Reduction of Poverty via Remittance: An Analysis of Fiji's Rural Households

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Abstract

Remittance has been a global phenomenon and has built practical consensus. Remittances have supported financially to many individuals. An early migrant who has left the host nation and is living in a foreign country returns to their society or family members. In Fiji, almost 30 percent live below the national poverty line, which has worsened after the impact of COVID-19. Most of them reside in informal settlements with a lack of housing amenities. The article will explore the impact of remittance on poor people who receive money from families abroad and how these households manage the funds received. Generally, it is understood that remittance has a positive impact on alleviating poverty. Therefore, the paper will explore whether remittance has significantly enabled households to reduce poverty. The paper will investigate ways to analyse the significance, such as if requesting remittance plays a crucial role. To determine the remittance sent, the paper tries to find if it is based on the request made or sent by their own will. To assess the impact of remittance, the paper will analyse primary (survey) data and determine the real purpose of remittance usage by households living in poverty. The paper evaluates 159 households living in informal settlements and rural areas.

Keywords: remittances, rural areas, poverty, Fiji, informal settlement

1. Introduction

Poverty is a global phenomenon, and many countries across the globe experience a high poverty rate. A classical definition of poverty explains that individuals are poor when a person or household lacks essential resources to meet the minimum living standard. It is a socio-economic issue and exists in both developing and developed nations. To eradicate poverty, there are numerous phases a country must go through. It is impossible to eliminate poverty as human desires and needs change periodically. According to the World Bank (2021), around 9.2 percent of the world's population is in extreme poverty, meaning they live below the international poverty line of USD 1.90 a day measured in 2011 prices. Over the years, tremendous progress has been made to reduce the global poverty rate, but the ongoing COVID-19 pandemic has interrupted the process. World Vision International (2021), a global humanitarian and development organisation, states that COVID-19 has reversed the cycle by putting additional people into extreme poverty. They have also confirmed that two-thirds of the world's poor consists of children and youth, while women are the majority in most regions. It has become difficult to reduce poverty due to COVID-19, as those slightly above the poverty line have fallen into poverty. The global pandemic is still an ongoing saga for many Pacific Island Nations and reversing the concurring situation will require some time.

Poverty is not just about low income but deals with what people can afford and cannot (Peer, 2021). Poverty in small developing nations can be reduced or eliminated through foreign exchange earnings. This is where remittance plays a dominant role. Remittance sent by migrants to their home countries has been the most effective form of foreign earnings for most small developing nations (Fajnzylber & Lopez, 2008). Remittance is the most critical and steady foreign exchange earner for Pacific Island Countries (PICs), as it was highly proven given the impacts of the ongoing COVID-19 pandemic. During the pandemic, many lost their jobs, and remittance was crucial in supporting themselves and their family. Pacific Island Countries is considered remittance-dependent country across the globe. Many Pacific Island Small States are heavy remittance receivers, such as Fiji, Samoa, and Tonga (Kumar & Kumar, 2021). For other small-state nations, remittance is dominant in determining the nation's economic progress.

In Fiji, almost 30 percent are living below the national poverty line. Most reside in informal settlements (Fiji Bureau of Statistics, 2021). Fiji's poverty gradually inclined well before the COVID-19 pandemic struck the Fijian economy. Hence, COVID-19 exacerbated the poverty situation in Fiji. Furthermore, COVID-19 has disabled the nation from combatting poverty and denied the economy from achieving its 2030 Sustainable Development Goal of poverty reduction (Gounder, 2021; Gosai, 2022b). World Vision International (2021) further highlights the impact of natural disasters and their significant contribution toward poverty. Fiji, surrounded by other Pacific Islands, is sitting in the middle of the Pacific Ring of Fire, making the nation more vulnerable to natural disasters. In recent years, Fiji has witnessed higher waves of natural disasters, and the destruction caused has damaged the nation's progress.

Poverty could become a cycle trap that may flow from one generation to another. Countries like Fiji that encounter a high unemployment rate and shortage of skilled labour could result in

indefinite poverty for families. Moreover, migration is considered to impact the nation based on the remittance received positively. However, it is also considered a negative impact as it hurts the employment sector and the skill set of the labour force for the nation.

The main objective of this paper is to study the impact of remittances on the poor people (poverty) in Fiji. The paper will use BNPL as a benchmark to determine if a household is in poverty. Based on the survey results, the paper will examine the sender's intentions and how the recipient has utilised them to meet the main objective of this paper. The analysis will mainly focus on whether the receiver has used the remittances to purchase essential goods, pay bills, send children to schools, or pay debts. The analysis will assist in making policy recommendations on how best remittance could be utilised in the future to make a tangible impact on the livelihood of poor people to have an improved decent living standard. The study will be carried out using the surveyed data that covers 159 households living informal settlements and rural areas. The results contain households residing above and below the national poverty level (BNPL). However, the results will discuss the overall impact of remittance based on BNPL and see which group effectively utilised remittance funds must alleviate poverty.

