

```
library(dplyr)  
  
rladies_global %>%  
  filter(city == 'Bucharest')
```



ROMANIAN WOMEN PROFILE

KEY FACTS AND TRENDS PREPARED USING R

Simona Grădinaru



“

Simona, Data Scientist: In 3 words: enthusiastic, friendly and positive.

Enthusiastic and passionate Data Scientist with 3+ years of experience in transforming data into insights. Likes to play with data until the story comes to live.

Passionate about foosball, hiking, cooking, coloring and astronomy.

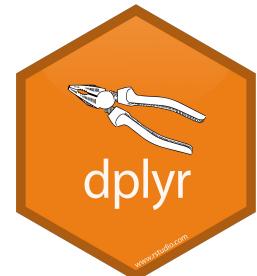
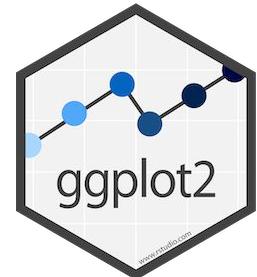


Foreword

The purpose of this presentation is to illustrate some recent demographic and financial trends with regard to women in Romania.

The data used for this exploratory analysis is publicly available at TEMPO-Online, a tool provided by INSSE.

All results are purely informative and we highly encourage the audience to use them as a starting point for an open discussion.



Women in Romania

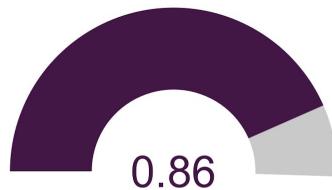


Women outnumber men, but is this enough to outnumber ideas?

- In rural areas, men outnumber women*, is it because population declining or women leave for working abroad? Or maybe is the lack of infrastructure?
- Marriage is no longer an early age priority
- Financial gap is a fact

*ages <60yrs

Human Sex Ratio weights towards Women !



86 Males to 100 Females



96 Males to 100 Females

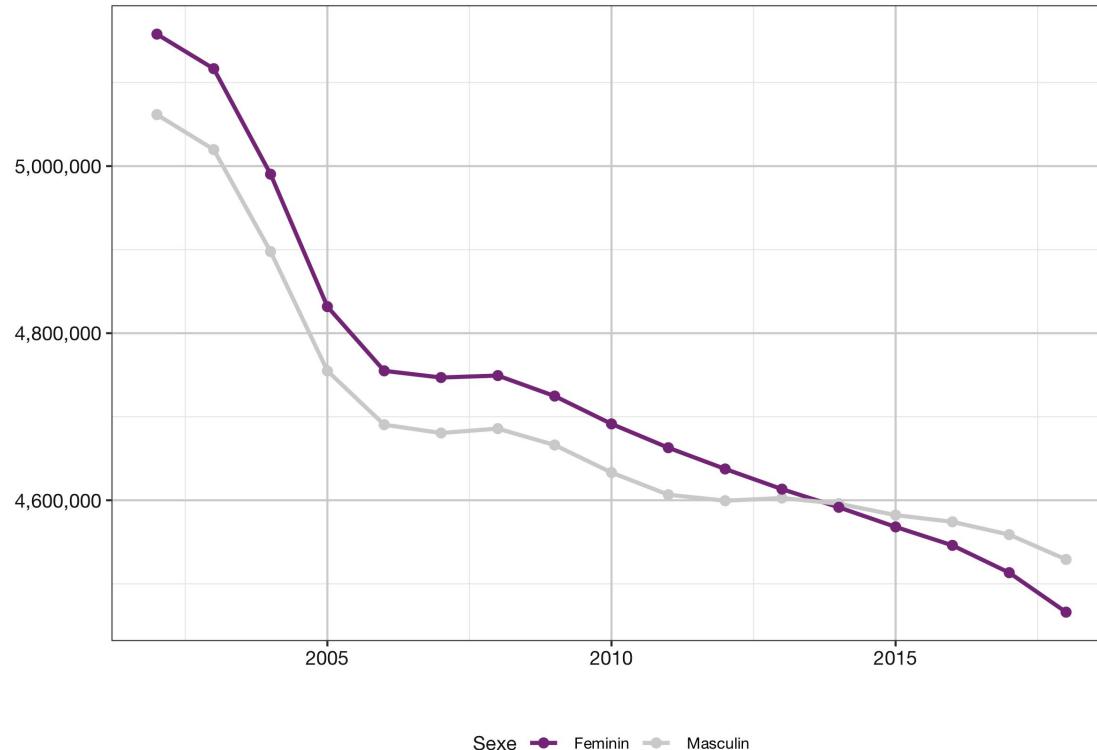


101 Males to 100 Females

Region Bucharest Romania Worldwide

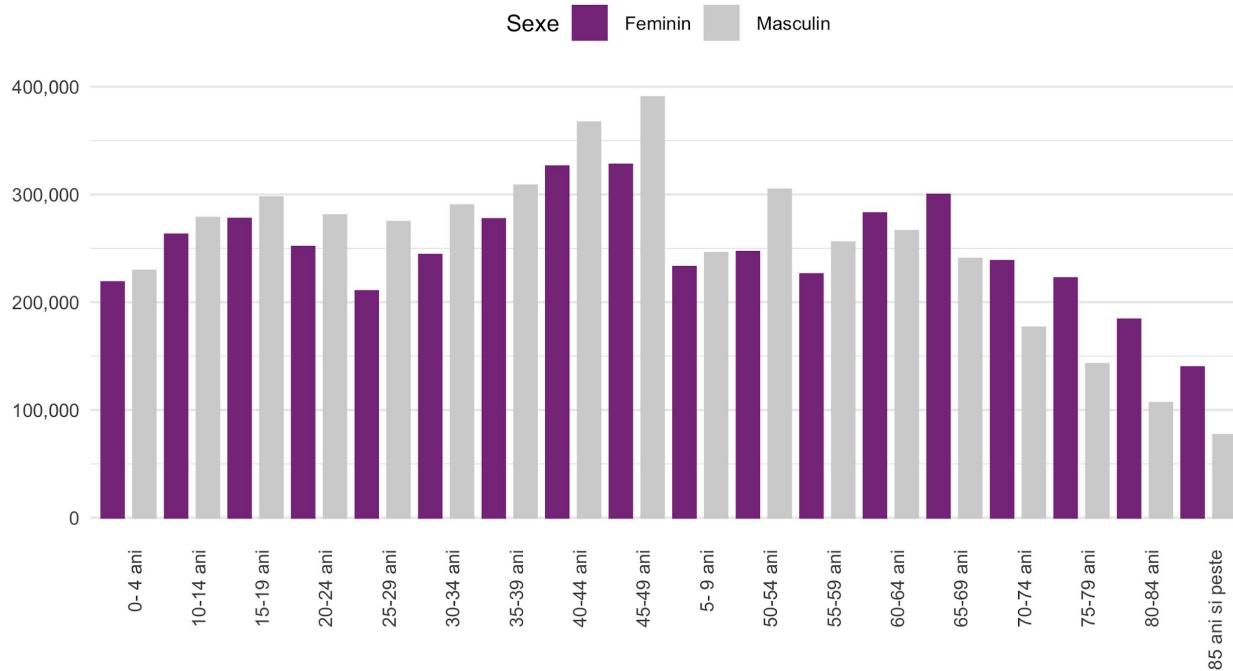
(INSSE POP106A - Populatia Rezidenta; Wikipedia, 2018)

But women seem to shrink in the rural areas



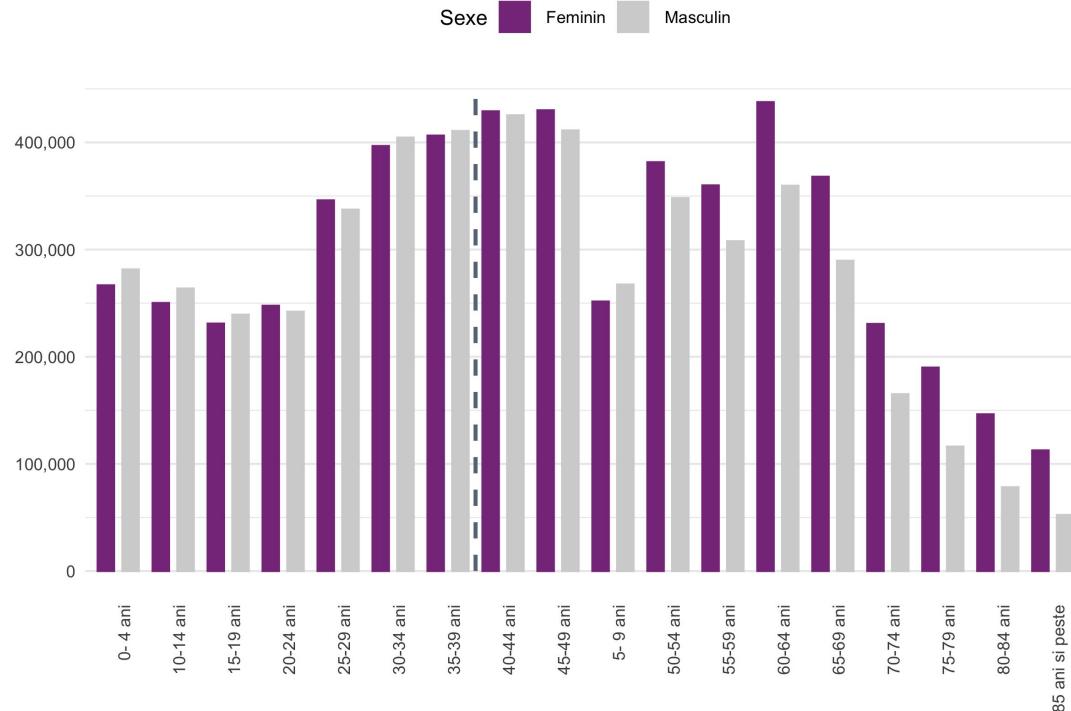
Source: INSSE TEMPO-Online, POP106A - Populația rezidentă la 1 iulie pe grupe de varsta și varste, sexe, medi de rezidentă, macroregiuni, regiuni de dezvoltare și județe.

