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Workers' Remittances and Socio-Economic Well-Being in Top Ten Remittances Receiving Developing Countries: The Role of Financial Development

Mahnaz Muhammad Ali[1]; Rozina Sadiq[2]; Muhammad Javed[3]
1. Department of Economics, The Islamia University of Bahawalpur, Pakistan.
Email: mahnaz.ali@iub.edu.pk
2. Department of Economics, University of Punjab, Pakistan.
Email: rozina2403@gmail.com
3. Department of Economics, The Islamia University of Bahawalpur, Pakistan.
Email: javedkamalya@gmail.com

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Corresponding Author's email:
mahnaz.ali@iub.edu.pk

ABSTRACT

The present study contributes empirical evidence to the impact of remittances on the socio-economic well-being of recipient nations, particularly through the enhancement of their Human Development Index (HDI) rankings. Utilizing a panel dataset comprising the top ten remittance-receiving countries over the period from 1990 to 2020, the research endeavors to offer a comprehensive analysis of the relationship between remittance inflows and HDI metrics. This investigation delves into the nuanced dimensions of HDI, namely health, education, and income per capita, to discern the specific effects of remittances on each component. The study employs the generalized method of moments (GMM) technique to mitigate potential endogeneity concerns inherent in the relationship between remittances and financial development. The findings of this empirical inquiry suggest that remittances wield a discernible influence on augmenting human well-being, particularly by fostering improvements in health and education outcomes. Additionally, the study identifies a constructive role for financial development in bolstering HDI indicators. In light of these findings, it is recommended that policymakers formulate tailored strategies aimed at facilitating remittance flows, thereby affording migrants enhanced access to robust financial systems.

1 Introduction

Remittances are the compensation and total of the wages that foreign-based employees pay back to their home country. Both the number of migrants and the quantity of remittances they send back to their home countries have significantly increased when compared to earlier decades. Since 2000, the number of migrants has increased by 50%, with an estimated 272 million people residing abroad in 2019. The entire amount of remittances in that same year was $714 billion, or just under 1% of global output. Remittance inflows increased more than foreign direct investment in developing nations (World Bank, 2020). Remittances from abroad are essential for the growth of underdeveloped countries all over the world.

Global remittances will reach $553 billion in 2020, which is almost three times more than the global official development assistance that is $131 billion. Remittances to remittance-receiving countries frequently account for 10% of their annual GDP, which is a sizable component of their economy. India received highest amount of remittances ($83.1 billion) in 2020 (WDI, 2020). International remittances play a vital role to boost the country's foreign exchange reserves, improved the lives of the receivers' citizens, help them escape poverty, enhance their savings and investments, and advance income

equality amongst socioeconomic categories. International remittances (also known as financial aid from migrants who reside in other nations) are seen as a crucial source for economic growth and the eradication of poverty, particularly in developing nations (Ratha & Moghaddam, 2020).

According to numerous international organizations, the Human Development Index (HDI) is widely acknowledged as a critical metric for determining a country's level of development. Since 1990, the UN has published an annual HDI report that offers information on the level of development of a nation's population. This study provides a thorough picture of people's well-being inside a nation by looking at a number of characteristics in several sectors, including health, income, education, and living conditions. These indicators not only give a comprehensive view of a country's development state, but they also provide information on governmental economic development policies.

Previously, foreign remittances in many developing nations were often disregarded as being insignificant in size and utilized mainly for consumption purposes, rather than economic development (Hugo, 2003). Countries such as India, Pakistan, Bangladesh, Philippines, Vietnam, and Nepal received little remittance amounts until 2000. However, since then, remittances have substantially increased and become a vital source of resource transfer in these nations. In fact, remittances are now considered more significant than foreign direct investment in some of these countries.

Remittances have reportedly been used to lower poverty rates in countries and improve household health (Acosta et al., 2007). According to Durand et al. (1996) remittances may have helped households get access to the best hospitals for medical care, which has helped lower death rates. Remittances have also given people the economic possibilities and decreased income disparity in society (Rodriguez & Tiongson, 2001). According to the World Bank, more than $550 billion was sent overseas to lower-middle income nations in 2020.

Remittance flows are essential to human welfare because they enable people to invest in their enterprises, access healthcare, and buy better food, education, and housing. Remittances are thought to benefit newborn health in terms of healthcare by ensuring income stability. As a result, immigration to other nations not only decreases child labor but also increases education levels and income stability, allowing for increased spending on baby healthcare. The financial situation and standard of living of families are raised by using remittances to build new homes, maintain old ones, pay off loans, and buy new cars. The increased education, health, and employment prospects that result from this improved financial situation enable families to take engage in social activities (Abdullah et al., 2021).

