate impact on the country's financial stability (Jushi et al, 2021). Remittances represent a substantial portion of the income for families in the developing countries that is used for the consumption and saving purposes to meet up their financial situations (Khan, 2024).

2.2. Empirical Review

2.2.1. Worker Remittances and Economic Growth

Worker remittances has been recognized as critical source of foreign exchange for a country and its catalytic role in economic development has been accepted through different research based investigations (Eftimoski & Josheski, 2021). Pakistan is a country with challenges in tis trade balance and balance of payment hence the foreign currency inflow through remittance have been recognized very important (Ahmad et al,

2022). An empirical study performed and revealed that there is positive association of the worker remittances to the Pakistan's economic growth in the long term (Islam, 2021). Another study also revealed that remittances contribute in a positive manner to the economic growth with its context in different time frame and its economic implications (Aslam & Alibuhtto, 2023). Similar study also found that positive association between worker remittance to the economic growth brings up with its role in the determination of the long term impact along with influence on other economic factors also (Yadeta & Hunegnaw, 2022).

Furthermore, the input of the financial sector development is quite critical in association with the inflow of transfer in the form of remittances with amplification of positive effect on economic growth. It is also revealed through research based findings that the importance of the financial infrastructure is also very critical in understanding the movement or channelization of the remittances to come up with its role in determination of the productive investment (Basnet et al, 2021). The stability and growth of the remittances observed quite associated and crucial for the sustainable economic development process. Pakistan reported with the robust inflow of 20.8 billion dollars in remittance from July 2024 to January 2025. It observed as a growth of around 31.7 percent as compare to the same period of last year. The impact of the remittances has not found harmonized in all region in the globe but influenced by number of factors that encloses migrations polices and global economic conditions. In other words, empirical findings underscore the positive relationship between workers' remittances and economic growth in Pakistan (Khan, 2024).

H1: There is a significant impact of the worker remittances in the determination of the economic growth of Pakistan.

2.2.2. Worker Remittances and Financial Stability

Worker remittances have been recognized as cornerstone for a country like Pakistan with its significant role in strengthening foreign exchange position for the country (Usman et al, 2022). The role of worker remittance is also quite significant in the determination of the financial stability of the country (Chowdhury et al, 2023). The fiscal year 2020-21 reported 29.4 billion dollars with its substantial contribution as compare to past years. The international institutions like Asian Development Bank (ADB) reported in 2024 a significant association of the worker remittances to the economic activities and remittances (Wu et al, 2023). It has been observed that migrant worker sends more transfers in time of economic upswings in their host countries (Rehman & Hysa, 2021). Another study also revealed that higher global oil prices come up with its impact on remittances flow as mostly the Pakistani labor is in middle east hence any surge or movement in the oil prices come up with greater remittances flows (Khan, 2024). In addition, stability of the remittances flow has been found in economic downturn condition along with stable capital flows and countercyclical effect (Islam & Alhamad, 2022). The scope of the remittance in case of Pakistan observed beyond mere financial support that play its crucial role in enhancing the financial inclusion not only but also ensure the financial position of the country and stability (Aslam & Alibuhtto, 2023).

In addition, the increased inclusion of the digital payment solution has brought up with streamlining of the remittances flow along with its encouraged part to promote digital transactions (Miao & Qamruzzaman, 2021). A study revealed that around 60 percent of the young population of the country has bank account (Khan, 2024). The association of the remittances to the financial stability is also observed in case of Pakistan (Islam & Alhamad, 2022). Pakistan reported with current account surplus of around $447 million in 2020 with an improved position of the trade balance and with continuous increase in the remittances. Pakistan is a country still observed with its significant part of worker remittances flow via traditional channels and its translation to explain revenue losses and challenges existing in management of the financial transactions (Eftimoski & Josheski, 2021). An input to optimize the flow of the

remittances comes up with its role in determination of the financial stability of the country (Chuc et al, 2022). Similarly, an improved digital infrastructure is also quite essential to bring up with financial literacy and its input in determination of the volume of the remittance inflow along with the financial stability of the country (Chowdhury et al, 2023).

