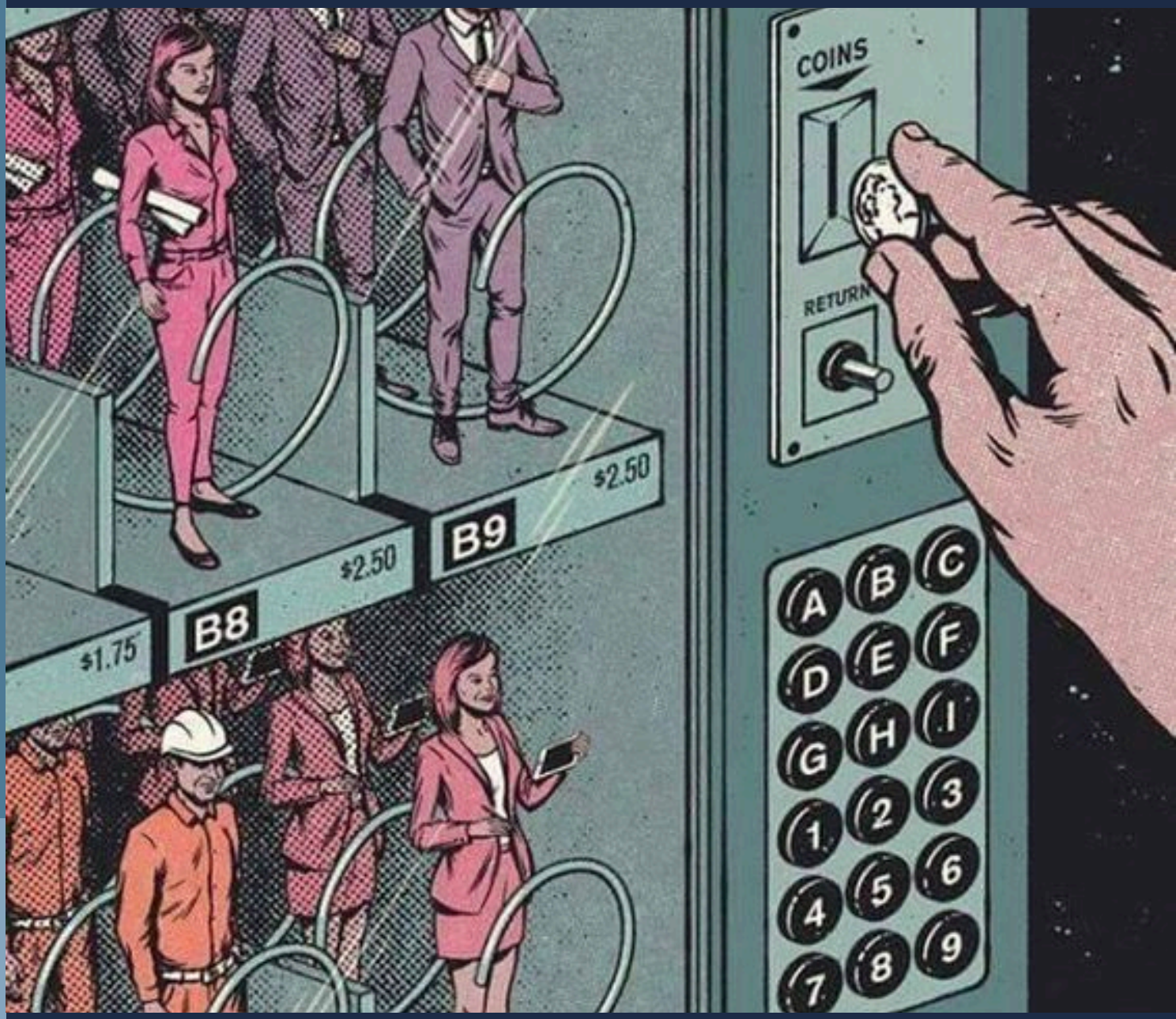
LABOUR DYNAMICS ACROSS G7 NATIONS

DATA REPORT 2024

2011-2020



The Economics Society, SRCC

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INTRODUCTION

The labour market operates by confronting the supply and demand of labour and it works in every country, on a regional and global scale. Any activity that is initiated or exists in society creates the need for labour.

It is a dynamic and complex system that is shaped by various social, economic, and political factors. It plays a vital role in driving a country's economic growth and development. The prevalence of informal employment, skill mismatch, gender and regional disparities, and inadequate social security systems are some of the significant issues that need to be addressed to ensure inclusive and sustainable growth.

However, the recent confluence of economic and geopolitical crises has cast a shadow of uncertainty and divergence over the landscape of global labour markets. This turbulence has exacerbated existing disparities between developed and developing economies, further marginalizing specific worker demographics. The complexities of labour markets arise from their inherent dynamism, being constantly shaped by a multitude of social, economic, and political factors. These factors include, but are not limited to, demographic trends, technological advancements, educational systems, and prevailing social norms.

Overall, the labor market serves as a critical component of economic activity, facilitating the exchange of labor between individuals and employers. By understanding the mechanisms through which it operates, policymakers, businesses, and individuals can make informed decisions to promote economic growth and prosperity.

NEED FOR STUDY

Highlighting the necessity of the study and the motive behind it

Labour markets serve as a barometer of economic health, influencing key indicators such as employment rates, wages, and workforce participation, which in turn, shape the overall economic performance and stability. Despite the expansion of the world economy in recent years, the employment situation remains uncertain, with a high percentage of the labour force unemployed or engaged in occupations which do not enable workers to escape from the shackles of poverty.

In this time of chronic unemployment, it is all too easy to lose sight of the single greatest trend underlying the long-term labour market: the demographic time bomb in the developed world.

In the US, 25 million extra workers will be needed by 2030 to sustain economic growth. In Europe, we are looking at a potential shortfall of around 35 million workers–15% of total labour demand–by 2050.

Businesses rely on labour market research to make strategic decisions regarding workforce planning, talent management, and competitiveness in dynamic industries.

Gaps also exist in the form of a skills mismatch between what job seekers possess and what employers need, and technological advancements and green transitions are compounding the challenge.

A study on the labour market, hence becomes essential. Labour policies and programs play a crucial role in achieving these objectives. They include labour regulations and insurance programs designed to protect workers and facilitate their move into better employment.

There remains an urgent need to provide adequate social protection to those not covered by full-time employment contracts. Nearly 2 billion workers globally are in informal employment. Given their susceptibility to economic shocks and working poverty, informal workers represent a crucial labour-market cohort and need better representation in data, broad-based income support in the short term and a longer-term shift towards formalization.

METHODOLOGY

A detailed overview of the statistical and econometric models utilised for analysis

DATA COLLECTION

For the purpose of our study, we have selected G7 countries- United States, Japan, Germany, United Kingdom, France, Italy and Canada.

The G7 nations collectively represent a substantial portion of the global economy. Their labour markets play a pivotal role in shaping global economic trends, productivity, and overall economic performance. Analysing their labour market dynamics can provide a comprehensive understanding of the broader economic landscape and its implications.

The G7 countries are major players in the global market, and their workforce competitiveness directly impacts their economic competitiveness on the international stage. Assessing their labour market dynamics can shed light on factors such as skill development, labour productivity, and workforce utilisation, which are essential for maintaining a competitive edge in a globalised economy.

By analysing labour market dynamics across the G7 countries, researchers and policymakers can draw meaningful comparisons, identify best practices, and facilitate international collaboration. This can lead to the sharing of knowledge, strategies, and policies that can benefit labour markets globally.

In order to carry out the study, secondary data related to several parameters has been taken and analysed using the below-mentioned techniques.

DATA NORMALISATION

As the parameters involved have different units and scales, the data was normalised to bring all the values on a similar scale and thus standardise the data. To normalise this data, the minimum-maximum normalisation approach was used.

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)}$$

- x is the original value,
- x' is the normalized value,
- $\min(x)$ is the minimum value in the dataset,
- $\max(x)$ is the maximum value in the dataset.

EXPONENTIAL DECAY AVERAGE

The data set encompasses a comprehensive period of ten years, spanning from 2011 to 2020, meticulously gathering relevant information across various parameters instrumental to our study. This data has undergone a normalisation process, employing the aforementioned formula to ensure consistency and comparability across different scales and units of measurement.

To derive a weighted average model that accurately captures the evolving landscape, an exponential decay average method has been strategically implemented. This approach recognises the dynamic nature of the subject matter and assigns greater significance to more recent performance of the indicators of countries. By attributing higher weightings to data points from recent years, the methodology effectively captures the prevailing trajectories and emerging trends within the region.

The rationale behind this methodological choice is rooted in the pursuit of

enhanced projection accuracy and responsiveness to the ever-changing dynamics that characterise the region under investigation. By emphasising the most up-to-date information, the model is better equipped to adapt to the shifting realities and provide more reliable forecasts that reflect the current state of affairs and future projections.

ENTROPY MODEL

The weights so assigned to the parameters have been allocated with respect to dispersion that persists in each data set and are also known as "Objective Weights". The data set was normalised by using the formula:

$$r_{ij} = \frac{x_{ij}}{\sum_{i=1}^{m} x_{ij}} \qquad e_j = -h \sum_{i=1}^{m} r_{ij} . \ln(r_{ij}) \qquad w_j = \frac{(1-e_j)}{\sum_{j=1}^{n} 1-e_j}$$ Weight Vector

$$h = \frac{1}{\ln(m)}$$; m is the number of alternatives

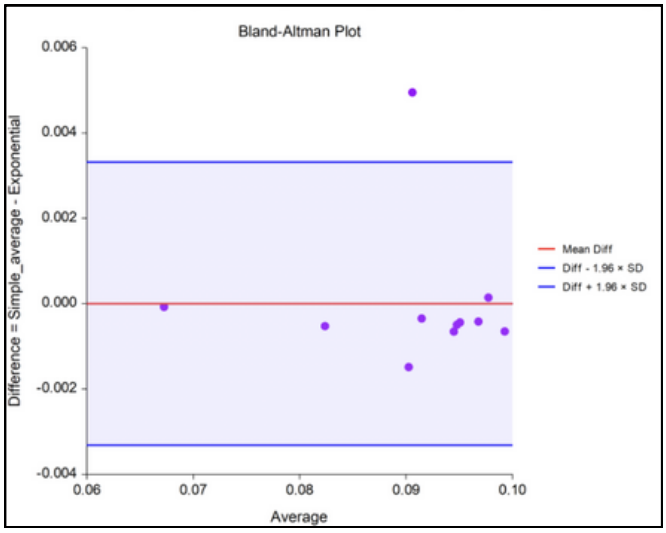
- Here Xij represents each value in the data set of a particular year and Rij represents the normalised value. After calculating the normalised values we calculate the entropy values, which are represented by the formula:

- h here is entropy, this value provides the theoretical limit for the efficiency of any possible encoding and is calculated using the formula:

- After this step, we get to calculating the weight vectors for the data set:

- The weight vectors so calculated using this formula represent the weights given to each parameter with respect to the dispersion persistent in their respective data sets.