Rural environment is "ruled" bv men

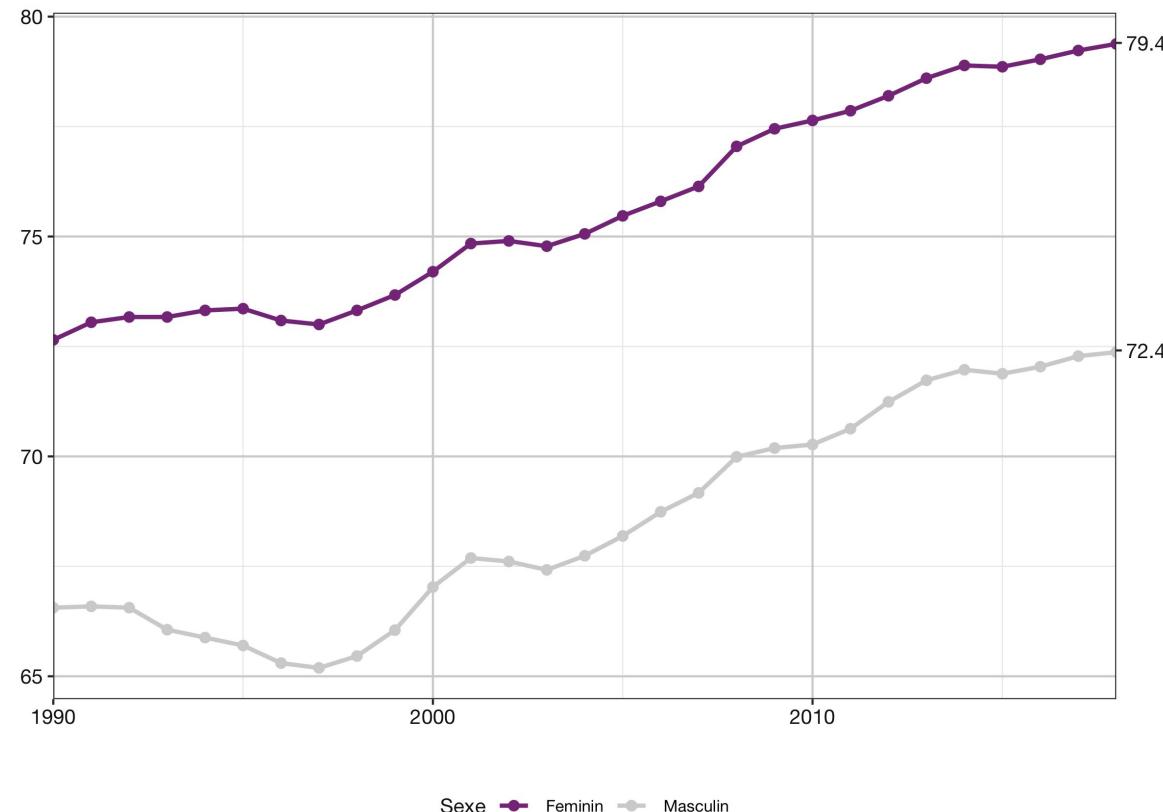


INSSE TEMPO-Online: POP106A - Populatia rezidenta la 1 iulie pe grupe de varsta si varste, sexe, medii de rezidenta, macroregiuni, regiuni de dezvoltare si judete.

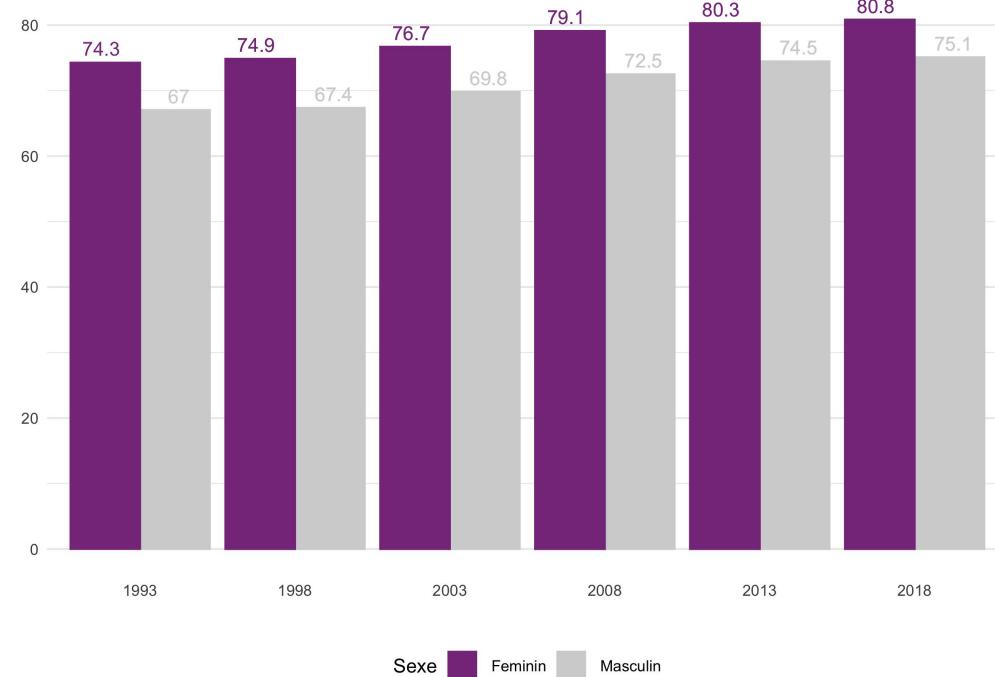
In urban areas women become a majority in age groups above 40 years



So, do women have a longer life?



Not to mention that living in Bucharest brings a higher life span!



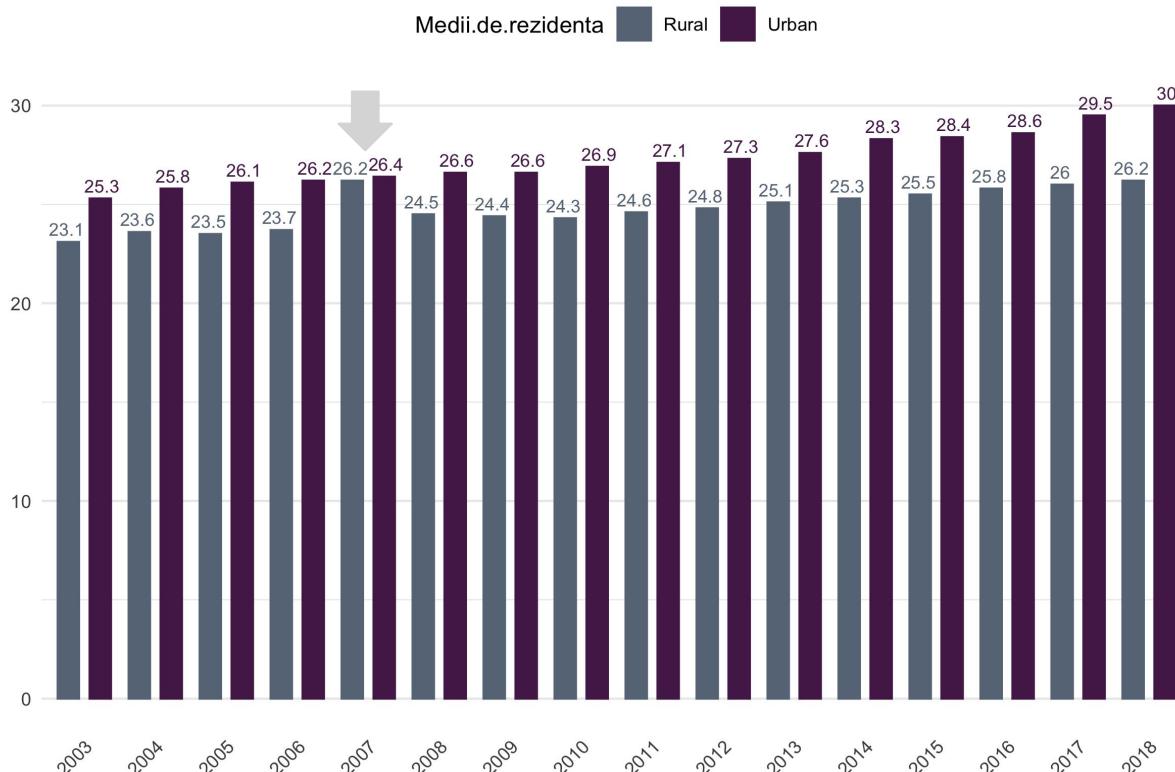
Source: INSSE TEMPO-Online, POP217A - Durata medie a vietii pe medii de rezidenta, sexe.



