



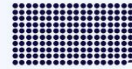
2021-2022 (Spring) Poster Presentations



THE IMPACT OF RICH COUNTRIES' COVID-19 VACCINE STOCKS ON POORER COUNTRIES

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High income countries: 3 in 4 people, or



71.93%

have been vaccinated with at least one dose as of Apr 27, 2022.

[WHO](#)

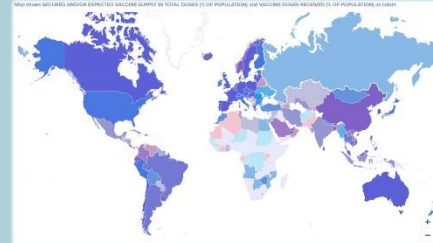
Low income countries: 1 in 6 people, or



16.19%

have been vaccinated with at least one dose as of Apr 27, 2022.

[WHO](#)



WHO WORLD SECURED AND/OR EXPECTED VACCINE SUPPLY BY REGION, GROSS DL OF POPULATION AND VACCINE DOSES REQUIRED DL OF PEOPLE AT RISK BY 2022

❖ Australia has enough vaccine stocks to vaccinate 9 times its population, meanwhile low-income countries such as Equatorial Guinea, Namibia, Tanzania does not have enough stocks to be able to vaccinate their entire population with one dose, let alone two doses. According to the Duke Global Health Innovation Center, 65% of COVID-19 vaccines have been reserved by high-income countries, despite these countries making up only the 16% of world population.

❖ The darker the colour, the more the vaccine doses stocked by countries.

The fight against the pandemic is more costly for low-income countries than it is for high-income countries!

❖ In countries with high poverty rate and insufficient access to health services, the fight against the pandemic is more difficult and costly.

High income countries have to increase their health care spending by

0.8%

on average to cover cost of vaccinating 70% of the population.

[LMDP Survey WHO UNICEF](#)

Low income countries have to increase their health care spending by

56.6%

on average to cover cost of vaccinating 70% of the population.

[LMDP Survey WHO UNICEF](#)

Methodology

Our model is a cross sectional model, and our equation is as follows:

$$DEATH = -321.7642 - 0.02(CHE) - 0.19(\Delta SVS) - 0.002(GDP/Capita) - 1.63(Vaccine) + 808.3(HDI)$$

Where:

- DEATH is defined as total cumulative deaths per 100,000 population.
- CHE represents the current health expenditure.
- ΔSVS is equal to mean of the secured vaccine supply numbers of rich countries minus the secured vaccine supply number of the country in question.
- HDI represents human development index.
- GDP/capita is gross domestic product divided into capita.
- Vaccine represents fully vaccinated per 100 people.

Conclusion

In conclusion, we have found that there is a big difference between the secured/expected vaccine doses and vaccination rates of high income countries and low income countries. And with the econometric model we made, we were able to show that this stockpiling done by rich countries is increasing the cumulative death rates of poor countries.

Acknowledgements

Special thanks to our advisor Prof. Durmus Önderim for leading us through this project, all of our lecturers, Research Assistant Fatma Deniz Demireli and Assoc. Prof. Ayşe Özten Bırgan for helping us with our econometric model.

Results

With the data obtained from United Nations Development Programme, we have reached the following results:

| Variable | Min | Q1 | Q2 | Q3 | Max |
|------------|----------|----------|----------|----------|----------|
| DEATH | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| CHE | 4.5710 | 4.9920 | 5.4030 | 5.8140 | 6.2250 |
| ΔSVS | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| GDP/Capita | 400.0000 | 450.0000 | 500.0000 | 550.0000 | 600.0000 |
| HDI | 0.5000 | 0.5500 | 0.6000 | 0.6500 | 0.7000 |
| Vaccine | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mean | 4.8000 | 5.1000 | 5.4000 | 5.7000 | 6.0000 |
| Std. Dev. | 0.5000 | 0.5000 | 0.5000 | 0.5000 | 0.5000 |

References



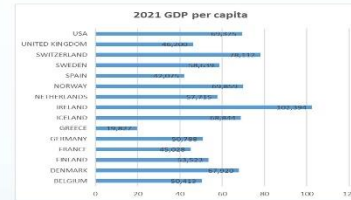


ECONOMIC DETERMINANTS OF HAPPINESS

SUNA ELVAN YÜCE & SELINAY TEKKANAT & KEREM ALI BALCIKARDEŞLER
ADVISOR: ASSOC.PROF UMUT HALAÇ

Introduction

Happiness economics is the implementation of public policies that can increase the happiness of individuals. In addition, determining the sources of happiness of individuals and the effect of economic variables on their happiness are investigated. When macroeconomic indicators such as unemployment, inflation and education are taken into account, there is a great closeness between life satisfaction and happiness.



