

Section 2. Business Needs

1. Problem Statement

PROBLEM

In Britain, unequal compensation for comparable labor has been prohibited since the 1970s and is presently codified in the Equality Act 2010. Since 1997, the full-time pay difference has been shrinking over the years, and the total pay gap has also shrunk. Specifically, according to the most recent numbers disclosed under the government's gender pay gap reporting process in 2021, women in the UK were paid just 90p for every £1 earned by males (Duncan, 2022). However, there have also been recent reversals in this issue's development. The gender wage gap in the United Kingdom increased from 14.9% to 15.4% in 2021 (White, 2021). The pay gap continues because of deeply ingrained inequities in society and the economy.

IMPACT

1. The increase in the gender pay gap can have a negative impact on companies' competitiveness. Take women's pay as an example, since women represent half of the global labor supply and around 70% of global consumer demand, a decrease in women's pay results in poor loyalty and belief in the company's value, lower their productivity, diversity, and gender balance of a company, which ultimately affects a company's performance and position (Mollerop, 2019). This problem not only affects the company itself, but also affects recruiters when hiring high-skilled workers and prospective employees when choosing to join;
2. Besides, the gender pay gap can lead to a risk that all the recent corporate gains may be jeopardized if employees continue to be disproportionately employed by gender and obeyed the investor and stakeholder attention on the environment, social, and governance (ESG) strategy. ESG requires organizations to describe their position in society and how they are fair to their employees, suppliers, and communities. So, while the gender pay gap in the United Kingdom remains a relatively specific measure, companies are increasingly grappling with the challenge of contextualizing it in a broader conversation about social contribution.

TIMEFRAME, LOCATION & TREND

The gender pay gap has always been an issue since women workers have taken up the battle for pay equity since the late nineteenth century. The dataset shows the data on the gender pay gap from different sizes of companies in the UK. In 2017, the UK government enacted legislation requiring organizations with 250 or more employees to report on their gender pay disparity on an annual basis. From 2017 to 2022, there is a slightly decreasing trend of the gender pay gap. Yet, the overall gender pay gap rose a bit in 2021 which might be affected due to COVID-19.

GOAL

Improve the position and brand reputation of listed companies in the UK for the next 5 years by offering professional suggestions to reduce the gender pay gaps and attract more talent for greater social accountability.

IMPORTANCE

A. For companies

1. Recruiters like Chief Human Resource Officers (CHO) can utilize expanded analysis and reporting to dive into their pay to discover the root causes of pay gaps and understand companies' current position in the industry by evaluating past figures and trends. Also, CHO can develop more specific and effective strategies in the next financial years by evaluating the effectiveness and efficiencies of the past strategies relating to reducing gender pay gaps through changes in the industry position;

2. Bespoke suggestions are offered as an indication for CHO to develop HR-related strategies to improve the company's position and align with the ESG criteria (satisfying shareholders), (also achieving their KPI) based on data and analysis by comparing firms with similar sizes and gender pay gap trends. For example, providing voluntary supplementary pay gap reporting for ethnicity, disability, and socioeconomic mobility.

B. For employees / graduates / workers

1. Pay transparency provides workers with the information and evidence they need to negotiate pay rates and gives them a way to challenge potential pay discrimination. Encourages current employees to have a clear indication that they want to demonstrate their commitment to eliminating the gender pay gap and bolstering companies' reputation as a fair and ethical workplace;
2. Workers are able to choose their preferred employer based on their willingness of pays, for example, workers can find out a company that is more female-friendly and has fewer gender pay gaps than others.

2. Persona of Target Audiences

RECRUITERS

Charlotte Wilson

Age: 27
Education: Msc Management
Work: Senior Management consultant
Family: Newly married
Location: London, UK

Bio

Charlotte entered management consulting through Accenture's female leadership program since 2018 and graduated with a first class degree in Msc Management from UCL. She is a professional management consultant who has the expertise that a company lacks. She has both theoretical and also practical experiences, so that she is able to help a business to focus on the development process and overall operations. Currently, she is looking to jump ship because she wants to move to her new married husband's city.



"I am looking for employers who have prioritised gender equality in the workplace!"

Personality

Introvert	Extrovert
Analytical	Creative
Loyal	Fickle
Passive	Active

Ambitious

Focussed

Free-Spirited

Logical

Motivation

Solving problems	
Female-friendly	
Personalization	
High salary	
Convenience working place	
Clear career path	

Wants and Goals

- Get the same opportunities as men in the work place
- To build relationships with long-term clients
- To get more leads and grow her own business later
- To find a new female-friendly company in a safe way

Desired Companies






Preferred Channels


LinkedIn	
Glassdoor	
Social Networks	
Headhunters	

Frustrations

- Personal information leaked during job change
- Have to face discriminations and unequal treatment because of stereotypical expectations, attitudes and behaviours towards women

WORKERS

Jackson Wang



"Hiring and developing talents are the key of success to a corporate's development and growth"

Age: 40
Work: **CHO**
Family: **Married**
Location: **London, United Kingdom**
Sector: **Finance**

Personality

Introvert	Extrovert
Thinking	Feeling
Sensing	Intuition
Judging	Perceiving

Sensitive perspicacity Optimistic Social

Goals

- Spread corporate culture to attract more talent to join
- Solve potential and existing problems of imbalanced working hours and gender pays.
- Aim to improve corporate's gender balance.

