

# Lecture\_4\_Notes

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## Data Wrangling

### 0. Load the tidyverse package

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.3      v readr      2.1.4
## v forcats    1.0.0      v stringr   1.5.0
## v ggplot2    3.4.3      v tibble    3.2.1
## v lubridate  1.9.2      v tidyr     1.3.0
## v purrr      1.0.2
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

### 1. Import the V-Dem Data

```
d <- read_csv("_DataPublic_/vdem/1984_2022/vdem_1984_2022_external.csv")

## Rows: 6789 Columns: 211
## -- Column specification -----
## Delimiter: ","
## chr    (3): country_name, country_text_id, histname
## dbl   (207): country_id, year, project, historical, codingstart, codingend, c...
## date   (1): historical_date
##
## 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.
```

```

> d
# A tibble: 6,789 × 211
  country_name country_text_id country_id year historical_date project historical histname codingstart codingend
  <chr>         <chr>          <dbl> <dbl> <date>          <dbl>    <dbl> <chr>          <dbl>    <dbl>
1 Mexico      MEX              3  1984 1984-12-31      0        1 United Mexican Sta...  1789    2022
2 Mexico      MEX              3  1985 1985-12-31      0        1 United Mexican Sta...  1789    2022
3 Mexico      MEX              3  1986 1986-12-31      0        1 United Mexican Sta...  1789    2022
4 Mexico      MEX              3  1987 1987-12-31      0        1 United Mexican Sta...  1789    2022
5 Mexico      MEX              3  1988 1988-12-31      0        1 United Mexican Sta...  1789    2022
6 Mexico      MEX              3  1989 1989-12-31      0        1 United Mexican Sta...  1789    2022
7 Mexico      MEX              3  1990 1990-12-31      0        1 United Mexican Sta...  1789    2022
8 Mexico      MEX              3  1991 1991-12-31      0        1 United Mexican Sta...  1789    2022
9 Mexico      MEX              3  1992 1992-12-31      0        1 United Mexican Sta...  1789    2022
10 Mexico     MEX              3  1993 1993-12-31      0        1 United Mexican Sta...  1789    2022
# i 6,779 more rows
# i 201 more variables: codingstart_contemp <dbl>, codingend_contemp <dbl>, codingstart_hist <dbl>, codingend_hist <dbl>,
# gapstart1 <dbl>, gapstart2 <dbl>, gapstart3 <dbl>, gapend1 <dbl>, gapend2 <dbl>, gapend3 <dbl>, gap_index <dbl>,
# COWcode <dbl>, e_v2x_api_3C <dbl>, e_v2x_api_4C <dbl>, e_v2x_api_5C <dbl>, e_v2x_civlib_3C <dbl>, e_v2x_civlib_4C <dbl>,
# e_v2x_civlib_5C <dbl>, e_v2x_clphy_3C <dbl>, e_v2x_clphy_4C <dbl>, e_v2x_clphy_5C <dbl>, e_v2x_clpol_3C <dbl>,
# e_v2x_clpol_4C <dbl>, e_v2x_clpol_5C <dbl>, e_v2x_clpriv_3C <dbl>, e_v2x_clpriv_4C <dbl>, e_v2x_clpriv_5C <dbl>,
# e_v2x_corr_3C <dbl>, e_v2x_corr_4C <dbl>, e_v2x_corr_5C <dbl>, e_v2x_cspart_3C <dbl>, e_v2x_cspart_4C <dbl>, ...
# i Use `print(n = ...)` to see more rows, and `colnames()` to see all variable names

```