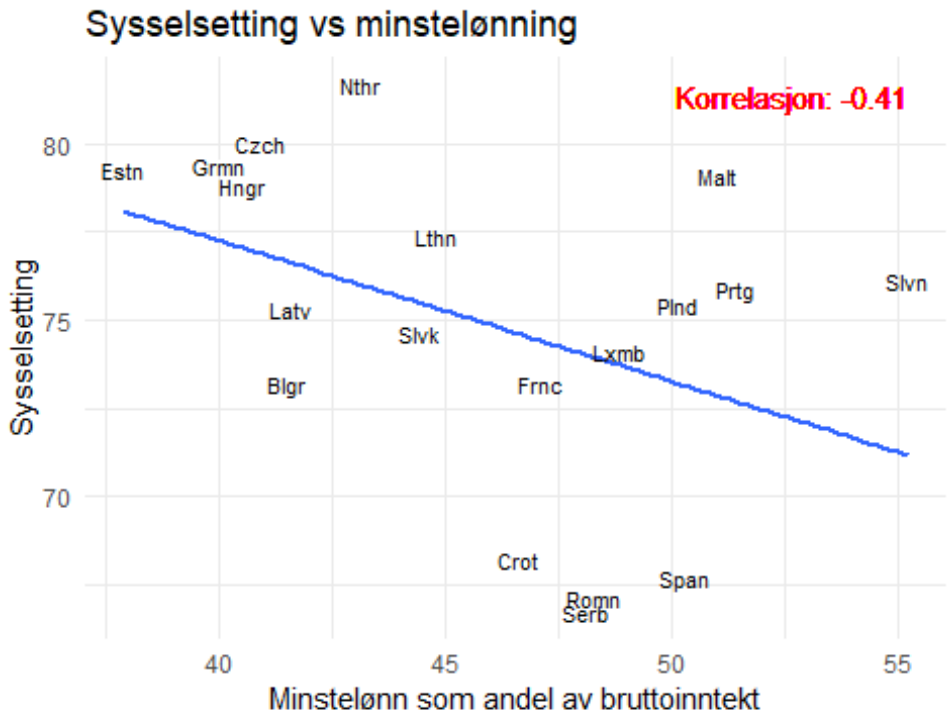
20sok_2008_h23_utf2


```
rm(list=ls())
Sys.setlocale(locale='no_NB.utf8')

[1]
"LC_COLLATE=no_NB.utf8;LC_CTYPE=no_NB.utf8;LC_MONETARY=no_NB.utf8;LC_NUMERIC=
C;LC_TIME=no_NB.utf8"

library(eurostat)
library(tidyverse)

── 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     1.0.2
── Conflicts ────────────────────────────────────────── tidyverse_conflicts()
──
✖ dplyr::filter() masks stats::filter()
✖ dplyr::lag()    masks stats::lag()
ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all
conflicts to become errors

earn_mw_avgr2 <- get_eurostat('earn_mw_avgr2', type= "label")

lfsi_emp_a <- get_eurostat('lfsi_emp_a', type= "label")

minstelonn_inntekt <- earn_mw_avgr2 %>%
  filter(time == "2021-01-01") %>%
  filter(nace_r2 == "Business economy") %>%
  filter(indic_se == 'Monthly minimum wage as a proportion of the mean gross
monthly earnings') %>%
  mutate(country_abbr = abbreviate(geo,4,strict = FALSE))

sysselsetting <- lfsi_emp_a %>%
  filter(age == 'From 20 to 64 years') %>%
  filter(time == '2021-01-01') %>%
  filter(sex == "Total") %>%
  filter(unit == "Percentage of total population") %>%
  filter(indic_em == 'Total employment (resident population concept - LFS)')

# Fjerner variabler for EU.
sysselsetting <- sysselsetting[!grepl("Eu",sysselsetting$geo),]
```

```r
# Setter sammen til en dataframe.
df <- minstelonn_inntekt %>%
  left_join(sysselsetting, by = "geo")