H2: There is a significant impact of the worker remittances in the determination of the financial stability of Pakistan.

2.3. Conceptual Framework

The conceptual framework of the current study has mentioned below.

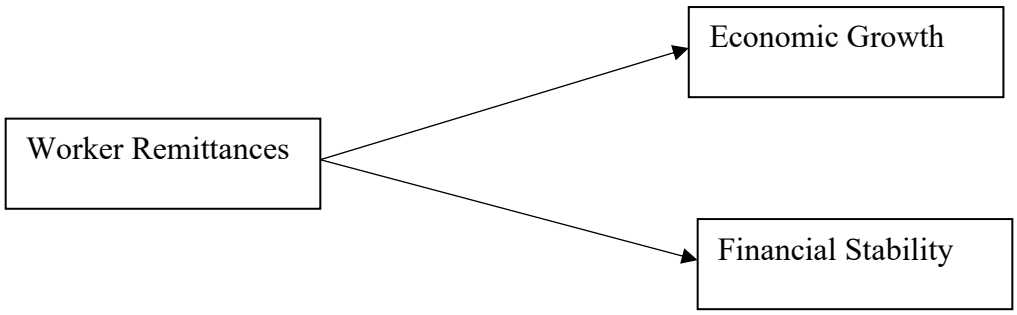


Figure 2.1: Conceptual Framework

3. RESEARCH METHODOLOGY

3.1. Research Approach & Type

The input of research approach describes the overall structure of the conducted research and its procedure to examine the phenomenon under investigation that is to empirically investigate the impact of worker remittance on economic growth and financial stability in Pakistan. The Study seems secondary in nature hence data collection is done from the published sources and its empirical investigation is done using statistical software E-views. The current selects with the quantitative approach over qualitative one as it best fit to the objective of our study based on developed research questions and research hypotheses. The past conducted studies on the same area found with the extensive application of the quantitative approach. In addition, quantitative approach also found its vast applications from practical perspective. The takes annual data on the selected variables and try to understand cause and effect association among the variable to test the hypotheses and justify findings in the light of the past conducted studies.

3.2. Research Design

Research design generally described the structure of the overall study. This explains on the data collection process and the explanation on either deductive approach or inducted approach followed. As explained above the current study follows with the secondary data hence published source are used to collected with the required set of information. Furthermore, the current study follows with the deductive approach. In this approach, the existing literature and theories are used to build up the conceptual framework and set of hypotheses are developed to test. The published source of information includes with website of State Bank of Pakistan, World Databank and Ministry of Finance to collect with the required information for the Pakistan. The current study reflects itself time series in nature as set of information is collected for single country for multiple years. The study takes the data on annual basis to support the aims of the study in understanding the impact of the worker remittances on the economic growth and financial stability of the Pakistan.

3.3. Targeted Population

Pakistan is the targeted population for the current study and study is conducted on macroeconomic factors to investigate the impact of work remittances on the economic growth and the financial stability. Pakistan has its geographic importance and being an important player in CPEC as critical position geographically to be investigated in macroeconomic context. Furthermore, the economy is passing through unstable economic, political and strategic situation hence the assessment of the worker remittance to economic growth and financial stability are of great importance in case of volatile trade position to the support of exchange rate.

3.4. Data Range & Source

The current study selected with the annual data on the selected variables i.e. worker remittances, economic growth and financial stability from 1985 to 2024 to examine the phenomenon. The data is collected from the website of State Bank of Pakistan, World Databank and Ministry of Finance for the Pakistan. The data is collected that is publically available to support the aims of the current study.

3.5. Research Model

The research model of the current study has mentioned below.

