Homicides in Europe - Group 11

2024-03-22

Loading data

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.0     v tibble    3.2.1
## v lubridate 1.9.3     v tidyr     1.3.1
## 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
```

```
Western_Europe <- read_csv("data/homicide-rates-across-western-europe.csv")
```

```
## Rows: 206 Columns: 4
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (2): Entity, Code
## dbl (2): Year, Homicide rate in Europe over long-term (per 100,000) (homicid...
##
## 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.
```

Checking the data:

```
head(Western_Europe)
```

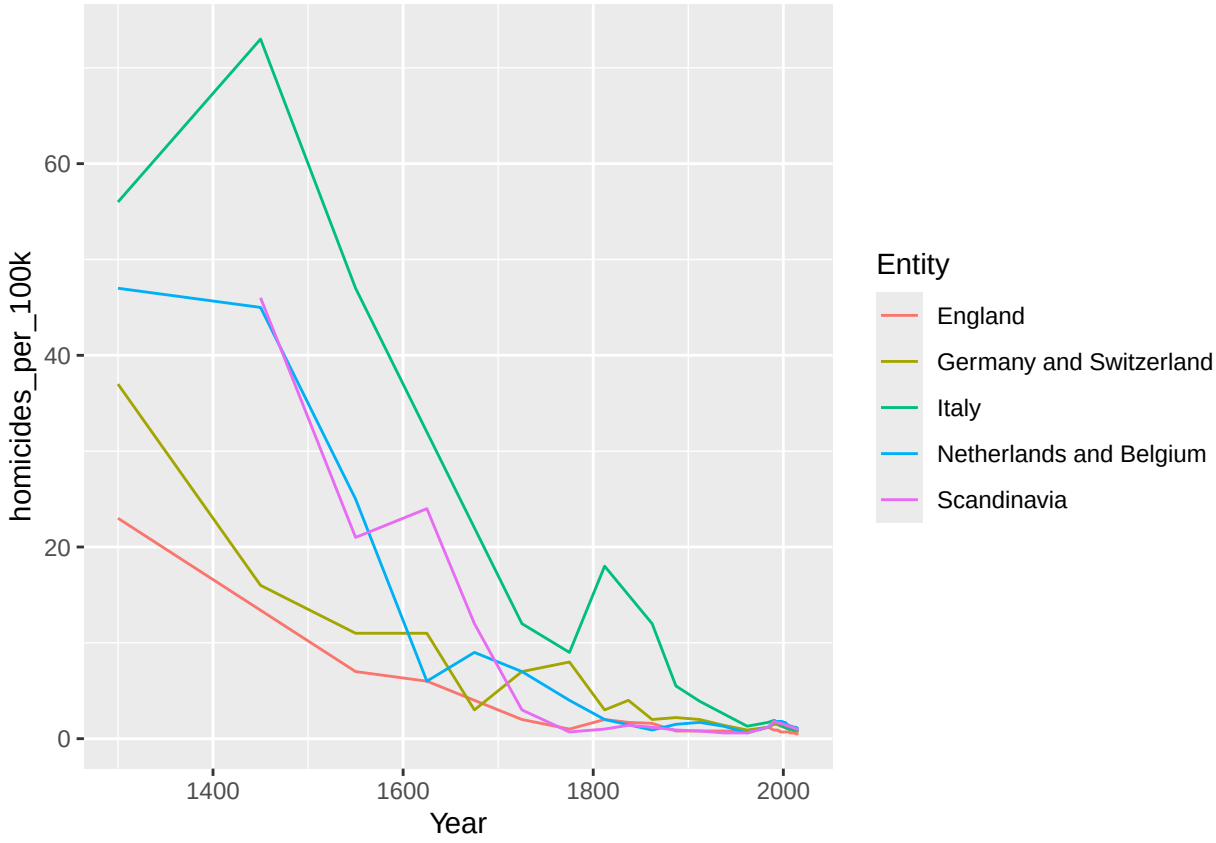
```
## # A tibble: 6 x 4
##   Entity  Code   Year Homicide rate in Europe over long-term (per 100,000) (ho~1
##   <chr>   <chr> <dbl>                                                      <dbl>
## 1 England <NA>   1300                                                         23
## 2 England <NA>   1550                                                          7
## 3 England <NA>   1625                                                          6
## 4 England <NA>   1675                                                          4
## 5 England <NA>   1725                                                          2
## 6 England <NA>   1775                                                          1
## # i abbreviated name:
## #   1: `Homicide rate in Europe over long-term (per 100,000) (homicides per 100,000 people)`
```

Renaming "Homicide rate in Europe over long-term (per 100,000)" to "homicides_per_100k"

```
names(Western_Europe)[4] <- "homicides_per_100k"
```

Seeing the long-term trend in homicides

