

Research Proposal: Remittance Patterns and Economic Development

1. Introduction

Over the years, a remarkable increase in remittance inflows especially to developing countries has been reported with a current estimate of \$860 billion for 2023 globally (World Bank-KNOMAD, 2023). This money from migrant workers represents a certain percentage of a nation's Gross Domestic Product (GDP) which is usually channelled towards feeding, education, healthcare, business, etc. It is thus expected that the positive implication of remittance inflow will outweigh any negative outcome in the recipient developing economy.

Therefore, this research seeks to explicitly define the role of remittance in propelling economic development as evidenced by data analysis and artificial intelligence through machine learning.

2. Background and Rationale

From previous cohorts, Hamoye interns such as Team Bayes and Catboost have undertaken similar research in an attempt to address this thematic area, however, knowledge deficits still exist. Team Bayes (2023), accomplishment was limited to highlighting inflow and outflow remittance trends and analysing remittance contribution to GDP. While Team Catboost sourced for additional data to evaluate remittance impacts on Gross Domestic Product (GDP) and unemployment; as well as, deployed a model for corresponding prediction (Uche, 2023).

Hence, most key measures of economic development are yet to be assessed in relation with remittance patterns. These indicators include Human Development Index (HDI), Inflation, Consumption per capita, Human Poverty Index (HPI), and Multidimensional Poverty Index (MPI) which takes into account health, education, and standard of living. Through these indicated perspectives, the intending research will explore the associated theme.

3. Problem Statement

Remittance contributes a notable percentage to the GDP of developing countries, however, for these recipients, translated economic impacts remain poorly measured. Hence, due to this knowledge gap, a globally acceptable framework that integrates remittance and economic development is currently lacking. The absence of such inhibits consistent tandem monitoring and projections which are both crucial to proactively uphold policies for consistent increase in remittance inflow to developing economies.

4. Aim & Objectives

This research aims at elucidating the economic implications of remittance for top recipient countries by;

- Assessing the remittance recipient trends featuring the top 10 countries based on 2023 estimated report
- Evaluating the effect of remittance on economic development through key indicators such as GDP, HDI, HPI, MPI, etc.
- Leveraging artificial intelligence through machine learning to train models for corresponding prediction, as well as, improving the accuracy
- Deploying trained model

5. Methodology

5.1 Datasets

- Remittance Data from Global Knowledge Partnership on Migration and Development (World Bank - KONMAD, 2023)
- Economic Outlook Data from International Monetary Fund (IMF) World Economic Outlook Database, 2024
- Human Development reports from United Nations Development Programme (UNDP, 2024)
- Any additional dataset will be subsequently outlined in the final documentation

5.2 Data Analysis and Modeling

- Data cleaning and preprocessing to appropriately manage missing values and encode data as deemed necessary
- Exploratory data analysis
- Statistical correlation between variables
- Training Models and evaluation of performance

5.3 Model Deployment

The Machine learning model with the best performance will be deployed on Streamlit framework for user-friendly real-time forecast.

6. Expected Outcome

- Disentangle the role of remittance toward improving the economy of current top recipient countries
- Provide an application/ interface which integrates relevant data for forecasting economic development underpinned by remittance

7. Conclusion

A clear understanding and projection of the economic impacts facilitated through remittance as supported by key development indicators is imperative for optimization strategy in a developing society. Hence, insights gained through this research has the potential to inform policies on migration, transaction, and technology advancement which influence remittance with resultant increase, stagnation, or decline.

8. References

- IMF (2024) World Economic Outlook Database <https://www.imf.org/en/Publications/WEO/weo-database/2024/April/select-country-group>
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- Uche M. (2023) [Remittance pattern and economic development: A project documentation for Team CatBoost \(Hamoye Capstone Project\) | by Miracle Uche | Medium](#)
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