The motivation to emphasise the effect of remittance on poor people is that remittances are mainly directly transferred to the household (recipients) rather than governments as an intermediary like other foreign transfers. Hence, this creates more significant opportunities for poor people to serve their household interests effectively and use the funds prudently based on household budgeting. It helps poor people improve their living standards by using the funds for basic needs, better health care, and quality education. However, foreign aid and direct investment need proper coordination between economic, political, and social institutions to provide maximum support to poor societies. Weak institutions like lack of good governance, regulation, and rapid corruption adversely impact foreign direct investment (FDI) and foreign aid; however, remittance would only be affected in the same circumstance. Anecdotal studies by Masron and Subramaniam (2018) show that remittance has proven more stable than FDI due to its fundamental features. They also indicated that regardless of the low remittance contribution, the impacts on poverty reduction were higher. Thus, remittance is the best and most reliable foreign exchange earnings that could be helpful to poor people and simultaneously improve the nation's economic circumstances.

Fiji set a new record of FJD 842.2 million inward personal remittances in 2021, which grew by 14.6 percent from the previous year (Reserve Bank of Fiji, 2022). Given the impact of COVID-19 on the tourism sector, remittance has surpassed Fiji's largest foreign exchange earner for two continuous periods of 2020 and 2021 (Xinhua, 2021). Fiji Has experienced an increasing trend of remittance inflow for the past few decades. Figure 1 below shows the flow of personal remittances to Fiji from 1993 to 2021.
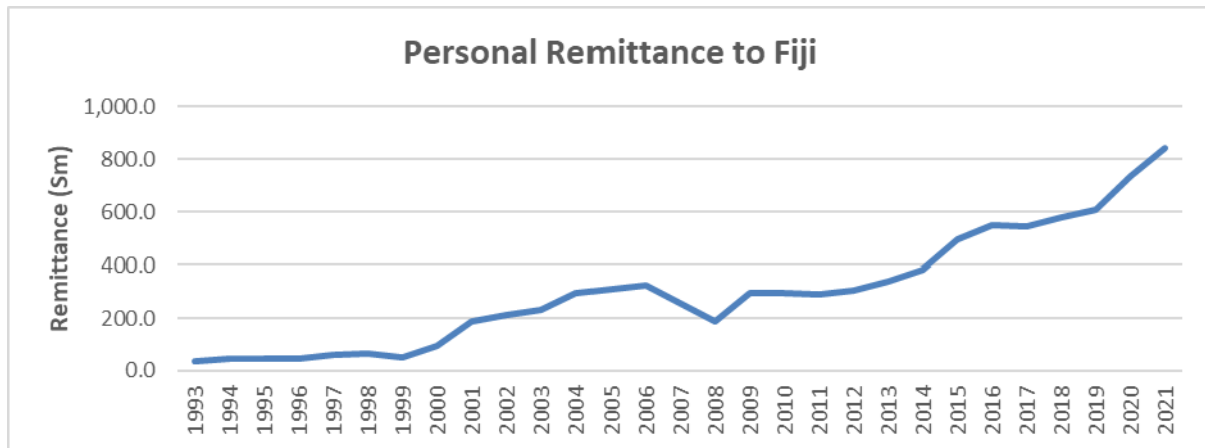
Figure 1. Personal remittance sent to Fiji

Source: Reserve Bank of Fiji, 2022.

