Comparing Economic Indicators: Tax Revenue, Unemployment Rates, and Foreign Investment across Nations

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Abstract

GDP (Gross Domestic Product) is the dependent variable in the equation, and the explanatory variables are CPI (Consumer Price Index), FDI (Foreign Direct Investment), and Tax Revenue. The expected effects of these factors on GDP are captured by the coefficients ((beta_0), (beta_1), (beta_2), and (beta_3). Unaccounted-for factors are taken into account via the error term (varepsilon). With the help of this equation, it is possible to analyze the connections between GDP and the explanatory factors and make forecasts and policy judgments.

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1 Introduction

Gender inequality at work has been a persistent issue worldwide, with women facing numerous barriers and challenges in their career advancement. The impact of patriarchy, gender norms, and discrimination in the workplace has led to unequal pay, lack of promotions, and leadership opportunities for women, and gender-based harassment. Addressing gender inequality at work is not only essential for promoting social justice, but it also has significant implications for organizational productivity and performance. This literature review aims to explore four articles that shed light on gender inequality at work and the challenges that women face in the workplace.

1.1 Literature Review

Gender inequality in the workplace is a persistent issue worldwide, with women facing numerous barriers and challenges in their career advancement. In Ataerkillik, Toplumsal Cinsiyet

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ve Kadının Çalışma Yaşamına Katılımı, the authors explore the impact of patriarchy and gender norms on women's participation in work life. (Kirikkaleli & Ozbeser, 2023) The study highlights the need for greater awareness and action to address gender-based discrimination and promote gender equity in the workplace. (Cotter et al., 2004)

In Psychosocial working conditions and exhaustion in a working population sample of Swedish middle-aged men and women, the authors examine the relationship between psychosocial working conditions and exhaustion in a sample of Swedish workers.(Bhorat, 2007) The study emphasizes the importance of improving working conditions to support employee well-being and reduce burnout.(Lindeberg et al., 2011)

Similarly, KAMU ÖRGÜTLERİNDE ÇALIŞAN KADIN İŞGÖRENLERİN ÇALIŞMA YAŞAMLARINDA KARŞILAŞTIKLARI SORUNLAR ÜZERİNE BİR ARAŞTIRMA investigates the challenges faced by women working in public organizations in Turkey. The study identifies issues such as lack of support, discrimination, and gender stereotypes as significant barriers to women's career advancement.(Yılmaz et al., 2008)

Gender inequality at work remains a critical issue globally, as highlighted in the literature. Efforts to address this issue must be multi-faceted and involve addressing societal norms and attitudes, promoting workplace policies and practices that support gender equity, and addressing specific barriers faced by women in different industries and sectors.(Özçatal, 2011)

Overall, the literature suggests the need for continued research, advocacy, and action to address gender inequality in the workplace and support gender equity in all aspects of work life.

1.2 Dataset

Based on a variety of significant economic and sociological traits of 9 countries in 2016, the data strives to generate a complex conclusion.There are 11 variables and 9 observations in it. The dataset was created using information from databank.worldbank.org.

These are the 11 variables:

- **Access to electricity:** shows the percentage of the population who regularly and reliably have access to power for a range of daily activities.
- **CPI:** stands for Consumer Price Index, a measure of the average change in prices of a basket of goods and services over time that shows changes in the cost of living and inflation.
- **GDP growth:** which is the pace at which a country's Gross Domestic Product (GDP) is rising or falling during a given time period, corresponding to the expansion or contraction of the production of the country's economy.
- **FDI:** Foreign Direct Investment, or FDI, is the term for investments made by people, companies, or governments into another country. These investments often involve the purchase of assets or the formation of business operations in the foreign economy.**
- **GDP per capita:** A country's Gross Domestic Product (GDP) divided by its entire population gives an estimate of the average level of economic success per person in that nation.

