Innlevering 2

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Utfordring 2.3

Setter opp slik at plottene kan kjøres

```
setwd("/Users/amundbech1/Desktop/sok-2008")

library(readr)
library(ggplot2)
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v tibble  3.1.4     v dplyr   1.0.7
## v tidyr   1.1.3     v stringr 1.4.0
## v purrr   0.3.4     v forcats 0.5.1

## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(readr)
library(plyr)
```

```
## Warning: package 'plyr' was built under R version 4.1.2

## ------------------------------------------------------------------------------

## You have loaded plyr after dplyr - this is likely to cause problems.
## If you need functions from both plyr and dplyr, please load plyr first, then dplyr:
## library(plyr); library(dplyr)

## ------------------------------------------------------------------------------

##
## Attaching package: 'plyr'

## The following objects are masked from 'package:dplyr':
##
##     arrange, count, desc, failwith, id, mutate, rename, summarise,
##     summarize
```

```
## The following object is masked from 'package:purrr':
##
##     compact
```

```
library(dplyr)

union<- read_csv("https://uit-sok-2008-h22.github.io/Assets/union_unempl.csv") #This loads the data wit
```

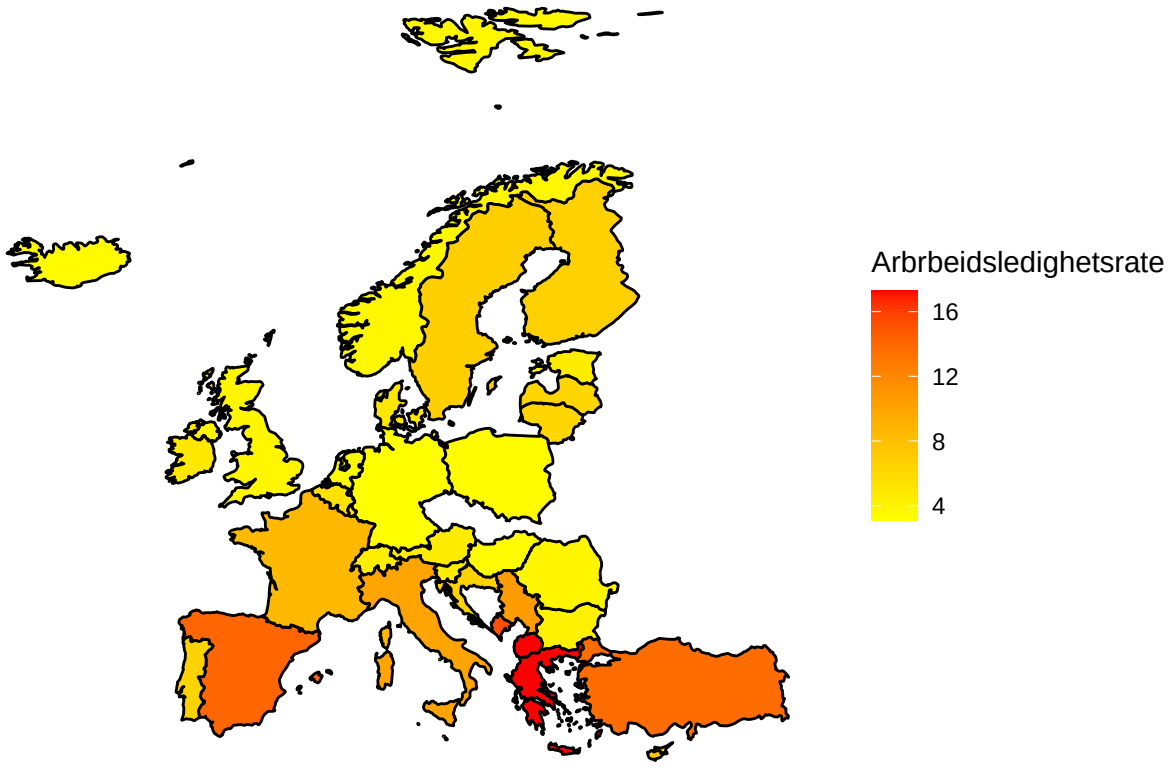
```
## Rows: 33 Columns: 10
```

```
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (5): country, iso3c, level, coord, age
## dbl (5): year, density, coverage, unempl, mean_unempl2015_2019
```

```
##
## 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.
```

