A boring (academic) title or a clever title?
A secondary title

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Here is a second paragraph of the abstract (if necessary), and with the pipe notation it doesn't break. Notice it still needs to be indented. In this article we compare the *empirical characteristic function* (Tukey 1977; Becker et al. 1988) to a *moment-generating-functional form* to compute the proportion of hypotheses m that are rejected under the null hypothesis. Generally, we write this abstract last. Often it is called the executive summary. It should succinctly summarize the entire document. You can include references such as this one to the Appendices section 6 if necessary.

December 10, 2020

1 Introduction

Write something here.
  [ONE GRAPHIC]
  [TWO GRAPHICS AS ONE]
  Write something here.

2 Research Question: What is my primary question

2.1 What is my secondary question

2.2 What is my other secondary question

• this notebook is found in the nascent folder • the concept of where we are with data analytics is a function of our culture and society • we need to let go of preconceptions and let the data speak – culture changes over time • the evolution of mathematics is the evolution of making computation easier • computation has changed significantly, but we cannot forget the past as we go into the future • the naïve approach is very efficient compared to the two-step approach • the mean is not one of the numbers selected in the data – it is an artificial number that represents the center • it is easier to compute the mean than the median – you don't have to sort • sorting is more computationally difficult • John Tuckey realized that if we can sort the data, we can look at the data in a different way • with sorting, we have to hold everything in memory • laundry sorting – choose one number at time and place it where it belongs • selection sort – loop through all of the data to find the minimum and the maximum, then move the min and max to the new vector • swap-meet sort (bubble sort) – go left to right and compare two numbers at a time and swap them as needed. This will push the biggest number to the end in one iteration. • default sort method in r uses the radix method – best for under 2 billion numbers • Median – the middle number of a sorted list of numbers, not the average of the two middle. Pick either the first or the second number based on an algorithm • Algorithm 1 in R gives numbers that are actually in the data • MAD – median absolute deviation. Shows how much dispersion / spread from the median • Find the median, take deviations of the median (distances of each number from the median), then find the median of the deviations • If the data is normal. . . . mean = median = mode

3   Data Description

Very brief introduction to the data, how it was collected, and so on. Remember that everything is covered (who, what, when, where, why, how, so what, and so on). Reference the section in the Appendix with greater detail about the data provenance. This section should be about two paragraphs, and the Appendix should have more information.

3.1   Summary of Sample

3.2   Summary Statistics of Data

4   Key Findings

5   Conclusion

This was a new page
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Here is some more text.
Below are some example code that may benefit you in preparing your document.

Please state your name: _____

I was born on _____ in _____

$$Y_{jt} = \alpha + \boldsymbol{\beta} X_{jt} + \upsilon_j + \varepsilon_{jt}, \tag{1}$$

where α is the grand mean, υ_j is the fixed-time country mean, X_{jt} (country j at time t) is the matrix of country-level observations for the vector of aforementioned parameters $\boldsymbol{\beta}$, and ε_{jt} represents the residual idiosyncratic disturbance. Our panel data set consists of repeated observations of countries over time. Therefore, we employ cross-section time-series models. This approach redefines Equation~1 by subtracting time-demeaned values. This *within* transformation subtracts constant country effects for the dependent variable $\bar{Y}_j$, the predictor variables $\bar{X}_j$, and the intercept $\bar{\upsilon}_j$:

$$(Y_{jt} - \theta \bar{Y}_j) = (1 - \theta)\alpha + \boldsymbol{\beta}(X_{jt} - \bar{X}_j) + (\upsilon_{jt} - \theta \bar{\upsilon}_j), \tag{2}$$

If $\theta = 0$, the model reduces to a basic pooled ordinary-least-squares (OLS) model; if $\theta = 1$, the model reduces to a fixed-effects model; otherwise the model represents a random-effects model. The pooled OLS estimation is biased if country effects exist (Hsiao 2003). The random-effects model may be susceptible to omitted-variable bias (Wooldridge 2006): bias because a predictor was excluded from the model specification. Conversely, the fixed-effects model is not susceptible to this bias as it captures unobserved intracountry variation around its average country-level "fixed effect." Panel-data analysis commonly has issues with heteroskedasticity, serial autocorrelation, and cross-sectional autocorrelation.

$i = 1$ and

$$i = 1$$

1	2	3	4	5
6	7	8	9	10

This is a footnote[1] that can be placed within a document.