Moreover, sports such as rugby significantly contribute to remittance to the Fijian economy. According to Sewabu and Richardson (2017) and Uperesa (Lisa) and Mountjoy (2014), remittances sent by rugby players are crucial to the household and community to achieve the targeted social and economic goal. Moreover, Uperesa and Mountjoy (2014) further highlighted that consistent and heavy remittance inflow had boosted some Pacific Countries' economic growth and bolstered new development. Conversely, they emphasised that poor financial literacy and limited investment opportunities narrow the multiplier effect. Regardless of an increase in remittance inflow, a positive impact on poor people will only be experienced if financial literacy for correct usage exists amongst the receivers in Fiji (Sewabu & Richardson, 2017). It has also been observed that most of the remittance funds to the economy come from Australia, New Zealand, and the United States. Remittance is sent to the country through both formal and informal channels. Money Transfer Operators (FX dealers) are the primary mode of remittance transfer channels to Fiji (Reserve Bank of Fiji, 2022). Figure 2 below shows the remittance transfer channels from 2015 to 2021.
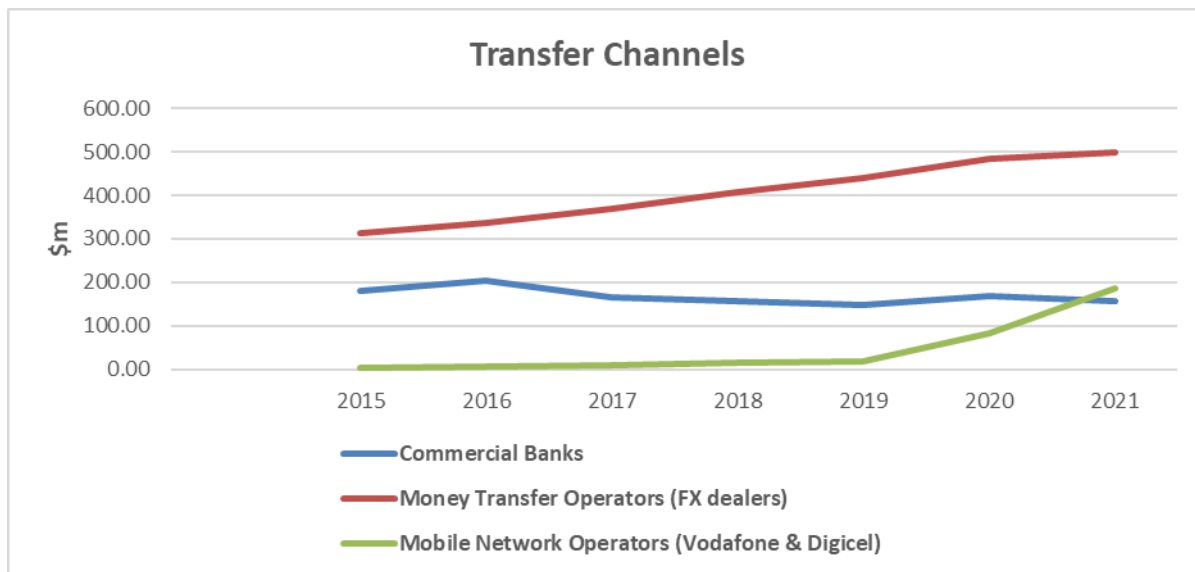
Figure 2. Platforms used to transfer money to Fiji

Source: Reserve Bank of Fiji, 2022.

The paper will be aligned in a basic layout. The following section of the paper looks at the literature review, followed by the methodology, which consists of survey methods, questionnaire design, and modelling process. Later, the section deliberates on the results using relevant empirical modelling and discusses the results. The last section will conclude with policy recommendations and ideas about future research.

2. Literature Review

The World Bank describes remittances as one of the largest sources of income for small islands and developing nations. If used wisely, remittances can improve the economy's well-being, especially during the recovery period and the lives of poor people (World Bank, 2021). Many studies have elaborated on the role of remittance and have found that remittance benefits the economy to a great extent. It tends to be advantageous to the economy, starting from microeconomics to the macroeconomic level.

A remittance is a powerful tool for poverty reduction as it increases household incomes (Masron & Subramaniam, 2018). A study on 71 developing countries (Adams & Page, 2005) has concluded that a 10 percent increase in remittances leads to a 3.5 percent decline in poverty. According to (Serino & Kim, 2011), remittance acts as a rightful instrument in stabilising poverty levels. It is difficult for the government to place regulations on remittance usage. However, the government should develop programs to assist the recipients in extracting maximum benefits purposefully and rip the full benefits of remittance income (Serino & Kim, 2011).

Remittance directly relates to any economic shocks and natural disasters in the Pacific Islands Countries (Jayaraman et al., 2011). It has always been evident in the Pacific that soon after any

natural disaster, we experience a rise in capital inflow not only through aid or donations but primarily through remittance as well. The same was experienced during the recent economic shock from the COVID-19 pandemic (Reserve Bank of Fiji, 2022). Mainly the funds are given by families to provide immediate support in rebuilding and consumption. However, the contradicting issue is to gauge how these have impacted the poverty rate.

According to Ratha (2003), household consumption increases in rural areas as remittance is used on locally produced goods. He also stated that remittance is more stable when compared to other foreign exchange earnings. In 2005 he claimed that remittances have multiplier effects on the economy through consumption and savings, which creates room for investment and employment, leading to higher income and reducing the burden on the poor. Further, in 2008 he added that money sent back home by migrants is a lifeline for poor people; a 10 percent increase in remittance could reduce poverty by around 3.5 percent (Ratha, 2013). On the other hand, (Banga & Sahu, 2010) states that, without a doubt, remittances reduce poverty, but this results in reliability being high only in countries where remittance contributes more than five percent of the GDP. Therefore, if the remittance contribution is below the five percent threshold, it cannot be said that remittance aids in reducing poverty. However, it can be argued that remittance does provide sufficient assistance to support them with essential household items (Banga & Sahu, 2010).

Remittance could be a critical tool used to reduce poverty and can be achieved via education. According to (Gounder, 2013), a higher level of education and rural agricultural policy development could be a way forward. In addition, reallocating labour towards the qualified formal sectors would be an efficient way of moving out of poverty, particularly at the micro-level. Moreover, Gosai (2022b) argued that during the rural-urban drift of labourers, households that reside in poverty in the rural sector carry the poverty burden with them to the urban sector, increasing the poverty rate in the urban sector. However, the distribution of poverty in the urban sector remains unchanged based on the increased population. Additional remittance received in the informal sector of urban areas does not relatively indicate that there has been a decline in the poverty rate. Hence, it only illustrates the usage of remittance on essential household items to enable the households to trudge on with their survival (Gosai, 2022b).