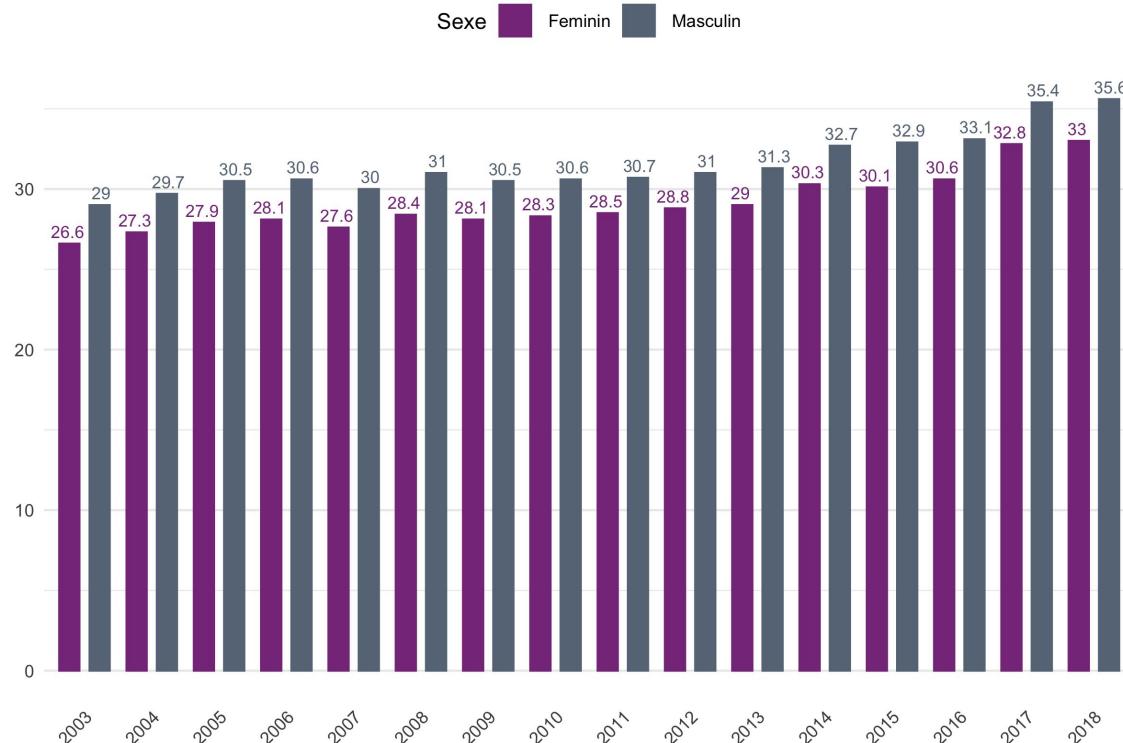
Marriage

No longer a priority for women

Women gradually slowed down the marriage



Faster pace in Bucharest, while men follow it



Lots of couples got married before the crisis!



Marriage age in Romania - Women

23.7 years

1990, average

22 years

1990, first marriage

30.6 years

2018, average

28.7 years

2018, first marriage

Marriage age in Romania - Men

26.9 years

1990, average

25 years

1990, first marriage

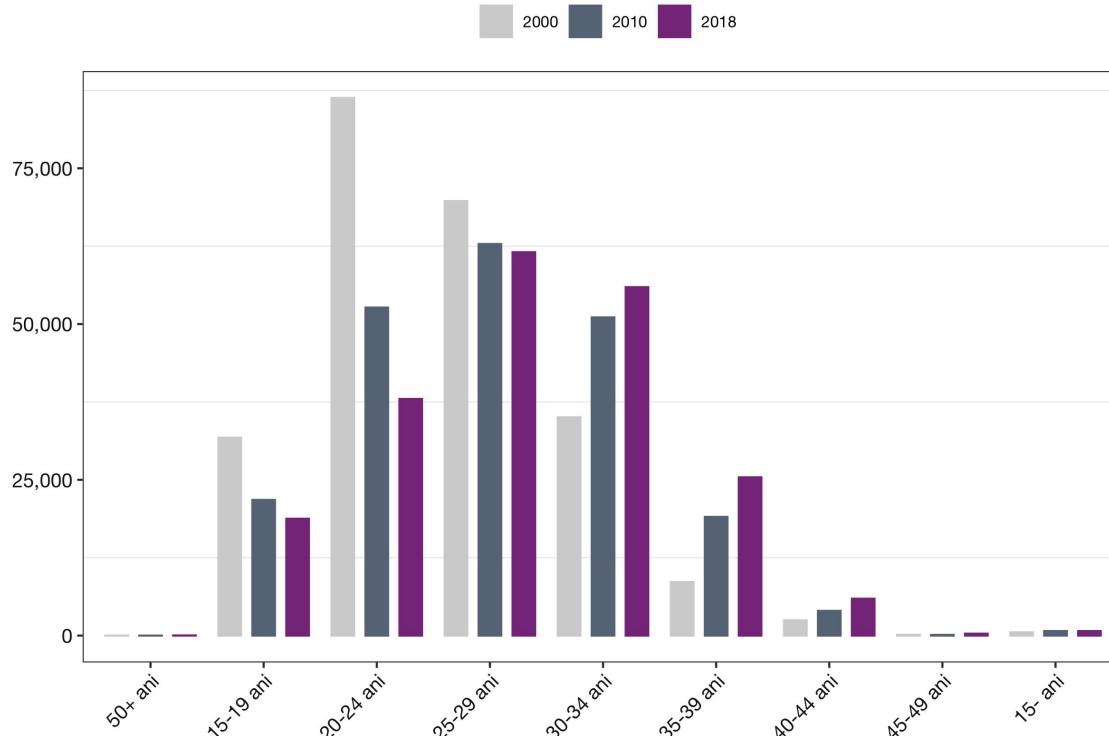
33.8 years

2018, average

31.9 years

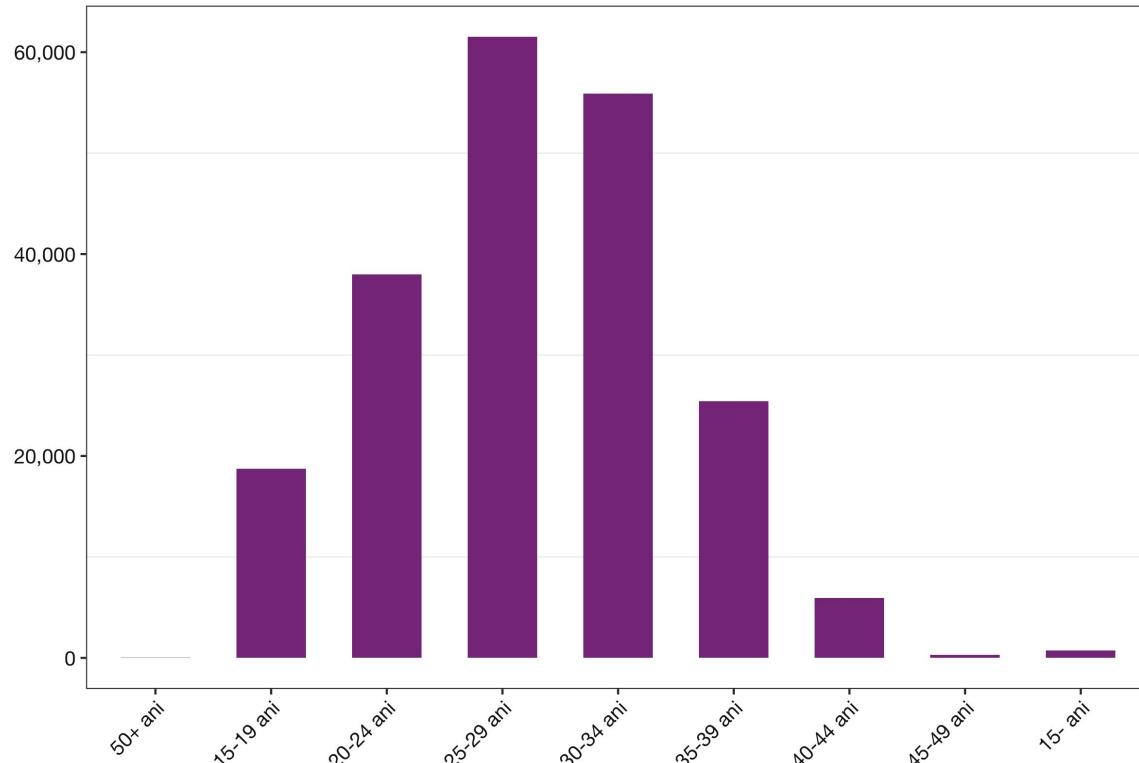
2018, first marriage

But also having kids is postponed



Source: INSSE TEMPO-Online, POP201B - Nascuti vii pe grupe de varsta ale tatalui si grupe de varsta ale mamei, macroregiuni, regiuni de dezvoltare si judete.