- **Life expectancy at birth, male:** The average number of years a male is projected to live after birth, giving insight into the general health of the population and the mortality rates for men.
- **Population, total:** the total number of people residing in a particular region or nation, indicating the magnitude of the population in that area.
- **Rural population:** highlights the number of people living outside of cities and towns by referring to the percentage of the total population that lives in rural or non-urban areas.
- **Tax revenue:** Indicates the overall amount of money the government has received through taxation and the sources of its revenue.
- **Unemployment, female:** refers to the proportion of women who are now unemployed in the labor force, showing the severity of unemployment among female workers.
- **Unemployment, male:** The percentage or number of men who are now unemployed in the labor force, representing the extent of unemployment among men.

The graph compares all of the variables on a country-by-country basis and displays them all as numbers using different graphical techniques. The country-by-country diagrams' spoken examination leads to some broad conclusions.

1.2.1 Data Summary Statistics

Table 1: Summary Statistics

	Mean	Std.Dev	Min	Median	Max
Access to electricity	100.00	0.00	100.00	100.00	100.00
CPI	114.81	16.13	105.77	110.22	157.42
FDI	2.50	4.90	-7.66	2.25	10.03
GDP growth	1.78	0.60	1.19	1.49	3.18
GDP per capita	44553.52	12790.57	14117.44	45923.01	60670.24
Life expectancy at birth, male	78.00	2.34	72.50	78.70	80.44
Population, total	75531451.89	97900200.95	5728010.00	65595565.00	323405935.00
Rural population	14893123.56	17978570.28	235807.00	11226025.00	58659368.00
Tax revenue	20.44	7.86	10.89	23.14	33.74
Unemployment, female	6.95	3.06	3.74	6.24	13.53
Unemployment, male	6.90	2.11	4.45	6.43	10.25

For each country, the dataset includes a number of important variables. Turkey has 79,512,426 people, a CPI of 157.42, a GDP growth rate of 3.12%, and 100% of the population has access to electricity. With a population of 65,595,565, the United Kingdom also has 100% access to electricity, a CPI of 112.54, and a GDP growth rate of 1.94%. With a CPI of 110.07, a GDP growth rate of 1.49%, and a population of 323,405,935, the United States has 100% access to electricity. With varied values for the remaining variables, Belgium, Canada, Denmark, France, Germany, and Austria all have complete access to electricity.

2 Methods and Data Analysis

2.1 Exploring the Relationship between Tax Revenue and GDP per Capita: A Comparative Analysis of Nations

The graph (figure 1) illustrates how various nations' tax collections and GDP per capita relate to one another. A country is represented by each point on the graph, and its name is displayed along the x-axis. The GDP per capita, a gauge of each nation's economic output per person, is shown on the y-axis on the left side of the graph. A nation is deemed to be more rich if its GDP per capita is higher. The percentage of the country's economic activity that is collected in taxes is shown on the graph's right-hand y-axis, which is represented by tax revenue. A higher tax revenue percentage implies that a greater portion of the GDP is taken in the form of taxes.

Two sets of points are displayed on the graph, one colored "GDP per capita" and the other colored "Tax revenue." The points denoting tax income are shown by open circles, while the points denoting GDP per capita are denoted by solid circles. The following can be seen in the graph:

1. The relationship between tax revenue and GDP per capita is generally positive. Higher tax revenue percentages are typically found in nations with higher GDP per capita. This shows that richer nations have the ability to raise more revenue through taxation.
2. Denmark stands out as a unique example. Its high GDP per capita and high tax revenue percentage both point to a robust economy and a productive tax structure.
3. Compared to their GDP per capita, France, Belgium, and Austria all have relatively high tax revenue percentages. This implies that these nations might have more complex tax structures or higher tax rates.
4. Turkey's tax revenue as a percentage of GDP is relatively low, suggesting either lower tax rates or a less sophisticated tax system. In general, the graph sheds light on how the GDP per capita, a measure of economic prosperity, and tax collections for the chosen nations interact. Though particular national situations and tax policies may differ, it shows that wealthier nations generally have the capacity to raise more tax revenues.