Furthermore, Gounder (2013) further added that location, demographics, and improvement in rural infrastructure create vital employment opportunities. Ratha (2013) states that an increase in remittance inflow allows the poor to attend school as it assists needy people in paying for school fees and other essential educational necessities. To add to it (Awan et al., 2011) also confirm that education is a vital factor in poverty reduction. They emphasised that education potentially increases income, undoubtedly pushing them out of poverty. However, this can only be measured based on household size. In a smaller family, one educated individual can support their family and ultimately be slightly above the poverty line based on the income earned. The situation will be vice versa in an enormous household. They further elaborated that there is a need for equality amongst males and females in society in terms of using remittance for education attainment and employment opportunities to ease the pathway of poverty eradication (Awan et al., 2011).

Conversely, despite its positive impacts, remittance can build a cultural dependency, a weak labour force, and unnecessary consumption rather than savings for productive investment (Ahortor & Adenutsi, 2009). Given Fiji's dependency culture, families rely solely on remittances for daily livelihood, which contributes negatively to the economy's future and poverty. It is where the individuals prefer to survive on the remittance received instead of joining the employment sector. Imai et al. (2014), in a study using panel data from 24 Asia and Pacific countries, confirmed that remittance benefits the economy and directly affects poverty reduction. Still, due to volatility, it is a source of output shocks.

3. Methodology

3.1 Remittances and Poverty

The paper looks into the data collection methods, questionnaire design, and methods used during the survey. The paper intends to determine the importance of remittances sent to poor households in Fiji. The remittance sent captures the intentions of both parties. Preferences are from the sender's end and the receiver's perspective. The empirical literature has predicted that the remittance sent to the recipient country aids in reducing poverty in many countries. Therefore, this study intends to investigate the annual remittance received by different households and their intentions regarding its use.

Furthermore, the analysis will unveil if the households have successfully alleviated poverty through remittances. It has been found in the previous study that remittance inflow has a positive impact on economic progress and aids in alleviating poverty (Javid et al., 2012). It has become a growing interest for many policy writers, economists, government agencies, and academia to discover the importance of remittance in developing the receiving nation. It has been found that remittance is a way to alleviate poverty and support poor households (c.f. Anyanwu & Erhijakapor, 2010; Javid et al., 2012). Others noted that remittance motivates people to engage in business. The motive independently relies on the receiver. It entirely depends on their intentions to invest in a business or use it for other purposes. However, if the choice is to invest in businesses, the sender sends it with a motive and sends it directly to the business project (c.f. Kakhkharov, 2017, 2019). The research paper additionally aims to determine if remittance sent to poor households helps reduce poverty and inspires them to invest the money correctly.

Many migrants remit funds back to family members to look after their property, pay their mortgages, or construct damages to their property. The remittance sender remits with the intention that the receiver will use the funds based on their preferences. Therefore, the receiver needs to comply. The amount sent is dictated to the receiver, and allocation is provided to spend relevantly. Many emigrants left their countries to seek better opportunities outside. This was mainly because of better life stability or better living, better income, supporting families to battle poverty, and helping those left behind (c.f. Stoll, 2010; Stahl & Arnold, 1986). Many migrants send remittances back when the family needs them, such as when they demand money to finance their living.

The methodology of this paper will discuss the design of the questionnaire and survey methods

used to collect data. Moreover, the other section will detail the conceptual framework and discuss the model used to estimate the relationship between remittance and poverty.

3.2 Survey Methods and Questionnaire Design

The research methods used to collect data for this paper employed structured and close-ended questions. The structured questionnaire allowed to target population and obtain fixed responses. Such as from which specific country the remittance was received. A list of countries was provided for the respondents to choose from. Moreover, each respondent had to indicate the amount of remittance they received. The questionnaire also used close-ended questions where the respondents had to choose from either yes or no (c.f. Joffe, 1992). The data obtained from the questionnaire is to find results such as if the poor household receives remittances from families or friends living abroad. The captured data evolves around the aim and objectives of the research. Forth, the paper aims to determine if the remittances sent are used for the initial purposes for which it has been sent. Furthermore, the paper also dives into areas to unfold the intentions of the fund holder after using the money. A critical analysis can be drawn if the remittance receiver intends to save the money for any future unforeseen situations or uses it for their petty desires.

The survey was conducted in rural areas between Nausori and Suva corridors. The targeted population were mostly living in informal settlements. Based on the survey, most participating recipients earn below the minimum wage level and live in poverty. The total response recorded in the survey was 159 households, either living in poor or almost poor conditions. The annual income component consisted of the total income earned in the household that excluded remittance. Some individuals only relied on remittance income. Therefore, it was considered as their annual income. Individuals that did not provide or receive remittance were eliminated from the analysis. The analysis strictly considered households that were involved in receiving remittances. Moreover, the total is used if multiple remittance receivers are within the same household.

