Exploratory Data Analysis Report - France

Dataset: france_pay_equity_scored_NOVEMBER2025.csv

Introduction

The dataset contains employer-reported statistics for France gender pay gap filings. This report focuses on data quality, distributions, temporal trends, and relationships among reported metrics.

The French "Index de l'égalité professionnelle" requires organisations with >50 employees to publish an annual gender equity score composed of five component scores:

1. **Wage Gap Score**: Note Ecart rémunération

2. **Promotion Gap Score**: Note Ecart taux de promotion

3. **Raise Gap Score**: Note Ecart taux d'augmentation

4. **Maternity Return Score**: Note Retour congé maternité

5. **Top Earners Balance Score**: Note Hautes rémunérations

These together produce a **CompositeIndex (0–100)**, where:

● 100 = perfect gender equity

● <75 = company must take corrective action

● <85 = company must publish improvement plan

Our objective is to explore completeness, trends, disparities, and industry patterns in France's equity landscape.
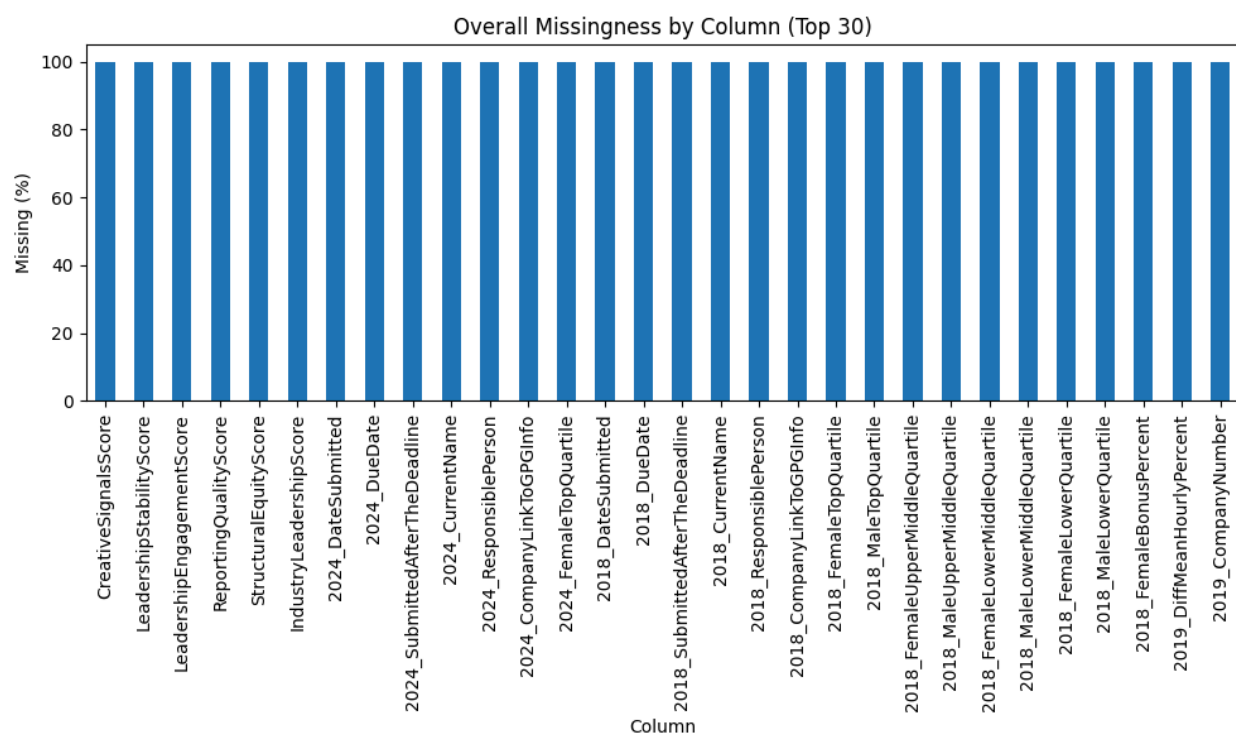
Data Quality & Coverage