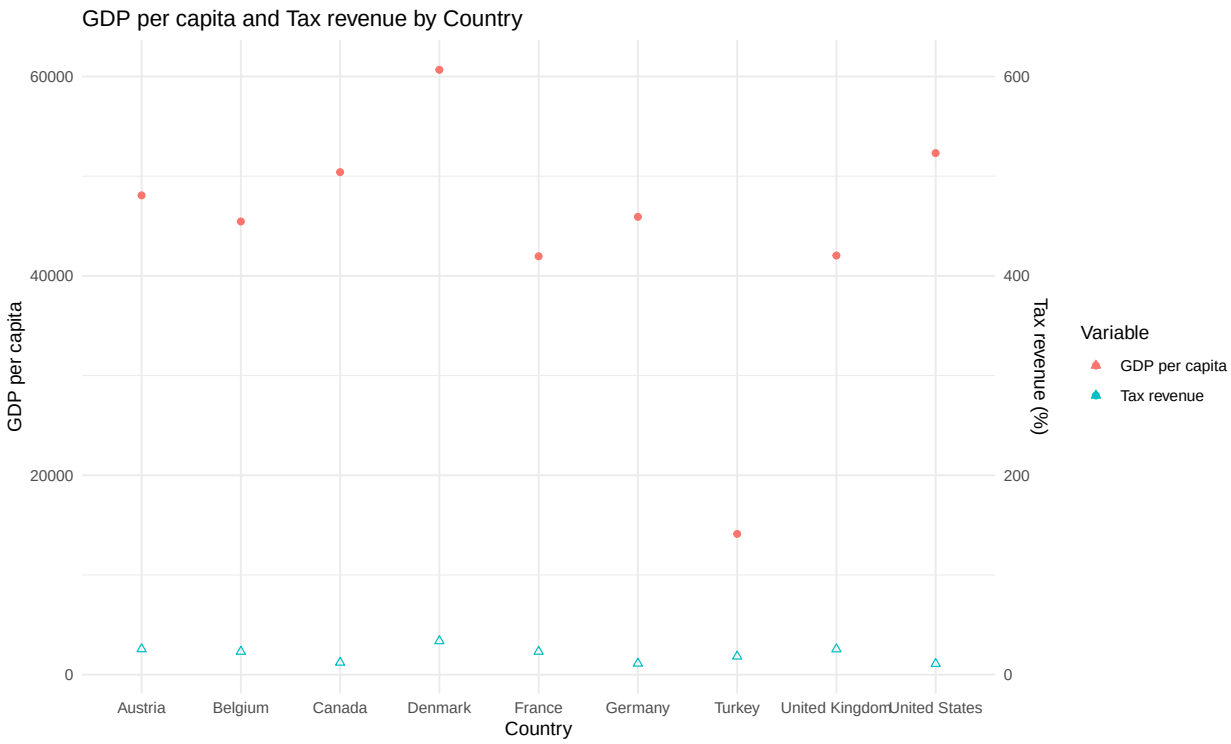
GDP per capita and Tax revenue by Country
60000
40000
20000
0
600
400
200
0
GDP per capita
Tax revenue (%)
Austria
Belgium
Canada
Denmark
France
Germany
Turkey
United Kingdom
United States
Country
Variable
GDP per capita
Tax revenue

figure 1

2.2 Comparing Male and Female Unemployment Rates: A Cross-Country Analysis of Labor Market Dynamics

The graph (figure 2) shows the rates of unemployment for men and women in various nations. The x-axis lists the names of the countries, and each bar on the graph represents one of them. The percentage of the labor force that is jobless is shown on the y-axis as the unemployment rate. The graph shows two sets of bars, one pink for the female unemployment rate and the other light blue for the male unemployment rate. The following can be seen in the graph: 1. The unemployment rates for men and women are often similar, showing that both sexes are affected similarly by job possibilities and labor market conditions. 2. When compared to other nations in the graph, Germany and the United States have the lowest overall unemployment rates for both men and women. 3. Compared to the other nations shown, France and Belgium have relatively higher rates of unemployment for both sexes. This means that there may be greater difficulties in these nations' economies or employment prospects. 4. When compared to the other nations in the graph, Turkey stands out for having greater unemployment rates for both men and women. This suggests a serious employment-related difficulty or economic scenario in Turkey. Overall, the graph provides insights into the gender-specific unemployment rates across different countries. It suggests that there are variations in unemployment rates between countries, and certain countries may face more significant employment challenges compared to others. Additionally, the graph highlights the importance of considering both male and female unemployment rates when analyzing labor market dynamics and identifying potential gender disparities in employment opportunities.