Data And Methodology

In this study, the world happiness score will be used as the dependent variable, and some macroeconomic and social variables that are not considered in the calculation of the happiness score will be modeled as independent variables.

In this study, all the data regarding the arguments of the 15 developed countries that we selected among the countries with the highest happiness scores cover the years 2013-2021. Data; Taken from Statista, The Global Economy and World Bank databases. We will use panel data, unbalanced panel data method, in which we will examine the relationship between the variables of the selected countries over a period of time.

$$happy_{i,t} = -\beta_1 inf_{i,t} + \beta_2 unemp_{i,t} - \beta_3 uneduc_{i,t} + \epsilon_{i,t}$$

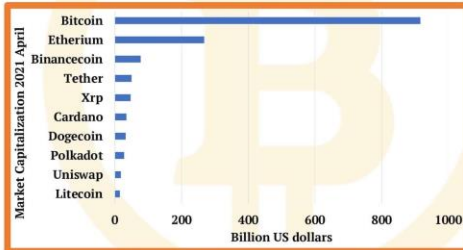
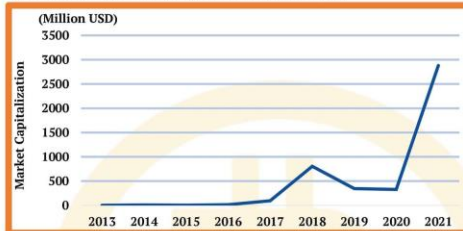
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|------------|-------------|--------|
| INF | -0.016309 | 0.020727 | -0.786851 | 0.4359 |
| UNEMP | 0.008110 | 0.010846 | 0.747743 | 0.4589 |
| UNEDUC | -0.035769 | 0.028221 | -1.267446 | 0.2121 |
| C | 7.032128 | 0.116236 | 6.049861 | 0.0000 |
| R-squared | 0.977687 | | | |
| Adjusted R-squared | 0.968436 | | | |
| F-statistic | 1.056773 | | | |
| Prob(F-statistic) | 0.000000 | | | |

Cross-section fixed (dummy variables)



INTRODUCTION & PURPOSE OF THE RESEARCH

In recent years, cryptocurrency, particularly Bitcoin, has proven its worth, with 14 million Bitcoins currently in circulation. Most of the current market capitalization has been driven by investors speculating on the prospects of this new technology, and this is expected to continue until a certain level of price stability and market acceptability is attained. Cryptocurrency is a recent and popular topic that attracts the interest of investors fund managers, startups retail e-commerce sellers and even people who have zero interest to buy must have heard this relatively new concept. The aim of this research is investigating cryptocurrency usage in 124 countries in 2020 and find the underlying macro economic factors of cryptocurrency usage to have a better understanding of this new phenomena.



DATA

Independent Variables

We examined 124 countries in our research and here are the independent variables we used ;

- Real Gdp Per Capita
- Inflation (CPI)
- Percentage of population under 20 years of age
- Life Expectancy
- Gini Index

Dependent Variables

We used Crypto adoption Index as our independent variable which is taken from 'The 2020 Geography of Cryptocurrency Report' done by Chain-Analysis.

GLOBAL CRYPTO ADOPTION INDEX

The Global Crypto Adoption Index is made up of four metrics, All 124 countries ranked according to each of those four metrics, and geometric mean of each country's ranking normalized so that final number on a scale of 0 to 1 to produce the overall rankings. The closer the country's final score is to 1, the higher the rank. Here are the four metrics that make up each country's final score in the Global Crypto Adoption Index;

- On-chain cryptocurrency value received : Total Crypto Activity
- Number of on chain cryptocurrency deposits: Number of crypto transactions
- On-chain retail value transferred: Total Non professional transactions under 10.000 \$
- Peer-to-peer (P2P) exchange trade volume: Amount of crypto currencies transactions between Peer to Peer without a third party or intermediary.