$ECGW = \beta_0 + \beta_1 WKREM + \text{error term}$ → eq. 1

$FNSB = \beta_0 + \beta_1 WKREM + \text{error term}$ → eq. 2

Where,

WKREM = Worker remittance
ECGW = Economic Growth
FNSB = Financial Stability

3.6. Data Analyses Method

The current research study applies the data with the time series regression model using E-view as software. The study considers 5 percent level of significance to determine the impact of independent variables on the dependent variable. The study also extracts with the R-square and F-statistics values along with the interpretation of the p-values of each coefficient to test the constructed hypotheses at 5 percent level of significance. The study also helps to investigate the association of worker remittances to economic growth and association of worker remittance to financial stability.

4. DATA ANALYSIS

4.1. Descriptive Statistics

The current study selected GDP growth rate and financial stability as dependent variables while personal/ worker remittance as independent variable. The study took data on annual basis for the selected variables in case of Pakistan and used GDP growth rate, Net foreign assets as percentage of GDP and personal remittance as percentage of GDP. The mean value for GDP growth rate, net foreign assets as percentage of GDP and personal remittance as percentage of GDP reported with value of 4.6777, 0.6161 and 5.3143 respectively. Furthermore, median value for GDP growth rate, net foreign assets as percentage of GDP and personal remittance as percentage of GDP reported with value of 4.4600, -0.4500 and 5.3200 respectively. The maximum value for GDP growth rate, net foreign assets as percentage of GDP and personal remittance as percentage of GDP reported with value of 10.220, 8.6600 and 10.2500 respectively. In addition, maximum value for GDP growth rate, net foreign assets as percentage of GDP and personal remittance as percentage of GDP reported with value of -1.2700, -6.5500 and 1.0800 respectively. Similarly, standard deviation for GDP growth rate, net foreign assets as percentage of GDP and personal remittance as percentage of GDP reported with value of 2.2595, 3.9008 and 2.4160 respectively. The study collected with 49 annual observations for each variable on annual basis form the published source of world databank.

Table 4.1:
Descriptive Statistics

	GDP Growth	Net Foreign Assets	Personal Remittances
Mean	4.677755	0.616122	5.314286
Median	4.460000	-0.450000	5.320000
Maximum	10.22000	8.660000	10.25000
Minimum	-1.270000	-6.550000	1.080000
Std. Dev.	2.259580	3.900809	2.416028
Observations	49	49	49

4.2. Pearson Correlation

The below Pearson Correlation table shows that Pearson correlation between GDP growth rate and net foreign assets reported with value of -0.0208. Similarly, the Pearson correlation between GDP growth rate and personal remittances reported with value of 0.1664. Furthermore, the Pearson correlation between net foreign remittances and personal remittances reported with value of 0.1664. Furthermore,

Table 4.2
Pearson Correlation

	GDP Growth	Net Foreign Assets	Personal Remittances
GDP Growth	1	-0.0208	0.1664
Net Foreign Assets	-0.0208	1	-0.1471
Personal Remittances	0.1664	-0.1471	1

4.3. Regression Model 1

The below regression model shows that overall model is significant at 5 percent level of significance with the significance value of 0.000 (p-value less than 0.05). Furthermore, F-statistics value also reported with value of 6.0686 i.e. (above 3) hence also supported the acceptance of the overall model. The study also reported with the Durbin Watson value 1.83 that is closer to 2 hence also support to translates that there is no incidence of auto-correlation in case of below model. The coefficient values for the personal remittances and lag of personal remittance reported with significance value of less than 0.05 with values of 0.0003 and 0.0002 respectively. In addition, the personal remittances and lag of personal remittance reported with coefficient value of -1.2955 and 1.3617 respectively.