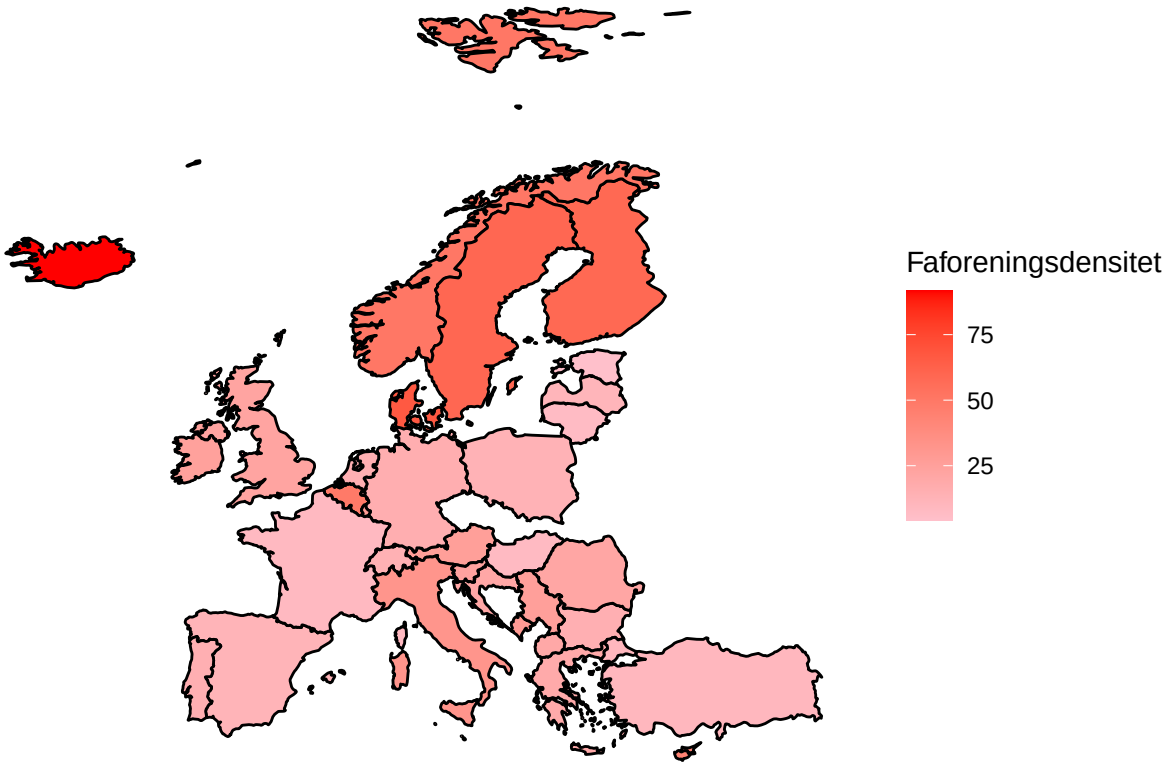
```
#Changing the name of a single observation. The below code changes all observations called "United King
union$country <- gsub("United Kingdom", "UK", union$country)

# Renaming a variable. The below code renames the variable "Country" to "Region".
names(union)[names(union) == "country"] <- "region"

#Excess coverage
union$excess_cover<-union$coverage - union$density #




#Lager dataset fra verden og kombinerer med vårt dataset
mapdata <- map_data("world")
mapdata <- left_join(mapdata, union, by="region")

# Lager et nytt dataset som fjerner alle NA values
mapdata_unempl<- mapdata %>% filter(!is.na(mapdata$unempl))
```

```
map1 <- ggplot(mapdata_unempl, aes( x = long, y = lat, group=group)) +
  geom_polygon(aes(fill = unempl), color = "black") +
  scale_fill_gradient(name = "Arbrbeidsledighetsrate", low = "yellow", high =
                        "red", na.value = "grey50") +
  theme(axis.text.x = element_blank(),
        axis.text.y = element_blank(),
        axis.ticks = element_blank(),
        axis.title.y=element_blank(),
        axis.title.x=element_blank(),
        rect = element_blank())
map1
```