# Fjerner unødvendige kolonner.
df <- df %>%
  select(-unit.x) %>%
  select(-unit.y) %>%
  select(-sex) %>%
  select(-time.y)

df <- na.omit(df)

fig <- df %>%
  ggplot(aes(values.x,values.y)) + geom_point(color="white") +
theme_minimal() + geom_smooth(method=lm, se=FALSE) + labs(title =
"Sysselsetting vs minstelønning") + xlab("Minstelønn som andel av
bruttoinntekt") + ylab('Sysselsetting') + labs(caption = "Figur 1") +
geom_text(aes(x = max(values.x), y = max(values.y), #Plassering av
korrelasjons-koeffisient
                label = paste("Korrelasjon:", round(cor(values.x,values.y),
2))),
            hjust = 1, vjust = 1, size = 4, color = "red") +
geom_text(aes(label= country_abbr),size=3)


fig
```

```
`geom_smooth()` using formula = 'y ~ x'
```

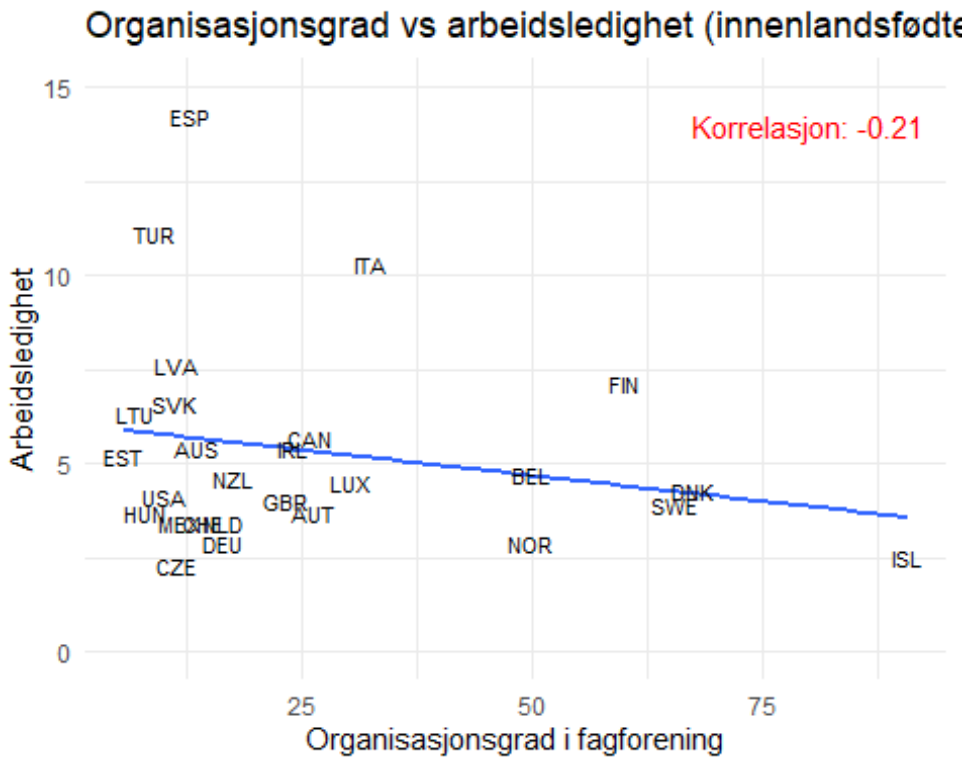


Figur 1

```
library(OECD)
library(dplyr)
library(grid)

arbeidsledighetsrate <- get_dataset("MIG_NUP_RATES_GENDER")

organisasjonsgrad <- get_dataset("TUD")

organisasjonsgrad <- organisasjonsgrad %>%
  filter(Time == "2018") %>%
  select(-OBS_STATUS) %>%
  rename(COUNTRY = LOCATION) %>%
  select(-TIME_FORMAT) %>%
  select(-Time) %>%
  mutate(ObsValue = as.numeric(ObsValue))

arbeidsledighetsrate <- arbeidsledighetsrate %>%
  filter(Time == "2018") %>%
  filter(GENDER == "TOT") %>%
  filter(RATE == "U_RATE") %>%
  select(-TIME_FORMAT) %>%
  mutate(ObsValue = as.numeric(ObsValue))

arbeidsledighetsrate_FB <- arbeidsledighetsrate %>%
  filter(BIRTH == "FB")
```

```r
arbeidsledighetsrate_NB <- arbeidsledighetsrate %>%
  filter(BIRTH == "NB")

df2 <- organisasjonsgrad %>%
  left_join(arbeidsledighetsrate_FB, by = "COUNTRY")

df3 <- organisasjonsgrad %>%
  left_join(arbeidsledighetsrate_NB, by = "COUNTRY")

fig2 <- df3 %>%
  ggplot(aes(ObsValue.x,ObsValue.y)) + geom_point(color="white") +
theme_minimal() + geom_smooth(method=lm, se=FALSE) + labs(title =
"Organisasjonsgrad vs arbeidsledighet (innenlandsfødte)") +
ylab("Arbeidsledighet") + xlab("Organisasjonsgrad i fagforening") +
annotate("text", x=80, y=14, label= "Korrelasjon: -0.21", color="red") +
geom_text(aes(label= COUNTRY),size=3) + ylim(0,15)

fig2
```

```
`geom_smooth()` using formula = 'y ~ x'

Warning: Removed 5 rows containing non-finite values (`stat_smooth()`).

