

## Sample Code

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Purpose: This document shows the graphs generated for this coding exercise.

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# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>National Accounts</b>	<b>1</b>
<b>3</b>	<b>Conclusion</b>	<b>7</b>

# 1 Introduction

This exercise sets out to retrieve, clean and plot National Accounts Data for South Africa.

Four files are included in the code folder:

- `reading_econdata.R` uses the EconData portal by Codera <https://www.econdata.co.za> to read in data as well as an excel document in the data folder. The framework is provided by `econdata`, however, it provides the data as a large list, however, I have written the function to convert the data to a data frame.
- `graph_theme.R` specifies colours and some preferences for graphing. These are some of my graphing preferences that I found myself using when making graphs (minimalist, very clean), so it has just been written as a theme I can call on when needed. A colour scheme is also specified here.
- `data_wrangling.R` joins the national accounts data to the inflation data, and performs some operations:
  - Convert the inflation data from monthly to quarterly
  - Calculates annual growth rates
  - Calculates the proportions that Consumption, Government Spending, Investment and Net Exports contribute to GDP.
- `graphing.R` plots this data, and the plots are imported and shown below.

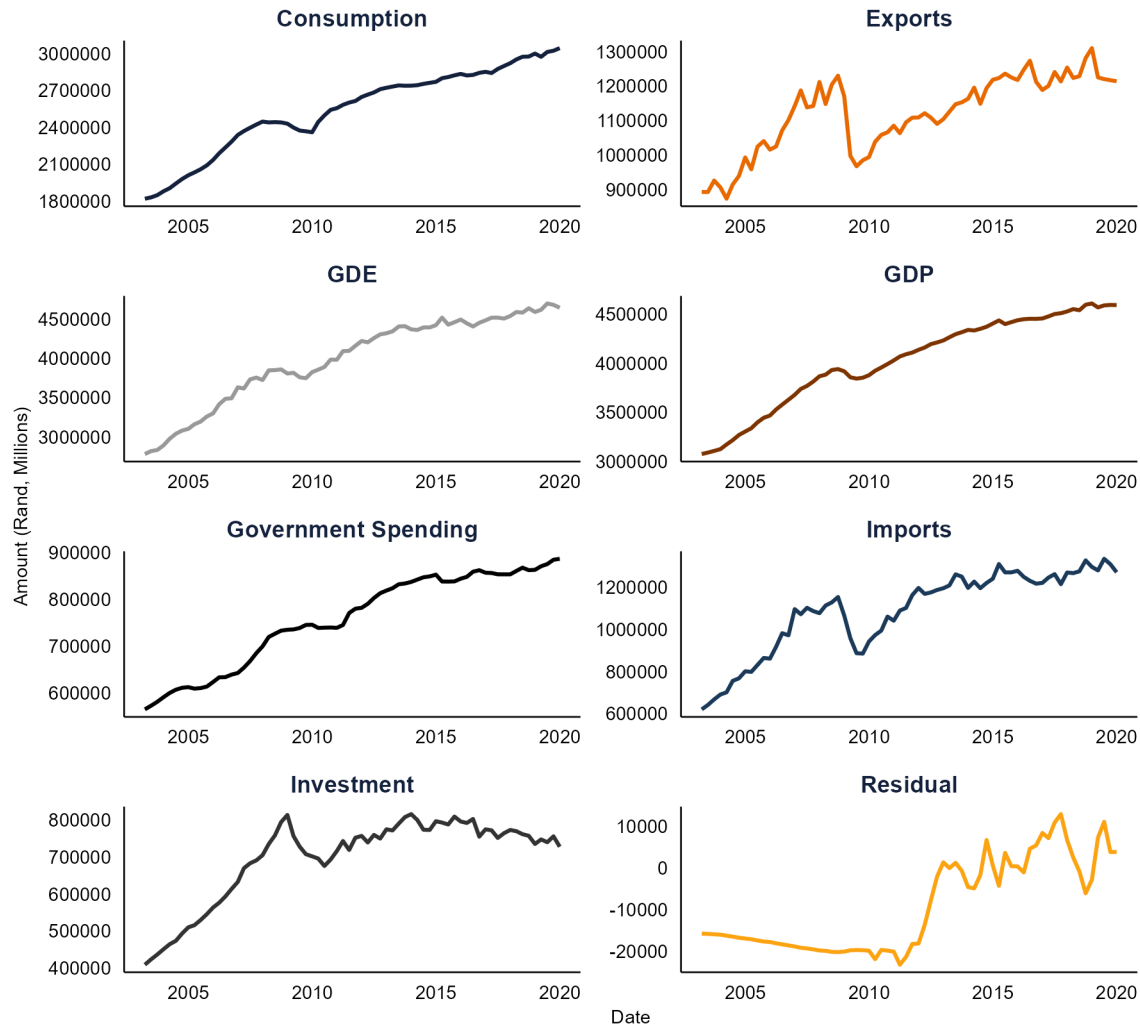
(Please note, my `.Renv` file contains my login credentials to Econdata that makes this run but that document has been placed in the `gitignore`)