BLAND-ALTMAN ANALYSIS



The Bland-Altman plot, also known as the mean-difference plot or limits of agreement plot, along with its corresponding analysis, serves the purpose of comparing two sets of measurements that pertain to the same variable. This methodological approach essentially falls under the umbrella of method comparison techniques. For instance, a costly measurement system could be contrasted with a more affordable one or an invasive measurement system could be compared to a less invasive one. This analysis had been conducted to check similarity between weights calculated on the basis of Entropy model by using both simple average and exponential average of the data set.

Method

The Bland-Altman plot comes into existence by plotting the differences X1 - X2 on the vertical axis against the averages (X1+X2)/2 on the horizontal axis, indicating the relationship between these two variables. On the plot, a straight horizontal line is drawn to show the bias, which is positioned at the mean difference $\bar{dd}$. Moreover, supplementary horizontal lines, identified as limits of agreement, are incorporated into the graph at $\bar{dd} - 1.96\ SSdd$ and $\bar{dd} + 1.96\ SSdd$, representing the range within which most data points fall. The differences d are calculated as d = X1 - X2, indicating the difference between the two measurements. In certain scenarios, the value '1.96' is interchanged with '2' or another numerical value based on the statistical requirements. The numerical value 1.96 corresponds to the z-value utilized to establish 95% limits for a unit-normal random variable, ensuring a comprehensive analysis of the data distribution and variability.

PARAMETERS

A comprehensive introduction of the parameters taken into consideration under the study and their relevance in analysing and drawing conclusions about the labour market.

LABOUR INCOME AS A SHARE OF GDP

The labour income share in GDP is the ratio, in percentage, between total labour income and gross domestic product (a measure of total output), both provided in nominal terms. Labour income includes the compensation of employees and part of the income of the self-employed. Self-employed workers earn from both their work and capital ownership. This ratio is useful to gauge the level of inequality between the working class and other classes.

EMPLOYMENT RATE

It measures the extent to which available labour resources are utilized and is calculated as the ratio of the employed to the working-age population (aged 15 to 64). This indicator reflects both short-term economic fluctuations and long-term effects of government policies, such as education, income support, and measures promoting employment diversity. Employed individuals are those aged 15 and over who have worked in gainful employment for at least one hour in the previous week or had a job but were absent from work. The employment rate is seasonally adjusted and presented as both a percentage of the working-age population and in terms of thousand persons aged 15 and over.

PROPORTION OF WOMEN IN MANAGERIAL POSITIONS

This metric sheds light on the representation of women in leadership roles compared to men, addressing gender disparities in employment, career progression, and earnings.

Women often face challenges such as working part-time, being employed in lower-paid occupations, and balancing domestic responsibilities, which contribute to gender pay gaps and higher rates of poverty among women. This data delves into the dynamics of women's workforce participation, full-time employment, and the impact of factors like childcare and ageing on women's career trajectories and earnings relative to men's.

PROPORTION OF IDLE YOUTH

This parameter highlights the share of young individuals who are not engaged in employment, education, or training as a percentage of the total number of young people within the corresponding age group. It serves as a gauge of social exclusion risk among youth, as those not in employment, education, or training may face challenges such as poverty and a lack of skills needed to enhance their economic prospects.

PART TIME EMPLOYMENT RATE

It refers to individuals who work fewer than 30 hours per week in their primary job. This includes both employees and self-employed individuals. The indicator captures the proportion of the employed population engaged in part-time work, providing insights into the prevalence of part-time employment within each country's workforce. It's presented as a total percentage and can also be broken down by gender to analyze gender disparities in part-time employment rates.

TRADE UNION DENSITY

The parameter quantifies the extent of union membership within the labor force by measuring the number of net union members, excluding individuals not in the labour force, unemployed and the self-employed, as a proportion of the total number of employees.

This metric provides insights into the strength and influence of trade unions within each country's workforce, reflecting the level of collective representation and bargaining power among employees.

AVERAGE ANNUAL GROWTH OF OUTPUT PER WORKER

This indicator measures the annual growth of the labour productivity of a country, expressed as a rate. Labour productivity represents the total volume of output (measured in terms of Gross Domestic Product, GDP) produced per unit of labour (measured in terms of the number of employed persons or hours worked) during a given time reference period. A positive and high rate implies an increase in the efficiency of workers of that country.

LABOUR FORCE PARTICIPATION RATE

This metric measures the percentage of the working-age population, typically defined as individuals aged 15 to 64, who are either employed or actively seeking employment. It provides insights into the proportion of the population that is engaged in the labour market, broken down by age groups, which helps in understanding the dynamics of workforce engagement across different demographics.

AVERAGE ANNUAL WAGES

It provides information on the average annual wages per full-time and full-year equivalent employee in the total economy. This metric encompasses the total remuneration received by employees over the course of a year, accounting for both full-time and full-year equivalent positions. It offers insights into the overall wage levels within each country's economy, serving as a key indicator of economic well-being and labor market conditions.

LABOUR FORCE

It encompasses individuals who are either employed or actively seeking employment. The employed category includes those working for pay or profit for at least one hour per week, as well as individuals temporarily absent from work due to reasons such as illness or leave. Unemployed individuals are those without work but actively searching for employment and available to start working. This indicator, measured in persons and seasonally adjusted, provides insights into the size and composition of the active workforce within each country.

HOURS WORKED

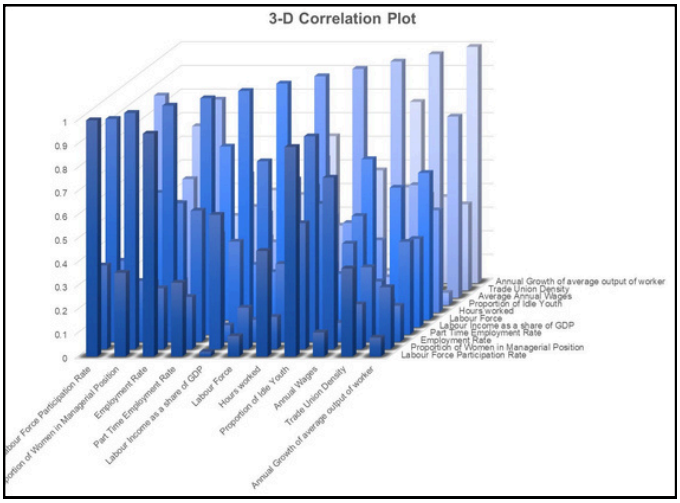
It calculates the total number of hours worked per year divided by the average number of people employed annually. This metric encompasses various types of work hours, including those of full-time, part-time, and part-year workers, paid and unpaid overtime, and hours from additional jobs. Excluded are hours not worked due to various reasons. However, caution is advised when comparing the level of average annual hours worked for a given year due to differences in data sources and calculation methods.

ANALYSIS

Dissecting the findings of the study by studying significant correlations

CORRELATION PLOT

The plot provided is a visual representation in three dimensions illustrating the absolute correlation existing between each parameter and all other parameters as well as with itself. The table beneath the plot displays the numerical values quantifying the correlations among the different parameters in a sequential manner.



1	0.35436	0.943673	0.31229	0.01988	0.0863	0.44671	0.88724	0.101993	0.37239	0.079793
0.35436	1	0.25763	0.22113	0.568759	0.175335	0.136585	0.533337	0.72616	0.19002	0.262304
0.943673	0.25763	1	0.555593	0.06985	0.093169	0.32985	0.87	0.07998	0.31586	0.152755
0.31229	0.22113	0.555593	1	0.39282	0.733225	0.279794	0.55331	0.38473	0.22428	0.392171
0.01988	0.568759	0.06985	0.39282	1	0.23314	0.41937	0.265971	0.47046	0.11115	0.373519
0.0863	0.175335	0.093169	0.733225	0.23314	1	0.562858	0.19395	0.67997	0.55938	0.621618
0.44671	0.136585	0.32985	0.279794	0.41937	0.562858	1	0.378763	0.30551	0.122638	0.432286
0.88724	0.533337	0.87	0.55331	0.265971	0.19395	0.378763	1	0.1183	0.508175	0.05166
0.101993	0.72616	0.07998	0.38473	0.47046	0.67997	0.30551	0.1183	1	0.436108	0.76695
0.37239	0.19002	0.31586	0.22428	0.11115	0.55938	0.122638	0.508175	0.436108	1	0.36465
0.079793	0.262304	0.152755	0.392171	0.373519	0.621618	0.432286	0.05166	0.76695	0.36465	1

The level of correlation is a key indicator that provides valuable insights into the relationships between various parameters. It shows that the majority of the parameters exhibit a degree of correlation that falls within the range of moderate (0.3-0.5) to strong (0.5-0.7). This suggests that there is a significant level of association between these parameters, with some showing weaker correlations while others display very strong correlations within the matrix. This suggests that the variables can be used to forecast/assess the countries on the basis of these parameters.

COUNTRY-WISE RANKING

Rank	Country	Composite Score
1	United States	0.718354
2	Canada	0.609886
3	Germany	0.604198
4	United Kingdom	0.557981
5	Japan	0.545765
6	France	0.422690
7	Italy	0.385135

United states ranks highest among the G7 countries, leading the group in 6 individual parameters as well. The largest economy in the world tops the charts in the major indicators such as labour force, average wages and hours worked among others, marking its labour market conditions as one of the best.

Canada and Germany follow closely with similar composite scores but differ vastly when we delve deeper into the parameters. Interestingly Germans work the least amount of hours among all the others by a large margin but has one of the highest productivity. Japan just falls behind the UK, though it has the highest Labour Force Participation Rate (86.62% as of 2022) among all others. It falls short in income-related parameters. Italy places last, performing poorly in almost all the indicators with the lowest Employment Rate. Index scores calculated based on basic averages from scores obtained through exponential decay.

COUNTRY PROFILES

A comprehensive country-wise analysis and ranking of various labor market parameters, including the determination of skewness in male and female workforce participation and relevant observations and actionable recommendations for each country to enhance their labor market statistics.