Refer to the Appendices in section~6 where I am going to cite John (Tukey 1962, pp. 2-3).
Here is a quote by Tukey (1962, pp. 2-3):

> For a long time I have thought I was a statistician, interested in inferences from the particular to the general. But as I have watched mathematical statistics evolve, I have had to cause to wonder and to doubt. [...] All in all, I have come to feel that my central interest is in *data analysis*, which I take to include among other things: procedures for analyzing data, techniques for interpreting the results of such procedures, ways of planning the gathering of data to make its analysis easier, more precise or more accurate, and all the machinery and results of (mathematical) statistics which apply to analyzing the data.
>
> Large parts of data analysis are inferential in the sample-to-population sense, but these are only parts, not the whole. Large parts of data analysis are incisive, laying bare indications which we could not perceive by simple and direct examination of the raw data, but these too are only parts, not the whole. Some parts of data analysis, as the term is her stretch beyond its philology, are allocation, in the sense that they guide us in the distribution of effort and other valuable considerations in observation, experimentation, or analysis. Data analysis is a larger and more varied field than inference, or incisive procedures, or allocation.
>
> Statistics has contributed much to data analysis. In the future it can, and in my view should, contribute more. For such contributions to exist, and be valuable, it is not necessary that they be direct. They need not provide new techniques, or better tables for old techniques, in order to influence the practice of data analysis.

6 APPENDICES

6.1 Data Provenance

6.1.1   Data Collection Handout

6.2   Preparing the Report Workspace as a subsection

6.2.1   *Preparing the Report Workspace as a subsubsection*

Preparing the Report Workspace as a paragraph

Preparing the Report Workspace as a subparagrah   Below are the necessary functions and libraries required to run the code referenced in this document.

```r
library(devtools);          # required for source_url

path.humanVerseWSU = "https://raw.githubusercontent.com/MonteShaffer/humanVerseWSU/"
source_url( paste0(path.humanVerseWSU,"master/misc/functions-project-measure.R") );
```

Below is the code to load the data and prepare it for analysis.

```r
#path.project = "C:/_git_/WSU_STATS419_FALL2020/project-measure/";
path.project = "/Users/jaileefoster/Desktop/stat419/_git_/WSU_STATS419_FALL2020/
                project-measure/";

#path.to.secret = "C:/Users/Alexander Nevsky/Dropbox/WSU-419/Fall 2020/__student_access__/_SECRET_/";
path.to.secret = "/Users/jaileefoster/Desktop/stat419/_git_/secret/";

measure = utils::read.csv( paste0(path.to.secret, "measure-students.txt"), header=TRUE,
                           quote="", sep="|");

#path.github = "https://raw.githubusercontent.com/this-IS-YOUR-PATH-TO-GITHUB/";
#source_url( paste0(path.github,"master/functions/functions-project-measure.R") );

# this is your function
# put in the same "units"
# merge left/right
# build proportion data
# and so on ...
# measure.df = prepareMeasureData(measure);
```

Below is the code to generate the summary statistics and save them as a table that you see in Section **??**.

```r
#local.path = "/Users/jaileefoster/Desktop/stat419/_git_/WSU_STATS419_FALL2020/";
#source(paste0(local.path, "functions/functions-corr.R"), local=T)
#source("/Users/jaileefoster/Desktop/stat419/_git_/WSU_STATS419_FALL2020/functions/")
```

ENDNOTES

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[1] This is a footnote that can be really long.

You can have multiple paragraphs in the footnote. You can have <u>underline</u> or **bold** or *italics*. You can even have a math equation inline.

In this section, we review the regression results to summarize our findings. First, we examine each model for significance, and conclude the hypothesized models fit well with the data. Second, we conclude that the fixed country effects represent consistent and unbiased parameter estimates. Third, with the use of the Driscoll and Kraay (1998) robust standard errors, we adjust any variance bias to ascertain the significance of these consistent estimates. Therefore, we are able to make inferences about the hypotheses using our model estimates. For ease of interpretation across these 12 models, we introduce $_{\text{Total}}^{\text{M1}}\hat{\beta}_1$ as notation to refer to parameter estimate $\hat{\beta}_1$ (HDI) for the Total Sample and (M1) Model 1: Main Effects. We proceed by reporting findings for the total sample.

The footnotes are automatically converted to "endnotes" and will be included at the end of the document. It will finish when you have that outer brace like this.

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CONTENTS