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# Econometric Analysis Lab-1(HS49002)

# Group Project

**Factors Affecting Corruption in Developing and Emerging Countries**

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**Abstract**

The economic and social indices of a country are becoming increasingly important in explaining a developing and emerging country’s level of corruption. Within the field of econometrics, corruption and its relationship with characteristics of a country such as level of education or life expectancy have been extensively researched. <<Research Paper ref. >>

We aim to construct a model able to explain the level of corruption, dependent variable, in developing and emerging countries given a set of economic parameters as the independent variables: country's gross domestic product (GDP) per capita, human development index (HDI), the social progress index (SPI), the type of government in the country, included as a **dummy variable,** the level of unemployment in the country, the income tax rate collected in the country, and the Gini index which measures the degree of inequality in the distribution of family income in a country

After checking the **descriptive statistics** of all the variables and **standardising** them; we would built a **multiple-regression analysis model** using OLS to analyse the level of corruption with mentioned independent variables. Then we’ll check the **significance** of model and all the variables. From there we’ll pick up significant variables and we’ll check for severity of **multicollinearity** and **heteroscedasticity**. Later robustness tests (**restricted –F tests**) will be conducted on the obtained models to check whether the independent variables, are jointly significant.  
  
We have an intuition that corruption prevents an efficient allocation of resources and it might be logical to expect that our model’s results will show - as corruption increases, economic growth and other economic parameter in a country slow down.

**Data Sources (Hyperlinks)**

* [World CPI](https://info.worldbank.org/governance/wgi/)
* [GDP per Capita 2019 (by -World Bank)](https://en.wikipedia.org/wiki/List_of_countries_by_GDP_(PPP)_per_capita)
* [SPI](https://en.wikipedia.org/wiki/Social_Progress_Index#:~:text=The%20Social%20Progress%20Index%20(SPI,the%20relative%20performance%20of%20nations.)
* [Unemployment](https://tradingeconomics.com/country-list/unemployment-rate)
* [Gini index](https://www.cia.gov/the-world-factbook/field/gini-index-coefficient-distribution-of-family-income/country-comparison)
* [Government Type](https://en.wikipedia.org/wiki/List_of_countries_by_system_of_government)
* [Personal Income Tax Rate](https://tradingeconomics.com/country-list/personal-income-tax-rate)
* [HDI](https://en.wikipedia.org/wiki/List_of_countries_by_Human_Development_Index)