PARAMETERS AND ICONS

A reference of the parameters along with their associated icons used later in the report

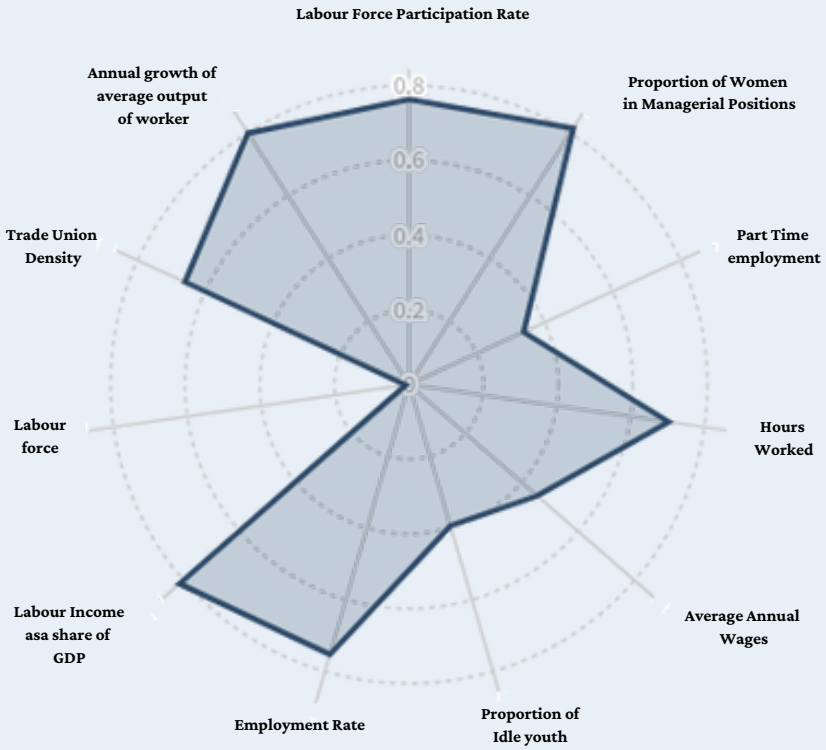
	**Labour Force Participation Rate**
	**Employment rate**
	**Average Annual Wages**
	**Proportion of Women in Managerial Positions**
	**Hours Worked**
	**Average Annual Growth of Output Per Worker**
	**Labour Force**
	**Trade Union Density**
	**Labour Income As A Share of GDP**
	**Part Time Employment Rate**
	**Proportion of Idle Youth**

CANADA

COUNTRY PROFILE

Rank
(out of 7 countries)
2

Score
(composite)
0.609



POPULATION

39 MILLION

♀ 50.29% ♂ 49.71%

LABOUR FORCE

21.63 MILLION

$59,428 AVERAGE ANNUAL WAGE

UNEMPLOYMENT RATE (2023)

5.40%

BEST PERFORMING INDICATOR

Indicator Name: Annual Growth of average output per worker

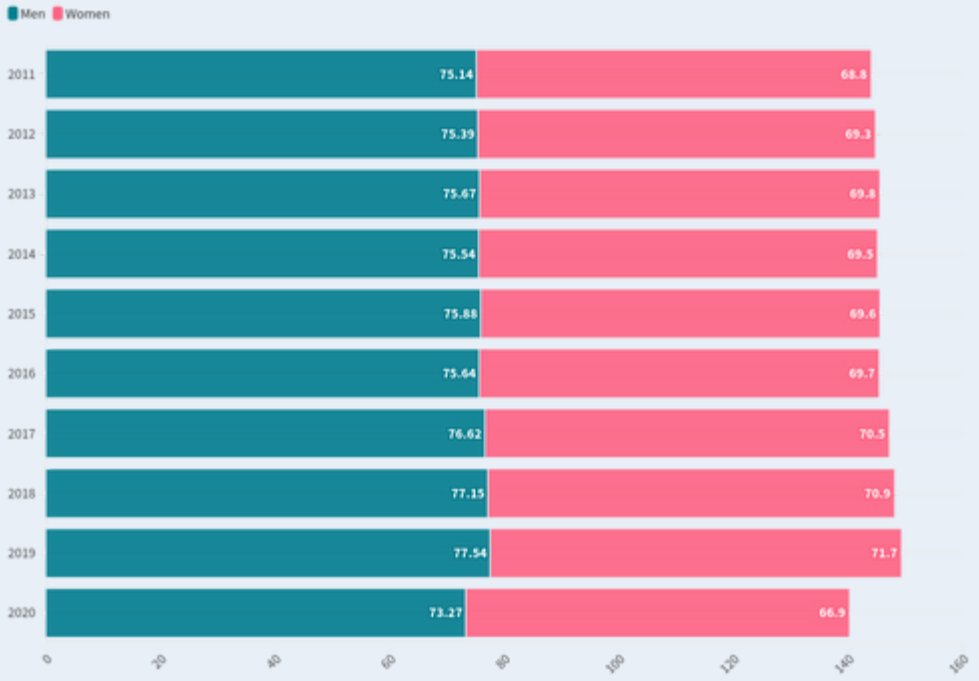
Indicator Score: 0.799

WORST PERFORMING INDICATOR

Indicator Name: Labour Force

Indicator Score: 0.009

Parameter wise ranking

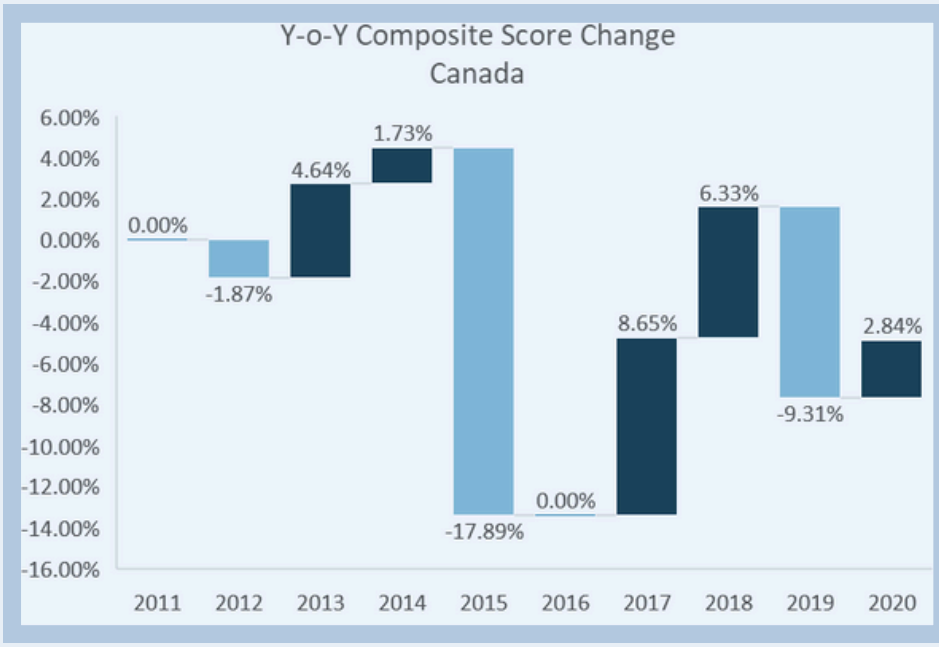


Male and female participation in workforce

69.7% Average employment rate of women

75.8% Average employment rate of men

72.3% Average employment rate in Canada



OBSERVATIONS

- Canada ranks second among all countries, demonstrating the progressive state of its labor markets.
- The annual growth rate of output per worker reflects the most versatility suggesting high productivity levels.
- Conversely, the labor force emerges as the weakest indicator, highlighting challenges and a shortage of human labor.

RECOMMENDATIONS

To increase its labor force, Canada can enhance immigration policies, promote flexible work arrangements, and invest in skill development programs. The country has already implemented measures such as the Express Entry system for skilled immigrants, expanded parental leave, and initiatives to improve women's participation in the workforce. Further steps include investing in education and training for Indigenous communities, encouraging older workers to remain employed, and creating incentives for businesses to hire and retain young workers. Additionally, improving childcare availability and affordability can enable more parents to enter and remain in the workforce, further boosting labor force participation.

FRANCE

COUNTRY PROFILE

Rank
(out of 7 countries)
6

Score
(composite)
0.422

POPULATION

65.8 MILLION

♀ 51.3% ♂ 48.7%

LABOUR FORCE

31.79 MILLION

$50,017 AVERAGE ANNUAL WAGE

UNEMPLOYMENT RATE (2023)