Table 4.3
Regression Model 1 Coefficient Matrix

Dependent Variable: GDP_GROWTH
Method: Least Squares
Date: 08/08/25 Time: 22:47
Sample: 1985 2024
Included observations: 40
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PERRSONAL_REMITTANCES	-1.295521	0.323475	-4.005013	0.0003
PERRSONAL_REMITTANCES(-1)	1.361799	0.323710	4.206850	0.0002
C	4.010064	0.891980	4.495688	0.0001

R-squared	0.247008	Mean dependent var	4.294000
Adjusted R-squared	0.206306	S.D. dependent var	2.129985
S.E. of regression	1.897593	Akaike info criterion	4.191088
Sum squared resid	133.2318	Schwarz criterion	4.317754
Log likelihood	-80.82176	Hannan-Quinn criter.	4.236886
F-statistic	6.068659	Durbin-Watson stat	1.829266
Prob(F-statistic)	0.005256	Wald F-statistic	9.056106
Prob(Wald F-statistic)	0.000629		

4.4. Regression Model 2

The below regression model shows that overall model is significant at 5 percent level of significance with the significance value of 0.0132 (p-value less than 0.05). Furthermore, F-statistics value also reported with value of 4.8726 i.e. (above 3) hence also supported the acceptance of the overall model. The coefficient values for the personal remittances and lag of personal remittance reported with significance value of less than 0.05 with values of 0.0043 and 0.0000 respectively. In addition, the personal remittances and lag of personal remittance reported with coefficient value of 1.9054 and -2.3793 respectively.

Table 4.4
Regression Model 2 Coefficient Matrix

Dependent Variable: NET_FOREIGN_ASSETS
Method: Least Squares
Date: 08/08/25 Time: 23:28
Sample: 1985 2024
Included observations: 40
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PEPERRSONAL_REMITTANCES	1.905446	0.625744	3.045089	0.0043
PEPERRSONAL_REMITTANCES(-1)	-2.379384	0.459981	-5.172789	0.0000
C	3.033522	2.646190	1.146374	0.2590

R-squared	0.208477	Mean dependent var	0.804500
Adjusted R-squared	0.165692	S.D. dependent var	4.250952
S.E. of regression	3.882840	Akaike info criterion	5.623049
Sum squared resid	557.8285	Schwarz criterion	5.749715
Log likelihood	-109.4610	Hannan-Quinn criter.	5.668848
F-statistic	4.872655	Durbin-Watson stat	0.471895
Prob(F-statistic)	0.013231	Wald F-statistic	14.93593
Prob(Wald F-statistic)	0.000018		

4.5. Hypotheses Summary

The summary of tested hypotheses has mentioned below.

Table 4.5
Hypotheses Summary

Sr.	Hypotheses	Sig. Value	Comments
1	H1: There is a significant impact of the worker remittances in the determination of the economic growth of Pakistan.	< 0.05	Hypotheses Accepted
2	H2: There is a significant impact of the worker remittances in the determination of the financial stability of Pakistan.	< 0.05	Hypotheses Accepted

5. DISCUSSION

5.1. Hypotheses 1

The above study clearly revealed that there is a significant impact of personal remittance on GDP growth rate with coefficient value of -1.2955 along with significance value of 0.0003. This clearly shows that for every unit increase in personal remittances there is a decrease of GDP growth rate approximately by 1.30 units keeping all other factors constant. The low value of probability shows that negative impact translates with higher remittance inflows with reduced share of labor in labor market. This has found with hindering effect in domestic economic productivity and hindrance also to long term growth. Literature has also reported with the similar findings. Literature has also found that financial stability also comes up with the inflow of the worker remittances for a receipt country (Islam & Alhamad, 2022). Another outcome of the worker remittances has also been reported in the form of countercyclical source of income with an increased option of work opportunities during the time of economic downturn (Chowdhury et al, 2023). The significant source of work remittances also brings up with stabilization to the household consumption along with supportive function during natural disasters (Eftimoski & Josheski, 2021). The input of the worker remittances has also been found with promotion of investment activities (Azizi, 2021).