## 2 National Accounts

Here is a snapshot of the National Accounts Data

## National Accounts

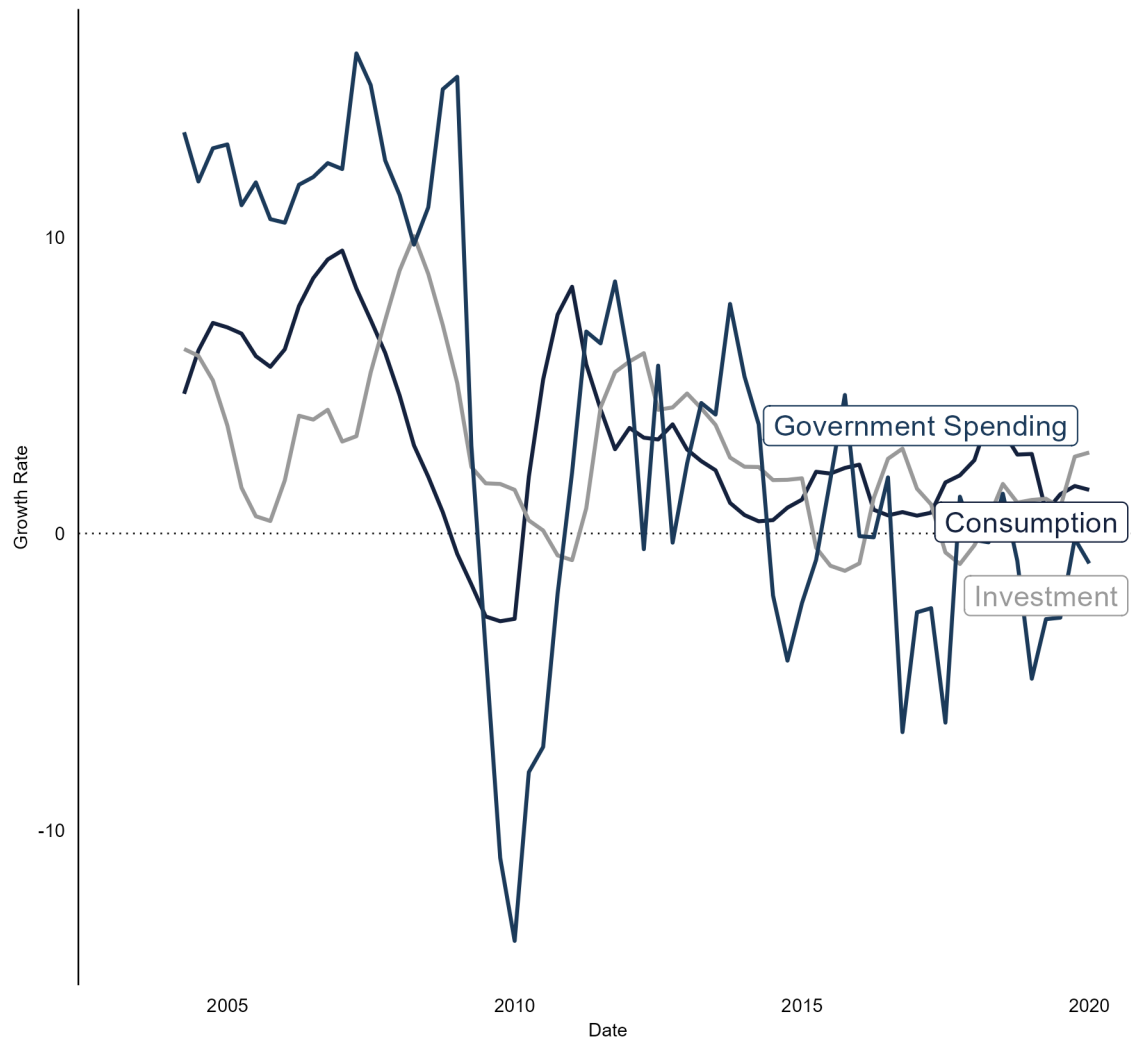
### South Africa

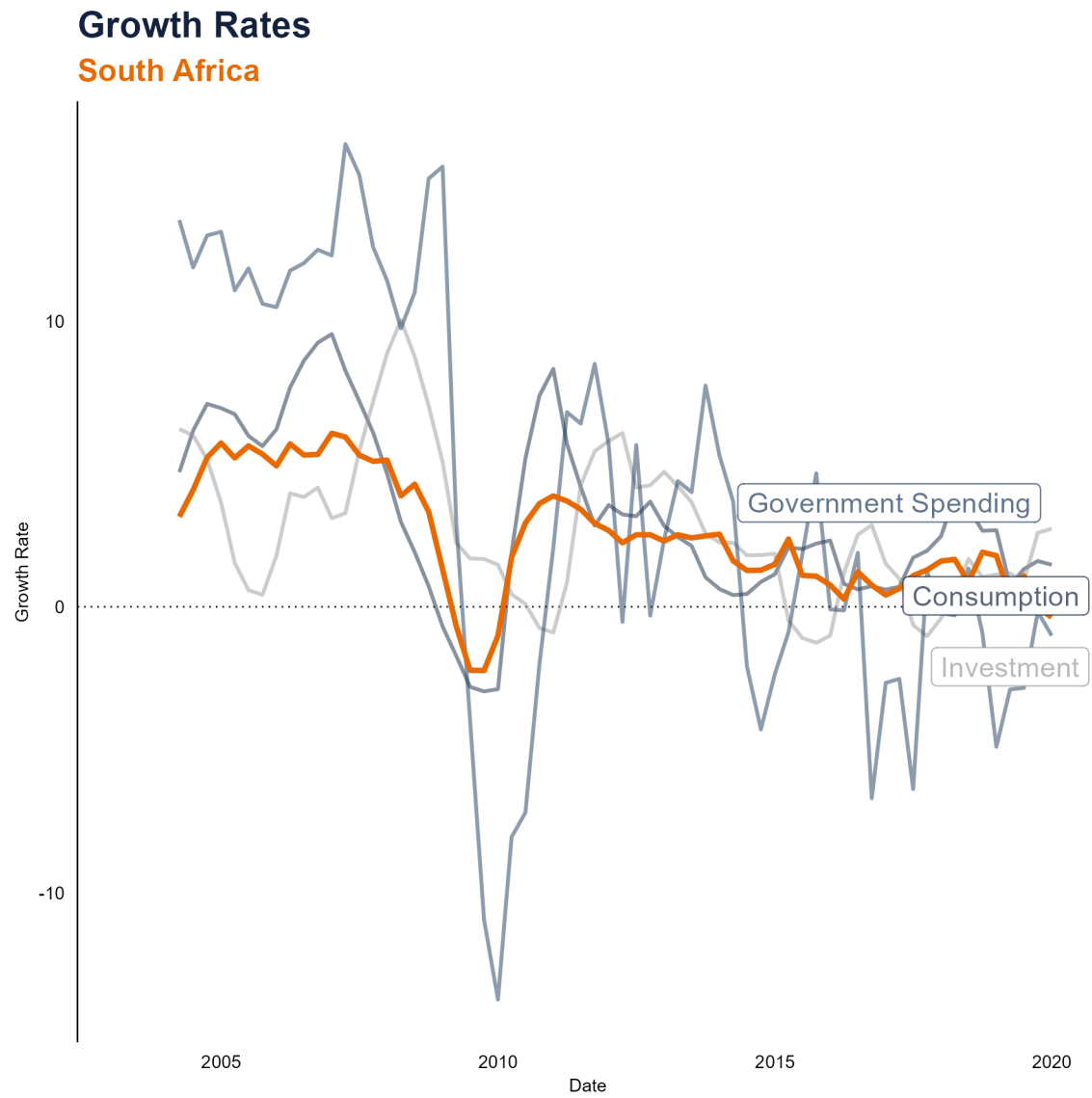


Final Household Consumption Expenditure, Government Spending and Fixed Private Investment growth rates are shown next, then in the second graph, GDP is superimposed to graphically assess the sensitivity of GDP to spikes in its core components.