7.10%

BEST PERFORMING INDICATOR

Indicator Name: Labour Income as a Share of GDP

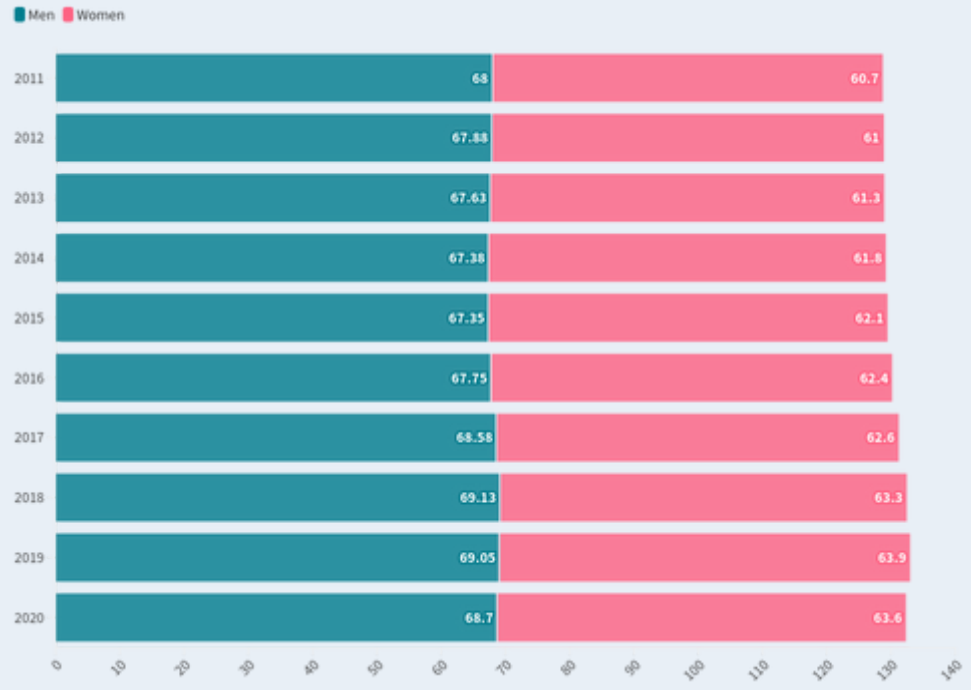
Indicator Score: 0.742

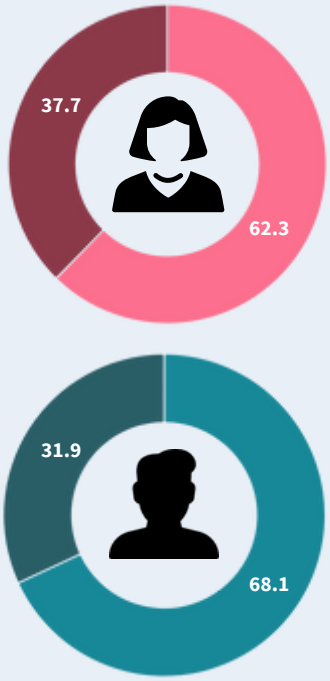
WORST PERFORMING INDICATOR

Indicator Name: Trade Union Density

Indicator Score: 0.010

Parameter wise ranking



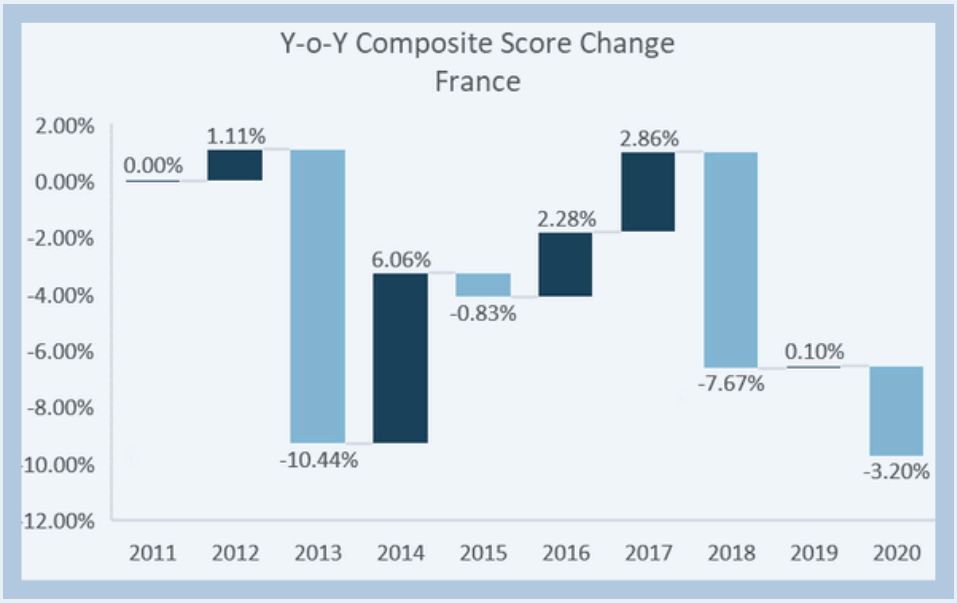


Male and female participation in workforce

62.3% Average employment rate of women

68.1% Average employment rate of men

66.3% Average employment rate in France



OBSERVATIONS

- France ranks 6th out of 7 countries, reflecting a below-average overall performance.
- Labour income as a share of GDP is the best performing indicator, highlighting economic stability and a high standard of living.
- Conversely, low trade union density indicates potential challenges in labour organisation and worker representation.

RECOMMENDATIONS

The French government has consistently prioritised workplace gender equity. In 2024, it introduced stricter sanctions for poor gender equality results, birth leave, new statistical indicators and women's health measures. The government remains committed to female issues like maternity and menstrual leave, diseases like endometriosis and ovarian cancer, etc. Conversely, French trade union membership has dropped to 9%, the lowest in the EU. Unions are strong in energy and transport but struggle in services and new work forms due to the expanding service sector, mass unemployment and atypical jobs. The country should aim to modernise trade unions with flexible membership models and benefits tailored to the evolving job market, targeting the service sector and atypical workers.

GERMANY

COUNTRY PROFILE

Rank
(out of 7 countries)
3

Score
(composite)
0.604

POPULATION

83.3 MILLION

♀ 50.63% ♂ 49.37%

LABOUR FORCE

44.36 MILLION

$55,766 AVERAGE ANNUAL WAGE

UNEMPLOYMENT RATE (2023)

3.00%

BEST PERFORMING INDICATOR

Indicator Name: Labour Income as a share of GDP

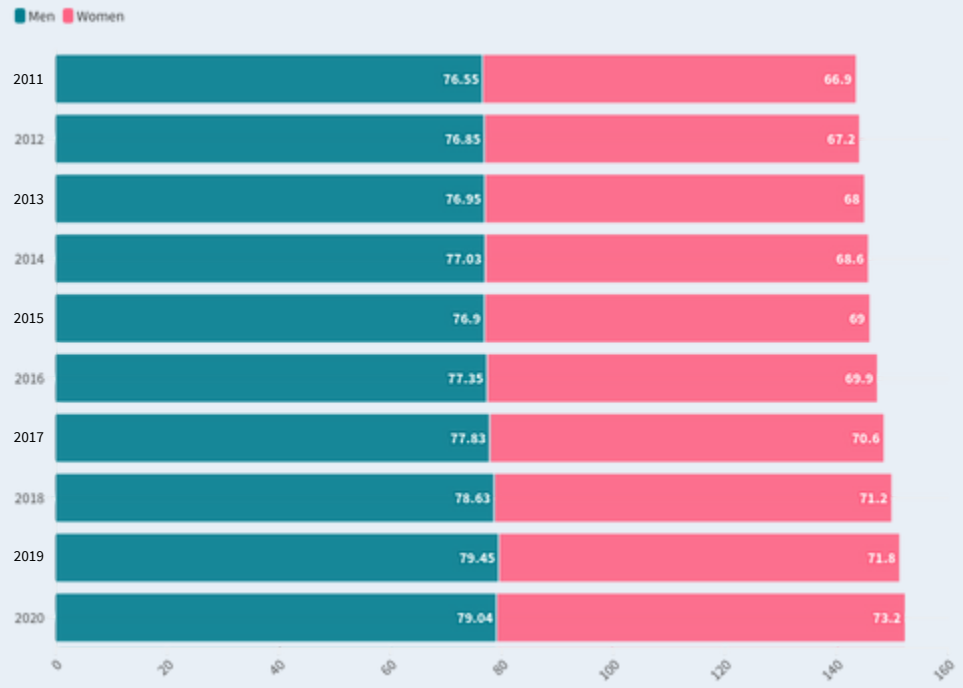
Indicator Score: 0.901

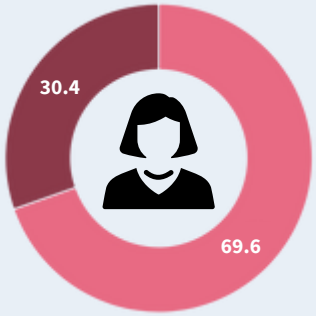
WORST PERFORMING INDICATOR

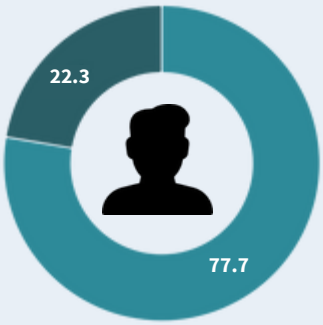
Indicator Name: Hours worked

Indicator Score: 0.074

Parameter wise ranking





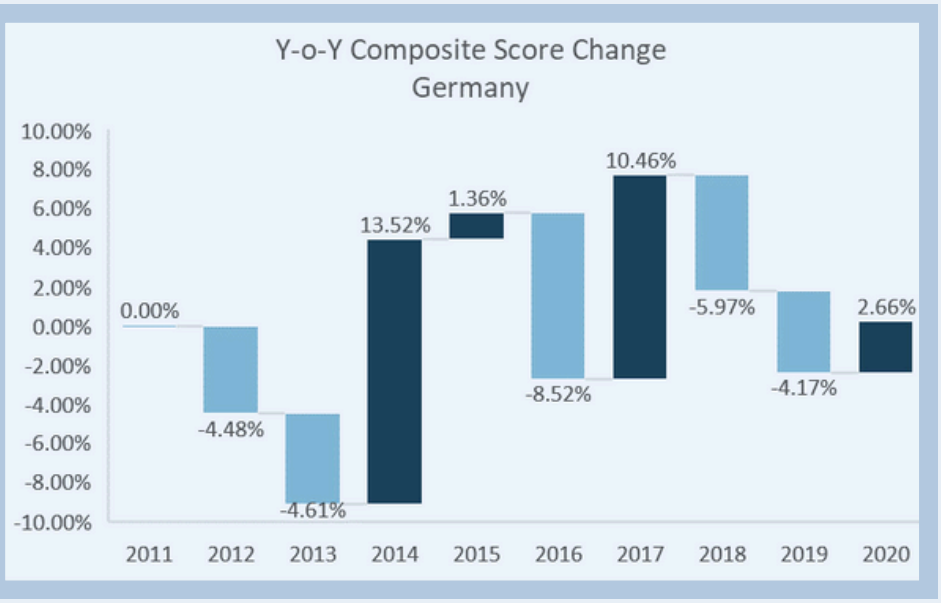


Male and female participation in workforce

69.6% Average employment rate of women

77.7% Average employment rate of men

73.7% Average employment rate in Germany



OBSERVATIONS

- Germany ranks third among all countries, highlighting productivity.
- The share of labor income in GDP stands out as the best-performing indicator, marking progress. Hours worked is the weakest indicator, suggesting that labor hours in the country are relatively low.
- This disparity indicates an improved work-life balance and overall employee well-being.

RECOMMENDATIONS

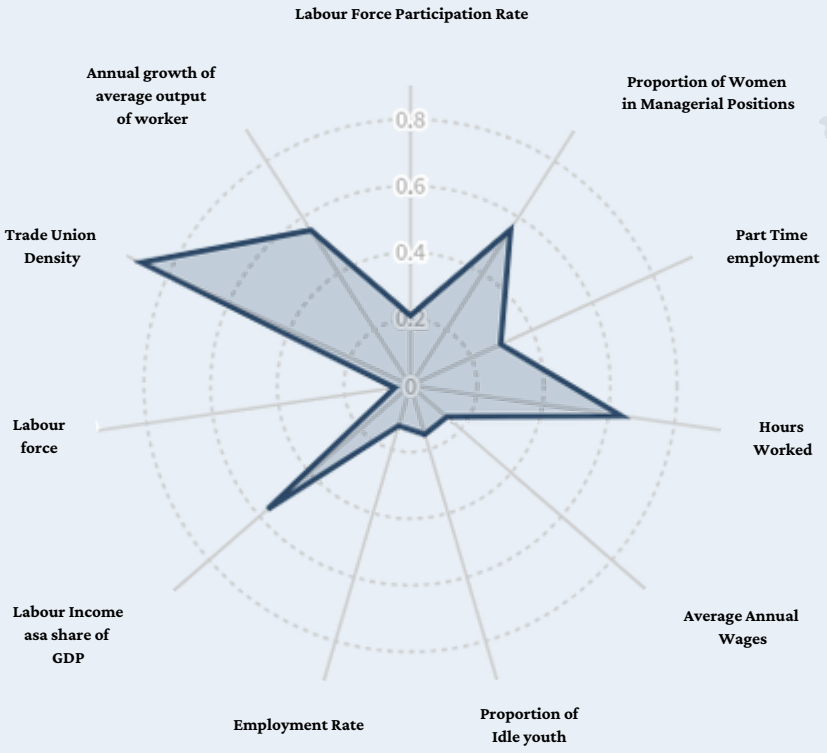
Germany can improve the proportion of women in managerial positions and trade union density by implementing and expanding current initiatives. Reforms already enforced by Germany include the 2015 "Women's Quota" law, mandating 30% of supervisory board seats in large companies be held by women, and the "Act on Equal Participation of Women and Men in Executive Positions" of 2021, which extends quotas to executive boards. To further enhance these areas, Germany should enforce stricter penalties for non-compliance, promote flexible working conditions, provide leadership training programs for women, and encourage trade union membership through better workplace benefits and rights protection.