The study also revealed that there is a significant impact of lag of personal remittance on GDP growth rate with coefficient value of 1.3617 along with significance value of 0.0002. The positive relationship and significant impact of lag of personal remittances on GDP growth suggests that remittance inflows contribute to economic growth over time instead of its immediate impact. This translates a delayed multiplier effect. This shows that households who are recipient of worker remittances initially uses worker remittances for consumption but with the passage of time channelize it into savings, education, housing, and also on small business investments. Such investment also input with an enhanced human capital, productivity, and entrepreneurial activity. This results in stimulation of future economic output. In addition, remittances have found its input in enhancing creditworthiness and reducing borrowing constraints for families. This also promotes long-term economic participation. The lag effect of worker remittances also indicates that worker remittances can foster sustainable development in case employed productively.

Literature also reported with similar findings. The role of the work remittances has also been found in literature supportive to eradicate poverty and its induced financial distress (Saydaliyev et al, 2022). The input of the worker remittances has also found significant in reducing the possible impact of the financial crises that commonly originates from the household sector (Rehman & Hysa, 2021). The outcome of the work remittances observed empowerment of the recipients especially in rural areas and to striving economies (Wu et al, 2023). The role of the worker remittances also found with injection of capital for entrepreneurial ventures and fostering of investment to bring up with constructive outcome of work remittance for economic development process (Aslam & Alibuhtto, 2023). The input of the worker remittance is also critical

to determine the performance of the macroeconomic indicators and its role in building up job opportunities in local market (Wu et al, 2023).

5.2. Hypotheses 2

The study also revealed that there is a significant impact of personal remittances on net foreign assets with significance value of 0.0043 along with coefficient value of 1.9054. This positive association of personal remittances and net foreign assets (NFA) translates with the role of remittance inflows in strengthening a country's external financial position like for Pakistan. Literature has reported the recording of worker remittances toward foreign exchange inflows with an increase in supply of foreign currency and improving the balance of payments. This results in support to the growth of foreign reserves that translates into higher net foreign assets. In addition, the stability of the remittance flows minimizes the dependency on external borrowing and help maintain currency stability. Literature also reported with the similar findings. The recent statistics showed that remittances flow to low and middle income countries reported around 626 billion dollars in 2022 that significantly surpassed foreign direct investment along with the aids moved to developing countries for development purposes (Wu et al, 2023). Another study also revealed that higher global oil prices come up with its impact on remittances flow as mostly the Pakistani labor is in middle east hence any surge or movement in the oil prices come up with greater remittances flows (Khan, 2024). In addition, stability of the remittances flow has been found in economic downturn condition along with stable capital flows and countercyclical effect (Islam & Alhamad, 2022).

The study also found that lag of the personal remittances has significant impact on the net foreign assets with coefficient value of -2.37938. This shows that lag of the personal remittances significantly determines net foreign assets in case of Pakistan. The negative relationship of lagged personal remittances on net foreign assets explains that remittances initially boost external reserves. Such delay effects translate into depletion of net foreign assets over the period of time. This relationship shows increased imports and consumption that is fuel by worker remittance income in subsequent periods. This results in deterioration of the current account. In addition, remittance-receiving households may convert foreign currency into local currency for spending. Literature also reported with the similar findings. A study revealed that around 60 percent of the young population of the country has bank account (Khan, 2024). The association of the remittances to the financial stability is also observed in case of Pakistan (Islam & Alhamad, 2022). The input of the worker remittances has also found significant in reducing the possible impact of the financial crises that commonly originates from the household sector (Rehman & Hysa, 2021). The recent investigation also reported that worker remittances serve as catalyst in economic development process with an improved access to education, healthcare and housing in emerging economies (Ahmad et al, 2022). The outcome of the work remittances observed empowerment of the recipients especially in rural areas and to striving economies (Wu et al, 2023).