Nowadays, women plan having kids around 30

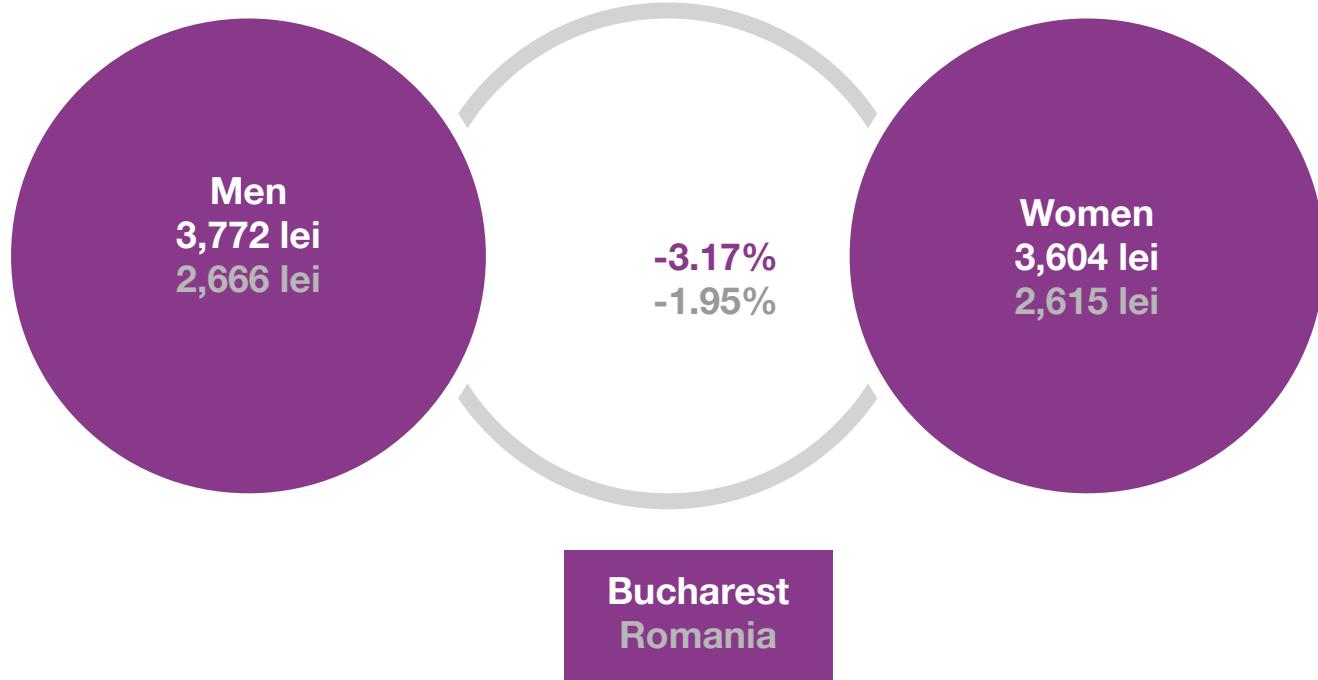




Career & financials

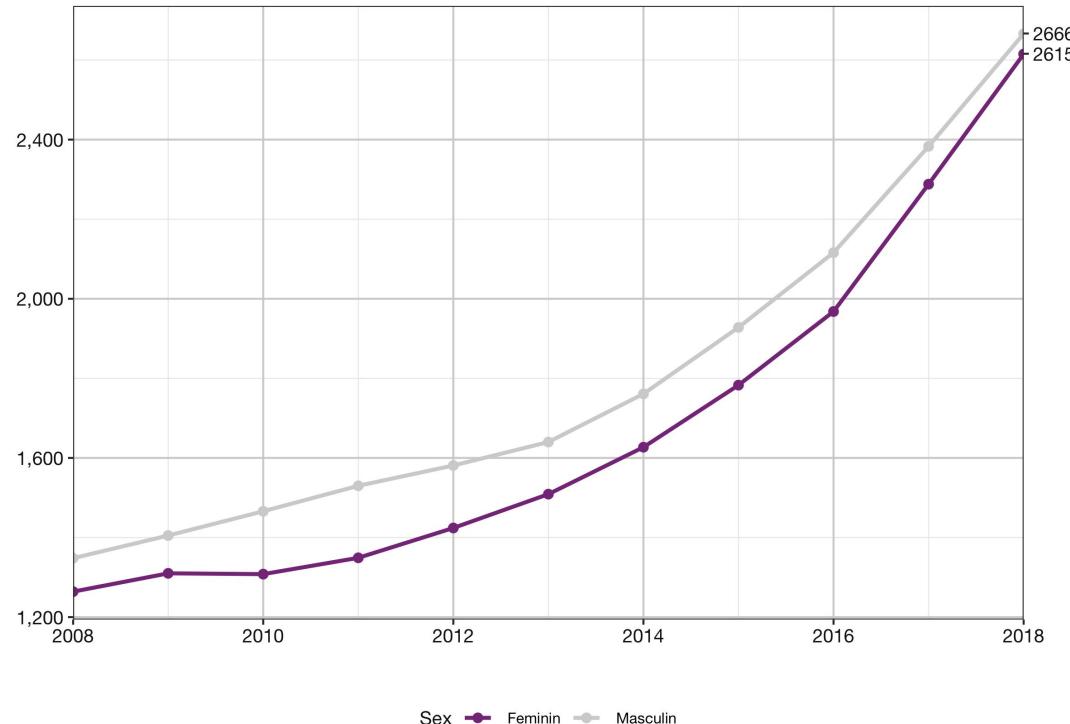
Gap - a reality for women

Gender Pay-Gap exists!



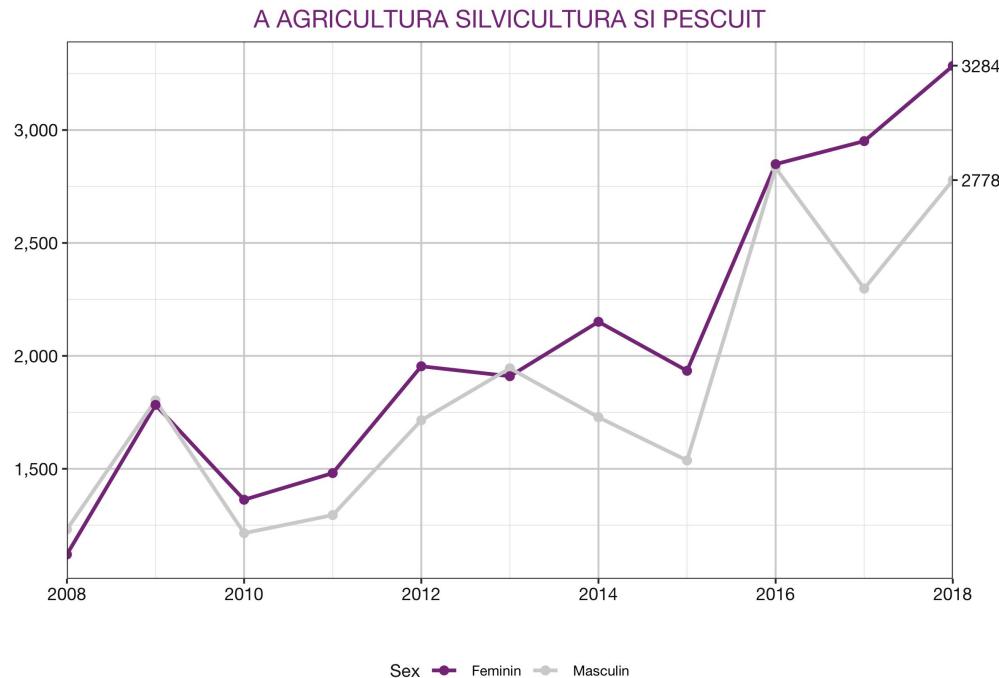
Source: INSSE TEMPO- Online, FOM106E -
Castigul salarial nominal mediu net lunar.

And it has been a **trend** for quite a while



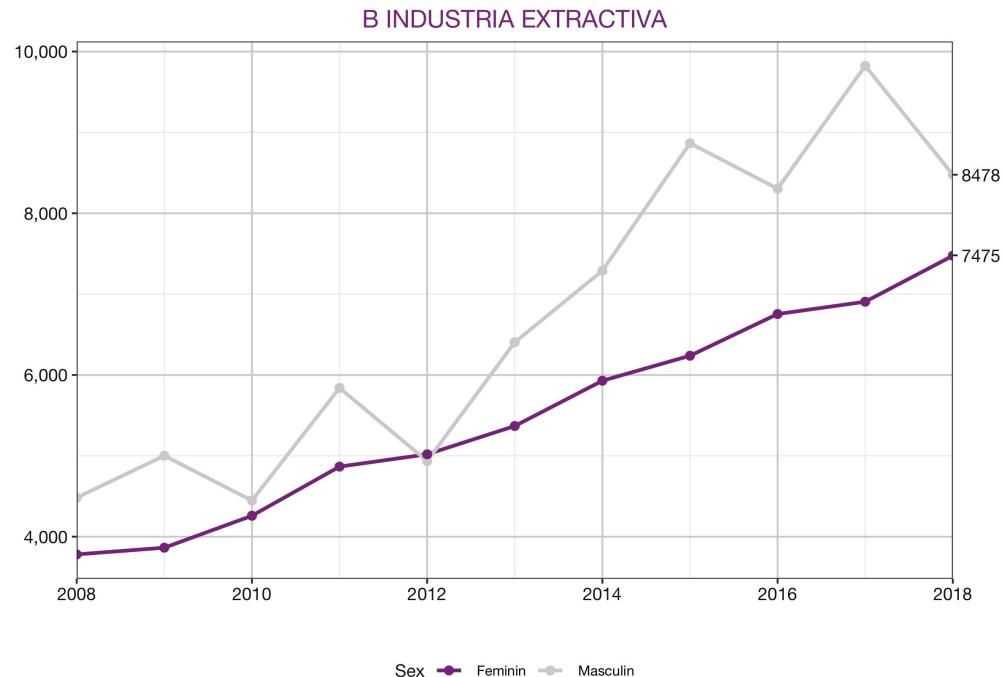
Source: INSSE TEMPO-Online, FOM106E - Castigul salarial nominal mediu net lunar pe activitati ale economiei nationale la nivel de sectiune CAEN Rev.2 si sexe.

Across all industries...