ITALY

COUNTRY PROFILE

Rank
(out of 7 countries)
7

Score
(composite)
0.385



POPULATION

59 MILLION

♀ 51.02% ♂ 48.98%

LABOUR FORCE

25.66 MILLION

$39,378 AVERAGE ANNUAL WAGE

UNEMPLOYMENT RATE (2023)

7.70%

BEST PERFORMING INDICATOR

Indicator Name: Trade Union Density

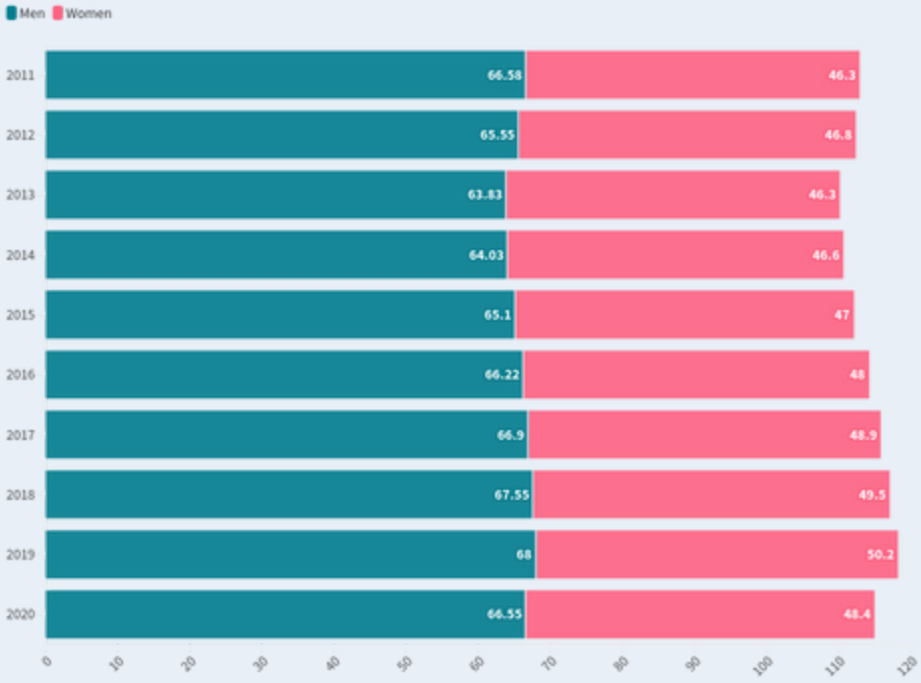
Indicator Score: 0.888

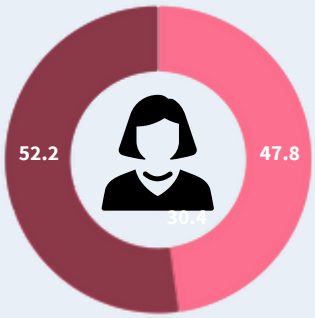
WORST PERFORMING INDICATOR

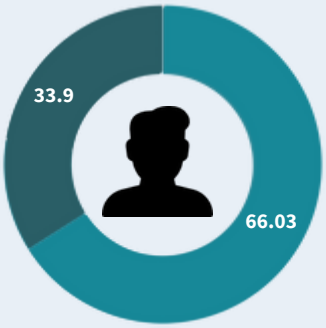
Indicator Name: Labour Force Participation Rate

Indicator Score: 0.210

Parameter wise ranking





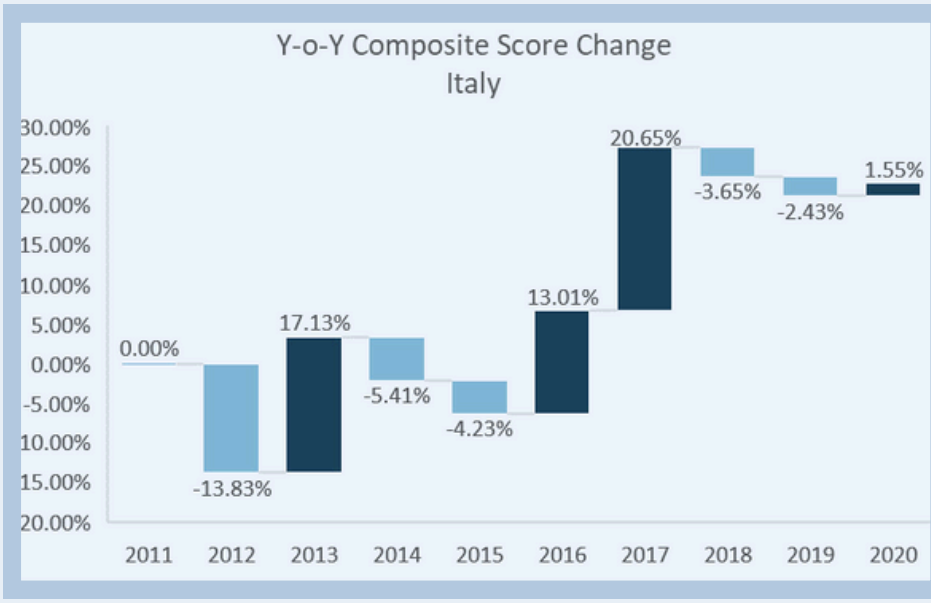


Male and female participation in workforce

47.8% Average employment rate of women

66.1% Average employment rate of men

60.1% Average employment rate in Italy



OBSERVATIONS

- Italy ranks among the weakest of countries under the study.
- Italy performs better on Trade Union Density, reflecting the level of collective representation and bargaining power of employees.
- Average annual wages in Italy have fallen over the period under study, indicating no growth in economic well being over the years.

RECOMMENDATIONS

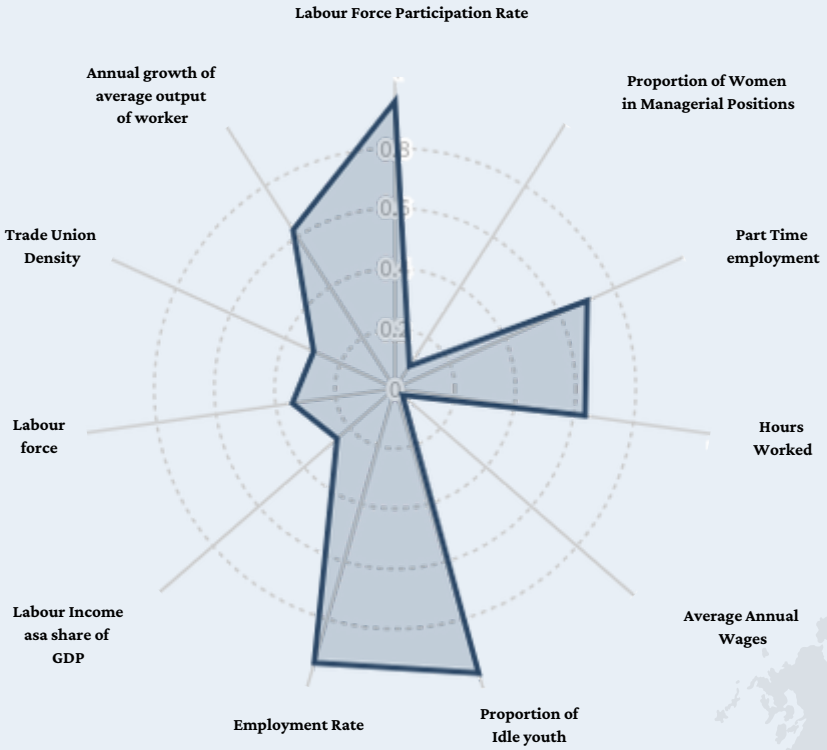
The Italy Government must take reforms that address the broad-ranging asymmetries in labour market regulations, including those in employment protection legislation and social safety nets, and help wages better respond to different conditions across firms and regions. While fiscal constraints limit Italy's ability to implement radical reform, not all shortcomings of the labor market need to be addressed simultaneously. Liberalising product markets is of first-order importance as it can help improve labor market outcomes, induces little to no fiscal cost, and may increase the political feasibility of subsequent labour market reforms. It may Implement targeted programs such as subsidised internships, apprenticeships, and vocational training schemes to address the high rates of youth unemployment.

JAPAN

COUNTRY PROFILE

Rank
(out of 7 countries)
5

Score
(composite)
0.545



POPULATION

125.1 MILLION

♀ 48.8% ♂ 51.2%

LABOUR FORCE

69.27 MILLION

$33,806 AVERAGE ANNUAL WAGE

UNEMPLOYMENT RATE (2023)