The fieldwork was scheduled to be completed within the timeframe, and the interview lasted an average of 10 minutes. The basic information from the survey included remittances sent by family and friends based on whether the individuals' requested remittances or the sender remitted for personal usage. The total amount of remittances received. The remittance data were based on the selected countries involved in sending remittances. The survey also investigated information such as who is sending the remittances and for what purposes. This includes sending the remittance to the receiver for personal use or using the money to pay senders' pending debts, renovate their property, or do charity work. The survey on remittance also captures if the money is sent to them weekly, monthly, quarterly, or yearly.

The information captures general information such as age, annual income, gender, ethnicity, and the number of family members. The data is widespread and captures information based on remittance utilisation intentions. Intension, such as if the receiver effectively utilises the remittance received. Furthermore, the questionnaire also captures data based on giving something (donation or gift) back to the family or friends supporting them through remittance. For example, if they look after them in Fiji, use their car when they come, and others. This

variable could offset the remittance received or could be the factor that makes an individual seek remittance from families abroad, knowing that they use their assets at no cost during their visitation.

4. Data and Poverty Statistics

The 2019–2020 HIES report from the Fiji Bureau of Statistics conducted a survey on poverty with a sample size of 6,000 households. However, the poverty report of Fiji only provides a snapshot of Fiji's poverty condition. The report only provides Fiji's poverty before COVID-19. Therefore, poverty conditions are set to worsen after COVID-19. Since Fiji faced the third wave of the COVID-19 variant, economic progress was estimated to decline even further. This indicates that poverty will increase due to the loss of employment and reduction in economic activities due to the closure of sectors/industries that heavily contributed toward economic progress.

Moreover, as the country opens borders with international trading and tourism, up to 80 percent of economic operations and international relations. Regardless of the economy opening, it will take years to offset the poverty rate caused by COVID-19. The primary national needs poverty line (BNPL) states that FJD 2,179.39 per adult and a threshold of FJD 8,717.56 with a household of four adults are estimated to be living in poverty per the 2019–2020 HIES report. Furthermore, the estimate indicates a total of 45,724 homes, which equates to 258,053 individuals in poverty at a 30 percent national-level poverty rate. Moreover, at a later stage, the government revised the data and indicated that the poverty for Fiji is 24 percent. The change in rate had been due to coding, which the World Bank later identified (World Bank, 2021). However, it is predicted that around 50 percent of Fiji's population will be in more poverty after the impact of COVID-19 compared to pre-COVID-19. Similarly, many academics have criticised the poverty data regarding the sudden decline in rates, which seemed impossible. According to Gounder (2021) and Chaudhary (2021), there have been no significant changes in poverty data for the past six years (Note 1).

Poverty in Fiji has been significantly increasing over the years as Fiji has faced many issues under ethnic minorities in history, which leaves the communities voiceless. It has become essential to study ethnic breakdowns of poverty since all ethnicities equally contribute to general voting and deciding the democratic government (c.f. Kumar et al., 2006). The study will provide accessibility to ethnic groups that are vulnerable to poverty. Increasing poverty has arguably become the most significant contributing factor towards international migration. This has caused many Indigenous and Indo-Fijians to migrate abroad to seek better working opportunities and improve their living standards (c.f. Kumar & Kumar, 2021).

However, the paper employs the threshold allocated by the 2019–2020 HIES report poverty benchmark. The benchmark for poverty is estimated to be FJD 9,000 (round figure), considering the impact of COVID-19. The individuals who fall below the benchmark and have an average of four family members live in poverty due to Fiji's increased living costs. The individuals who have stated their income as more than the benchmark income are not affected by poverty and COVID-19. The data is collected via a survey conducted in rural and semi-rural areas where poverty has persisted for many years. Informal and squatter settlement has been a

debatable and hot-notch discussion in Fiji. There has been a continuous increase in these settlements because of cheap housing for people who cannot afford quality properties. Therefore, data were collected from areas lacking basic living amenities. The locations were identified via the Fiji Bureau of Statistics poverty report – HIES 2019–2020. This area has a high poverty rate and has contributed to 30 percent of the national poverty rate in Fiji.

The survey was conducted continuously for one whole month in January 2022. The result records detailed information on household income, annual remittance (including breakdown), remittance received (country breakdown), and expenditure. The BNPL benchmark is applied to the annual income (excluding remittance income) to determine if a household is in poverty. Remittance income is only used if the family solely depends on remittance income and has no other income source. However, to equate better results in the regression, remittance income is used to understand household expenditure patterns (Note 2). Household expenditure comprises households, including money from their employed income and money received via remittance. Therefore, we have only obtained information (for analysis) on which areas the families have spent using remittance money.