Warning: Removed 5 rows containing missing values (`geom_point()`).

Warning: Removed 5 rows containing missing values (`geom_text()`).
```



```r
library(gridExtra)
```

```
Attaching package: 'gridExtra'

The following object is masked from 'package:dplyr':

    combine
```

```r
fig3 <- df2 %>%
  ggplot(aes(ObsValue.x,ObsValue.y)) + geom_point(color="white") +
geom_text(aes(label=COUNTRY),size=3) + theme_minimal() +
geom_smooth(method=lm, se=FALSE) + ylab('Arbeidsledighet') + ylim(0,20) +
annotate("text", x=60, y=20, label= "Utenlandsfødte", color="red") + xlab("")
+ annotate("text", x=60, y=19, label= "Korrelasjon: 0.27", color="red")

cor.test(df2$ObsValue.x,df2$ObsValue.y)
```

```
    Pearson's product-moment correlation

data:  df2$ObsValue.x and df2$ObsValue.y
t = 1.395, df = 24, p-value = 0.1758
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 -0.1269617  0.5977962
sample estimates:
      cor
0.2738582
```

```r
fig4 <- df3 %>%
  ggplot(aes(ObsValue.x,ObsValue.y)) + geom_point(color="white") +
geom_text(aes(label=COUNTRY),size=3) + theme_minimal() +
geom_smooth(method=lm, se=FALSE) + ylim(0,20) + ylab("") + annotate("text",
x=60, y=20, label= "Innenlandsfødte", color="red") + xlab("") +
annotate("text", x=60, y=19, label= "Korrelasjon: -0.21", color="red")

cor.test(df3$ObsValue.x,df3$ObsValue.y)
```

```
    Pearson's product-moment correlation

data:  df3$ObsValue.x and df3$ObsValue.y
t = -1.1221, df = 25, p-value = 0.2725
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 -0.5529719  0.1756590
sample estimates:
      cor
-0.218972
```

```
grid.arrange(fig3,fig4, nrow = 1, top = textGrob("Organisasjonsgrad i
fagforeninger vs arbeidsledighet"), bottom = textGrob("Organisasjonsgrad i
fagforeninger"))
```

```
`geom_smooth()` using formula = 'y ~ x'

Warning: Removed 7 rows containing non-finite values (`stat_smooth()`).

Warning: Removed 7 rows containing missing values (`geom_point()`).

Warning: Removed 7 rows containing missing values (`geom_text()`).

`geom_smooth()` using formula = 'y ~ x'

Warning: Removed 5 rows containing non-finite values (`stat_smooth()`).

Warning: Removed 5 rows containing missing values (`geom_point()`).

Warning: Removed 5 rows containing missing values (`geom_text()`).
```