For emigrant households, remittances are a key source of income. Remittances reduce exchange rate risk and transaction costs, making them a potentially important component in economic growth. Remittances' eventual impact on economic growth, however, will depend on whether people invest them or utilize them for personal expenses (Kumar et al., 2018). Remittances inflow is determined by the effectiveness of the financial system and competition among transfer service providers. The flow of remittances has been found to be negatively impacted by monetary authority-imposed legal restrictions on financial service providers, such as higher tax rates on both the sender and the recipient (Kock & Sun, 2011). A technologically advanced banking system has been found to have a positive impact on the flow of remittances in industrialized nations. However, it has been discovered that remittances also have a detrimental impact on recipient countries' economic growth by limiting their capacity to work (Chami et al., 2005). While it has been discovered that financial development and remittances both significantly and favorably affect economic growth when considered independently, it has been discovered that their interactions have the opposite effect. According to Bettin and Zazzaro (2012), an effective banking system has a favorable impact on remittances inflow and economic growth. In nations with alternate sources of financing and undeveloped financial

institutions, remittances have been demonstrated to boost economic growth (Guiliano & Ruiz-Arranz, 2009).

Table 1

Top Ten Remittances Receiving Developing Countries (WDI, 2020)

Sr No	Country	Remittances Inflow	HDI Ranking	Sr No	Country	Remittances Inflow	HDI Ranking
1	India	83.1	131	6	Pakistan	26.1	161
2	China	59.5	82	7	Bangladesh	21.7	128
3	Mexico	42.8	88	8	Nigeria	17.2	163
4	Philippines	34.9	113	9	Vietnam	17.0	113
5	Egypt	29.6	97	10	Nepal	8.2	144

Remittances are measured in billion US $.

Developing countries are the top recipients of worker remittances; however, they have a poor ranking in the Human Development Index (HDI). For instance, table 01 presents the data of top ten remittances receiving countries and their ranking of HDI[1]. India is the top-ranked country in terms of remittances received but has an HDI ranking of 131 out of 195 total countries (HDI, 2020). Similarly, the other countries receiving significant amounts of remittances have a very poor rank of Human Development Index. Therefore, the present study wants to explore, whether the remittances have any impact on HDI indicators.

The study's objectives are to examine the effects of remittances on the socioeconomic well-being of developing nations that receive remittances and to offer policy recommendations. The inflow and outflow of remittances are significantly influenced by financial development, and this study also examines how financial development affects the flow of remittances. The study's precise objectives can be summarized as follows:

- To examine the effect of worker remittances on the Human Development Index of the top ten developing nations that receive remittances.
- To examine how worker remittances effect the health outcomes in the top 10 developing remittances receiving nations.
- To examine how worker remittances effect educational outcomes in the top 10 developing remittances receiving nations.
- To examine the influence of worker remittances and the role of financial development on economic well-being.

The current study aims to determine how the Human Development Index (HDI) is impacted by worker remittances. This study attempts to investigate the effects of remittances on each of the HDI components, such as health, education, and per capita income, with respect to the top 10 remittance-receiving nations. This study use the data spanning from 1990 to 2020 and uses four different models to achieve each objective. Data is obtained from the United Nations Development Program and the World Development Indicators.

2 Literature Review

Over the years, academics have delved deeply into the idea of human development, exploring many elements that support its growth and advancement. The impact of remittances, financial

[1] Countries are selected on the basis of their volume of remittances. The countries chosen are the world's top ten remittances receiving countries according to World Bank.

development, macroeconomic policies, and other factors on human development in various parts of the world are the main topics of this literature review, which examined a variety of research on the topic. The review has been done to get a thorough grasp of the variables affecting human development and how they affect the socioeconomic development of countries through the examination of these studies.

Bracking and Sachikonye (2010) performed a research on the effect of remittances on people's social welfare. They discovered that although some who received remittances saw an improvement in their social welfare, others experienced market inflation and had a low standard of living. The study compared the lives of households that received remittances with those that did not, using quantitative and qualitative approaches. According to Chowdhury (2011), remittances from employees were Bangladesh's largest source of foreign income and helped the country's financial system grow. For Bangladesh, remittances has major contribution in total GDP accounting 12% of GDP. Using annual data from 1971 to 2008 the study explored that remittances can improve the financial system deepening and expansion.

Asongu (2011) looked into the connection between economic dynamics and human development in 38 developing nations using data from 1996 to 2008. The dependent variable was human development, and the independent variables were inflation, legality and regulation, goods trade, and GDP per capita. A substantial association between inequality, financial distribution, and adjusted human development was found using the TSLS and OLS methodologies. While the GDP per capita was not greatly altered, it was discovered that the depth of financial activity was large and beneficial for human development.

