COVID-19 and Bitcoin Prices

Alston Rice

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## Synopsis

This is the overview section ~ 250 words to describe the paper in terms of key hypotheses, conclusions, and potential future research.

## Background

This section summarizes relevant literature as an introduction / setup for hypotheses to be tested in the paper.

## Research Questions

Given the literature review as context, describe the major hypotheses to be tested in the paper. Include one or more null hypotheses, and for each null hypothesis provide one or more alternate hypotheses. Then explain the types of data needed to test each hypothesis.

Discuss whether the purpose of the analysis is to be descriptive (explains the data that was collected), inferential (makes inferences about a larger population based on analysis of a sample), or predictive (uses existing data to predict future values) and your reasons for choosing one type of analysis over others.

## Data Sources & Cleaning

This section explains the sources of data, why they were chosen, their limitations and steps taken to clean / subset / eliminate missing values. For example, with the Johns Hopkins COVID-19 data, consider the following items:

* Data elements collected changed over time
* Data elements were cumulative numbers, requiring additional processing to derive daily counts
* Country specific data correction processes resulted in anomalies in the data, such as negative daily counts for deaths or confirmed cases

For the Bitcoin data, explain the source of the financial info (quantmod R package plus Google or Yahoo! Finance website).

## Exploratory Analysis

Provide some exploratory data analysis / visualizations to illustrate / describe features of the data to be analyzed.

## Analysis & Results

Conduct the analysis, summarizing into tables that are standard for journal articles given the type of data analysis. For example, a regression analysis might include a table of effects / effect sizes and p-values, along with one or more goodness-of-fit measures.

Discuss whether to accept or reject null hypotheses, and why they were accepted or rejected. In addition to statistical significane, explain the substantive meaning of the results.

## Conclusions & Implications for Future Research

Given the results of the analysis, highlight some general conclusions and describe any implications / ideas for future research given the results of the analysis.

## References

List the external articles, papers, and data sources used in the paper.

For example, the Johns Hopkins COVID-19 data would be cited as follows, per the [README](https://github.com/CSSEGISandData/COVID-19) from the Johns Hopkins University’s COVID-19 Github Repository:

Dong E, Du H, Gardner L. *An interactive web-based dashboard to track COVID-19 in real time.* Lancet Inf Dis. 20(5):533-534. doi: 10.1016/S1473-3099(20)30120-1

Ryan JA, Ulrich JM (2022). *quantmod: Quantitative Financial Modelling Framework*. R package version 0.4.20, <https://CRAN.R-project.org/package=quantmod>.