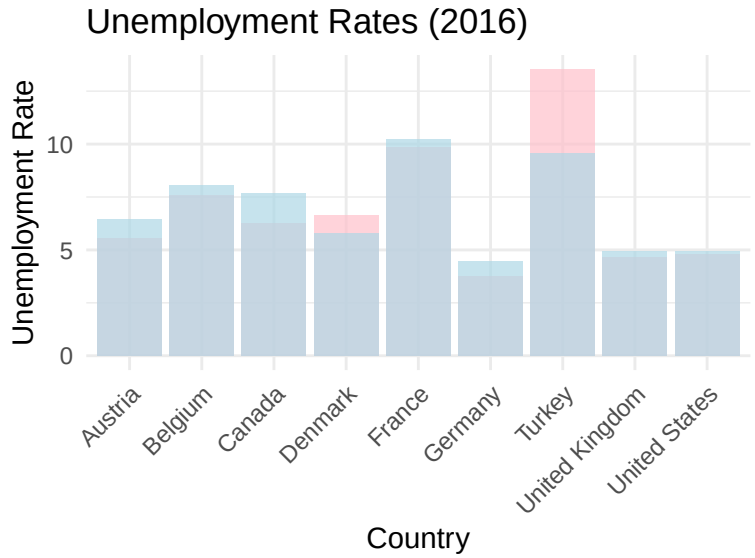

figure 2

2.3 Analyzing Foreign Direct Investment and Consumer Price Index: A Comparative Study of Nations' Economic Indicators

The following can be seen in the graph (figure 3): 1. The CPI numbers (blue bars) show the changes in the cost of living and the overall level of inflation. CPI levels above a certain threshold indicate greater inflation rates and presumably higher prices for goods and services. 2. The FDI figures (red bars) show the volume of FDI that each nation receives from abroad. FDI is a crucial gauge of a nation's economic development and level of foreign investment. 3. The graph shows that the United States and the United Kingdom have relatively larger FDI values than the other countries, indicating that there is more foreign investment in these two nations. 4. Germany and Turkey both have positive FDI numbers, indicating that they are also getting FDI from outside, but at a lower rate than the US and the UK. 5. France and Austria both have negative FDI numbers, which shows a net outflow of FDI from both nations over the observation period. 6. The CPI values varies between nations, illustrating variations in inflation rates and cost of living. It's crucial to notice that the graph's lack of a scale for the CPI axis makes it challenging to compare the precise ranges of CPI values between different nations. In general, the graph sheds light on how FDI and CPI are distributed among various nations. It implies changes in the amount of foreign investment, the rate of inflation, or shifts in the cost of living. Making accurate comparisons between nations' inflation rates, however, is difficult without the precise scale of the CPI data.