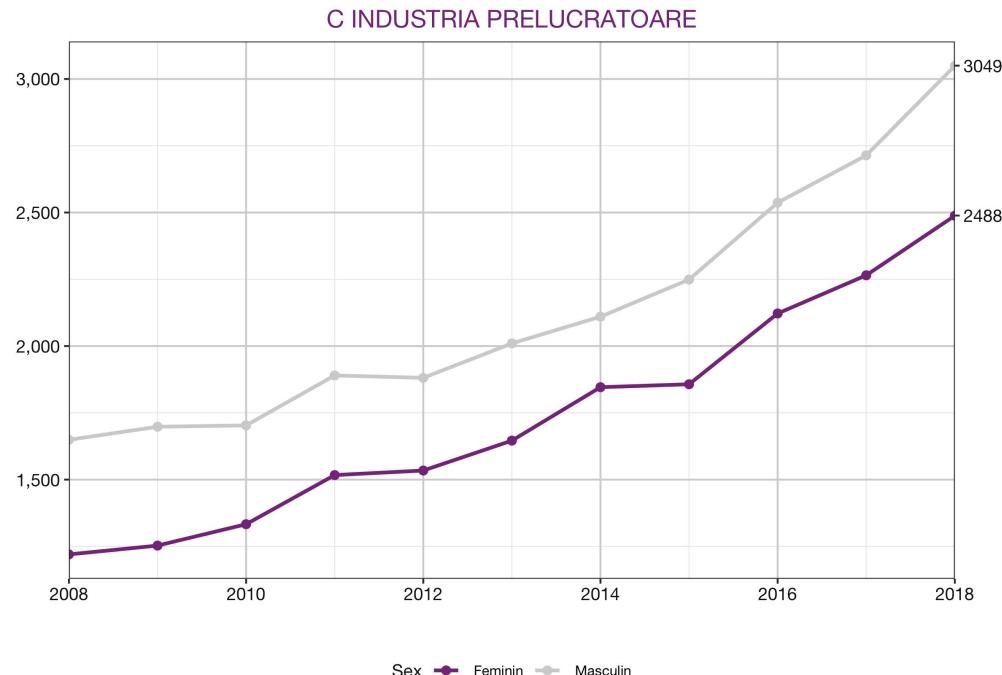
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Across all industries...



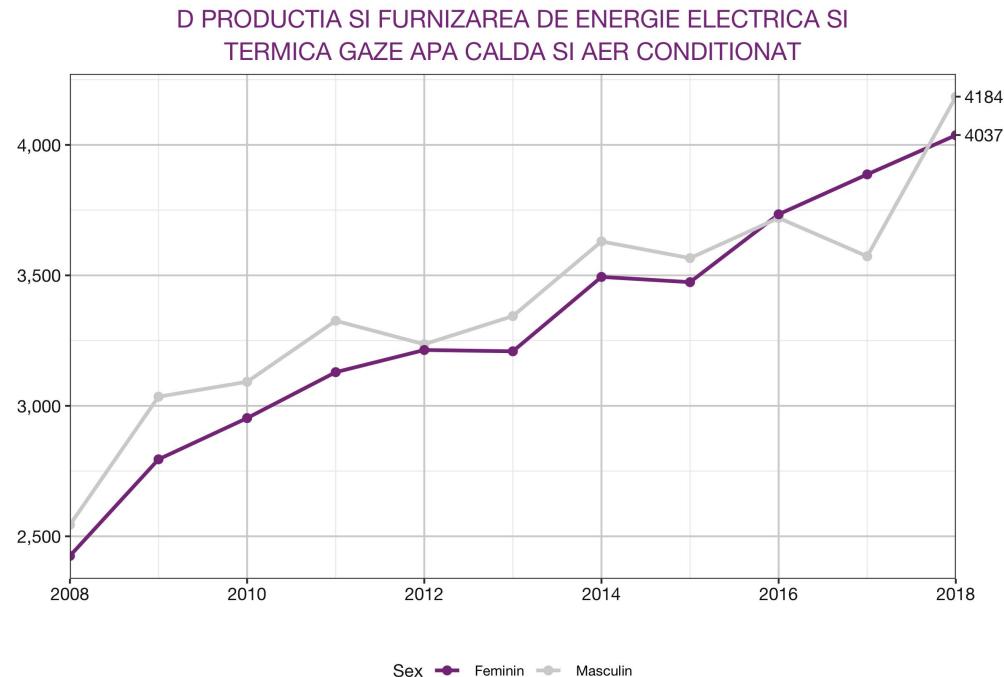
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Across all industries...



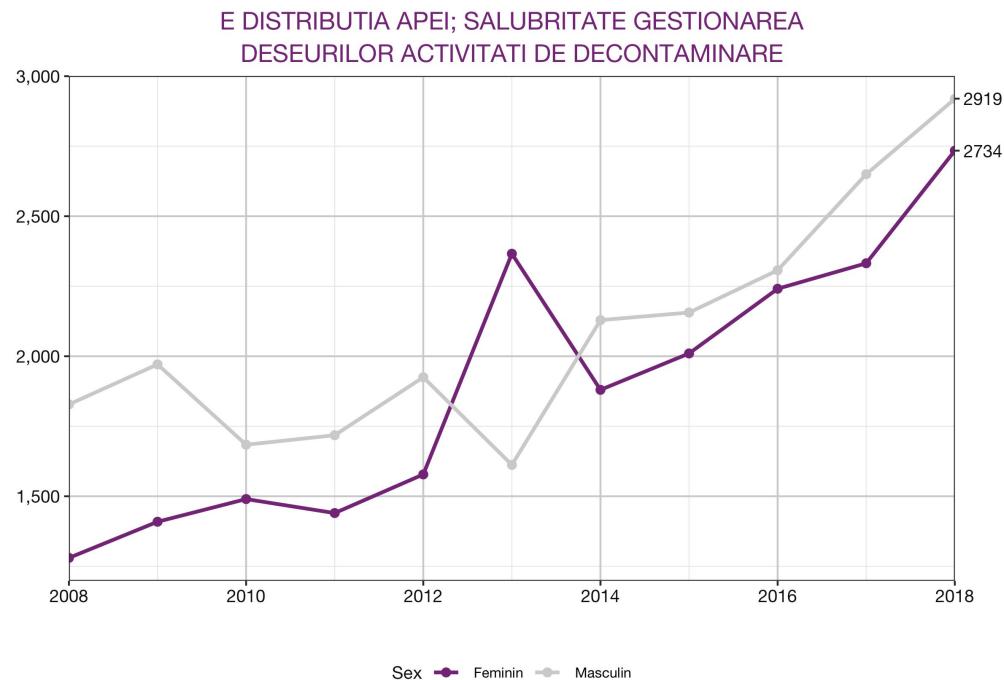
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Across all industries...



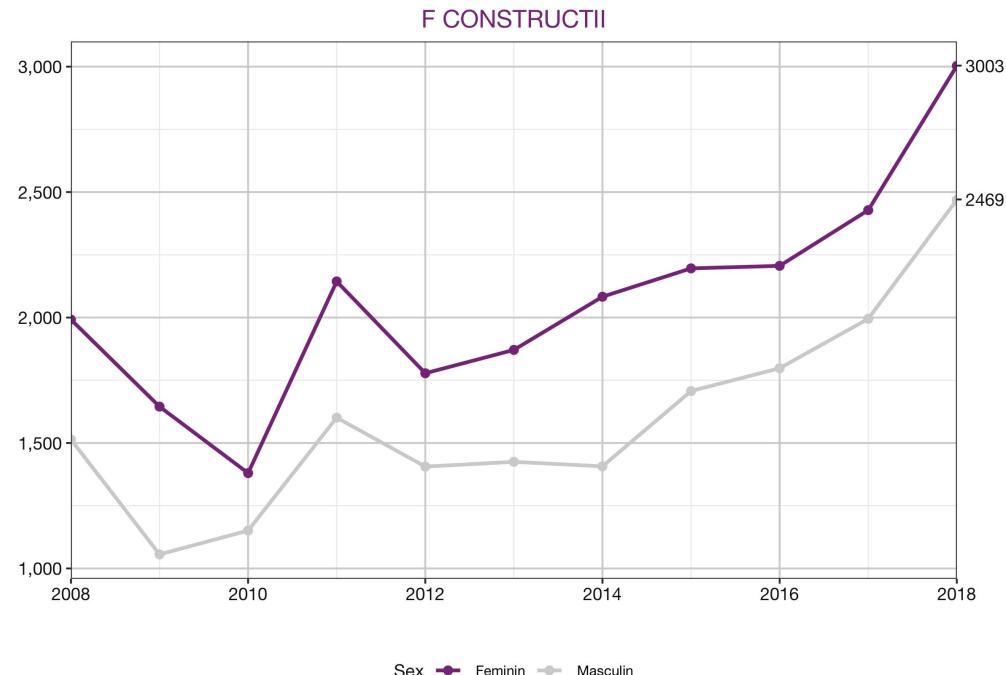
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Across all industries...



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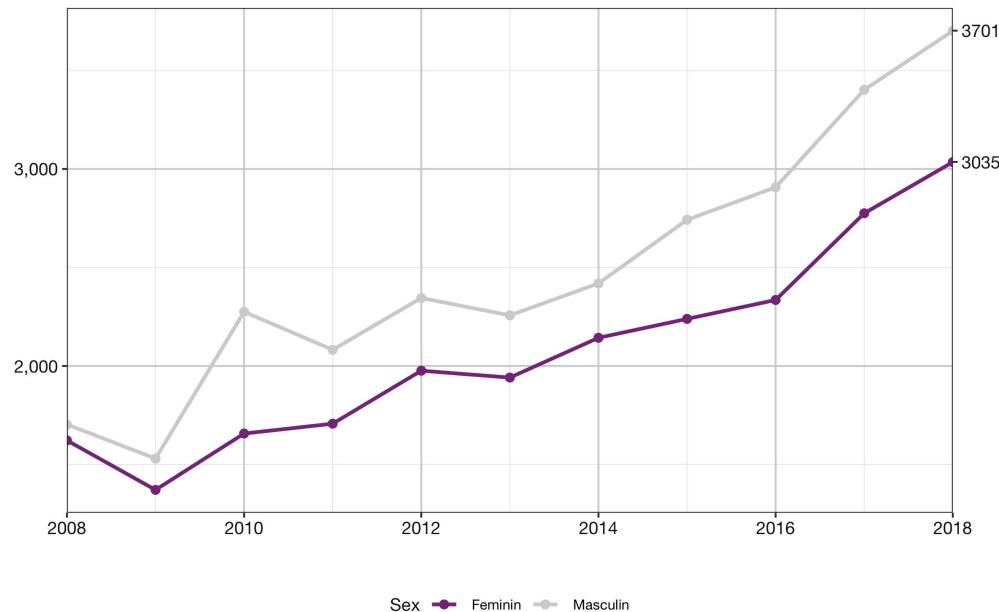
Across all industries...



