

Final Project Submission - Week 10

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Week 9

1. The topic that I have chosen for this project will be "Inflation". For this project, I will be investigating inflation rates worldwide and most importantly Singapore, analysing its global trends and the factors contributing to its rise or fall.
2. The data sources that I have curated so far are Inflation data by International Monetary Fund and Core Inflation of Singapore by Monetary Authority of Singapore.

Week 10

1. Why is inflation happening in Singapore?
2.
 - According to Monetary Authority Singapore, inflation affects many areas of the economy hence there is a need to understand inflation to secure a low and stable inflation in the Singapore economy over time.
 - Singapore has the second highest inflation rate in 2023 among the ASEAN 5 countries according to the data provided by International Monetary Fund.
 - Inflation in Singapore has been persistently growing according to data from Monetary Authority Singapore.
3. For the dataset "Inflation_world", I will be using the columns of 'region' and 'Inflation_rate'.

```
## Warning: package 'tidyverse' was built under R version 4.2.3
```

```
## Warning: package 'ggplot2' was built under R version 4.2.3
```

```
## Warning: package 'tibble' was built under R version 4.2.3
```

```
## Warning: package 'tidyr' was built under R version 4.2.3
```

```
## Warning: package 'readr' was built under R version 4.2.3
```

```
## Warning: package 'purrr' was built under R version 4.2.2
```

```
## Warning: package 'dplyr' was built under R version 4.2.3
```

```
## Warning: package 'stringr' was built under R version 4.2.2
```

```
## Warning: package 'forcats' was built under R version 4.2.3
```

```
## Warning: package 'lubridate' was built under R version 4.2.3
```

```
## — Attaching core tidyverse packages — tidyverse 2.0.0 —
## ✓ dplyr      1.1.2      ✓ readr      2.1.4
## ✓ forcats    1.0.0      ✓ stringr    1.5.0
## ✓ ggplot2    3.4.3      ✓ tibble     3.2.1
## ✓ lubridate  1.9.2      ✓ tidyr      1.3.0
## ✓ purrr      1.0.1
## — Conflicts — tidyverse_conflicts() —
## ✗ dplyr::filter() masks stats::filter()
## ✗ dplyr::lag()    masks stats::lag()
## i Use the [8];http://conflicted.r-lib.org/[8];[8] to force all conflicts to become errors
## Rows: 229 Columns: 2
## — Column specification —
## Delimiter: ","
## chr (1): region
## dbl (1): Inflation_rate
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
## # A tibble: 229 × 2
##   region          Inflation_rate
##   <chr>              <dbl>
## 1 Afghanistan         NA
## 2 Albania              4.8
## 3 Algeria              9
## 4 Andorra             5.2
## 5 Angola             13.1
## 6 Antigua and Barbuda  5
## 7 Argentina          122.
## 8 Armenia             3.5
## 9 Aruba               4.5
## 10 Australia           5.8
## # i 219 more rows
```

For the dataset “ASEAN_5_IMF”, I will be using the columns of ‘Year’, ‘Inflation_rate’ and ‘Country’.

```
## Rows: 115 Columns: 3
## — Column specification —
## Delimiter: ","
## chr (1): Country
## dbl (2): Year, Inflation_Rate
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
## # A tibble: 115 × 3
##   Year Inflation_Rate Country
##   <dbl>         <dbl> <chr>
## 1  2001             11.5 Indonesia
## 2  2002             11.9 Indonesia
## 3  2003              6.8 Indonesia
## 4  2004              6.1 Indonesia
## 5  2005             10.5 Indonesia
## 6  2006             13.1 Indonesia
## 7  2007              6.3 Indonesia
## 8  2008              9.9 Indonesia
## 9  2009              4.8 Indonesia
## 10 2010              5.1 Indonesia
## # i 105 more rows
```

For the dataset “Inflation_SG”, I will be using the columns of ‘Year’ and ‘Inflation_rate’.

```
## Rows: 44 Columns: 2
## — Column specification —————
## Delimiter: ","
## dbl (2): Year, Inflation_rate
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
## # A tibble: 44 × 2
##   Year Inflation_rate
##   <dbl>         <dbl>
## 1  1980             8.5
## 2  1981             8.2
## 3  1982             3.9
## 4  1983              1
## 5  1984             2.6
## 6  1985             0.5
## 7  1986            -1.4
## 8  1987             0.5
## 9  1988             1.5
## 10 1989             2.3
## # i 34 more rows
```

For the dataset “CPI_goods”, I will be using the columns of ‘Goods’ and ‘Weights’.

```
## New names:
## Rows: 15 Columns: 15
## — Column specification ————— Delimiter: "," chr
## (1): Goods dbl (13): 2019, 2020, 2021, 2022, 2021Q2...7, 2021Q3, 2021Q4,
## 2022Q1, 2022Q2... num (1): Weights1
## i Use `spec()` to retrieve the full column specification for this data. i
## Specify the column types or set `show_col_types = FALSE` to quiet this message.
## • `2021Q2` -> `2021Q2...7`
## • `2021Q2` -> `2021Q2...15`
```

```
## # A tibble: 15 × 15
##   Goods      Weights1 `2019` `2020` `2021` `2022` `2021Q2...7` `2021Q3` `2021Q4`
##   <chr>      <dbl> <dbl> <dbl> <dbl> <dbl>      <dbl> <dbl> <dbl>
## 1 "ALL ITE... 10000    100  99.8 102.  108.      102.  102.  104.
## 2 "Food"      2110    100 102. 103.  109.      103   104.  104.
## 3 "Food ex...   682    100 103. 104.  110.      104   105.  106.
## 4 "Food Se... 1428    100 101. 103.  108.      102.  103.  103.
## 5 "Clothin...   212    100  96.2  90.8  93.4      90.8   89.3   89.6
## 6 "Housing... 2484    100  99.7 101.  106.      100.  101.  103.
## 7 "Househo...   493    100 100. 102.  104.      102.  102   102.
## 8 "Health ...   655    100  98.5  99.6  102.      99.4   100   100
## 9 "Transpo... 1707    100  99.3 108.  126.      107.  108.  114.
## 10 "Communi...   411    100 101. 100.   98.9      99.8   99.4   99.7
## 11 "Recreat...   789    100  98.2  99.2  104.      98.7   99.4  100.
## 12 "Educati...   663    100  99.4 101.  103.      100.  101.  101.
## 13 "Miscell...   476    100  98.8  98.3  98.7      98.4   98.1   98.2
## 14 "All Ite...  8250    100  99.7 102.  109.      102.  102.  104.
## 15 "All Ite...  7803    100  99.7 102.  109      102.  102.  104
## # i 6 more variables: `2022Q1` <dbl>, `2022Q2` <dbl>, `2022Q3` <dbl>,
## #   `2022Q4` <dbl>, `2023Q1` <dbl>, `2021Q2...15` <dbl>
```

One challenge I faced was to clean and format the dataset such that R can read my data. For example, in the dataset "ASEAN_5_IMF", 'country' and 'year' were initially in rows instead of columns and hence R was not able to read and produce the result that I want. It took me a very long time trying to figure out the problem and find the best way to edit the Excel to get the end result. Another challenge I faced was to think of the question that I want to answer. The question cannot be too broad or too narrow as it will affect the rest of my data story. Therefore, to think of one, I need to exercise forward thinking and plan how the rest of my project will turn out so that I can achieve an organised data story that make sense.