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| Global food prices  impact analysis on population and GDP  Group Assignment – Data Science 2 – Introduction to Statistics | |
|  | Presented by - Group 2  Jobbin Samuel  Ricky Lam  Maxim Smetin | Ramila Mudarth  Avery Lizhong Wang  James Lising |  |

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| iNTRODUCTION The global food prices have always been subjected to external influences like fuel prices and global warming effects relating to natural disasters. Some countries have been affected more than others depending on their ability to endure the fluctuations and food availability. There are assumptions made that the food prices influence the mortality, the GDP, affordability and income which in turn effects the population trends. Producers benefit from rise in prices where are consumers benefits from lower food prices. Any fluctuation in prices will have an effect especially on the lower income individuals as a result causing food shortages.  The objective of our assignment was to determine the impact of food prices of top 10 commodities for developing countries and compare their GDP, Mortality Rate to determine any kind of correlation that might exists using last 10 years of data. Additionally, we intend to pair it with restaurant index data to see if there are any insights derived.  *Our main two hypothesis are that:*  *Q1:* How much food price influence Population? Null Hypothesis is food price isn’t a key driver of population. The alternative Hypothesis is that food price somewhat affect population.  Q2 : How much do food prices impact all parameters? Null Hypothesis is that food prices impact all parameters equally. The alternative hypothesis is that there are some differences between some parameters affected by food prices. data preparation Preparation of the data set required compiling and sourcing from multiple location. Each data set had to be solved for challenges presented and transformed for the required analysis.   |  |  |  |  | | --- | --- | --- | --- | | A picture containing chart  Description automatically generated Global Food Prices The dataset contains Global Food Prices data from the World Food Programmed covering foods such as maize, rice, beans, fish, and sugar for 76 countries and some 1,500 markets. The data goes back as far as 1992 for a few countries, although many countries started reporting from 2003 or thereafter.  The Data is collected by [WFP(The World Food Program)](https://www.wfp.org/) and the dataset was distributed by [HDX](https://data.humdata.org/) .  Data includes developing countries, locality, market, goods purchased, price & currency used, quantity exchanged, and month/year of purchase.  The Food prices were in local currency.  The classification of the Category was too granular, so we had to aggregate it at a higher level.  The unit of measure used need to be equivalized so that the aggregation made sense. As a result we had to use Conversion tables.  There were too many countries, so we need to classify the countries into regions using a mapping table. Gross domestic product (GDP)MORTALITY RATEPOPULATION TREND The Data set was procured from United Nations Statistical Division. Population and Vital Statistics Report (various years)  The Data set was pivoted to get last 10 years of Population Trend CURRENCY EXCHANGECOST OF LIVINGFEATURE ENGINEERING Grouping by Regions data ANALYSIS What trends are observed? Commodity trends, Population trends. and parameters are driving.  Impact of the attributes to the final Hypothesis TESTING  |  |  | | --- | --- | | <<ENTER>> |  | |  | |

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| CONCLUSION What did we infer from our analysis?  << NOTABLE HIGHLIGHTS  Closing Comments three important notes |

# Bibliography

*Exchange Rates*. (n.d.). Retrieved from https://data.oecd.org/conversion/exchange-rates.htm.

*Global Food Prices*. (n.d.). Retrieved from https://data.humdata.org/dataset/wfp-food-prices.

*Gross Domestic Product*. (n.d.). Retrieved from https://stats.oecd.org/Index.aspx?DatasetCode=SNA\_TABLE1.

*Population Trends*. (n.d.). Retrieved from https://data.worldbank.org/indicator/SP.POP.TOTL.

# ApPENDIX