Bettin and Zazzaro (2012) conducted a study to show the complimentary relationship of remittances and financial development for GDP growth. Using new proxy for financial development the study concluded that remittances can boost economic growth on in those countries who have a strong and efficient financial system.

Research on the effects of remittance inflow, information and communication technology, and financial growth on Sub-Saharan African nations was done by Kumar (2012). The results showed that ICT had a negative impact on remittances while financial development had a favorable impact; however, there was no correlation between remittances and FDI. In Bangladesh and Vietnam, Barai (2012) looked at how remittances improved socioeconomic metrics like housing, healthcare, and education. It was discovered that remittances were essential for both nations and had a favorable impact on their BOP, GDP, foreign debt, and FDI.

Using panel data from 1980 to 2009, Nyamongo, Misati, Kioyegon, and Ndirangu (2012) investigated the impact of remittances and the expansion of the banking sector on the economic growth of 36 African nations. They discovered that for several African countries, remittances were the main source of revenue and a factor in the growth rate. Remittance volatility, on the other hand, had a negative impact on economic growth, and the development of the financial sector appeared to have less impact on boosting the economies of several African nations.

Connolly and Leoz (2014) conducted a study to identify the factors affecting highly developed human development in various countries. The study included information from HDI, the World Bank, and the Population Reference Bureau for 174 countries. Human development index was employed as the dependent variable, whereas life expectancy, literacy rate, GDP per capita, projected years of schooling, and inflation rate were used as the explanatory variables. Probit regression was employed in the data analysis. According to the regression analysis, life expectancy, GDP per capita, and predicted years of schooling had a positive and significant impact on HDI.

Using time-series data from 1981 to 2013, Masuduzzaman (2014) examined the impact of remittances on economic growth and the development of the banking sector in Bangladesh. The findings indicated that remittances contributed to the GDP and benefited the financial development.

Sede and Ohemeng (2015) conducted research on the variables affecting life expectancy in Nigeria. Using information from 1980 to 2011, study used life expectancy at birth (LEAB) as the dependent variable, and the independent factors were unemployment, secondary school enrollment, health expenditures, GDP per capita, and exchange rate. Utilizing a unit root test to analyze the data, the study explored that LEAB was not significantly impacted by health spending, per capita GDP, or enrollment in school. However, unemployment and the exchange rate had the vital effects on LEAB, showing that effective policies aiming at increasing employment rates and redistribution of wealth could improve social well-being in Nigeria.

Sangaji (2016) concentrated on factors influencing the human development index in eight Buddhist-majority nations. He demonstrated that the human development index was significantly influenced by four explanatory variables. All eight countries' HDIs were favorably impacted by GDP per capita, birth length, and life expectancy, while negatively impacted by inflation and fertility rates. Another study by Khan and Khan (2016) looked at how Pakistani children between the ages of 4 and 15 were educated and enrolled in school. They discovered that households receiving remittances were more likely to enroll their children in school, particularly females in rural areas, and that the impact was stronger in rural areas than in urban areas using data from nationally representative surveys conducted in 2010 and 2011. The gender gap shrunk and the literacy rate increased as a result of remittances.

Hassan, Minato, Ishida, and Nor (2017) used time series data from 2006 to 2010 to examine the associations between life expectancy and 108 developing nations' GDP, sanitation facilities, water coverage, health spending, and education. However, there is no immediate cause-and-effect relationship between life expectancy and these characteristics were found. In the long run, there was a bidirectional causal relationship between income and life expectancy. According to Caglayan et al. (2017), there was a negative correlation between HDI, life expectancy at birth, and rural population while there were positive and significant short-term relationships between health expenditure, life expectancy at birth, GDP per capita, internet users, expected year of schooling seats, and HDI. GDP per capita and Internet usage were statistically significant.

In three locations in Pakistan, Ariadi, Saud, and Ashfaq (2018) investigated how the foreign remittances of male migrants affected their parents' social lives. The study indicated that remittances had a favorable and significant impact on the health care status of parents left behind, allowing them to maintain their expenditure on basic needs and access to high-quality healthcare facilities, using snowball sampling procedures in urban and rural locations.

According to Arisman (2018), human development in ASEAN countries was favorably impacted by income per capita and negatively impacted by population. While employment and inflation rates have little bearing on HDI, inflation reduced people's purchasing power. Another argument built by Shafiq and Gillani (2018) showed that an increase in remittances from developed economies to developing economies has a gradual positive impact on investment and spending, which enables households to access better healthcare. Girum, Muktar, and Shegaze (2018) used data from 83 nations to analyze the factors that affect life expectancy in low- and middle-income countries. According to the study, there was a significant and favorable correlation between independent variables linked to healthcare, socioeconomics, and morbidity. The research made recommendations for strengthening socioeconomic and the health system.

