

Research on Labor Market Participation Based on Sex

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Abstract

Write your abstract here.

1 Introduction

The labor market is a gendered institution, and even if education levels are the same, labor force participation is biased against one gender. Feminist economists criticize mainstream economics and argue that the market structure remains gendered, despite the decreasing gender wage gap. In addition, factors such as age, marital status, and area of living influence employment status, with women having fewer opportunities to commute or relocate.

The research aims to address the question of whether the market system is a gendered institution that creates mass inequality in labor force participation. To investigate this phenomenon, the study will examine whether factors such as marital status, age, and area of living affect women more than men. The study will also compare the sex ratio of the labor force based on educational level.

The study will use three data sets from ILO, supplemented by relevant literature. All sources will be cited in the references section.

1.1 Literature Review

Mainstream economics view labor markets as neutral arenas that focus solely on efficient production. However, feminist economists argue that this approach creates unequal empowerment between men and women due to two reasons. Firstly, even though the labor markets themselves do not create unequal opportunities within society, the unequal system boosts efficiency, therefore nurturing markets (Elson, 1999). Secondly, from a feminist perspective, it is a prominent issue that, even though labor force participation has increased in developing countries, most of the women's participation belongs to export-oriented sectors with less stable and long-term jobs, creating further inequalities (Ngai, 2007).

*20080159, [Github Repo](#)

Women's force participation is vital for economic development. It is observed that the Middle East and North Africa regions have made progress in gender participation in education in the last four decades (Assaad et al., 2020). When economic development is considered to increase the total welfare without worsening anyone which is called harmonizing up, women's labor force participation tends to increase. Unfortunately, this relationship is not consistent and may empower men more than women, resulting in an inconsistent improvement in overall welfare (Verick, 2014).

2 Data

The source of the data set has been reached from the official site of International Labour Organization (ILOSTAT). Three different data sets from the mentioned source gathered and data cleaning and clustering operations done on the raw data. The reason that this study combines three different data sets in order to allow for more complex and close to reality analysis. Summary statistics of data set is given in (Table ??) and (Table ??) containing mean, standard deviation, minimum, maximum, and median value for men and women in the labour force allowing to compare the differences if there is any.

Table 1: Summary Statistics For Men

	Mean	Std.Dev	Min	Median	Max
Employed	6571.66	23720.66	0.10	681.60	310090.10
Married	6999.06	20768.28	1.30	1284.60	275496.90
Single	4161.93	10390.86	1.00	1036.05	133312.50
Unemployed	505.86	1867.34	0.10	61.40	37400.50

Table 2: Summary Statistics For Women

	Mean	Std.Dev	Min	Median	Max
Employed	3981.44	11132.09	0.20	518.60	115599.40
Married	7201.63	21547.28	1.70	1362.70	285814.90
Single	3150.60	7017.50	0.60	794.70	81182.40
Unemployed	335.94	906.20	0.00	53.90	10372.30

3 Methods and Data Analysis

In this section describe the methods that you use to achieve the purpose of the study. You should use the appropriate analysis methods (such as hypothesis tests and correlation analysis) that we covered in the class. If you want, you can also use other methods that we

haven't covered. If you think some method is more suitable for the purpose of the analysis and the data set, you can use that method.

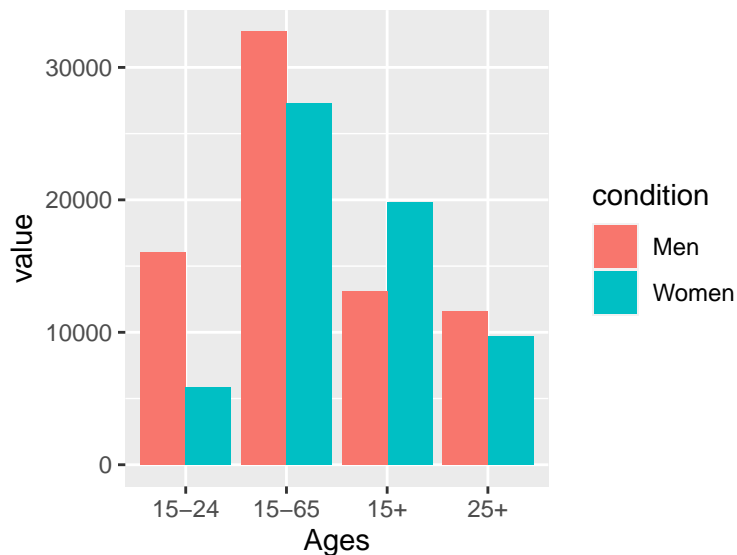
```
library(ggplot2)

# Define the combined_data function
combined_data <- function(age_group1, age_group2, age_group3, age_group4) {
  # Generate a data frame with the specified age groups
  data <- data.frame(
    Ages = c(rep(age_group1, 3), rep(age_group2, 3), rep(age_group3, 3), rep(age_group4, 3)),
    condition = rep(c("Women", "Men"), each = 2),
    value = abs(rnorm(12, 0, 20000))
  )

  # Return the generated data frame
  return(data)
}

# Call the combined_data function and store the result in 'data'
data <- combined_data("15+", "15-24", "15-65", "25+")

# Create the grouped bar plot
ggplot(data, aes(fill = condition, y = value, x = Ages)) +
  geom_bar(position = "dodge", stat = "identity")
```



```
library(ggthemes)
library(ggplot2)
library(dplyr)
```