2.60%

BEST PERFORMING INDICATOR

Indicator Name: Proportion of Idle Youth

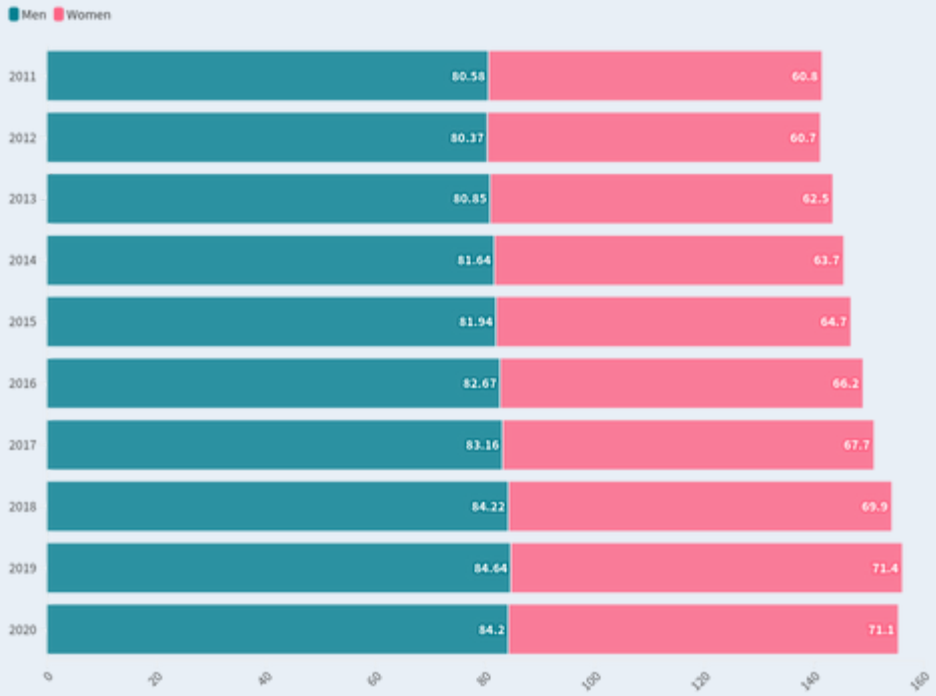
Indicator Score: 0.987

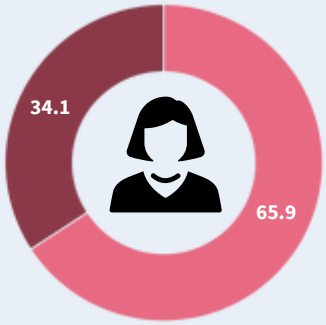
WORST PERFORMING INDICATOR

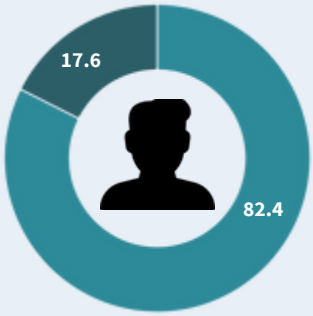
Indicator Name: Average Annual Wages

Indicator Score: 0.033

Parameter wise ranking





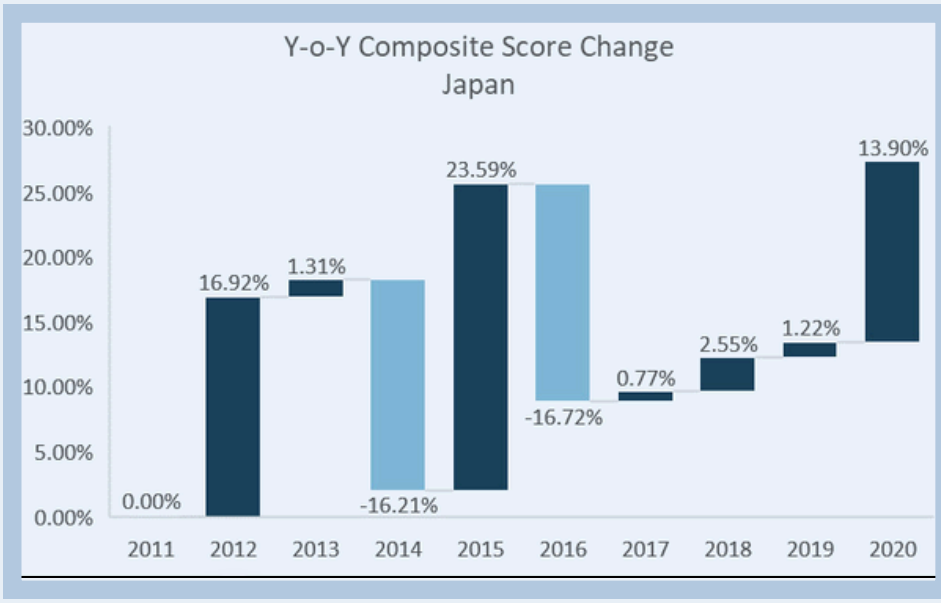


Male and female participation in workforce

65.9% Average employment rate of women

82.4% Average employment rate of men

73.7% Average employment rate in Japan



OBSERVATIONS

- Japan ranks 5th out of 8 countries, reflecting an under-average overall performance.
- The proportion of idle youth is the best performing indicator
- Conversely, the low trade union density indicates potential challenges in labor organization and worker representation, which may impact labor relations and rights.

RECOMMENDATIONS

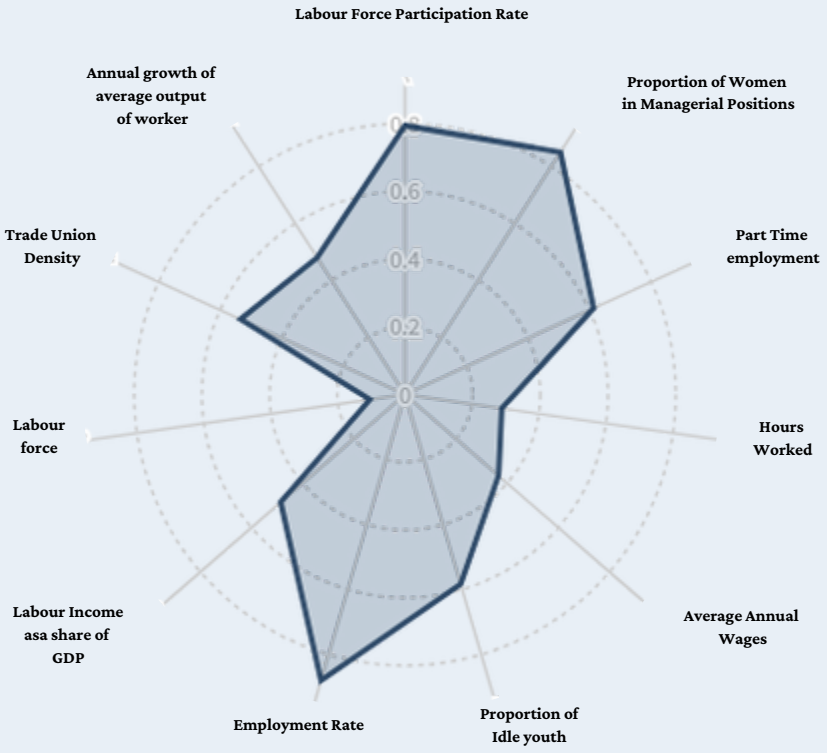
Japan might pursue a number of measures to raise yearly wages and labor income as a percentage of GDP. Encouraging technical innovation and improvement can raise productivity, which in turn can raise salaries. Encouraging education and training specific to developing industries can guarantee a workforce with more expertise, which will fetch better earnings. Policies that support a flexible labor market can encourage the development of jobs and lessen income disparity. Moreover, enticing companies to make welfare and human capital investments can raise employee happiness and productivity.

UK

COUNTRY PROFILE

Rank
(out of 7 countries)
4

Score
(composite)
0.557



POPULATION

67.7 MILLION

♀ 50.6% ♂ 49.4%

LABOUR FORCE

34.67 MILLION

$40,700 AVERAGE ANNUAL WAGE

UNEMPLOYMENT RATE (2023)

4.40%

BEST PERFORMING INDICATOR

Indicator Name: Employment Rate

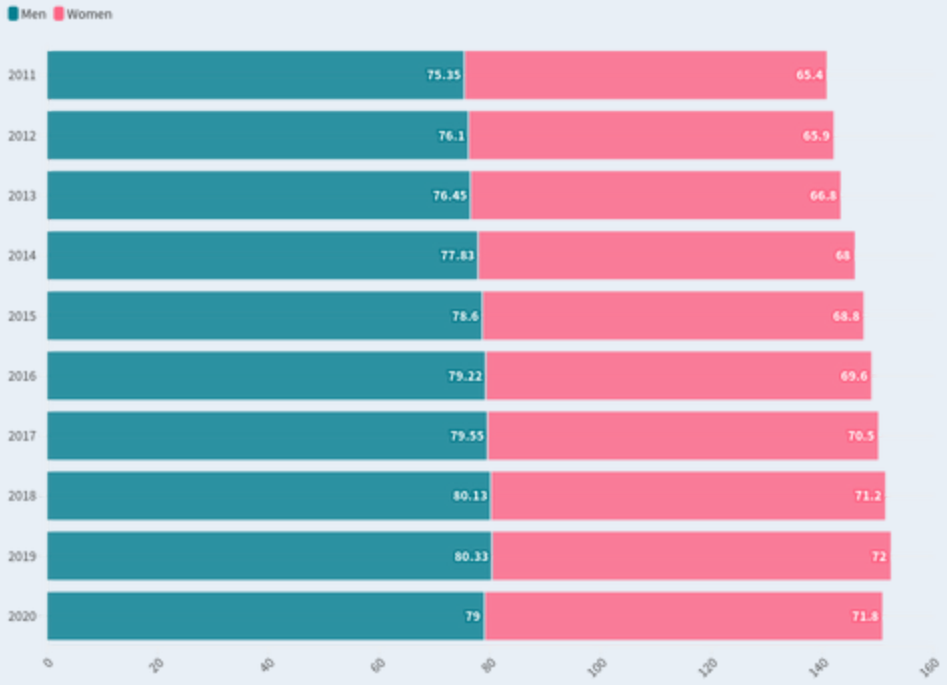
Indicator Score: 0.880

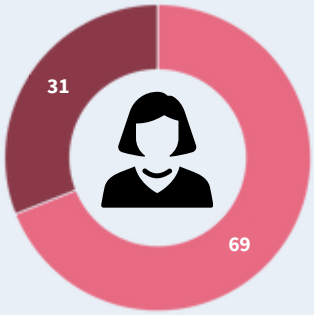
WORST PERFORMING INDICATOR

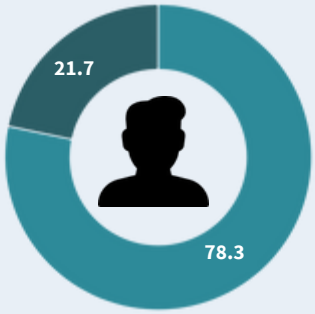
Indicator Name: Average Annual Growth of output per worker

Indicator Score: 0.480

Parameter wise ranking





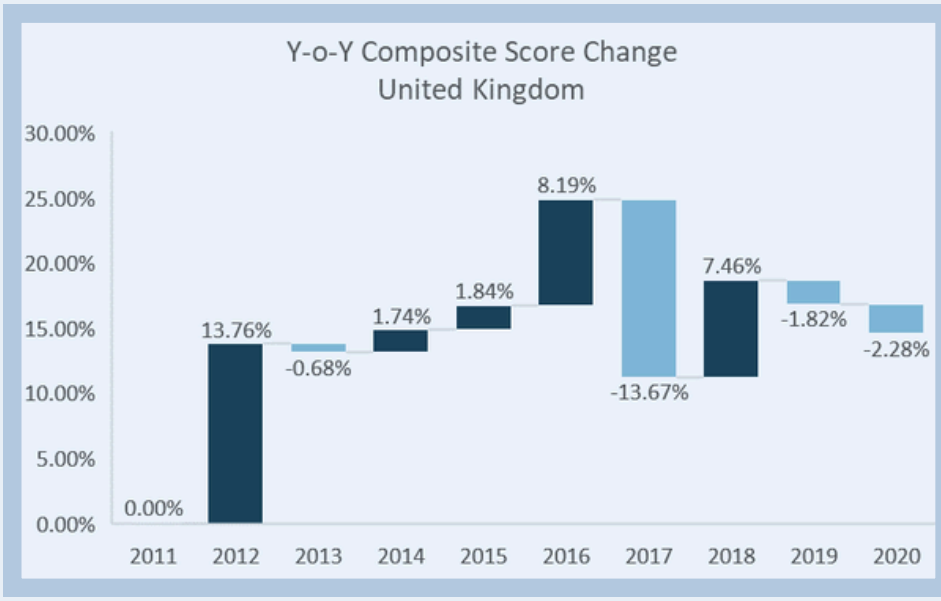


Male and female participation in workforce

69% Average employment rate of women

78.3% Average employment rate of men

73.6% Average employment rate in UK



OBSERVATIONS

- UK ranks midway in the ranking list, indicating room for improvement against its counterparts.
- The Labour Force Participation Rate has seen fluctuations over the years, indicating stagnation of employment opportunities.
- There is high Part Time employment rate, which maybe beneficial for work-life balance but might also indicate lack of full time jobs.

RECOMMENDATIONS

In order to address fluctuations in the employment rate, the UK should prioritise policies that promote job creation and incentivise workforce participation. This includes support for individuals re-entering the workforce after career breaks and the implementation of flexible working hours.