6. CONCLUSION & RECOMMENDATIONS

6.1. Conclusion

The current study examined the empirical input of worker remittances in determination of economic growth and financial stability in case of Pakistan. The current study selected GDP growth rate and financial stability as dependent variables while personal/ worker remittance as independent variable. The study took data on annual basis for the selected variables in case of Pakistan and used GDP growth rate, Net foreign assets as percentage of GDP and personal remittance as percentage of GDP. That study followed with the quantitative approach over qualitative one as it best fit to the objective of our study based on developed research questions and research hypotheses. This study also followed with collection of secondary data as it is available in published form. The study collected data for

the selected variables from world databank on annual basis. The current study selected with the annual data on the selected variables i.e. worker remittances, economic growth and financial stability from 1985 to 2024 to examine the phenomenon. The current research study applied the data with the time series regression model using E-view as software.

The results of the study revealed that there is a significant impact of personal remittance on GDP growth rate with coefficient value of -1.2955 along with significance value of 0.0003. This clearly shows that for every unit increase in personal remittances there is a decrease of GDP growth rate approximately by 1.30 units keeping all other factors constant. The study also revealed that there is a significant impact of lag of personal remittance on GDP growth rate with coefficient value of 1.3617 along with significance value of 0.0002. The positive relationship and significant impact of lag of personal remittances on GDP growth suggests that remittance inflows contribute to economic growth over time instead of its immediate impact. Similarly, the study also revealed that there is a significant impact of personal remittances on net foreign assets with significance value of 0.0043 along with coefficient value of 1.9054. This positive association of personal remittances and net foreign assets (NFA) translates with the role of remittance inflows in strengthening a country's external financial position like for Pakistan. The study also found that lag of the personal remittances has significant impact on the net foreign assets with coefficient value of -2.37938. This shows that lag of the personal remittances significantly determines net foreign assets in case of Pakistan. The negative relationship of lagged personal remittances on net foreign assets explains that remittances initially boost external reserves.

6.2. Recommendations

The set of recommendations designed based on the above findings are mentioned below.

- Regulatory bodies are needed to promote productive use of remittances through encouragement of financial literacy programs.
- The financial industry is needed to develop with remittance-linked investment products. This can be attained through diaspora bonds or remittance-based mutual funds.
- Market participants are also needed to promote entrepreneurship among remittance-receiving families.
- Recipient of worker remittances are also needed to improve access to formal financial institutions.
- Financial players are also needed to establish a remittance-backed sovereign wealth funds.
- Government body is also needed to encourage import substitution policies.
- Government bodies are also needed to input with tax incentives for investment of remittances in export-oriented sectors like textiles, IT, or agriculture.
- Regulatory body is also needed to enhance digital remittance infrastructure.
- Regulatory bodies are also needed to input with policy measures to monitor lagged remittance effects.
- Market players are needed to develop with tailored economic programs that helps to align country's worker remittances usage with national development priorities that includes job creation and export diversification.

6.3. Limitations

The set of limitation confronted to the current study are mentioned below.

- The study observed time as a major constraint in performing the analysis.
- The study also found time taking the task to learn the selected statistical technique and make sure its effective application on the collected data.

6.4. Future Prospect of Studies

The current study is needed to empirically explore broader macroeconomic and structural factors in determination of association personal remittances, GDP growth, and net foreign assets in Pakistan. This study can be further deepening

its implication with consideration of exchange rate volatility and examine association of remittance inflows with its affect in term of currency valuation and trade competitiveness. The current study can also consider inflation rate within the model to understand its association to capture the price level effects of remittance-fueled consumption. Furthermore, the study can be extended in its with conductance of study on regional level with employment of panel data in perform the empirical investigation.

7. References

Ahmad, M., Rahman, S. U., & Fayyaz, S. (2022). Impact of Worker's Remittances, Financial Development, and Economic Growth on Living Standard of Pakistan. Research Journal for Societal Issues, 4(1), 66-94.

Azizi, S. (2021). The impacts of workers' remittances on poverty and inequality in developing countries. Empirical Economics, 60(2), 969-991.