TOP 10 COUNTRIES ON CRYPTO ADOPTION INDEX

| Country | Score | Rank | Rank of individual weighted metrics feeding into index | | | |
|--------------------------|-------|------|--|--------------------------------|-----------------------------|---------------------------|
| | | | On-chain value received | On-chain retail value received | Number of on-chain deposits | P2P exchange trade volume |
| Ukraine | 1 | 1 | 4 | 4 | 7 | 11 |
| Russia | 0.931 | 2 | 7 | 8 | 5 | 9 |
| Venezuela | 0.799 | 3 | 19 | 14 | 15 | 2 |
| China | 0.672 | 4 | 1 | 1 | 95 | 53 |
| Kenya | 0.645 | 5 | 37 | 11 | 57 | 1 |
| United States of America | 0.627 | 6 | 5 | 6 | 39 | 16 |
| South Africa | 0.526 | 7 | 12 | 9 | 41 | 10 |
| Nigeria | 0.459 | 8 | 14 | 7 | 112 | 3 |
| Colombia | 0.444 | 9 | 25 | 18 | 61 | 4 |
| Vietnam | 0.443 | 10 | 2 | 2 | 44 | 81 |

METHODOLOGY & RESULTS & DISCUSSION

At the beginning of our research, we compared the average of the independent variables of the 10 countries that have the highest score and the 10 countries that have the lowest score, to gain an insight into the subject and see the patterns if there is one. Then we decided to use covariance and correlation analysis using score and crypto usage percentage as dependent variables. For further examination, we used multiple regression analyses. While correlation and covariance analysis did not give us a really meaningful result we managed to eliminate some of the independent variables from our model while examining the averages of the top 10 and bottom 10 countries.

Multiple Regression Analysis

| Coefficients: | Estimate | Std. Error | T- | Pr(> t) |
|---------------|------------|------------|--------|--------------|
| RGDPPC | -1.816e-06 | 9.276e-07 | -1.957 | .0530 . |
| POP20 | 1.961e-01 | 9.352e-02 | 2.097 | 0.0384 * |
| Penetration | 3.552e-01 | 8.318e-02 | 4.271 | 4.32e-05 *** |
| GINI | 3.154e-01 | 1.695e-01 | 1.861 | 0.0656 . |
| (Intercept) | -2.405e-01 | 9.381e-02 | -2.564 | 0.0118 * |

Notes: 104 degrees of freedom (24 observations deleted due to missingness)

Significance Levels: 0 '****' 0.001 '***' 0.01 '**' 0.05 '.' '0.1' ' ' 1

Multiple R-squared: 0.2522, Adjusted R-squared: 0.2107

Breusch-Pagan Test Conducted, P>0.05 Fail to Reject H0

Interpretation of Results

Result of our multiple regression analysis showed that;

- ✔ Real GDP per capita has **negative**
 - ✔ Percentage population under age of 20 has **positive**
 - ✔ Internet Penetration has **positive**
 - ✔ GINI index has **positive**
- Relationship with cryptocurrency usage.

Also, since our sample was cross-sectional, we conduct a Breusch-Pagan test to check heteroskedasticity. Result of the test showed that there was no heteroskedasticity present.

Discussion

Even though we found meaningful relationship between cryptocurrency usage and dependent variables listed above and we can state that a country's development level is linked with its population crypto currency usage, our dataset was limited to only 2020 so to draw certain conclusion, subject must be investigated with longer time-span. Our study fulfills its mission to be a steppingstone for future researches.

References

<https://blog.chainalysis.com>
<https://www.nationmaster.com>
<https://tradingeconomics.com>
<https://coinmarketcap.com>
<https://statisticsanddata.org>
<https://www.statista.com/>



CONSTRUCTING AND USING A STUDENT PRICE INDEX FOR YAŞAR UNIVERSITY

Anil IŞLAKÇA - Egemen YETİŞTİREN - Gençer OKUR - Şerife KARS

INTRODUCTION

The topic we chose in the senior project is *Constructing and Using a Student Price Index for Yaşar University Students*. Before entering our subject, there should be a general information about what inflation is, why it rises and how it is measured.

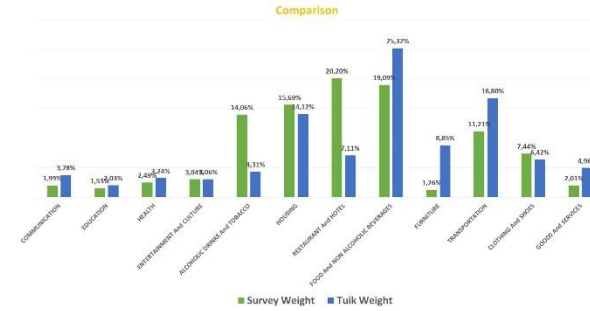
Inflation is the increase in the general level of prices of goods and services over time depending on supply, demand and other factors. The important thing is that not only the price of a certain product or service, but also the general price level rises continuously.