1. Missingness Overview

What it shows:
Many fields have extremely high missingness, especially older year-specific granular fields and metadata columns.
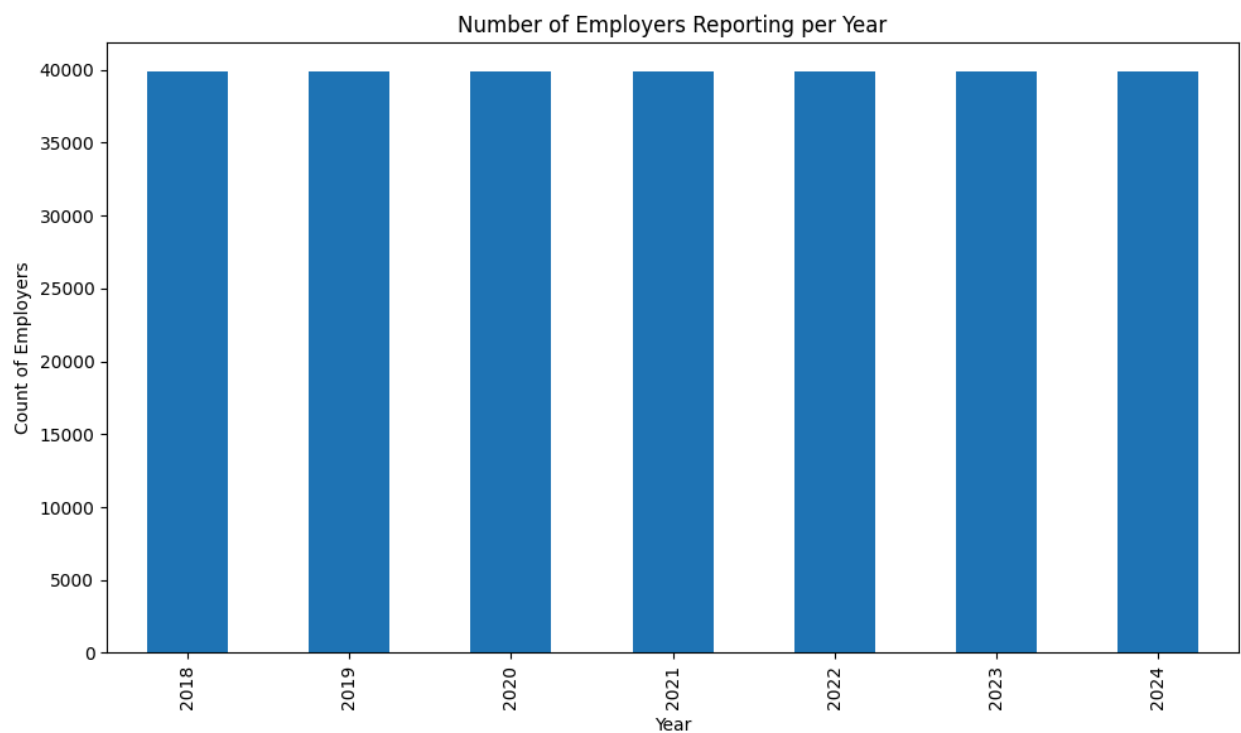This suggests:

- Companies inconsistently report historical entries
- Non-mandatory fields (like quartile splits before 2021) are sparsely filled
- CompositeIndex and the 5 official components are the *only* reliable metrics

Overall Missingness by Column (Top 30)

