Predicting Coup Attempts on the Interaction between Economic Indicators and Political Polarization

**Background**
It is well known that political polarization and economic crises are often seen as precursors to coup attempts. A 2017 study by Arbatli and Arbatli suggested that the International Monetary Fund (IMF), a global organization focused on the economic wellbeing of 190 countries, programs promote coups. However, previous research fails to investigate a causal relationship between IMF programs and political polarization, which refers to the political divide within a country, on the probability of a coup occurring and isolates the true reasons why economic support causes more unrest in a country.

**Methods**
- **Logistic Regression with Fixed and Random Effects**
  - The response variable is binary (was there a coup attempt or not?)
  - Each coefficient in the regression represents a fixed effect on the log-odds of a coup being attempted
  - We are working with panel data (repeated observations over time)
  - Random effects: Unobservable that have their own probability distribution
  - Log: We will include coup, IMF, and polarization data from the previous year as predictors
  - Political Polarization: Coded as binary variable, if greater than the median value of polarization, it will be coded as 1 and 0 for all else
  - We will define significance as a p-value <= 0.10

**Model Evaluation**
- The Full ME model has lowest Bayesian Information Criterion (BIC) (873), i.e., it is the model of best fit
- Log GDP per Capita: Strong negative association
- IMF Program Presence: Not significantly associated with coup odds by itself
- Political Polarization Above Median: Significant positive association
- Interaction of Polarization Above Median and Presence of IMF Program: Significant positive association
- Attempted Coup in Previous Year: Significant positive association
- IMF Program Presence: Highly significant at 1.54, i.e., a 10% increase in GDP per capita increases the probability of a coup by a factor of 1.54

**Analysis and Results**
- **Full Mixed Effects Model** (significant predictors highlighted in red)
  - Allowing for intercepts to vary based on country and holding all else constant, we can interpret the results from our model as:
    - 10% increase in GDP per capita → 9.1% decrease in coup odds
    - IMF program presence above median → 44% increase in coup odds
    - Polarization and IMF Program → 304% increase in coup odds
    - Coup in previous year → 123% increase in coup odds
    - Country is in the Middle East → 286% increase in coup odds

**Conclusion**
- Further investigate specific conditions within IMF programs that may exacerbate or mitigate coup risk
- Conduct longitudinal studies to track changes in coup dynamics over time and assess the effectiveness of interventions
- Compare coup dynamics across regions and countries with varying political systems and socio-economic contexts to identify common patterns and unique factors

**Future Steps**
- Further investigate specific conditions within IMF programs that may exacerbate or mitigate coup risk
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**References**