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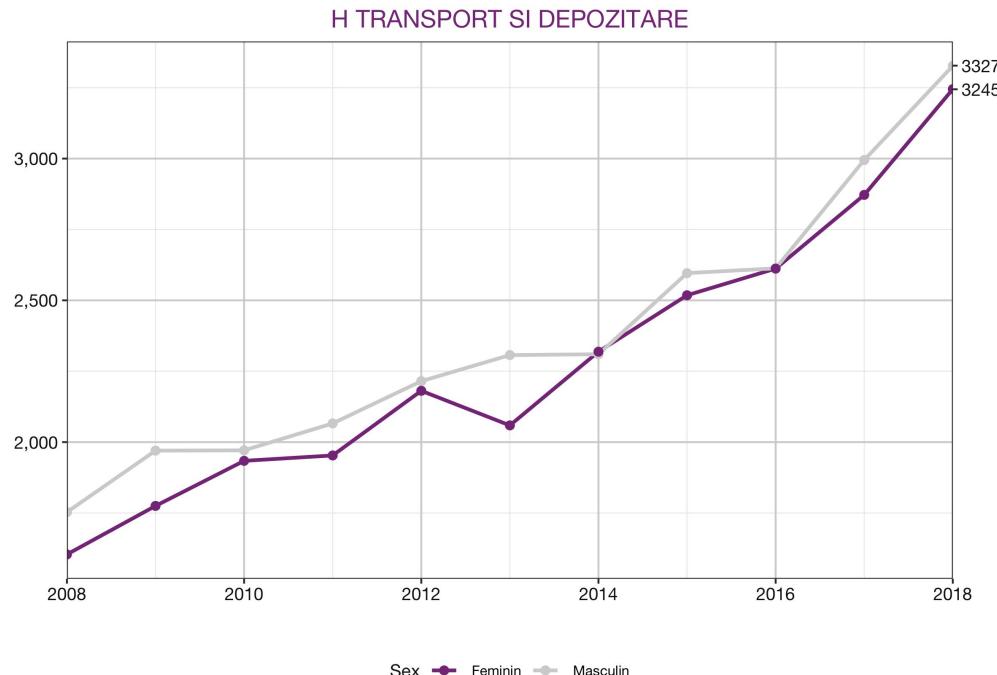
Across all industries...

G COMERT CU RIDICATA SI CU AMANUNTUL; REPARAREA
AUTOVEHICULELOR SI MOTOCICLETELOR



Source: INSSE TEMPO-Online, FOM106E - Castigul salarial nominal mediu net lunar pe activitati ale economiei nationale la nivel de sectiune CAEN Rev.2 si sexe.

Across all industries...



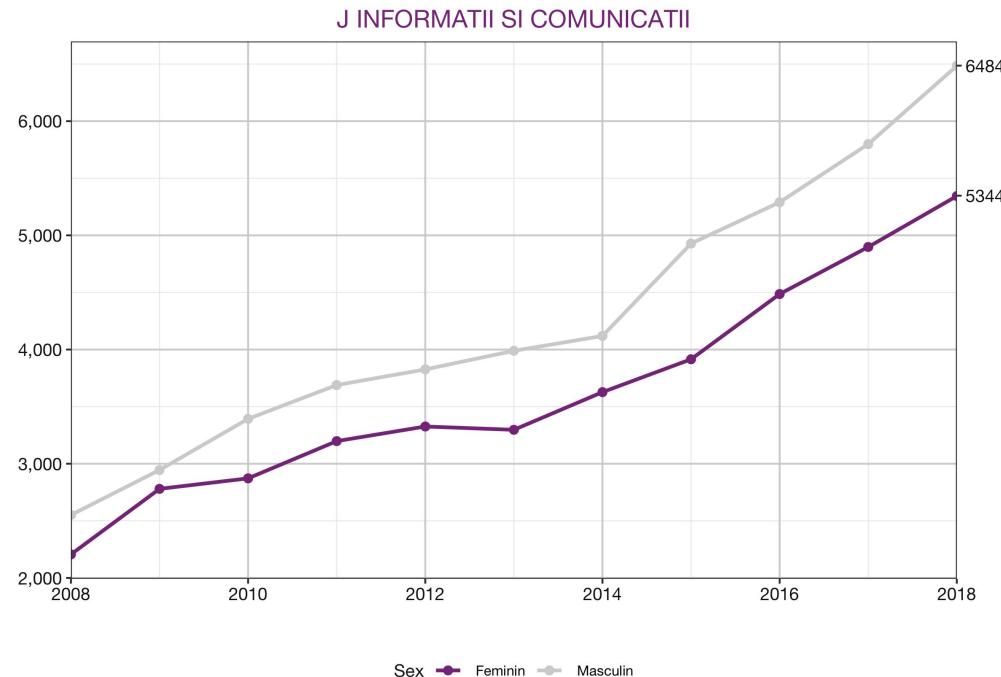
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Across all industries...



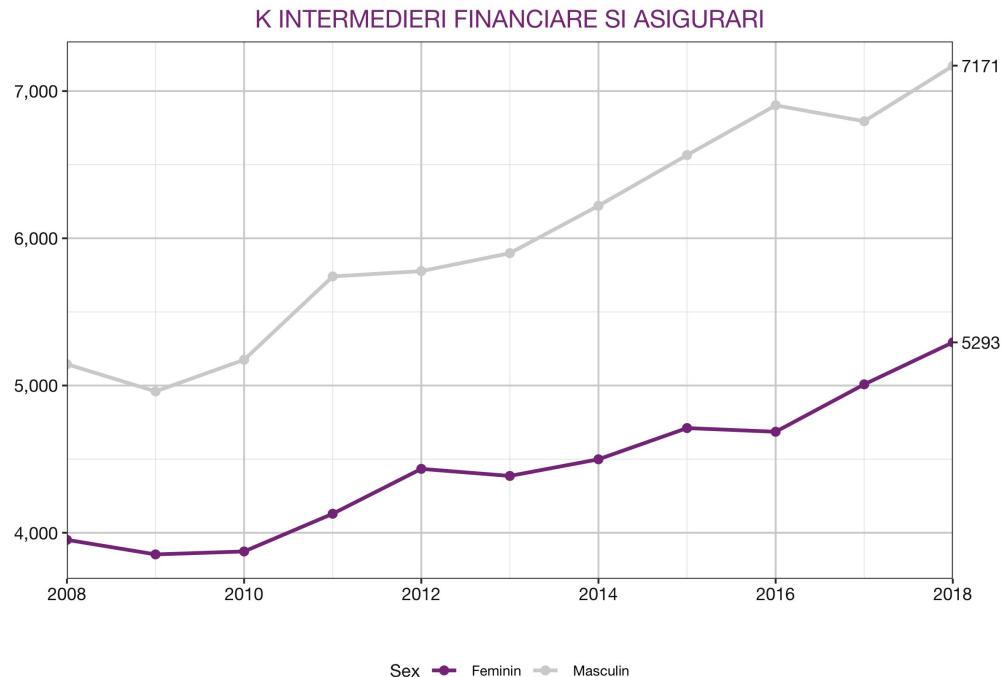
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Even in Information and Communications



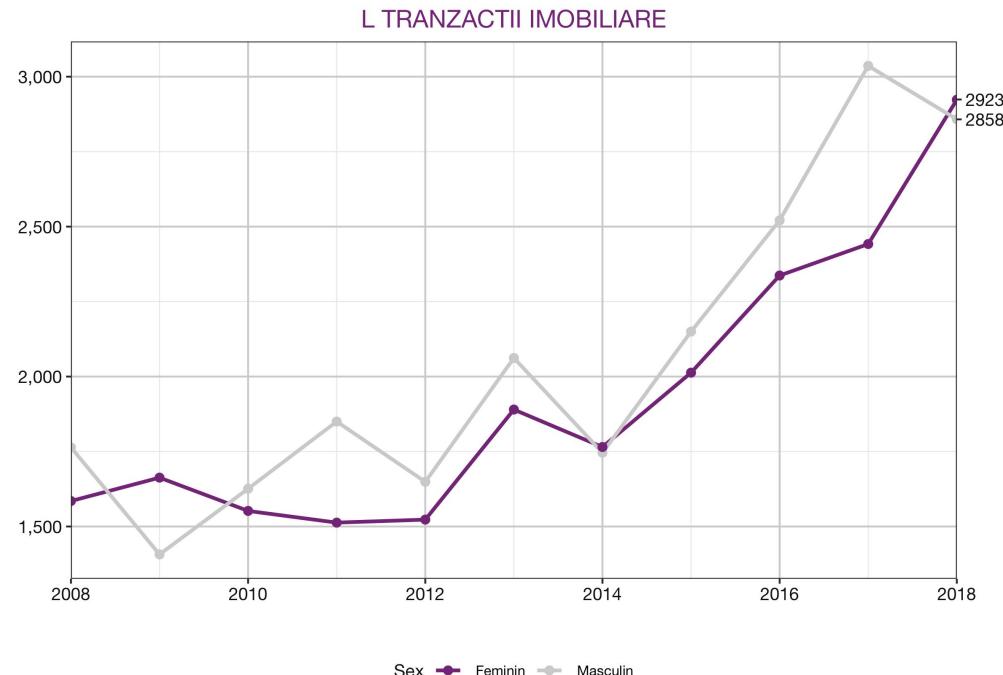
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Or Banking and Insurance