Basnet, H. C., Koirala, B., Upadhyaya, K. P., & Donou-Adonsou, F. (2021). Workers' remittances and financial development: The case of South Asia. International Review of Economics, 68, 185-207.

Chowdhury, E. K., Dhar, B. K., & Gazi, M. A. I. (2023). Impact of remittance on economic progress: evidence from low-income Asian Frontier countries. Journal of the Knowledge Economy, 14(1), 382-407.

Chuc, A. T., Li, W., Phi, N. T. M., Le, Q. T., Yoshino, N., & Taghizadeh-Hesary, F. (2022). The necessity of financial inclusion for enhancing the economic impacts of remittances. Borsa Istanbul Review, 22(1), 47-56.

Eftimoski, D., & Josheski, D. (2021). Reopening the debate on the relationship among remittances, household consumption stability and economic growth in emerging markets. International Journal of Emerging Markets, 16(8), 1892-1911.

ELazhary, R., Eladham, F., & Elakkad, M. (2023). The impact of workers' remittances on the economic growth in Egypt: a financial inclusion perspective. مجلة البحوث التجارية, 45(4), -3 32.

Islam, M. S., & Alhamad, I. A. (2022). Impact of financial development and institutional quality on remittance-growth nexus: evidence from the topmost remittance-earning economies. Heliyon, 8(12).

Islam, T. (2021). Workers' Remittances and Economic Growth: Evidence from Bangladesh. International Journal of Financial Research, 12(2), 233-241.

Jushi, E., Hysa, E., Cela, A., Panait, M., & Voica, M. C. (2021). Financing growth through remittances and foreign direct investment: Evidences from Balkan Countries. Journal of Risk and Financial Management, 14(3), 117.

Khan, M. A. (2024). The impact of migrant remittances on economic development: Empirical evidence from the developing world. Journal of Social and Economic Development, 1-29.

Miao, M., & Qamruzzaman, M. (2021). Dose remittances matter for openness and financial stability: Evidence from least developed economies. Frontiers in psychology, 12, 696600.

Mohamed Aslam, A. L., & Alibuhtto, M. C. (2023). Workers' remittances and economic growth: new evidence from an ARDL bounds cointegration approach for Sri Lanka. Journal of Economic and Administrative Sciences.

Ngoma, A. L., Ismail, N. W., & Law, S. H. (2021). The role of financial development and institutional quality in remittance-growth Nexus in Asia. The Journal of Developing Areas, 55(4), 399-425.

Olanipekun, D. B. (2024). Workers' Remittances to Sub-Saharan Africa: Do Institutional Quality and Financial Development Matter?. Journal of International

Commerce, Economics and Policy, 15(02), 2450008.

Pal, S., Villanthenkodath, M. A., Patel, G., & Mahalik, M. K. (2022). The impact of remittance inflows on economic growth, unemployment and income inequality: An international evidence. International Journal of Economic Policy Studies, 16(1), 211-235.

Saydaliyev, H. B., Chin, L., & Mohamed, A. (2022). Remittance inflow and economic development: interaction with financial inclusion and human capital. Migration and Development, 11(3), 876-893.

Ur Rehman, N., & Hysa, E. (2021). The effect of financial development and remittances on economic growth. Cogent Economics & Finance, 9(1), 1932060.

Usman, M. A., Ozdeser, H., Çavuşoğlu, B., & Aliyu, U. S. (2022). On the sustainable economic growth in Sub-Saharan Africa: do remittances, human capital flight, and brain drain matter?. Sustainability, 14(4), 2117.

Wu, W., Hon-Wei, L., Yang, S., Muda, I., & Xu, Z. (2023). Nexus between financial inclusion, workers' remittances, and unemployment rate in Asian economies. Humanities and Social Sciences Communications, 10(1), 1-10.

Yadeta, D. B., & Hunegnaw, F. B. (2022). Effect of international remittance on economic growth: Empirical evidence from Ethiopia. Journal of International Migration and Integration, 23(2), 383-402.