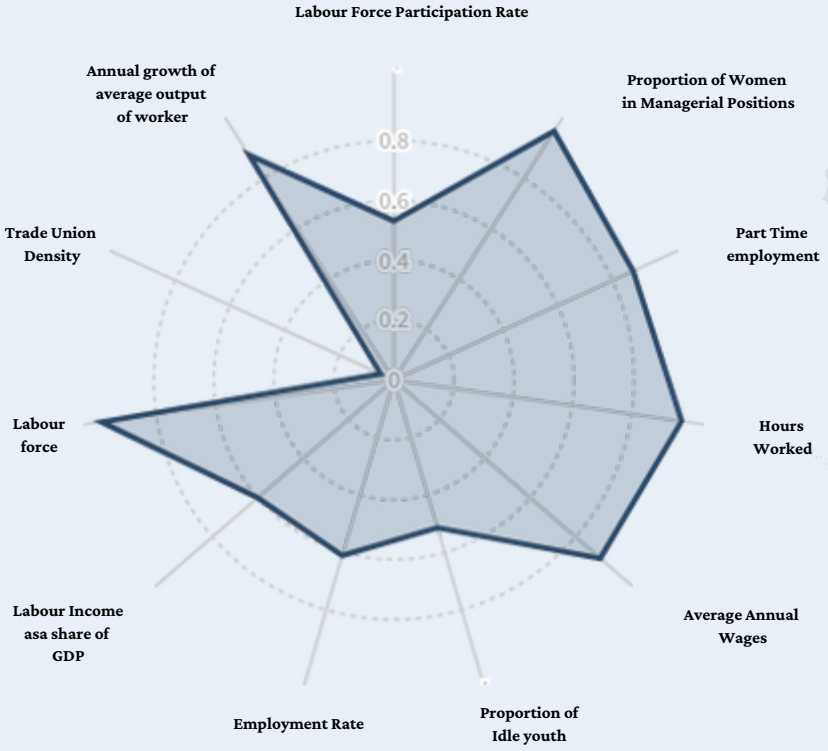
Moreover, to improve the proportion of youth not in employment, education, or training (NEET), the UK could introduce targeted programs such as vocational training and mentorship initiatives. Additionally, policies aimed at mitigating education and employment barriers, including transportation and childcare support, would contribute to reducing the NEET rate.

USA

COUNTRY PROFILE

Rank
(out of 7 countries)
1

Score
(composite)
0.718



POPULATION

314 MILLION

♀ 49.49% ♂ 50.51%

LABOUR FORCE

170.60 MILLION

$58,135 AVERAGE ANNUAL WAGE

UNEMPLOYMENT RATE (2023)

3.60%

BEST PERFORMING INDICATOR

Indicator Name: Proportion of Women in Managerial Positions

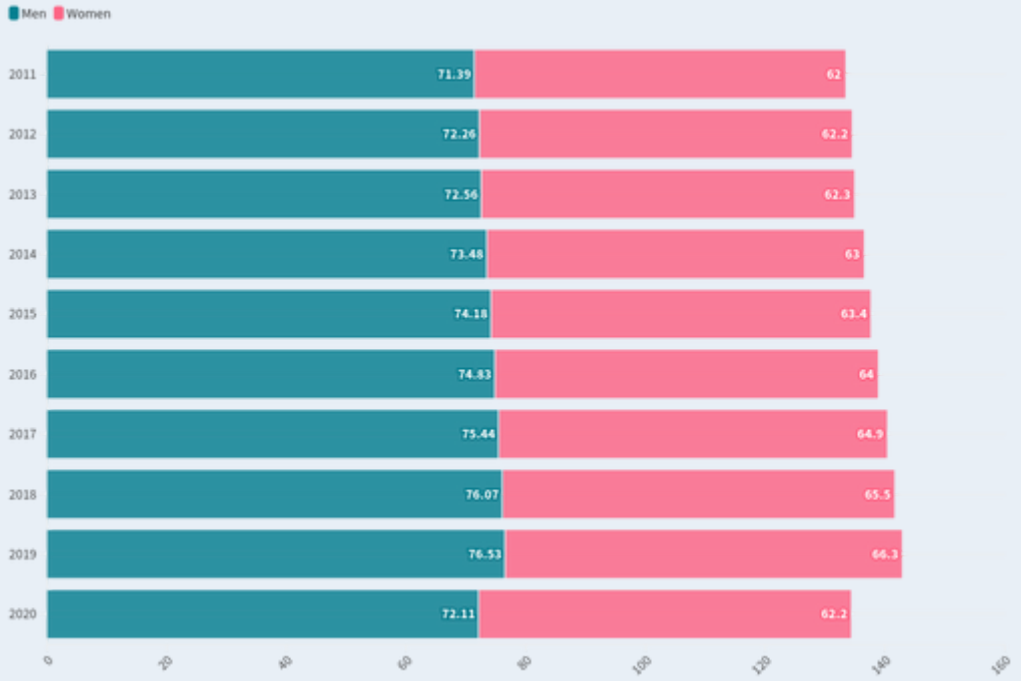
Indicator Score: 0.987

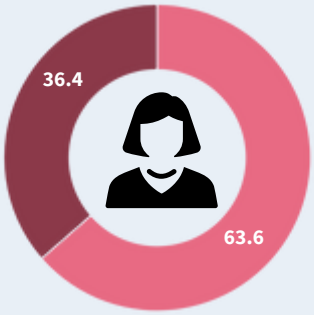
WORST PERFORMING INDICATOR

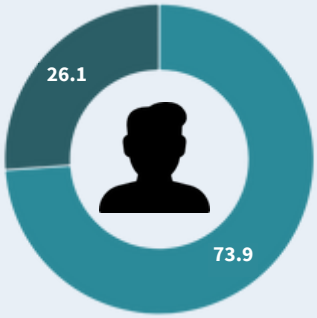
Indicator Name: Trade Union Density

Indicator Score: 0.049

Parameter wise ranking





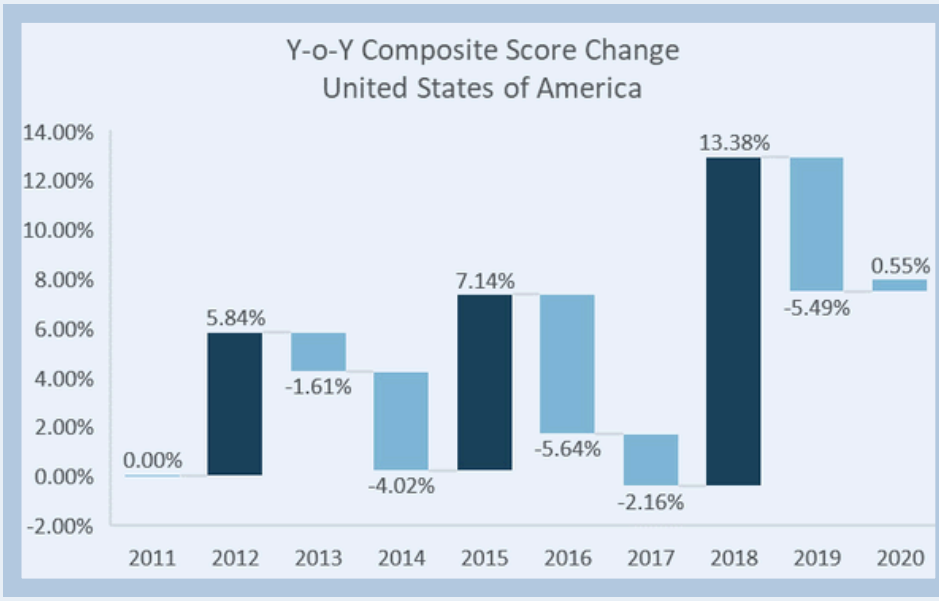


Male and female participation in workforce

63.6% Average employment rate of women

73.7% Average employment rate of men

68.6% Average employment rate in USA



OBSERVATIONS

- USA tops the list with the highest scores in 6 out of the listed 11 parameters.
- The country displays its prowess in output related indicators, with the highest annual wages and hours worked of all the countries.
- However it has one of the lowest trade union density, showing its lack of labour representation

RECOMMENDATIONS

Membership in trade unions have remained stagnant and policy changes are required to revitalise these important units of the economy. It needs to look into passing the Protecting the Right to Organise Act, the Public Service Freedom to Negotiate Act, and other reforms to ensure workers have strong rights, incentives to join unions, and a clear path to collective bargaining.
The country also witnesses a low labour share of income which is indicative of wealth inequality. This is also linked to a poor union density but majorly driven by technological changes which results in a lower demand for labour. Investing in education and training programs outside traditional channels could prepare future workers to keep up with technological progress and cope with the challenges posed by globalisation.

APPENDIX

EMPLOYMENT RATE

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	71.97	72.32	72.72	72.5	72.74	72.67	73.57	74.03	74.6	70.13
France	64.3	64.38	64.38	64.53	64.7	65	65.55	66.15	66.38	66.1
Germany	71.78	72.05	72.53	72.8	73	73.67	74.25	74.9	75.65	76.16
Italy	56.35	56.08	54.95	55.27	56.02	57.05	57.88	58.5	59.05	57.45
Japan	70.83	70.62	71.76	72.76	73.4	74.52	75.5	77.16	78.11	77.73
United Kingdom	70.33	70.97	71.55	72.88	73.67	74.38	75	75.63	76.17	75.4
United States	66.65	67.14	67.36	68.15	68.71	69.35	70.11	70.73	71.36	67.07

LABOUR INCOME AS A SHARE OF GDP

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	60.23	61.20	61.26	60.33	62.40	61.23	60.31	60.71	60.91	62.16
France	63.02	62.28	61.52	63.41	62.16	61.82	59.86	59.97	59.61	61.09
Germany	60.95	61.81	61.99	61.67	61.88	61.42	61.51	62.02	62.51	62.75
Italy	57.69	57.75	57.85	57.30	57.92	60.00	61.44	61.40	59.09	56.88
Japan	55.29	54.88	54.19	53.99	52.51	53.12	53.12	54.52	55.38	56.59
United Kingdom	57.60	57.38	57.15	56.83	56.03	56.05	55.54	55.76	56.51	60.27
United States	58.40	58.26	57.76	58.01	58.59	58.47	58.60	58.48	58.37	60.00

PART TIME EMPLOYMENT RATE

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	19.44	19.09	19.24	19.43	18.96	19.35	19.44	18.96	19.06	18
France	13.66	13.87	14.02	14.31	14.36	14.25	14.29	14.01	13.44	13.12
Germany	22.27	22.24	22.57	22.33	22.4	22.07	22.16	22.03	22.04	22.52
Italy	16.66	17.78	18.52	18.82	18.65	18.58	18.42	17.91	17.94	17.88
Japan	20.57	20.51	21.89	22.75	22.67	22.79	22.42	23.93	25.16	25.78
United Kingdom	24.67	24.97	24.64	24.1	23.97	24.04	23.85	23.59	23.37	22.52
United States	29.56	28.79	27.97	28.33	28.76	27.42	27.56	26.31	25.74	28.83