Kausar, Sarwar, Rafiq, and Rehman (2019) demonstrated that corruption had a significant and negative influence on both human development and remittances, while political openness, migration, population growth, and commerce had positive effects on the HDI. The relationship between information and communication technology (ICT), economic development, and human development in Pakistan was studied by Khan, Ju, and Hassan (2019). Using time series data from 1990 to 2014. Human development was the dependent variable and the independent factors included GDP per

capita, ICT, trade, urbanization, and foreign direct investment. The study found that economic growth and ICT had positive effects on human development.

For a few SAARC economies, including Bangladesh, India, Pakistan, Nepal, and Sri Lanka, the determinants of life expectancy were examined by Jafrin, Masud, Saif, Mahi, and Khanam (2021). Pooled OLS and random-effect models were used to analyze secondary data from 2000 to 2016 and found that sanitation services and mean years of schooling have a significant positive impact on life expectancy at birth. Spending on healthcare and birth weight had a substantial unfavorable relationship. On the other side, life expectancy was only somewhat predicted by GDP, Internet use, mobile phone use, and gross capital creation.

Abdullah, Habib, and Gillani (2021) investigated how remittances affected the quality of life for families that received money from migrant workers. Cross-sectional research methodology was used to conduct the study in the Bagh area of AJK, and interviews were used to gather information from 200 families. The dependent variable was remittances, while the independent variables were family means of subsistence, health care, and other aspects. Remittances were shown to have a positive socioeconomic impact on families and to be used for a variety of things, including debt repayment, construction of new buildings, education, and health care facilities.

Shenga, Husseina and Likomba (2024) gave a fresh evidence on the socio-economic impact of remittances for recipient country. The study was conducted for Sub Saharan region using the time series data from 2010 to 2019. Simple regression analysis and 2SLS technique was used for empirical inquiry. The results are quite different from the past studies. The study concluded that the socio-economic impact of remittances are depend on the local conditions and the intentions of the migrants. The short term impact of remittances are positive on socio-economic well-being, however the long term impact in negative since people may want to move and settle in foreign countries instead using remittances in their home country.

The majority of past studies on the human development index have made use of several HDI dimensions and variables. There are no studies that employed both the overall Human Development Index and each HDI dimension simultaneously. To the best of my knowledge, none of the studies addressed the issue of poor nations that receive the majority of remittances. The current study will use time-series data from the top ten developing countries that receive remittances, including India, China, Pakistan, Philippines, Egypt, Mexico, Bangladesh, Nepal, Nigeria, and Vietnam, to investigate the effects of remittance inflow on the human development index and on each component of the index (health, education, and income per capita) separately.

The following conceptual framework for the present study can be drawn based on theoretical and empirical literature.