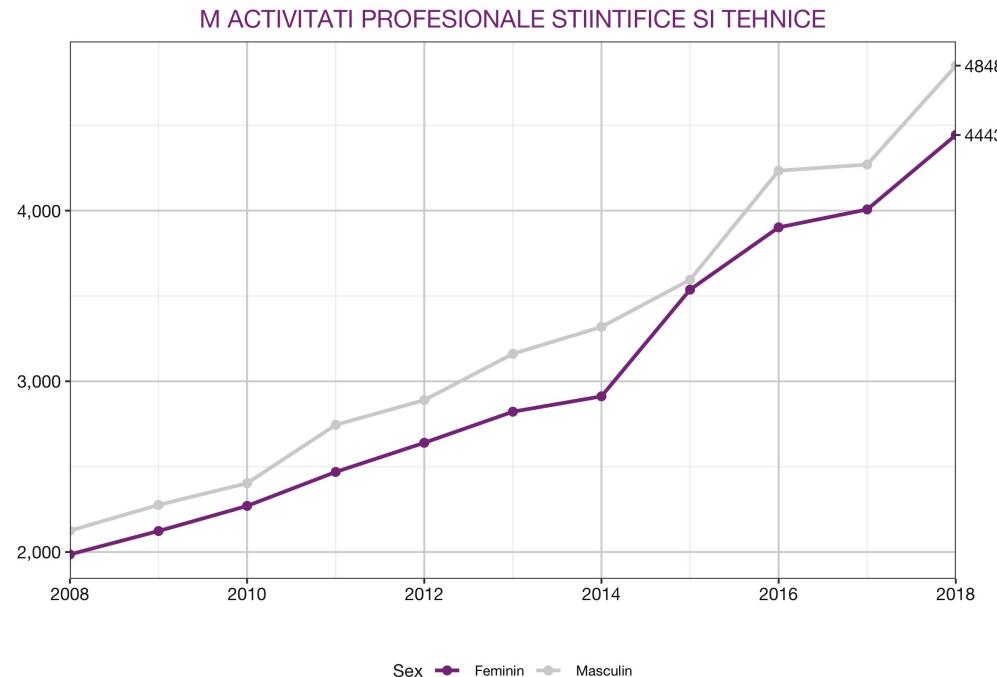
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Across all industries...



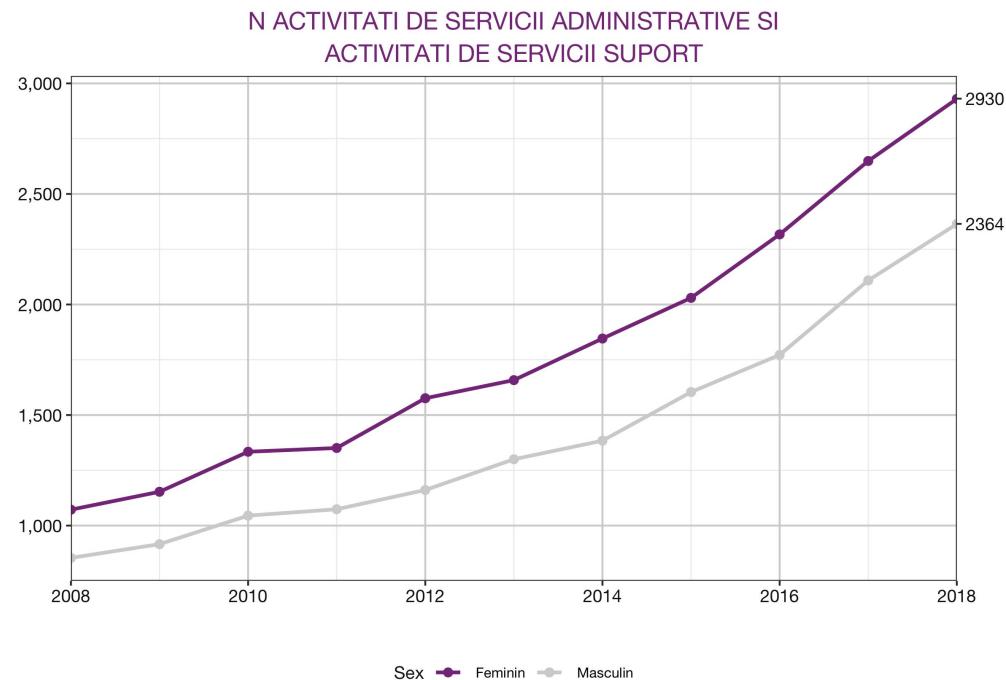
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Across all industries...



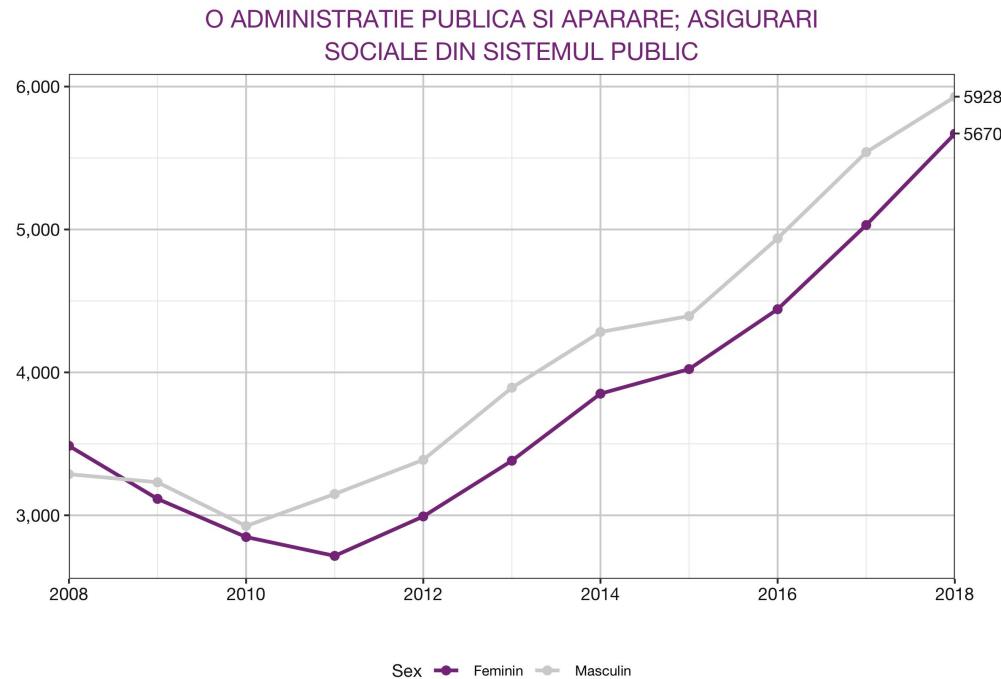
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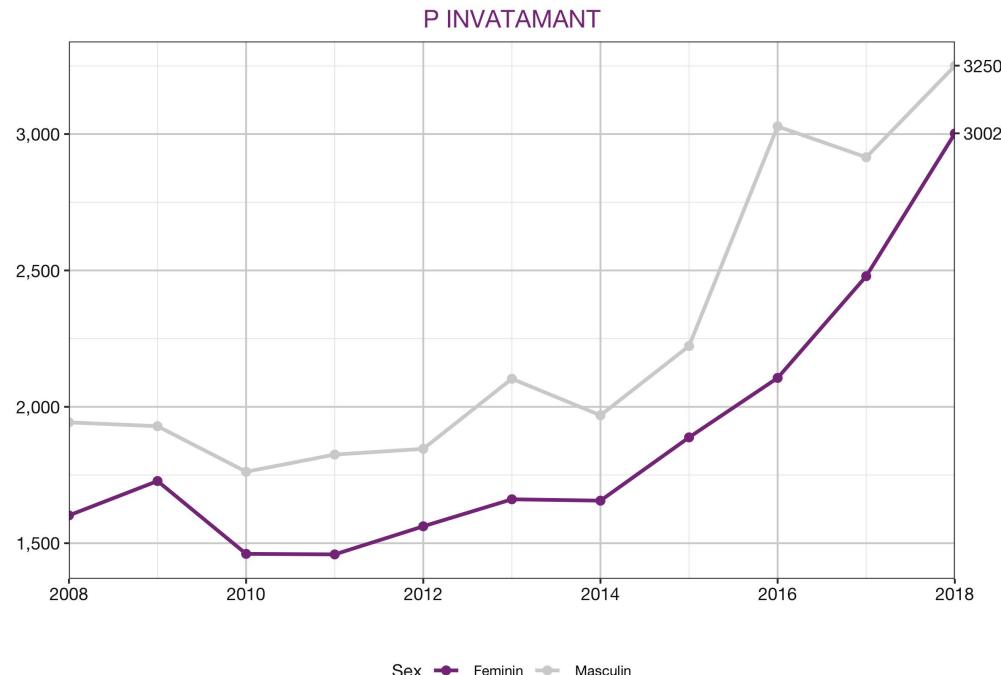
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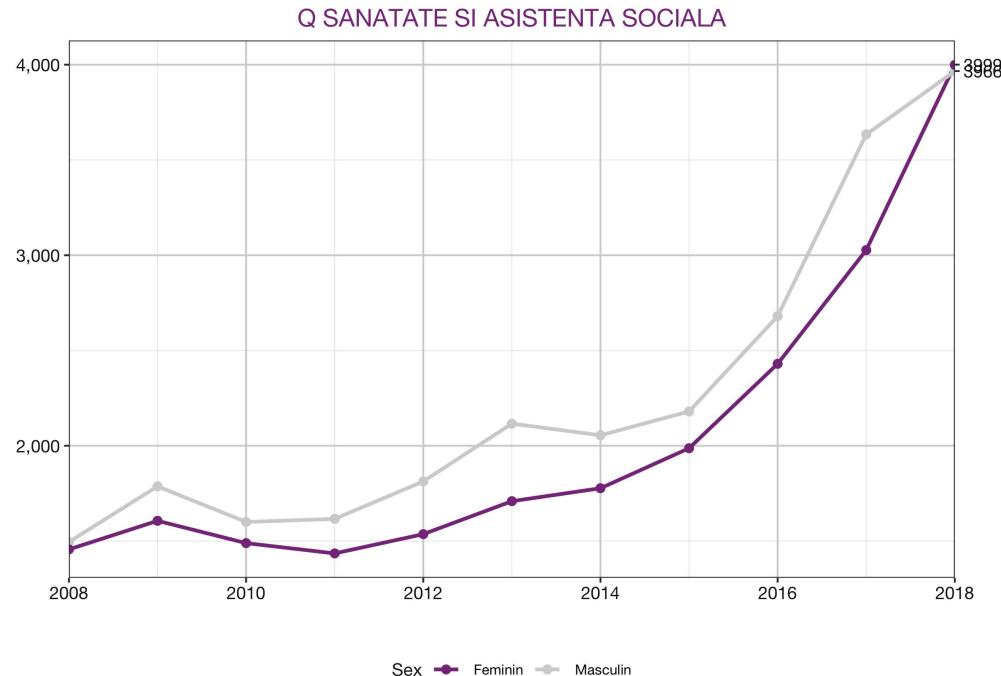
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Across all industries...