4.1 Conceptual Framework

The methods test if remittance is sent to poor households and see if it benefits Fiji's poor people. The Probit model estimate will be used to analyse the data received. The long-run model will be estimated using Probit modelling (c.f. Gounder, 2013).

Pov = [1 if a household is in poverty based on annual income (BNPL), 0 if it is otherwise]

Therefore, the model will predict the results based on the following:

$$\text{Pr\_reg } (pov = 1/R) = X(R,\beta) \tag{1}$$

$$\text{Pr\_reg } (pov = 0/R) = 1 - X(R,\beta) \tag{2}$$

The R is the vector for household-level characteristics to define the input variables. The β is a set of parameters that will reflect any changes on the vector *R* for the probability analysis. The approach uses the BNPL method to determine if a household is in poverty based on income level.

4.2 Dependent Variable

There has been contemporary debate about measuring household welfare using either income or expenditure of households. The national survey for poverty in Fiji used a comprehensive survey and measured poverty using the Gini index that used consumption per capita, according to the HIES 2019–2020 report. The estimates cannot be compared to the previous poverty rates (2013–2014) because the methods used were based on the income approach. Therefore, in 2013–2014, poverty rates calculation were measured using an income-based while a consumption-based approach was used in 2019–2020 (World Bank, 2021).

The income earned gives the overall picture of the person's financial stand. Therefore, to measure household welfare and study poverty, the paper uses the annual income to measure if

the remittance has further boosted their overall income to help them meet their needs. Many countries, such as the United States, adopt the household income method to set the poverty threshold and determine the poverty rate. Therefore, the income-based approach is widely used to determine household and national poverty rates.

Moreover, in this study, to determine the actual impact of poverty, the study has considered using an income approach to measure poverty. The survey will expand and check in-depth expenditure analysis in the future because the households in the rural and informal settlements have been impacted by the current global outbreak—COVID-19. To estimate poverty, actual consumption is also considered the best study method during the pandemic since the majority did not have regular income through employment. However, the paper focuses on the remittance impact on households that have been in poverty. During the survey, breaking down the expenditure by earned income became challenging. However, due to the scale of remittance received and the dictation of allocated remittance expenditure by the remitter, it was easier to capture the breakdown of remittance expenditure. The study uses remittance income as contributing factor toward the overall revenue earned. Therefore, the endogenous variable is used to make notations if a person is in poverty based on their annual income, excluding remittance income. The annual income and number of household members are used to benchmark the poverty variable using BNPL criteria.

4.3 Independent Variable

The variables selected to study the impact of remittance on poor households are based on the factors that affect the household's overall welfare. The variables contribute to the attitude of a household towards remittance income. The set of exogenous variables used to determine the impact of remittance on the poverty of Fiji are the following:

- *hhold_gen:* gender of heads of household (male = 1 and female = 0);

- *age_head:* age of household head (in number of years);

- *hhold_Y:* annual income for the household (in currency);

- *hhold_status:* marital status for heads of households (married = 1 and 0 for unmarried);

- *hhold_size:* total number of households members;

- *hethnic_head:* household ethnicity (Indigenous Fijians = 1 and Indo-Fijians (non-indigenous Fijians) = 0;

- *rem_rec:* remittance received from abroad (yes = 1 and 0 for no);

- *hhold_remY:* annual remittance received by heads of household (in currency);

- *rem_purp:* useful use of remittance received (yes = 1 and 0 otherwise);

- *rem_impact:* impact of remittance on household (yes = 1 and no = 0);

- *req_rem:* request of remittance by family members abroad (yes = 1 and no = 0).

The variables above provide brief information and explanation by definition. The household's

income to determine poverty, household remittance income, and critical detriment to understand the impact of remittance on overall household income and consumption. It is widely understood that determining remittance income is contra to see if the households request remittance from family members abroad. It is also critical to analyse whether the remittance received impacted the household and family members. It has become a growing phenomenon to study the intention of the remitter. Few senders remit to family and friends, while others send based on the request. Other household characteristics include household age, size, and gender of heads of household (Note 3). There is strong empirical evidence that household size, income, and consumption are correlated as the size will negatively correlate with income and consumption (Gounder, 2013; Lanjouw & Ravallion, 1995). The gender variable further assumes that female heads of households are vulnerable and have a more significant potential for poverty. This is mainly due to disadvantages in the Fiji labour market and additional responsibilities for women at home, e.g., looking after the children and grandchildren and taking care of household chores (c.f. Kumar, 2008). This increases dependency on the sole income earner (Lanjouw & Ravallion, 1995; Gounder, 2013, Kumar, 2007; Kumar & Prasad, 2004; Kumar, 2008).