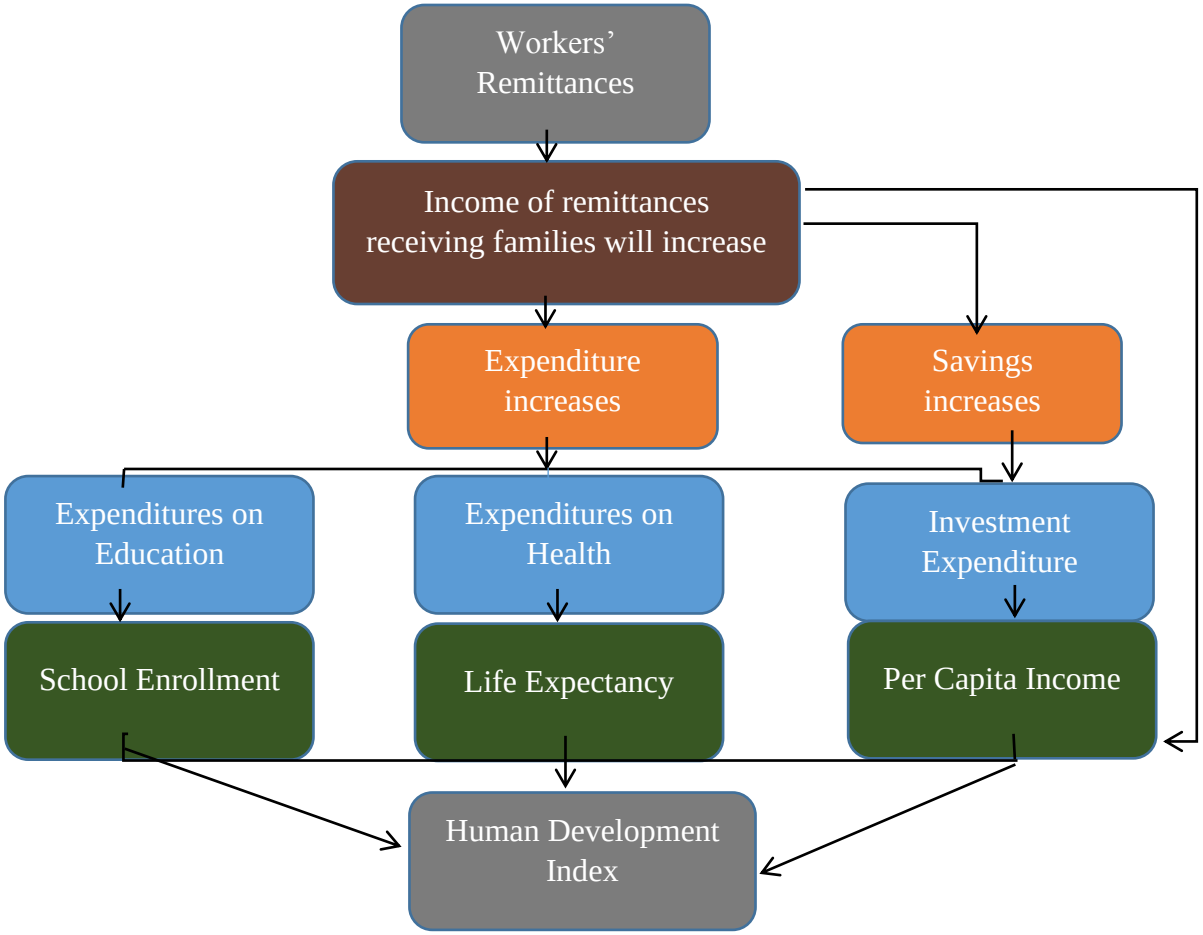

Figure 01: Source, Author's own construction

3 Data and Methodology

Based on the review of literature and theory the models for the study can be specified as under.

a) Model for Human Development (HDI)

Functional form of the first model is given as.

HDI= (Remittances, Financial Development (Credit to private sector) (Money Supply), Inflation, Unemployment, Gross Capital Formation, and Primary School Enrollment) (1)

In econometrics form three different specifications of all models have been used for analysis.

$HDI_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 INF_{it} + \alpha_4 GCF_{it} + \alpha_5 UNEMP_{it} + \alpha_6 SCHENR_{it} + \varepsilon t_{it}$ (2)

$HDI_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 CRTPS_{it} + \alpha_4 INF_{it} + \alpha_5 GCF_{it} + \alpha_6 UNEMP_{it} + \alpha_7 SCHENR_{it} + \varepsilon t_{it}$ (3)

$HDI_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 M2_{it} + \alpha_4 INF_{it} + \alpha_5 GCF_{it} + \alpha_6 UNEMP_{it} + \alpha_7 SCHENR_{it} + \varepsilon t_{it}$ (4)

b) Model for Health (Life Expectancy at Birth)

Life expectancy at birth = (Remittances, Financial Development (Credit to private sector) (Money Supply), Improved Water Coverage, Unemployment, Urban Population, and Gross Domestic Product per capita) (5)

In econometrics form the model can be specified as;

$$LEAB_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 IWC_{it} + \alpha_4 UNEMP_{it} + \alpha_5 URPOP_{it} + \alpha_6 GDPC_{it} + \varepsilon t_{it} \quad (6)$$

$$LEAB_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 CRTPS_{it} + \alpha_4 IWC_{it} + \alpha_5 UNEMP_{it} + \alpha_6 URPOP_{it} + \alpha_7 GDPC_{it} + \varepsilon t_{it} \quad (7)$$

$$LEAB_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 M2_{it} + \alpha_4 IWC_{it} + \alpha_5 UNEMP_{it} + \alpha_6 URPOP_{it} + \alpha_7 GDPC_{it} + \varepsilon t_{it} \quad (8)$$

c) Model for Education (Tertiary School Enrollment)

Tertiary School Enrollment= (Remittances, Financial Development (Credit To Private Sector) (Money Supply), Urban Population, Foreign Direct Investment, Unemployment, Gross Domestic Product per capita) (9)

In econometrics form the model can be specified as;

$$TSE_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 URPOP_{it} + \alpha_4 UNEMP_{it} + \alpha_5 FDI_{it} + \alpha_6 GDPC_{it} + \varepsilon t_{it} \quad (10)$$

$$TSE_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 CRTPS_{it} + \alpha_4 URPOP_{it} + \alpha_5 UNEMP_{it} + \alpha_6 FDI_{it} + \alpha_7 GDPC_{it} + \varepsilon t_{it} \quad (11)$$

$$TSE_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 M2_{it} + \alpha_4 URPOP_{it} + \alpha_5 UNEMP_{it} + \alpha_6 FDI_{it} + \alpha_7 GDPC_{it} + \varepsilon t_{it} \quad (12)$$