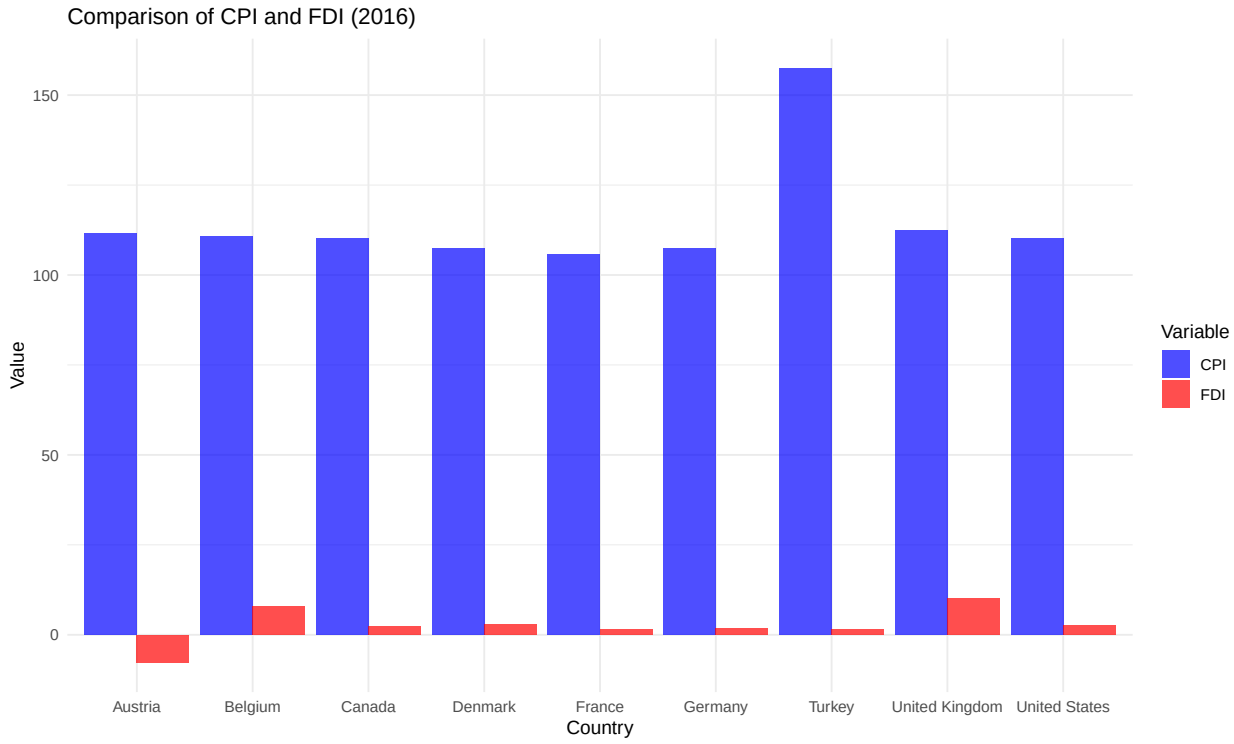

figure 3

2.4 Prediction

GDP (Gross Domestic Product) is the dependent variable in the equation, and the explanatory variables are CPI (Consumer Price Index), FDI (Foreign Direct Investment), and Tax Revenue. The expected effects of these factors on GDP are captured by the coefficients ((beta_0), (beta_1), (beta_2), and (beta_3). Unaccounted-for factors are taken into account via the error term (varepsilon). With the help of this equation, it is possible to analyze the connections between GDP and the explanatory factors and make forecasts and policy judgments.

$$GDP = \beta_0 + \beta_1 \text{CPI} + \beta_2 \text{FDI} + \beta_3 \text{Tax Revenue} + \varepsilon$$

3 Conclusion

In conclusion, gender disparity in the workplace is still a serious problem around the world, with women encountering a variety of challenges in their careers. The evaluated literature has a strong emphasis on how gender roles, discrimination, and working conditions affect women's experiences at the office. For the purpose of addressing gender-based discrimination and advancing gender equity in the workplace, these articles demand greater awareness, action, and supportive policies.

The dataset offers insightful information about the socioeconomic characteristics of nine countries in 2016. It comprises a variety of variables, including life expectancy, population, tax revenue, access to electricity, CPI, GDP growth, FDI, GDP per capita, life expectancy in rural areas, and male and female unemployment rates. By comparing these factors across many countries, the dataset analysis creates a foundation for understanding the economic and social dynamics of each country.

Overall, the literature review and dataset analysis highlight how crucial it is to keep up the fight against gender disparity at work and to advance gender equity. Organizations and society can establish environments that nurture equal opportunities and support the career advancement of women by addressing societal norms, enhancing working conditions, and enacting inclusive policies.

4 References

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