Ethnic contribution towards poverty incidence has become a growing interest to many policies, academics, and political perspectives. Assumption based on regressing the nature of poverty in rural household determinants is the same as urban suburbs in the country (Gosai, 2022a). However, different results can be obtained by running separate regression for an urban suburb with impoverished households. So, therefore, there is one estimation for low-income families in rural areas that have been persistent with remittance inflow and analyse its impact on their livelihood. The reason for choosing rural and semi-rural regions of the Central division is that it is the centre of the large developed commercial households that have faced rapid economic changes, poverty, the high impact of a recent global pandemic, and fluctuations in employment. A total of 159 households were covered in this area.

5. Data Analysis and Discussion

The adopted models show the parameters and estimation based on the dependent variable households in poverty by annual income (based on BNPL). From the regression, the interpretation predicts that a one percentage point increase in the independent variable leads to relevant change for a dependent variable based on the coefficients of the independent variable. The discussion reflects the most impacting independent variable that affects the poverty of the household and analysis the impact of remittance. The estimation will be defined as an increase in one positive percentage point state's potential favourable chances of the households being (non)poor. In contrast, a negative impact in an independent variable indicates a one percentage point change to have a negative decrease in the predictor variable. The determinant of poverty is checked by estimating the Probit model. The dependent indicator states 1 for being poor while 0 for non-poor.

A stepwise regression analysis method was adopted. Insignificant variables were dropped to reach the preferred model. However, a few insignificant variables were retained due to the model dynamics as they influenced determining the impact of remittance on poverty.

Table 1. Probit regression results

Probit Regression			Number of obs =		159
			LR chi2(8) =		58.93
			Prob > chi2 =		0.0000
Log likelihood = -68.739187			Pseudo R2 =		0.3000
pov	Coef.	Std. Err.	z	P>|Z|	[95% Conf. Interval]
hhold_gen	-.8996626	.349599	-2.57	0.010	-1.584864 -.2144612
age_head	.0635451	.0161031	3.95	0.000	.0319836 .0951067
hhold_status	.6161876	.6564384	0.94	0.348	-.6704079 1.902783
hhold_size	-.1789006	.1247375	-1.43	0.152	-.4233816 .0655803
hethnic_head	.7214645	.2663872	2.71	0.007	.1993553 1.243574
hhold_remY	.0001802	.0001995	0.90	0.366	-.0002108 .0005712
rem_impact	.2439474	.6209972	0.39	0.694	-.9731848 1.46108
req_rem	-.110043	.2622392	-0.42	0.675	-.6240223 .4039363
_cons	-2.66375	.9176699	-2.90	0.004	-4.462349 -.8651497

Source: Estimates using STATA Statistical Software.

The long-run model predicted from the estimates is as follows:

$Pr\_reg(R/1-R)$ = -2.66375 – 0.8996626$hhold\_gen$ + 0.0635451age_head + 0.6161876$hhold\_status$ - -0.1789006$hhold\_size$ + 0.7214645$hethnic\_head$ + 0.0001802$hhold\_remY$ + 0.2439474rem_impact – 0.110043req_rem

From the total number of observations, it can be predicted that remittances significantly impact households to reduce poverty. More prominent family members have a positive impact on household poverty. It indicates that the larger the number of family members, the higher the poverty. The burden lies on the single-income earner. The remittance income has a positive impact on household income and poverty. However, remittance does not alleviate poverty as it is an additional income to the household. However, the request for remittance has a positive impact on households. The households with families abroad contribute by supporting family members living in poverty who need financial assistance.

The findings have eight variables tested, from which household gender, size, and ethnicity are statistically significant. With the high rate of insignificant results, it becomes challenging to indicate if the household has managed to alleviate poverty through remittance. The variables explain that any changes in the variable will move the predicted probability in the same direction. The dependent variable, if a household is in poverty or otherwise, will have a direct impact depending on the coef of each independent variable. The explanations are as follows:

Table 2. Variable explanation

Variable	Explanation	Accept or Reject
hhold_gen	One percent increase will cause a -0.899 percent decrease in predictor probability.	The z-score -2.57 value associated with the p-value with alpha set at 0.05 rejects the hypothesis. The p-value is significant.
age_head	One percent increase will cause a 0.0635 percent increase in predictor probability.	The z-score 3.95 value associated with the p-value with alpha set at 0.05 rejects the hypothesis. The p-value is significant.
hhold_status	One percent increase will cause a 0.61619 percent increase in predictor probability.	The z-score 0.94 value associated with the p-value with alpha set at 0.05 does not reject the hypothesis. The p-value is insignificant.
hhold_size	One percent increase will cause a -0.17890 percent decrease in predictor probability.	The z-score -1.43 value associated with the p-value with alpha set at 0.05 does not reject the hypothesis. The p-value is insignificant.
hethnic_head	One percent increase will cause a 0.72146 percent increase in predictor probability.	The z-score 2.71 value associated with the p-value with alpha set at 0.05 rejects the hypothesis. The p-value is significant.
hhold_remY	One percent increase will cause a 0.00018 percent increase in predictor probability.	The z-score 0.90 value associated with the p-value with alpha set at 0.05 does not reject the hypothesis. The p-value is insignificant.
rem_impact	One percent increase will cause a 0.24395 percent increase in predictor probability.	The z-score 0.39 value associated with the p-value with alpha set at 0.05 does not reject the hypothesis. The p-value is insignificant.
req_rem	One percent increase will cause a -0.11004 percent decrease in predictor probability.	The z-score -0.42 value associated with the p-value with alpha set at 0.05 does not reject the hypothesis. The p-value is insignificant.