(d) Model for Gross National Income Per Capita

Income = (Remittances, Financial Development (Credit to Private Sector) (Money Supply), Inflation, Urban Population, Exports, Gross Capita Formation)

In econometrics form the model can be specified as;

$$GNI_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 INF_{it} + \alpha_4 URPOP_{it} + \alpha_5 EXP_{it} + \alpha_6 GCF_{it} + \varepsilon t_{it} \quad (13)$$

$$GNI_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 CRTPS_{it} + \alpha_4 INF_{it} + \alpha_5 URPOP_{it} + \alpha_6 EXP_{it} + \alpha_7 GCF_{it} + \varepsilon t_{it} \quad (14)$$

$$GNI_{it} = \alpha_1 + \alpha_2 REM_{it} + \alpha_3 M2_{it} + \alpha_4 INF_{it} + \alpha_5 URPOP_{it} + \alpha_6 EXP_{it} + \alpha_7 GCF_{it} + \varepsilon t_{it} \quad (15)$$

Table 2

Description of Variables

Abbreviation	Variables Name	Unit of Measures
Dependent Variables		
HDI	Human Development Index	Human development indicators
LEAB	Life Expectancy at Birth	Life expectancy at birth, total in years)
EDU	Tertiary School Enrollment use proxy of Education	School enrollment, tertiary (% gross based on annual school surveys)
GNI	Gross National Income per capita	GNI per capita growth (annual %)
Principal Variables		
REM	Remittances	Personal remittances received (current US$)
M2	Money Supply	Broad money (Percentage of GDP)
CRTPS	Domestic Credit to Private Sector	Domestic credit to the private sector provided by banks (Percentage of GDP)
Control Variables		
INF	Inflation	Inflation, GDP deflator (annual percentage)

UNEMP	Unemployment	Unemployment, total (Percentage of the total labor force) (modeled by ILO estimation)
GCF	Gross Capital Formation	Gross capital formation (annual Percentage growth)
SCHENR	School Enrollment	School enrollment, primary (Percentage gross, based on annual school surveys)
IWC	Improved Water Coverage	People have basic facilities of drinking water services (Percentage of the total population)
URPOP	Urban Population	Urban population growth rate (annual percentage)
GDP	Gross Domestic Product per capita	GDP per capita (growth annual percentage)
FDI	Foreign Direct Investment	Foreign direct investment, (net inflows Percentage of GDP)
EXP)	Exports of Goods and Services	Exports of goods and services (percentage of GDP)

Data

World Development Indicators (WDI) and United Nations Development Program (UNDP) data was utilized in the current study's panel data set to examine the effect of workers' remittances on the socioeconomic wellbeing of remittances receiving developing countries. A panel data spanning from 1990 to 2020 was utilized to test the research hypothesis empirically.

Estimation Technique (Generalized Method of Moments)

The econometric technique used to examine the unidentified parameters of economic models is known as the generalized Method of Moments (GMM). When there is heteroscedasticity and endogeneity in the data, GMM approaches are recognized as being more effective and dependable. The GMM technique is typically applied in the form of semi-parametric models, which have constrained parameter sets and incomplete distribution function knowledge. Maximum likelihood is not applicable when the moment number is equal to the parameter. The recognized system's solution is best served by (GMM). The Hausman test was used before estimate, and the outcomes showed that endogeneity was present. The GMM method is thought to be the most suitable one for dealing with endogeneity.

The initial rationale for adopting the system generalized method of moments (GMM) as an estimation technique stems from the recognition of potential endogeneity concerns inherent in the relationship between remittances and financial development. This methodological choice is underpinned by the necessity to account for the interdependence between these variables effectively.

Moreover, the reliance of Human Development Index (HDI) rankings on their lagged values underscores the pertinence of employing a dynamic model within the framework of GMM. By incorporating lagged variables into the analysis, the dynamic GMM approach enables a more robust examination.

4 Results and Discussion

This part of the study described the results of the impact of remittances on human development index, health, Education, and income per capita.