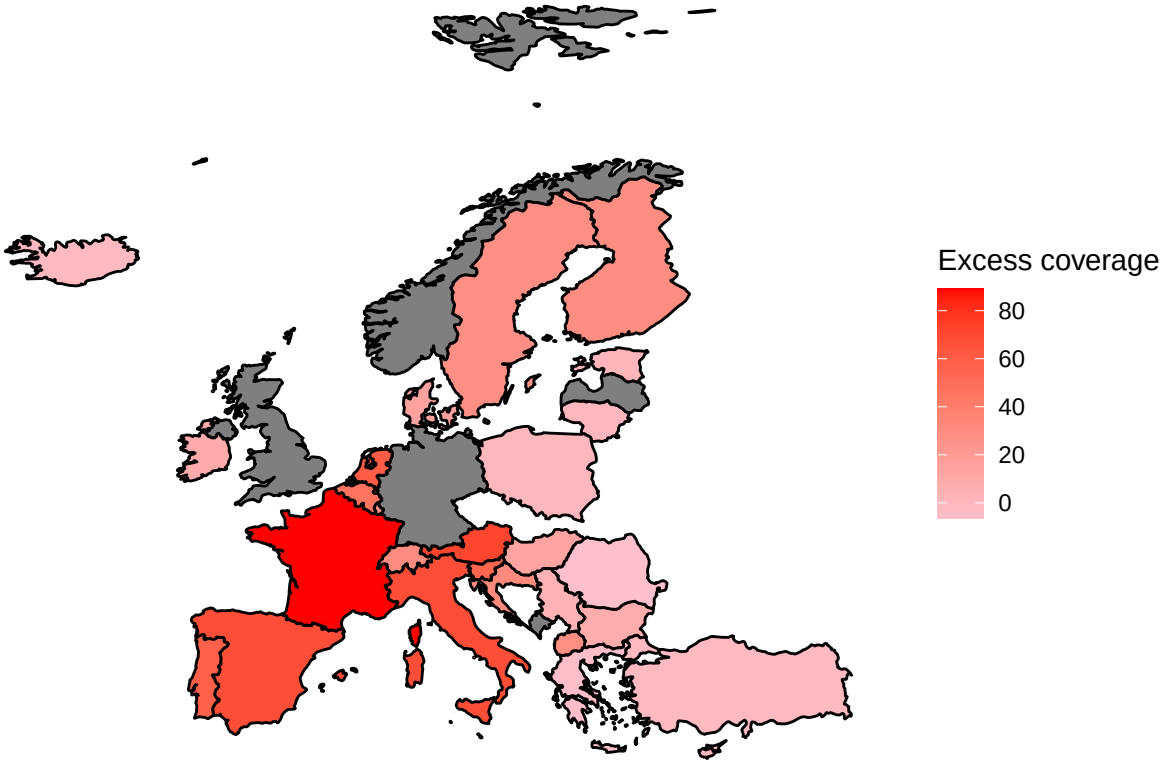
Over ser vi et plot over arbeidsledigheten. Den viser at de nordiske landene samt sentral europa og østlige land har relativt lav arbeidsledighet. De landene med høy arbeidsledighet er de sørlige landene i Europa.

```
map3 <- ggplot(mapdata_unempl, aes( x = long, y = lat, group=group)) +
  geom_polygon(aes(fill = density), color = "black") +
  scale_fill_gradient(name = "Faforeningsdensitet", low = "pink",
                      high =  "red", na.value = "grey50") +
  theme(axis.text.x = element_blank(),
        axis.text.y = element_blank(),
        axis.ticks = element_blank(),
        axis.title.y=element_blank(),
        axis.title.x=element_blank(),
        rect = element_blank())
map3
```