## Growth Rates

### South Africa

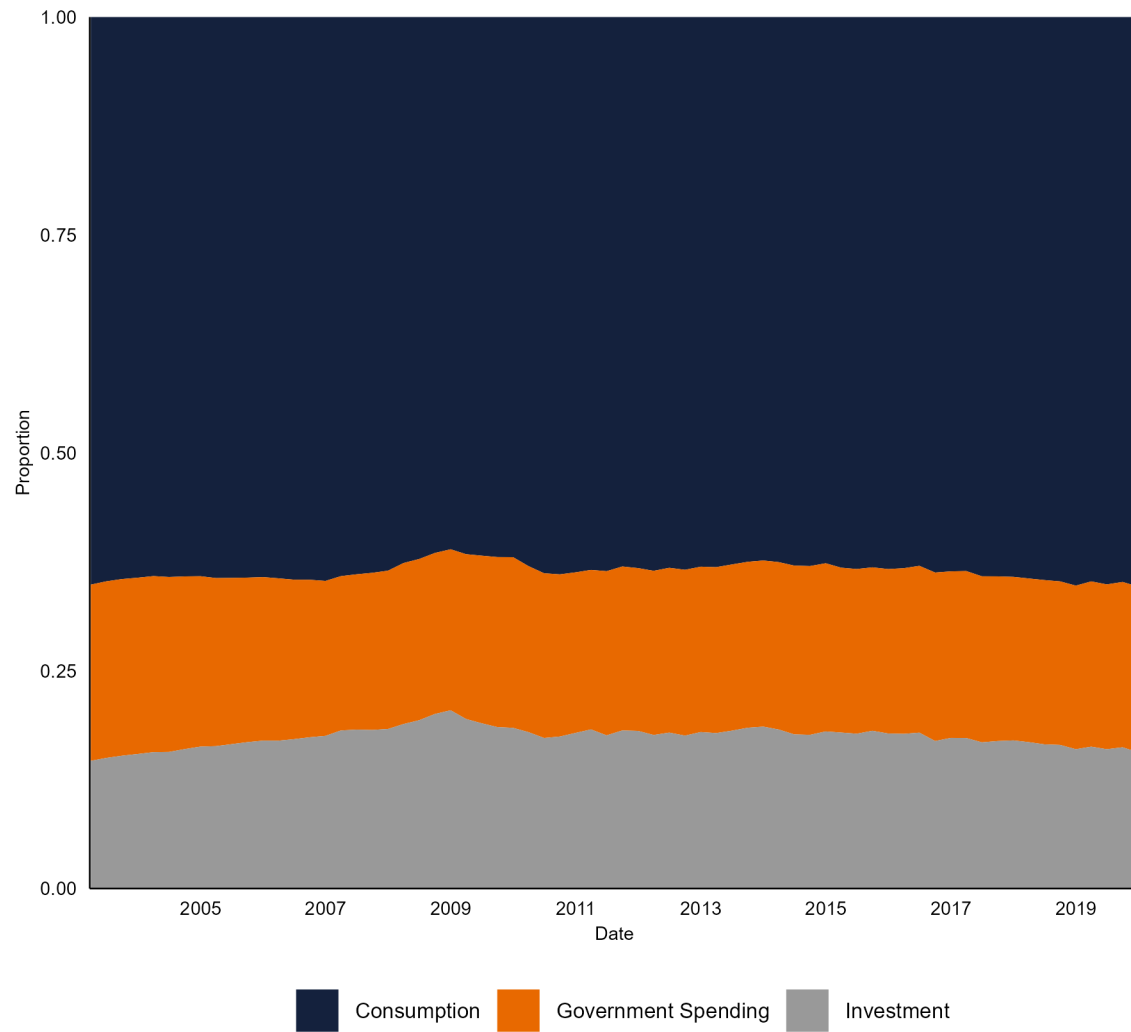




The following graph assesses the relative sizes of the three core accounts:

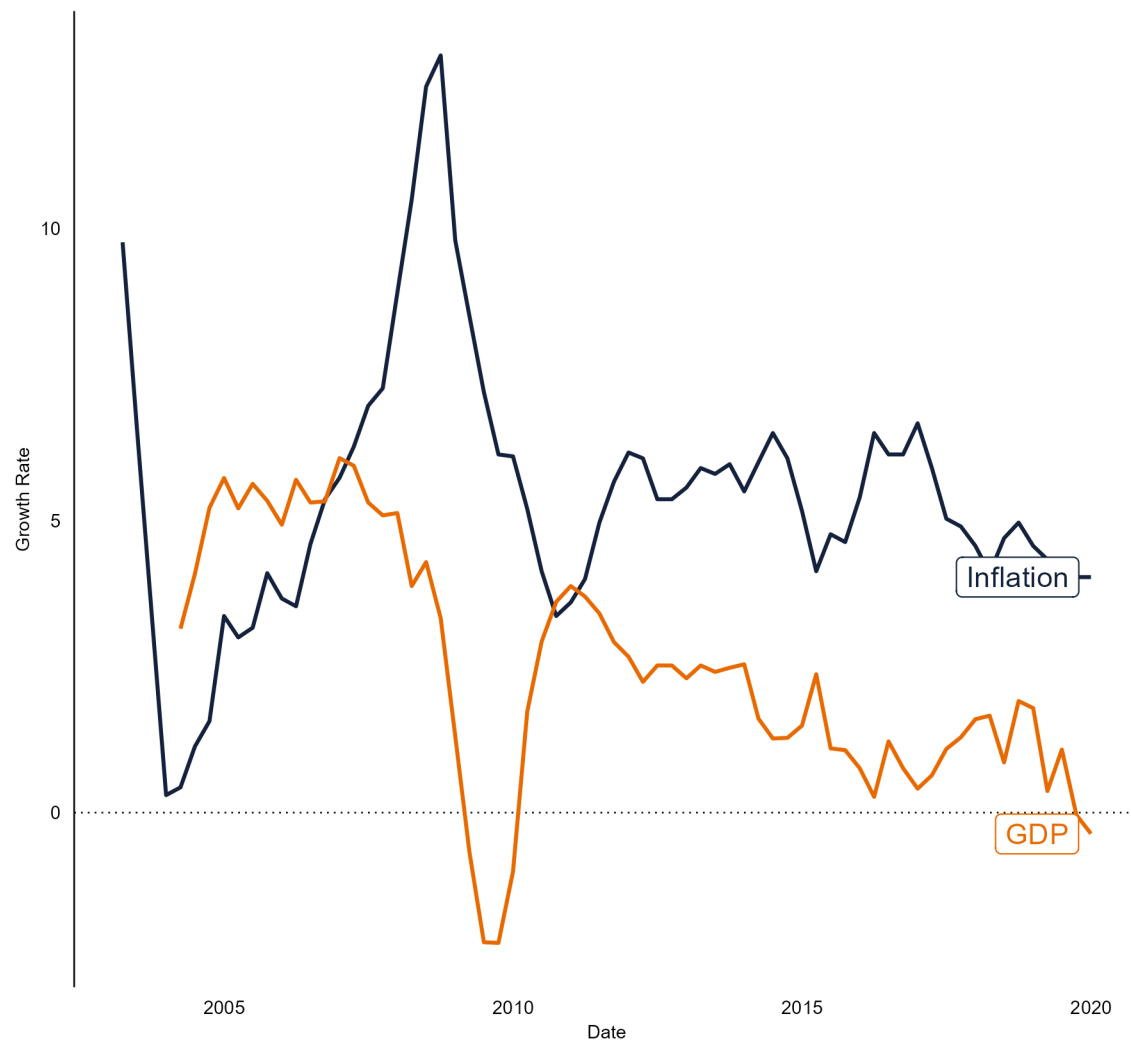
## Proportions of National Accounts

South Africa



## Growth Rates

### South Africa





### 3 Conclusion

This document has shown some graphs generated by importing, wrangling and then plotting National Accounts data for South Africa.