Results presented in Table 03 show that the impact of remittances on the human development index is positive and significant in all specifications. Positive coefficients indicate that as remittances increase it can improve human development in remittance receiving countries. The results are consistent with the findings of Arisman (2018), Ariadi et al. (2019), and Abdullah et al. (2021) as they

also found that financial inflows in the form of remittance can improve the living conditions of the recipient nations. The estimated coefficients of inflation and unemployment are negative and significant indicating that an increase in inflation and unemployment can worsen human development by deteriorating the living conditions of the masses. Results are similar to the study of Asongu (2011), Connolly et al. (2014), Sangaji (2016), Arisman (2018), and Migała-Warchoł and Sobolewski (2020), since they also confirmed that high inflation rate by lowering the purchasing power and high unemployment rate by lowering the income level, can deteriorate the human well being.

Table 3

Impacts of Remittances on Human Development Index

Dependent Variable: Human Development Index			
Variables	**Model 01**	**Model 02**	**Model 03**
Remittances	.0006287**	.0006803**	.0007437***
	(0.045)	(0.031)	(0.014)
Inflation	-.0012826***	-.0007787*	-.0008068*
	(0.003)	(0.086)	(0.078)
Unemployment	-.0010669*	-.0011074**	-.0012395**
	(0.083)	(0.047)	(0.026)
Gross Capital Formation	.0014276***	.0011139***	.0011918***
	(0.000)	(0.004)	(0.003)
School Enrollment	.0100677***	.008658***	.009854***
	(0.000)	(0.000)	(0.000)
Credit To Private Sector(FD)		.0017777***	
		(0.000)	
M2 Broad Money (FD)			.0011879**
			(0.011)
Constant	-.0364903***	-.0326431***	-.0409801***
	(0.001)	(0.003)	(0.000)
Sargan Value	0.435	0.534	0.390
AR2 Value	0.628	0.420	0.453

The impact of gross capital formation on human development is positive and significant that demonstrates that an increase in fixed capital formation increases the productive capacity of the economy which eventually results in increased human well-being. The result is aligned with the result of Jafrin et al. (2021). The impact of school enrollment on human development is positive and significant which means education increases human development (Kiani, 2010). The impact of domestic credit to the private sector and money supply on human development, is also positive and significant because a safe and sound financial system cause an improved flow of remittances (Hadeel et al., 2012; Asongu, 2011; Giuliano & Arranz, 2005).

Table 4

Impact of Remittances on Health (life expectancy at birth)

Dependent Variable: Life Expectancy at Birth			
Variables	**Model 01**	**Model 02**	**Model 03**
Remittances	.0331358***	.0163602***	.0309184***
	(0.000)	(0.012)	(0.000)
Unemployment	-.0954725***	-.0964409***	-.0720874***
	(0.000)	(0.000)	(0.000)
Improved Water Coverage	.0116004***	.0421585***	.0074423***

	(0.000)	(0.000)	(0.000)
Urban Population	.0012647***	.0047477***	.0005662*
	(0.018)	(0.000)	(0.097)
GDP Per Capita	.0111506***	.022018***	.0099823***
	(0.001)	(0.000)	(0.000)
Credit To Private Sector(FD)		.0041677***	
		(0.000)	
M2 Broad Money (FD)			.0006883***
			(0.013)
Constant	1.854466***	2.371785***	1.841553***
	(0.000)	(0.000)	(0.000)
Sargan Value	0.540	0.458	0.480
AR2 Value	0.490	0.432	0.624

In first model the impact of remittances has been checked on human development index. Subsequently, the impact of remittances is check on each dimension of the HDI separately. Table 04 presents the results of impact of remittances on health dimension of HDI. Life expectancy at birth is used as proxy for health. Remittances have a positive and significant impact on life expectancy. It is argued that increase in remittances make it affordable to avail better medical facilities, access to safe drinking water, and sanitation facilities, which eventually positively impacted the health status of remittances receiving families (Kabir, 2008).

Results are similar to the results of Hassan et al. (2017), Girum et al. (2018) and Ariadi et al. (2019). The impact of unemployment on life expectancy is negative and significant; indicating that unemployment can worsen the health conditions of the unemployed persons due to their non-affordability of good health facilities. The result is in line with the results of Sede and Ohemeng (2015) and Migała-Warchoł and Sobolewski (2020). The impact of improved water on life expectancy is positive and significant and findings are consistent with De Souza et al. (2020); Hassan et al. (2017). Urban population positively and significantly impacted life expectancy because of the best facilities in the health sector available in urban areas the results are consistent with Khan et al. (2019) and Novak et al. (2016). The impact of domestic credit to the private sector and money supply are used as proxies for financial development have positive and significant impact on life expectancy and findings are in line with Bettin and Zazzaro (2009), Sghaier (2021), and Jafrin et al. (2021).