```
Western_Europe %>%
  ggplot(aes(x = Year, y = homicides_per_100k, color = Entity)) +
  geom_line()
```

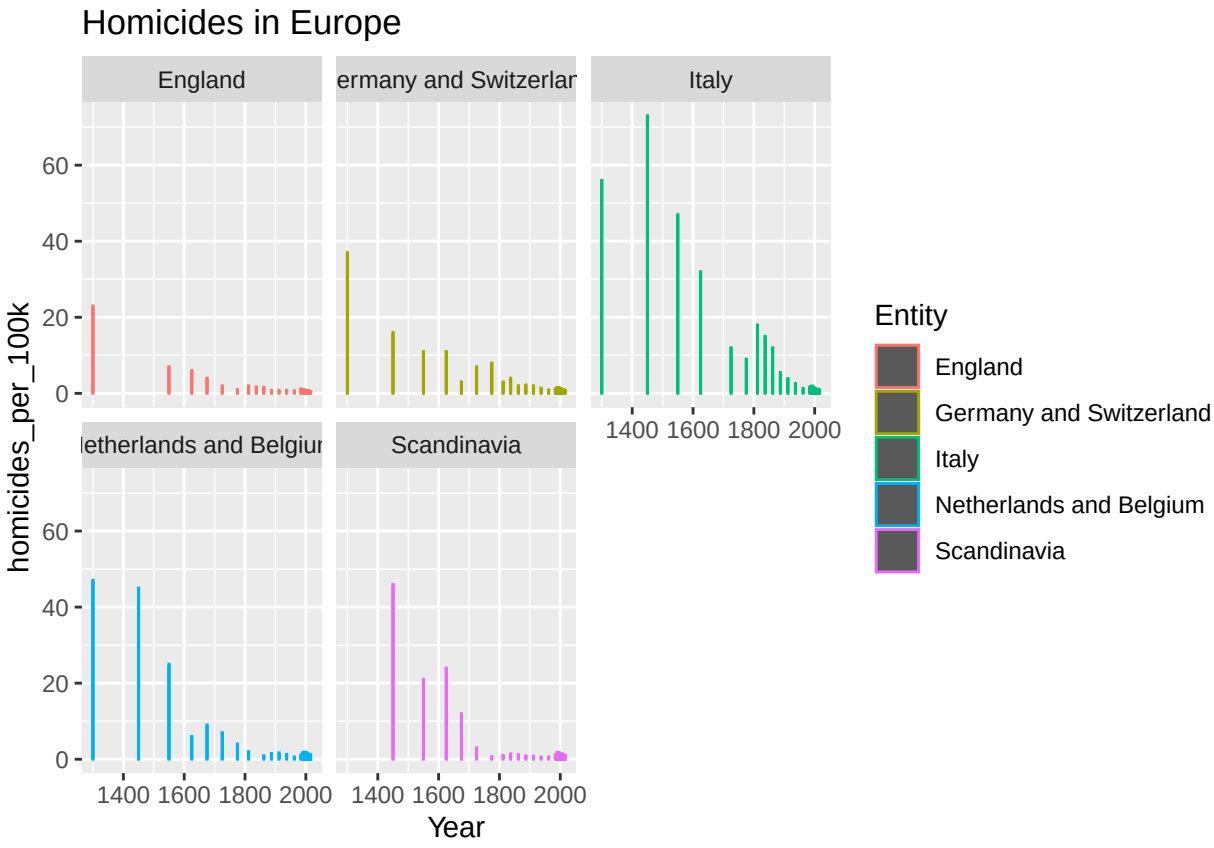



```
eval(Western_Europe)
```

```
## # A tibble: 206 x 4
##    Entity  Code   Year homicides_per_100k
##    <chr>   <chr> <dbl>              <dbl>
##  1 England <NA>   1300               23
##  2 England <NA>   1550                7
##  3 England <NA>   1625                6
##  4 England <NA>   1675                4
##  5 England <NA>   1725                2
##  6 England <NA>   1775                1
##  7 England <NA>   1812                2
##  8 England <NA>   1837                1.7
##  9 England <NA>   1862                1.6
## 10 England <NA>   1887                0.8
## # i 196 more rows
```

Making it easier to see

```
Western_Europe %>%
  ggplot(aes(x = Year, y = homicides_per_100k, color = Entity)) +
  geom_bar(stat = "identity", position = "dodge") +
  labs(title="Homicides in Europe",
       x = "Year",
       y = "homicides_per_100k") +
  facet_wrap(~ Entity)
```



Now we have a look at our Danish Rulers Data Set

```
library(readr)
Danske_konger_Gruppe11 <- read_csv("data/Danske_konger_Gruppe11.csv")
```

```
## Rows: 57 Columns: 5
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (2): Navne, fodsels aar
## dbl (3): Dods aar, Start paa regerings tid, Slut paa regerings tid
##
## 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.
```

Plotting the data

```
Danske_konger_Gruppe11 %>%
  mutate(duration = `Slut paa regerings tid` - `Start paa regerings tid`) %>%
  mutate(midyear = `Start paa regerings tid` - duration/2) %>%
  ggplot(aes(x = midyear, y = duration)) +
  geom_smooth()
```

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```

```
## Warning: Removed 1 row containing non-finite outside the scale range
## (`stat_smooth()`).
```