Over 95% of columns in this dataset are almost completely empty

Every column shown in the Top 30 Missingness chart is **>95% missing**, and many reach **100% missingness**.
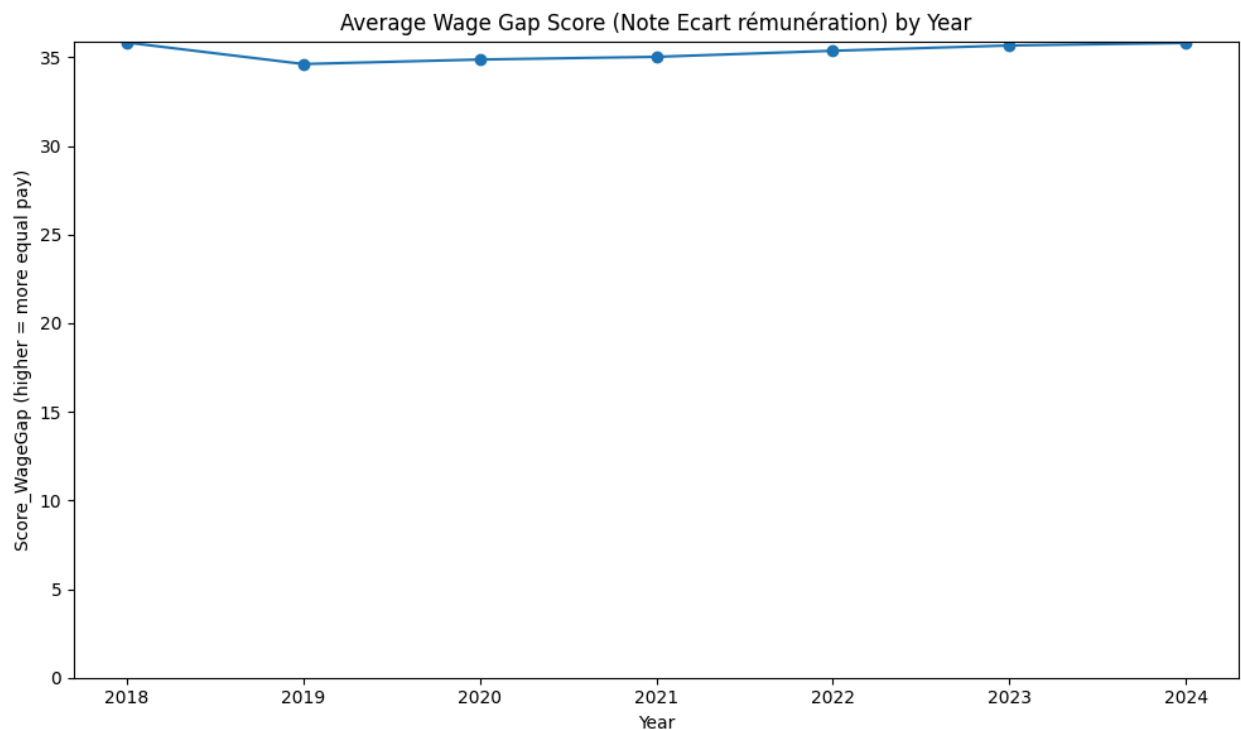
2. Number of Employers Reporting per Year

France maintains ~40,000 employer filings every year, demonstrating exceptionally strong and stable compliance with gender pay-equity reporting laws.
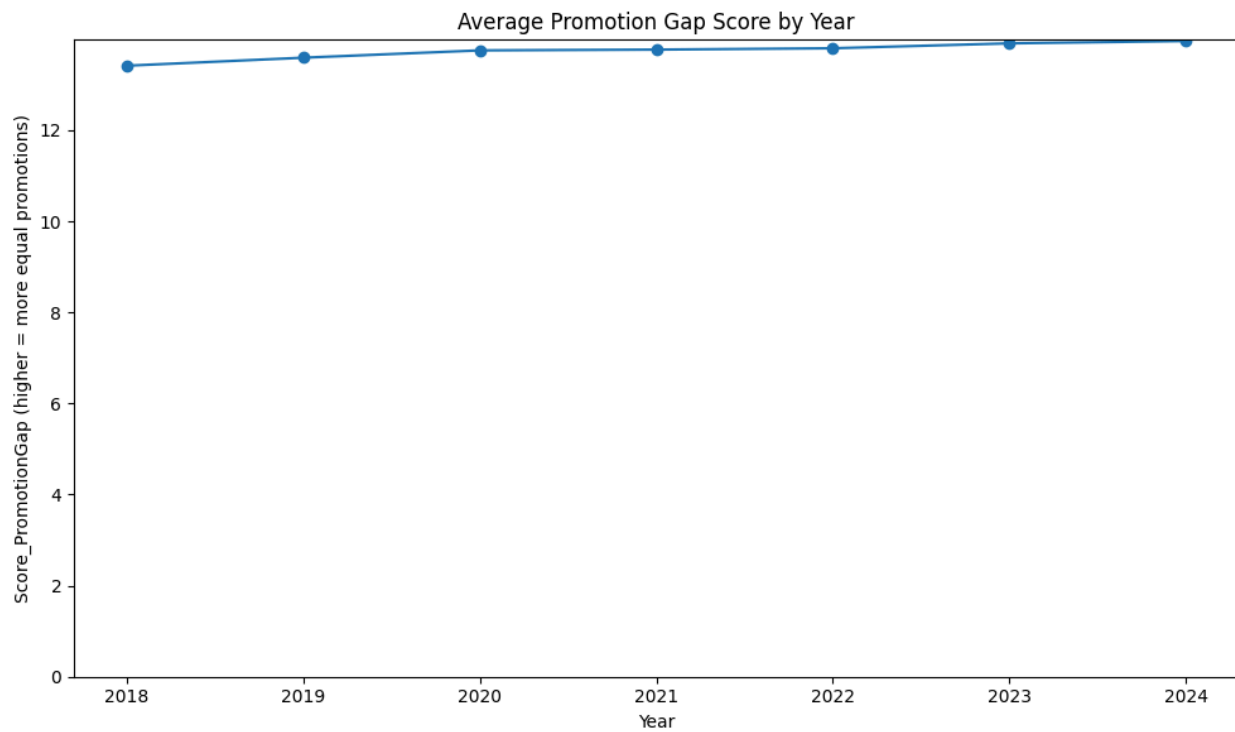
Component Score Trends Over Time