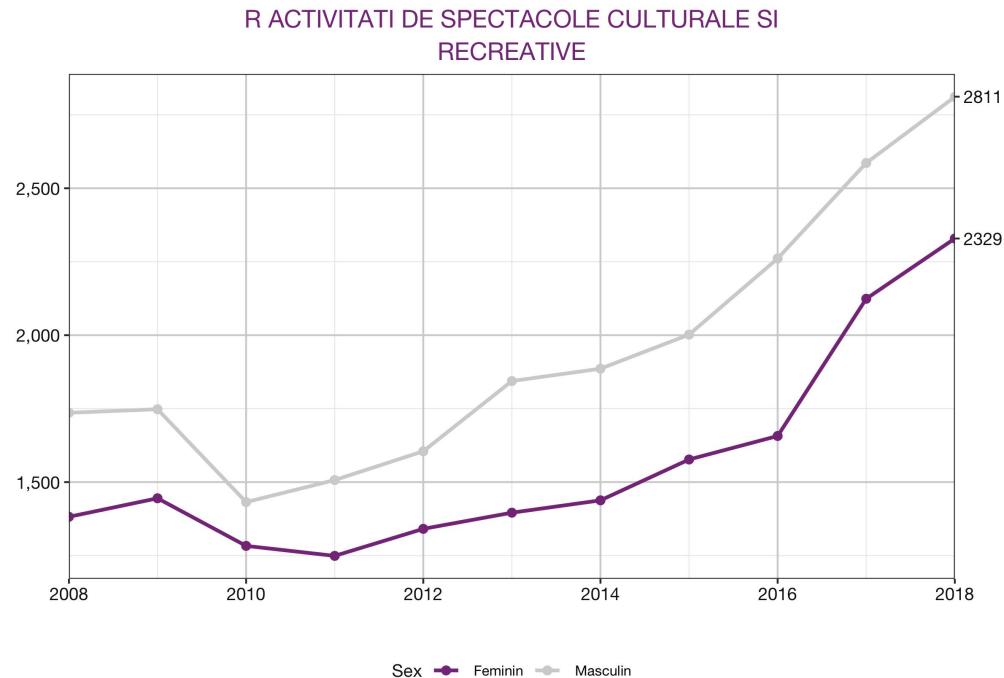
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Across all industries...



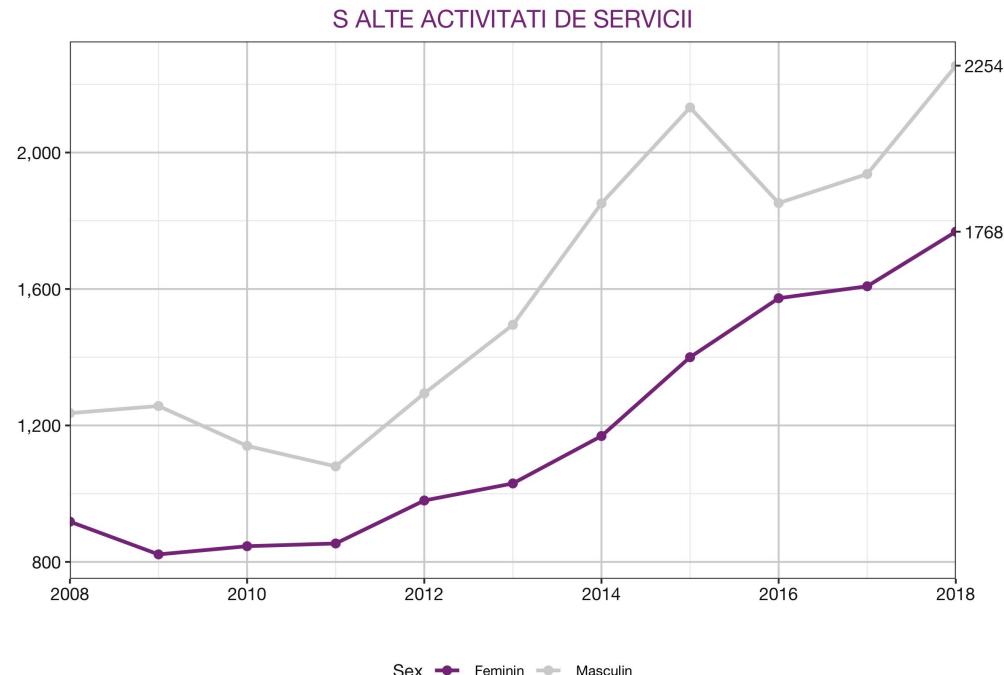
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Across all industries...



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Across all industries...



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**MULTUMESC
THANK YOU**

Write multiple plots

```
# Pay-gap Bucharest - Select industries
industry.levels <- c("A AGRICULTURA SILVICULTURA SI PESCUIT"
, "B INDUSTRIA EXTRACTIVA"
, "C INDUSTRIA PRELUCRATOARE"
, "D PRODUCTIA SI FURNIZAREA DE ENERGIE ELECTRICA SI TERMICA GAZE APA CALDA SI AER CONDITIONAT"
, "E DISTRIBUTIA APEI; SALUBRITATE GESTIONAREA DESEURILOR ACTIVITATI DE DECONTAMINARE"
, "F CONSTRUCTII"
, "H TRANSPORT SI DEPOZITARE"
, "I HOTELURI SI RESTAURANTE"
, "J INFORMATII SI COMUNICATII"
, "K INTERMEDIERI FINANCIARE SI ASIGURARI"
, "L TRANZACTII IMOBILIARE"
, "M ACTIVITATI PROFESIONALE STIINTIFICE SI TEHNICE"
, "N ACTIVITATI DE SERVICII ADMINISTRATIVE SI ACTIVITATI DE SERVICII SUPORT"
, "O ADMINISTRATIE PUBLICA SI APARARE; ASIGURARI SOCIALE DIN SISTEMUL PUBLIC"
, "P INVATAMANT"
, "Q SANATATE SI ASISTENTA SOCIALA"
, "S ALTE ACTIVITATI DE SERVICII")
```



```
# Individual pay-gap plot for each industry
industry.plots <- lapply(industry.levels, function(x){
  ggplot(pay.data %>%
    filter(Macroregiuni..regiuni.de.dezvoltare.si.judete == " Municipiul Bucuresti" &
      Sex %in% c(" Feminin", " Masculin") &
      Industrie == x) %>%
    group_by(Sex, An) %>%
    select(Sex, An, Salariu)
  , aes(x = An, y = Salariu, fill = Sex)) +
  geom_line(aes(color = Sex), size = 1) +
  geom_point(aes(color = Sex), size = 2) +
  r_ladies_theme() +
  scale_color_manual(values = c("#88398A", "#D3D3D3")) +
  theme(strip.background = element_blank(), strip.text.x = element_blank(), legend.position = "bottom")+
  labs(x = "", y = "", caption = wrapper("Source: INSSE TEMPO-Online, FOM106E - Castigul salarial nominal mediu net lunar pe activitati ale economiei nationale la nivel de sectiune CAEN Rev.2 si sexe."), width
= 100) +
  scale_y_continuous(name = "", labels = comma, sec.axis = sec_axis(~ ., breaks = pay.data %>%
    group_by(Sex) %>%
    filter(An == "2018" &
      Macroregiuni..regiuni.de.dezvoltare.si.judete == " Municipiul Bucuresti" &
      Sex %in% c(" Feminin", " Masculin") &
      Industrie == x) %>%
    pull(Salariu))) +
  scale_x_continuous(name = "", expand = c(0,0)))
})
```



Write multiple plots

```
# Proper names for plots
names(industry.plots) <- industry.levels

# Write each plot to a .png file
lapply(industry.levels, function(x) ggsave(filename = paste0("/Users/simonagradinaru/Documents/R-Ladies me
eting/Pay-gap by industry/", x, ".png"), plot = industry.plots[[x]]))
```