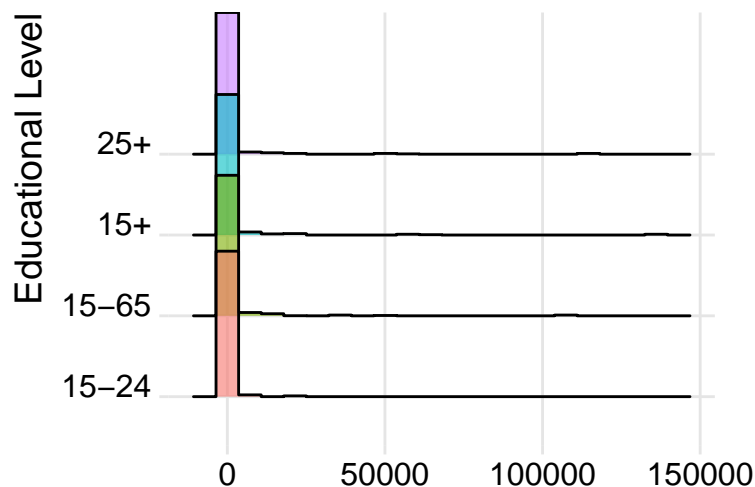
```

library(tidyr)
library(forcats)

data <- female_df
data <- data %>%
  gather(key = "Education", value = "Time") %>%
  mutate(Education = gsub("\\\\.", " ", Education)) %>%
  mutate(Time = as.numeric(Time)) %>%
  mutate(Time = ifelse(is.na(Time), 0, round(Time, 0))) %>%
  filter(Education %in% c("15+", "25+", "15-24", "15-65"))

data %>%
  mutate(Education = fct_reorder(Education, Time)) %>%
  ggplot(aes(y = Education, x = Time, fill = Education)) +
  geom_density_ridges(alpha = 0.6, stat = "binline", bins = 20) +
  theme_ridges() +
  theme(
    legend.position = "none",
    panel.spacing = unit(0.1, "lines"),
    strip.text.x = element_text(size = 8)
  ) +
  xlab("") +
  ylab("Educational Level")

```



For example, if you are performing regression analysis, discuss your predicted equation in this section. Write your equations and mathematical expressions using *LaTeX*.

$$Y_t = \beta_0 + \beta_N N_t + \beta_P P_t + \beta_I I_t + \varepsilon_t$$

This section should also include different tables and plots. You can add histograms, scatter plots (such as Figure ??), box plots, etc. Make the necessary references to your figures as shown in the previous sentence.

4 Conclusion

Summarize the results of your analysis in this section. Discuss to what extent your results responded to the research question you identified at the beginning and how this work could be improved in the future.

References section is created automatically by Rmarkdown. There is no need to change the references section in the draft file.

You shouldn't delete the last 3 lines. Those lines are required for References section.

5 References

- Assaad, R., Hendy, R., Lassassi, M., & Yassin, S. (2020). Explaining the MENA paradox: Rising educational attainment, yet stagnant female labor force participation. *Demographic Research*, 43, 817.
- Elson, D. (1999). Labor markets as gendered institutions: equality. *Efficiency and*.
- Ngai, P. (2007). Gendering the dormitory labor system: Production, reproduction, and migrant labor in south china. *Feminist Economics*, 13(3-4), 239–258.
- Verick, S. (2014). Female labor force participation in developing countries. *IZA World of Labor*.