PROPORTION OF WOMEN IN MANAGERIAL POSITION

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	37.11	36.43	35.78	35.52	36.25	35.79	34.54	35.08	35.28	35.82
France	39.34	39.32	36.00	32.74	31.66	32.91	33.44	34.44	34.67	35.53
Germany	27.66	28.83	29.10	28.98	28.88	29.50	28.99	29.18	29.48	28.63
Italy	25.10	26.11	27.13	26.72	26.73	27.92	27.69	27.21	28.15	27.62
Japan	11.74	11.31	10.85	11.39	12.05	13.33	12.78	14.38	14.72	13.06
United Kingdom	33.88	34.19	33.37	35.45	35.73	35.56	35.77	36.05	37.32	36.76
United States	38.87	39.33	38.92	38.93	39.56	39.74	40.50	40.74	40.68	41.06

HOURS WORKED

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	1711	1721	1714	1709	1710	1701	1689	1702	1691	1653
France	1546	1541	1526	1518	1520	1522	1508	1514	1518	1403
Germany	1427	1408	1397	1400	1401	1396	1389	1381	1372	1319
Italy	1773	1734	1719	1716	1718	1722	1719	1719	1710	1543
Japan	1728	1745	1734	1729	1719	1714	1709	1680	1644	1597
United Kingdom	1515	1531	1534	1542	1525	1541	1536	1536	1537	1364
United States	1820	1828	1827	1830	1831	1823	1822	1827	1824	1800

LABOUR FORCE PARTICIPATION RATE

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	80.94	81.28	81.46	80.99	81.15	81.28	81.67	81.82	82.2	81.13
France	77.17	77.97	78.46	78.75	78.9	79.16	79.33	79.77	79.71	79.33
Germany	82.27	82.45	82.81	83.06	83.05	83.33	83.57	83.96	84.42	83.55
Italy	68.36	69.82	69.9	70.56	70.83	71.81	72.46	72.72	72.87	71.39
Japan	79.57	79.77	80.77	81.53	82.14	82.98	83.87	84.86	85.45	85.64
United Kingdom	79.02	79.78	80.4	80.71	80.91	81.13	81.71	81.91	82.34	82.48
United States	77.62	77.45	77.03	76.87	76.71	77.04	77.42	77.78	78.2	77.23

AVERAGE ANNUAL WAGES

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	53088	53717	54286	54995	55400	54350	55122	56083	56370	59160
France	49836	50159	50581	50929	51415	52010	52732	52664	53172	50550
Germany	53980	54699	55215	56141	57431	58311	58924	59750	60732	60309
Italy	46866	45379	45527	45704	46103	46469	46169	46230	46460	44246
Japan	41656	40963	40995	40257	40062	40609	40710	41172	41699	41442
United Kingdom	51497	51070	51594	51816	52549	53156	53471	53950	54703	53612
United States	67353	67928	67604	68591	70320	70446	71157	71937	73194	77567

TRADE UNION DENSITY

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	26.90	27.20	27.10	26.40	26.50	26.30	26.30	25.90	26.10	27.20
France	9.10	9.10	11.30	9.00	9.00	11.00	9.00	8.90	9.16	9.05
Germany	18.40	18.30	18.00	17.70	17.60	17.00	16.70	16.60	16.30	15.98
Italy	35.20	35.50	35.70	35.40	34.20	33.60	33.20	32.60	32.50	32.24
Japan	19.00	18.00	17.80	17.60	17.50	17.40	17.20	17.00	16.80	16.55
United Kingdom	26.00	26.10	25.60	25.00	24.70	23.60	23.30	23.40	23.50	22.57
United States	11.30	10.80	10.80	10.70	10.60	10.30	10.30	10.10	9.90	10.30

ANNUAL GROWTH OF AVERAGE OUTPUT OF WORKER

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	1.60	0.61	0.97	2.44	-0.12	0.22	1.00	1.24	-0.18	0.59
France	1.18	0.10	-0.09	1.49	0.82	0.58	1.72	1.09	1.43	-7.24
Germany	2.00	-0.31	-0.47	1.55	1.24	0.07	1.68	0.30	-0.40	-1.03
Italy	0.53	-2.71	0.15	-0.08	0.08	-0.01	1.42	0.04	-0.17	-7.06
Japan	0.45	1.59	1.27	-0.46	1.29	-0.28	0.50	-1.23	-1.25	-3.48
United Kingdom	-0.03	0.22	0.45	0.83	0.76	0.76	0.69	0.56	0.56	-10.24
United States	0.60	0.51	0.68	0.42	0.98	0.03	0.60	1.44	0.76	3.25

PROPORTION OF IDLE YOUTH

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	13.19	13.25	12.91	13.55	13.27	12.89	12.07	12.21	12.04	17.87
France	12.42	12.84	13.43	13.50	13.97	13.94	13.43	13.08	12.62	12.70
Germany	8.16	7.23	6.41	6.37	6.24	6.70	6.27	6.01	5.61	7.30
Italy	19.68	20.97	22.17	22.18	21.46	19.97	20.20	19.36	18.24	19.02
Japan	4.30	4.26	3.96	3.74	3.66	3.55	3.32	2.97	3.14	2.82
United Kingdom	15.16	14.18	13.76	12.24	12.20	11.48	11.04	11.42	11.22	10.00
United States	14.42	13.91	14.38	13.39	12.44	12.02	10.97	10.92	10.41	13.89

LABOUR FORCE (IN THOUSANDS)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Canada	18670	18871	19075	19126	19242	19372	19658	19884	20275	19973
France	28248	28482	28625	29402	29496	29549	29587	29700	29625	29346
Germany	41185	41350	41712	41959	42158	43039	43283	43381	43771	43517
Italy	24659	25256	25259	25514	25497	25769	25929	25969	25941	25214
Japan	65955	65652	65928	66088	66251	66785	67323	68492	69122	69023
United Kingdom	31966	32264	32514	32777	33065	33379	33537	33823	34102	34061
United States	153617	154975	155389	155922	157130	159187	160320	162075	163539	160742

COUNTRY WISE RANKING

Country	Composite Score	Rank
United States	0.718	1
Canada	0.610	2
Germany	0.604	3
United Kingdom	0.558	4
Japan	0.546	5
France	0.423	6
Italy	0.385	7

EXPONENTIAL DECAY SCORES

	Canada	France	Germany	Italy	Japan	United Kingdom	United States
Labour Force Participation Rate	0.763	0.640	0.891	0.210	0.956	0.794	0.531
Proportion of Women in Managerial Position	0.815	0.790	0.601	0.556	0.089	0.850	0.987
Employment Rate	0.753	0.475	0.879	0.126	0.952	0.880	0.611
Part Time Employment Rate	0.338	0.027	0.556	0.298	0.702	0.613	0.876
Labour Income as a share of GDP	0.814	0.742	0.901	0.567	0.255	0.486	0.601
Labour Force	0.009	0.075	0.171	0.048	0.344	0.105	0.984
Hours worked	0.703	0.296	0.074	0.639	0.638	0.289	0.968
Proportion of Idle Youth	0.394	0.478	0.809	0.153	0.987	0.584	0.514
Annual Wages	0.455	0.313	0.527	0.144	0.033	0.366	0.909
Trade Union Density	0.660	0.010	0.280	0.888	0.297	0.534	0.049
Annual Growth of average output of worker	0.799	0.598	0.740	0.554	0.626	0.480	0.893

WEIGHTS ASSIGNED TO PARAMETERS

Parameters	Weights
Labour Force Participation Rate	0.096999
Proportion of Women in Managerial Position	0.094808
Employment Rate	0.095279
Part Time Employment Rate	0.090985
Labour Income as a share of GDP	0.097657
Labour Force	0.067285
Hours worked	0.091633
Proportion of Idle Youth	0.095020
Annual Wages	0.088113
Trade Union Density	0.082635
Annual Growth of average output of worker	0.099587

WEIGHTED FINAL SCORE FOR ALL INDICATORS

	Canada	France	Germany	Italy	Japan	United Kingdom	United States
Labour Force Participation Rate	0.074	0.062	0.086	0.020	0.093	0.077	0.051
Proportion of Women in Managerial Position	0.077	0.075	0.057	0.053	0.008	0.081	0.094
Employment Rate	0.072	0.045	0.084	0.012	0.091	0.084	0.058
Part Time Employment Rate	0.031	0.002	0.051	0.027	0.064	0.056	0.080
Labour Income as a share of GDP	0.079	0.072	0.088	0.055	0.025	0.047	0.059
Labour Force	0.001	0.005	0.011	0.003	0.023	0.007	0.066
Hours worked	0.064	0.027	0.007	0.059	0.058	0.026	0.089
Proportion of Idle Youth	0.037	0.045	0.077	0.015	0.094	0.056	0.049
Annual Wages	0.040	0.028	0.046	0.013	0.003	0.032	0.080
Trade Union Density	0.055	0.001	0.023	0.073	0.025	0.044	0.004
Annual Growth of average output of worker	0.080	0.060	0.074	0.055	0.062	0.048	0.089

PARAMETER WISE RANKINGS

	Labour Force Participation Rate		Proportion of Women in Managerial Position		Employment Rate	
	Score	Rank	Score	Rank	Score	Rank
Canada	0.763	4	0.815	3	0.753	4
France	0.640	5	0.790	4	0.475	6
Germany	0.891	2	0.601	5	0.879	3
Italy	0.210	7	0.556	6	0.126	7
Japan	0.956	1	0.089	7	0.952	1
United Kingdom	0.794	3	0.850	2	0.880	2
United States	0.531	6	0.987	1	0.611	5

	Part Time Employment Rate		Labour Income as a share of GDP		Labour Force	
	Score	Rank	Score	Rank	Score	Rank
Canada	0.338	5	0.814	2	0.009	7
France	0.027	7	0.742	3	0.075	5
Germany	0.556	4	0.901	1	0.171	3
Italy	0.298	6	0.567	5	0.048	6
Japan	0.702	2	0.255	7	0.344	2
United Kingdom	0.613	3	0.486	6	0.105	4
United States	0.876	1	0.601	4	0.984	1

	Hours worked		Proportion of Idle Youth		Average Annual Wages	
	Score	Rank	Score	Rank	Score	Rank
Canada	0.703	2	0.394	6	0.455	3
France	0.296	5	0.478	5	0.313	5
Germany	0.074	7	0.809	2	0.527	2
Italy	0.639	3	0.153	7	0.144	6
Japan	0.638	4	0.987	1	0.033	7
United Kingdom	0.289	6	0.584	3	0.366	4
United States	0.968	1	0.514	4	0.909	1

	Trade Union Density		Annual Growth of average output of worker	
	Score	Rank	Score	Rank
Canada	0.660	2	0.799	2
France	0.010	7	0.598	5
Germany	0.280	5	0.740	3
Italy	0.888	1	0.554	6
Japan	0.297	4	0.626	4
United Kingdom	0.534	3	0.480	7
United States	0.049	6	0.893	1

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