Needs

- Find the company's current position and development trends in the industry regarding the gender pay gap.
- Receive an insightful analysis of existing and potential problems regarding the gender pay gap.
- Compare with rivals with workforce strengths and weaknesses.
- Find impacts for the company from gender pay gaps.
- Get bespoke suggestions for future development.


Bio

Jackson is the Chief Human Resources Officer (CHO) of a financial institution with much experience in hiring talents. He is responsible for formulating the strategic planning of human resources and supervising its implementation, establishing smooth communication channels and effective incentive mechanisms for employees. He is now reviewing employees' gender pay gap and trying to sort out the impacts on human resources, so as to improve the company's brand reputation and position.

Motivation

OKR	Progress
Workforce Analysis	80%
Gender pay gap position	60%
Company reputation	70%
Company's growth	90%

Gender-balanced competitors



Preferred Hiring Channels

Channel	Progress
Graduate Scheme	70%
Experienced Hires	60%
Referral	80%
Headhunting	70%

3. Questions to Answer

A. For employees/graduates/workers or people who are looking for a job or trying to know more about the company's information

INDUSTRY

1. How many and what industries can we define from our datasets?
2. Which industries have the largest and the least mean gender pay gap in both hourly pay and bonus pay?
3. What are the average gender pay quantiles (including lower, lower middle, upper middle, and top) in these industries?
4. Will the industry trend vary in terms of company size and region?
5. Is there any specific industry not following the overall trend?

COMPANY SIZE

1. How many classes can we define based on the dataset?

2. Based on different classes of companies' sizes, which classes have the largest and the least mean gender pay gap in both hourly pay and bonus pay?
3. What are the average gender pay quantiles (including lower, lower middle, upper middle, and top) in these classes?
4. Will the trend on company size vary in terms of industry and region?

REGION

1. Which regions can we determine from the dataset?
2. Which regions have the largest and the least mean gender pay gap in both hourly pay and bonus pay?
3. What are the average gender pay quantiles (including lower, lower middle, upper middle, and top) in these regions?
4. Will the regional trend vary in terms of industry and company size?
5. Is there a specific region not following the overall trend?

B. For recruiters that want to learn about the current position of their firm

INDIVIDUAL COMPANIES

1. What is the rank in either the industry, company size or region by comparing the hourly pay gap and bonus pay gap?
2. Is the firm being absolutely paying biased salary or bonus?
3. Is the firm being relatively paying biased salary or bonus within an industry, a class of company size or a region?
4. How the firm can improve its competitiveness by benchmarking other companies with better gender pay gap within the same industry, same company size or same region?

4. Suggestion for Machine Learning Models

CLASSIFICATION

To classify companies into their corresponding industries. This utilization can be found on gov.uk.

Search and compare gender pay gap data by employer name or type

☐ Employer name ☒ Employer type or SIC code

Examples of employer types include banks, supermarkets, law firms. You can also search by Sector Industry Classification (SIC) codes which provide an easy way of describing what an employer does. [Find SIC codes](#)

Clear all filters

Order: ☒ By relevance ☐ Alphabetically

Employer size: 350 employers

Sector: [Add all employers to comparison list](#)

Reporting year: 1 selected

Reporting status: Wholesale and retail trade

A.J.N. STEELSTOCK LTD.
Icknield Way, Kentford, Newmarket, Suffolk, CB8 7QT [Add to compare](#)

AB WORLD FOODS LIMITED
Woburn Centre, 10 Gorsewood Street, London, W1K [Add to compare](#)

REGRESSION

To predict whether a company tends to be biased on gender payment or not.

XGBOOST

To compare gender pay gaps or mean gender pays with other companies. This can help prospective employees to compare employers or help recruiters to understand their industrial or regional position on gender pay gap issue.

References:

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Mollerop, F. (June, 2019) *How The Gender Pay Gap Could Destroy Business Competitiveness*. Forbes. Available at: <https://www.forbes.com/sites/forbestechcouncil/2019/07/26/how-the-gender-pay-gap-could-destroy-business-competitiveness/?sh=5fc6d60968dc> [Accessed: Oct 2022]

Sharkey, A., Pontikes, E., & Hsu, G. (2022). The Impact of Mandated Pay Gap Transparency on Firms' Reputations as Employers. *Administrative Science Quarterly*, 0(0). <https://doi.org/10.1177/00018392221124614>

White, N. (October, 2021) *Gender pay gap in the UK: 2021 - Differences in pay between women and men by age, region, full-time and part-time, and occupation*. Office for National Statistics. Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/genderpaygapintheuk/2021> [Accessed: Oct 2022]