

## Case Study 4: Braidwell Consulting Workforce Insight from IBM HR Data

### Company Background:

Braidwell Consulting, a rapidly growing firm in Nigeria, has experienced rising concerns from its HR department. The company is struggling with:

- Low retention in critical departments
- Growing concerns about fairness in promotions
- Suspected gender-related salary gaps
- Compliance issues with minimum salary regulation

The CEO has mandated a full-scale internal audit based on their workforce dataset (provided by the HR analytics system, sourced from IBM HR).

### Your Objective as the Data Analyst:

Using the IBM HR dataset, you are required to:

- Clean and transform the data in Excel and Power BI
- Conduct analysis in Excel, SQL, and Python (optional)
- Build dashboards in Excel and Power BI
- Deliver data-driven recommendations to improve gender equality, promotion fairness, and salary structure

### Business Questions:

#### 1. Workforce Composition

- What is the gender distribution across departments and job roles?
- Are there departments dominated by a particular gender?

#### 2. Salary Structure

- Is there a gender pay gap?
- Are employees paid above the required minimum salary (90,000/month)?
- How is salary distributed across salary bands (10,000 increments)?

#### 3. Performance vs Pay

- Are top performers being fairly compensated?

- Do performance ratings align with years at company?

#### 4. Promotions & Opportunities

- Who is being promoted more by gender and department?
- Is there a pattern in who gets promoted vs who doesn't?

#### 5. Attrition & Turnover

- Which employees left the company and why?
- Are there patterns by department, gender, salary, or performance?

Dataset Fields to Focus On (from IBM HR dataset):

- Age
- Gender
- Department
- MonthlyIncome
- EducationField
- PerformanceRating
- JobRole
- YearsAtCompany
- YearsSinceLastPromotion
- Attrition (Yes/No)
- JobSatisfaction
- EnvironmentSatisfaction
- BusinessTravel

Bonus Ideas:

- Correlation heatmap: MonthlyIncome, PerformanceRating, YearsAtCompany
- KPI Scorecards: Promotion rate, attrition rate, average salary
- Power BI dashboard: Slicers by Gender, Department, Attrition
- Salary band charts: Bar chart of number of employees in each 10,000 range
- SQL analysis: Number of high performers (45) earning below 90,000