Table 5

Impacts of Remittances on Education

Dependent Variable: Tertiary School Enrollment (Education)			
Variables	**Model 01**	**Model 02**	**Model 03**
Remittances	0.6011222***	0.3918209***	0.3793216***
	(0.001)	(0.002)	(0.003)
Urban Population	0.0723917***	0.0703734***	0.072762***
	(0.000)	(0.000)	(0.000)
Foreign Direct Investment	0.1557171*	0.1381156*	0.1458137*
	0.077	0.075	0.057
Unemployment	-.1578106***	-.0823549*	-.1101997**
	(0.003)	(0.076)	(0.012)
GDP per Capita	.0925125*	.1011538**	.0982394**
	(0.069)	(0.034)	(0.040)
Credit To Private Sector(FD)		0.0095822**	
		(0.036)	

M2 Broad Money (FD)			0.0086236**
			(0.028)
Constant	-15.53202***	-11.30756***	-11.12983***
	(0.000)	(0.000)	(0.000)
Sargan	0.530	0.476	0.543
AR2	0.389	0.369	0.435

Third and the last dimension of HDI is income per capita. Table 06 presents the results of the fourth model which shows the impact of remittances on income per capita. The estimated coefficients of remittances in our study reveal their positive and significant impact on income per capita, demonstrating that the countries receiving significant amount of remittances will have higher income per capita. The estimated results are similar to the result of Bettin and Zazzaro (2012), Nyamongo et al. (2012), and Sghaier (2021). The Impact of inflation on income per capita is negative and insignificant and findings are in line with the findings of Asongu (2011), Connolly et al. (2014), Sangaji (2016) and Arisman (2018). The results demonstrate that increasing inflation always lowers the purchasing power of the households due to decrease in real wages. Urban population and exports have positive and significant impact on income per capita, indicating that urban population have more job opportunities as cities are usually the main center of all economic activity. The impact of gross capital formation on income per capita is positive and significant. The impact of domestic credit to the private sector and money supply on income is positive and significant and findings are in line with the findings of Chowdhury (2011), Bettin and Zazzaro (2012) and Sghaier (2021).

Table 6

Impacts of Remittances on GNI Per Capita.

Dependent Variable: GNI Per Capita			
Variables	**Model 01**	**Model 02**	**Model 03**
Remittances	.9059877***	.6499961***	.4697049**
	(0.000)	(0.009)	(0.040)
Inflation	-.0341679*	-.0289968*	-.0262977*
	(0.097)	(0.154)	(0.192)
Urban Population	3.525449***	2.701564***	2.197561***
	(0.000)	(0.003)	(0.010)
Exports	.0360147***	.0440398**	.0366483**
	(0.000)	(0.030)	(0.044)
Gross Capital Formation	.1217155***	.1199615***	.1192056***
	(0.000)	(0.000)	(0.000)
Credit To Private Sector(FD)		.0143806**	
		(0.042)	
M2 Broad Money (FD)			.0180299***
			(0.001)
Constant	-29.15443***	-21.909***	-16.7844**
	(0.000)	(0.006)	(0.023)
Sargan	0.763	0.676	0.568
AR 2	0.582	0.430	0.390

5 Conclusions and Policy Suggestions

The present study intended to explore the impact of workers' remittances on the socio-economic well-being of the recipient economy. In order to investigate the impact of remittances on socioeconomic well-being factors, such as human development, health, education, and per capita income, this study uses a panel dataset consisting of ten different countries. Remittances and financial development are the main factors of importance, with proxies including the money supply and domestic lending to

the private sector. The human development index and each of its constituent parts—life expectancy (which represents health), school enrolment (which represents education), and GNI per capita—are the dependent variables employed in the empirical study. The panel dataset spans the years 1990 to 2020 and includes the top 10 developing nations in terms of remittances received. Data for the study was gathered from the World Development Indicators (WDI) and the UNDP 2020 report.

The current analysis is carried out using system GMM technique of analysis. The findings demonstrate that the impact of remittances inflow on Human Development Index (HDI), health, education, and income is positive and significant. Further the current study dig out the role of financial development on socioeconomic wellbeing and it is explored that financial development can help to enhance the socio-economic well-being of the remittances receiving nations. Moreover, Outcomes showed that remittance inflow has positive impact on life expectancy, education, and income per capita.

It is recommended that policymakers establish a convenient and accessible financial system to encourage the inflow of remittances. Since the remittances can augment the HDI ranking therefore, implementing an improved and user-friendly financial system can enable immigrant families to send money through legal banking channels easily and with less transaction cost.

Limitations of Study

One limitation of this study is the incompleteness of the available data on remittances from sources like WDI and other internet databases. This is because many migrants of the sample countries choose alternative methods to send remittances, such as "Hawala Hundi" or physically sending money through relatives or friends. As a result, obtaining precise and accurate figures for the data was not feasible.

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