The age, household size, and request for remittance have a negative impact on the overall model. The model predicts using annual income if an individual is in poverty or otherwise. The variables further analyse if remittance received as an additional income eliminates poverty. Household gender and size have a negative impact indicating that a family can be in poverty based on the family size. However, through literature, it has also been proved that female head of households has potential chances of being in poverty compared to males (c.f. Kumar et al., 2006; Kumar, 2008). However, requesting remittance has a negative impact on poverty. In other words, a household that requests remittance from families or friends abroad does help them to alleviate poverty, hence to a smaller proportion. The p-value is also accepted as the null hypothesis is not rejected. The ethnicity of the household head p-value is rejected. However, ethnicity does not provide a significantly strong relationship to poverty and the impact of remittance on households. The remittance income has a positive impact on household poverty. The p-value is in the acceptance region and positively impacts the predictor probability.

The rise in Fiji's poverty has been consistent since the first political coup in Fiji in 1987 (Gosai,

2022a). Ever since Fiji's trading market has declined. One primary contributing factor to poverty has been inconsistent government control and support via policy to alleviate rural-based families with the low-income threshold. Remittance has contributed to many families supporting them in times of need. In the case of COVID-19, many families have been facing constant problems. However, remittance has been a consistent source of income for many rural-based households. Through the findings, it can be said that household age also contributes significantly to poverty. As more age is added, poverty increases as their income decline (decline in involvement with the employment sector) and reliance on remittance increases.

6. Conclusion and Recommendations

The national growth of Fiji for the past 30 years has been insignificant in uplifting the living standards of Fiji. Rural-Urban drift has been occurring at unprecedented levels. The property rights issues in Fiji continue to woe as it has become an unsolved matter. Hundreds and thousands of skilled workers migrate overseas yearly. The migration of skilled labourers has a push and a pull factor. It has a positive and a negative impact on the economy's human capital. The positive impact indicates that remittance inflow increases yearly due to increased migration. This shows that families and friends abroad remit back to their country to support their family members. However, migration is also harmful to Fiji's labour market. This caused a decrease in skilled labour in Fiji, forcing the nation into skilled labour shortages. After COVID-19 widespread, poverty rose and has been a persistent issue for developing countries.

Remittance requests, the impact of remittance, and remittance income have been essential determinants for poverty reduction. However, remittance income has been used for personal consumption, and it must indicate that remittance alleviates poverty. The government should enhance employment opportunities through rural infrastructure to reduce rural poverty. The nation's leaders should enforce macro-level policies to create safe and quality investments. Political stability plays an important role. Fiji has seen various political instability since gaining independence. Precedented economic growth and income security will boost the living standards of Fiji (c.f. Gosai, 2022a). A significant focus shall be given to the agriculture sector. Since COVID-19, the highest contributing sector—tourism declined significantly. In this case, agriculture would have been a better investment choice as it has remained crucial for rural development.

7. Future Research

Further studies will be conducted to determine remittances in more detail. The remittance sent has overall six countries involved. Furthermore, future research will be based on this topic using the same data to analyse the impact of remittance on poor households based on each country's analysis showing the breakdown of each country's contribution to help alleviate poverty.

In another series of coming papers, the survey results will be used to study the intention of the sender and receiver. The paper will provide brief outcomes of the remittance senders' choices and brief results of remittance receivers' preferences. The study will use consumption-based analysis. This is where the paper will provide information on the purpose of sending money.

The allocation will provide information on which area the receiver needs to spend money in based on the sender's request. The other part of the analysis will provide notification of the allocation of the receiver using the money they receive. This is where the sender sends money for the receiver to decide where they wish to invest.

Declaration

All relevant ethics were followed, as no personal information was released or used for analysis.

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Notes

Note 1. Further read Gounder, N. (2021). No poverty reduction in Fiji over the last six years; Fiji Bureau of Statistics. (2021). HIES report 2019–2020; and Chaudhary, F. (2021). 50% may now be in poverty.

Note 2. Further read Gounder, N. (2021). No poverty reduction in Fiji over the last six years; Fiji Bureau of Statistics. (2021). HIES report 2019–2020; and Chaudhary, F. (2021). 50% may now be in poverty.

Note 3. In Fiji, the overall population consist of two major ethnic groups (communities). The indigenous Fijians (are known to be the first settlers) and Indo-Fijians (non-indigenous Fijians). Most non-indigenous settlers are emigrants and decedents brought to Fiji as labourers to work on sugar plantations under British colonial ruling.

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