

# Data 400 Project Proposal 1

## Exploring the Relationship Between Remittances and Economic Stability in Nepal

**Research Question:** Can remittance inflows help predict changes in household consumption and inflation in Nepal?

### Motivation

Nepal is one of the most remittance dependent economies in the world with 25% of its total GDP coming from remittance. Since a large share of household income comes from citizens working abroad, remittances are an important source of income for households and for stabilizing the economy. Remittances are studied in development economics in Nepal but are usually studied by describing trends rather than making predictions. I want to use this project to examine whether remittance inflows can help predict changes in household consumption and inflation in Nepal.

### Data Sources

For this project I will use publicly available macroeconomic time-series data. Data on remittance inflows can be obtained from the Nepal Rastra Bank and the World Bank datasets. I will source Household consumption, gross domestic product (GDP), and inflation data from the World Bank and the International Monetary Fund. All datasets are aggregated, numeric, and reported at monthly or yearly frequencies which makes them suitable for exploratory analysis and predictive modeling.

### Methodology

I will begin this project with exploratory data analysis (EDA) to examine trends/relationships between remittance inflows, household consumption, and inflation. This will include summary statistics and visualizations such as time-series plots and correlation matrices. If time allows I will also consider economic shock periods like the 2015 earthquake and the COVID-19 pandemic, to observe how these variables behaved during times of stress. For the predictive modelling, I will use models such as linear regression to assess whether remittance inflows can help predict changes in consumption and inflation.

### Implications for Stakeholders

The findings from this project would be useful for policymakers and central bank officials in Nepal who are interested in economic forecasting and planning. Development organizations and researchers would benefit from understanding whether remittance flows provide signals of changes in economic conditions. The project highlights the economic role of migrant workers and the importance of external income flows in shaping domestic outcomes.

### Ethical Considerations

This project relies on aggregated and publicly available data which does not involve personal or sensitive information. However, the analysis acknowledges societal issues related to labor migration, including household separation and unequal access to migration opportunities. I will avoid causal claims and state its limitations to ensure the interpretation of predictive results is clear.

### Challenges

I may face challenges in aligning data from different sources which are reported at different time intervals or contain missing values. I will clearly document data limitations and modeling assumptions so that results can be interpreted with caution.