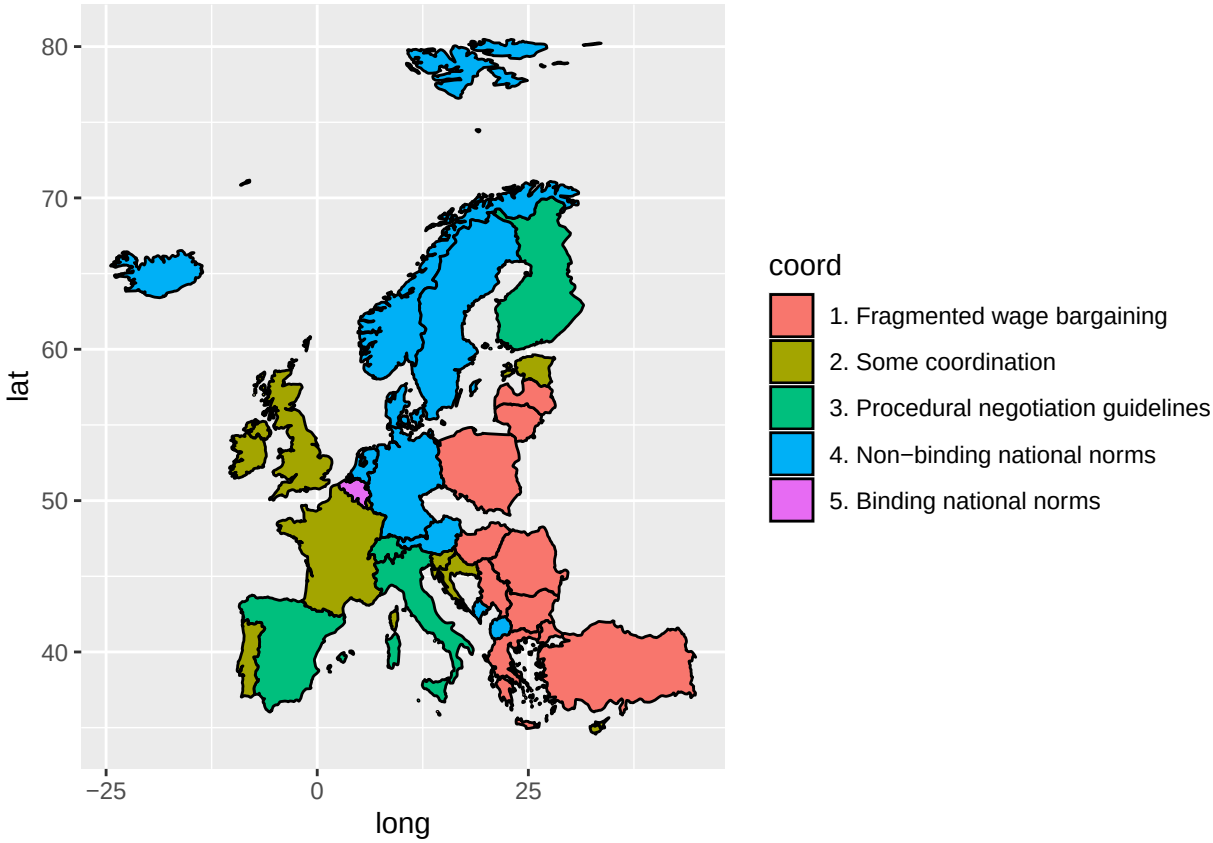
Dette plottet viser fagforeningsdensiteten i Europa. Her vises det at de nordiske landene har høyere fagforeningsdensitet enn de andre landene i Europa.

```
map5 <- ggplot(mapdata_unempl, aes( x = long, y = lat, group=group)) +
  geom_polygon(aes(fill = excess_cover), color = "black")+
  scale_fill_gradient(name = "Excess coverage", low = "pink", high =  "red", na.value = "grey50")+
  theme(axis.text.x = element_blank(),
        axis.text.y = element_blank(),
        axis.ticks = element_blank(),
        axis.title.y=element_blank(),
        axis.title.x=element_blank(),
        rect = element_blank())
map5
```



Plottet over viser excess coverage

```
map6 <- ggplot(mapdata_unempl, aes( x = long, y = lat, group=group)) +
  geom_polygon(aes(fill = coord), color = "black")
map6
```



I dette plottet vises hvordan koordingering av lønnsfastsettelse

Grunnen til at det er sterke fagforeninger og lav arbeidsledighet i de nordiske landene kan være at det er kollektive avtaler mellom interessese organiasjoner og arbeidsgiver, eller for eksempel at fagforeningene i norden er mye større enn andre plasser i Europa.

Sammenlignet med kapittel 3 i Boeri og van Ours er at plottene vist her er veldig like med det som vises i boken.