METHODOLOGY

In this project, the survey method was used. The stages proceeded as follows;

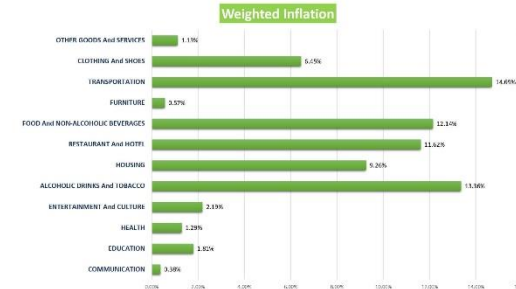
- Literature survey on the preparation of the inflation survey.
- Survey questions were prepared. Application of the prepared questionnaire on 100 students.
- According to the answers, the expenditures were placed in the appropriate categories by taking 12 TUIK titles as reference.
- October 2021-2022 April prices have been found.
- According to the results, inflation was calculated and a comparison was made with TUIK and ENAG.

| Headlines | Total expenditure | Total income | Survey Weight | Tuik Weight |
|---------------------------------|-------------------|-----------------|----------------|----------------|
| COMMUNICATION | ₺9.492 | ₺477.000 | 1,99% | 3,78% |
| EDUCATION | ₺7.295 | ₺477.000 | 1,53% | 2,03% |
| HEALTH | ₺11.895 | ₺477.000 | 2,49% | 3,24% |
| ENTERTAINMENT And CULTURE | ₺14.500 | ₺477.000 | 3,04% | 3,06% |
| ALCOHOLIC DRINKS And TOBACCO | ₺67.054 | ₺477.000 | 14,06% | 4,31% |
| HOUSING | ₺74.850 | ₺477.000 | 15,69% | 14,12% |
| RESTAURANT And HOTEL | ₺96.340 | ₺477.000 | 20,20% | 7,11% |
| FOOD And NON ALCOHOLIC BEVERAGE | ₺91.080 | ₺477.000 | 19,09% | 25,32% |
| FURNITURE | ₺6.010 | ₺477.000 | 1,26% | 8,85% |
| TRANSPORTATION | ₺53.450 | ₺477.000 | 11,21% | 16,80% |
| CLOTHING And SHOES | ₺35.470 | ₺477.000 | 7,44% | 6,42% |
| GOODS And SERVICES | ₺9.564 | ₺477.000 | 2,01% | 4,96% |
| Total: | ₺477.000 | ₺477.000 | 100,00% | 100,00% |

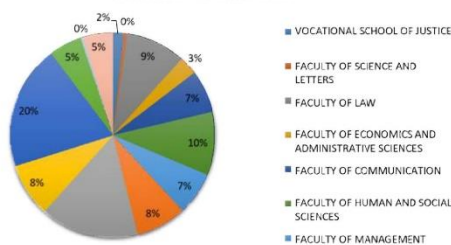


HOW MUCH IS GINI COEFFICIENT?

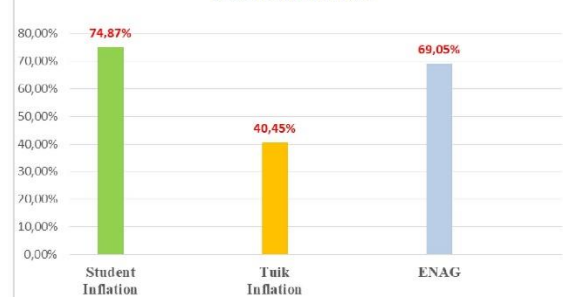
0,222



Number of Students



6 Month Inflation



REFERENCES

- <https://data.tuik.gov.tr/Kategori/GetKategori?p=Enflasyon-ve-Fiyat-106>
- <https://enagrup.org/>
- <https://data.worldbank.org/>
- <https://www.migros.com.tr/>
- <https://www.a101.com.tr/>
- <https://www.cimri.com/>
- <https://www.opet.com.tr/>
- <https://www.biletix.com/>
- <https://www.esnot.gov.tr/>