1. Wage Gap Score (Note Ecart rémunération)

Average Wage Gap Score (Note Ecart rémunération) by Year

Insight:

- Wage equality in France has remained consistently high, with the wage-gap score stabilizing between 35 and 36 points (out of 40).
- After a small dip in 2019, scores improved steadily and reached their highest levels by 2024.
- Employers are maintaining strong control over gender wage disparities.
- The pay gap has remained narrow and stable across the entire reporting period.
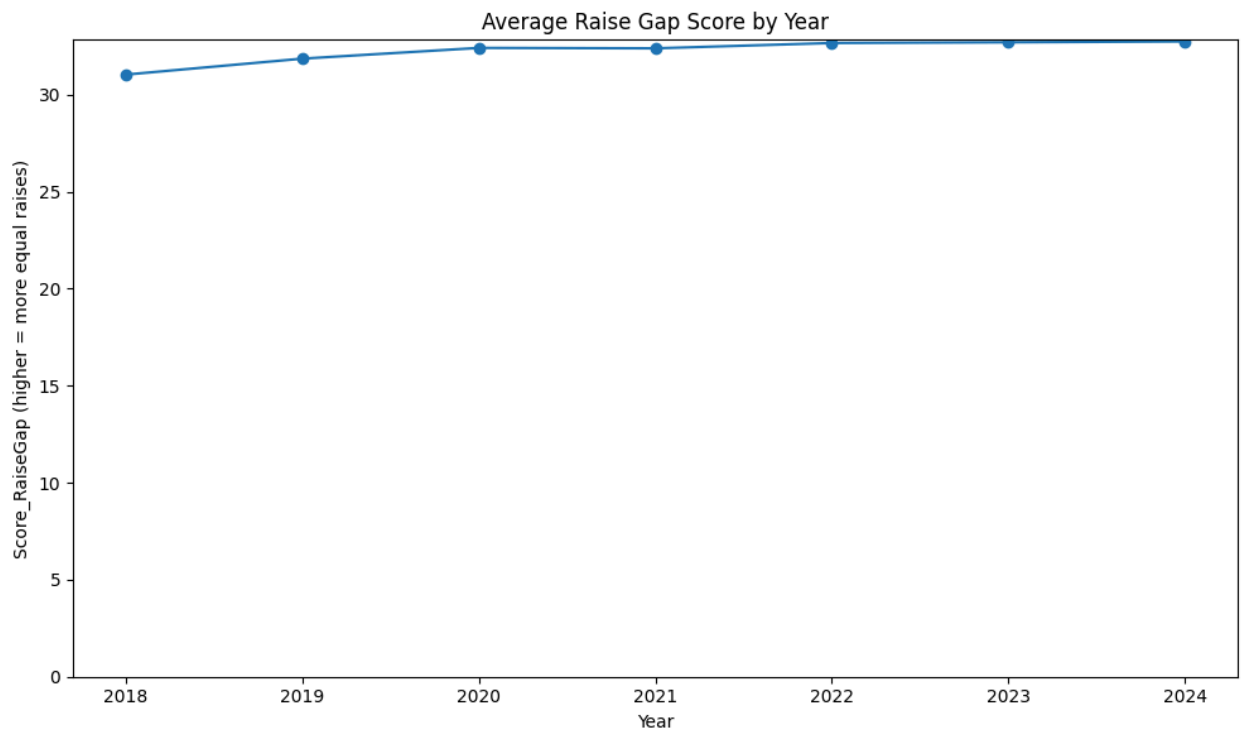
2. Promotion Gap Score (Note Ecart taux de promotion)

Average Promotion Gap Score by Year

Insight:

- Promotion equality is improving slowly but steadily, rising from **~13.3 to 14 out of 15**, reflecting **nearly perfect gender balance in promotion opportunities** nationwide.
- Men and women receive nearly equal chances of promotion.
- Companies have likely implemented **more structured promotion processes**.
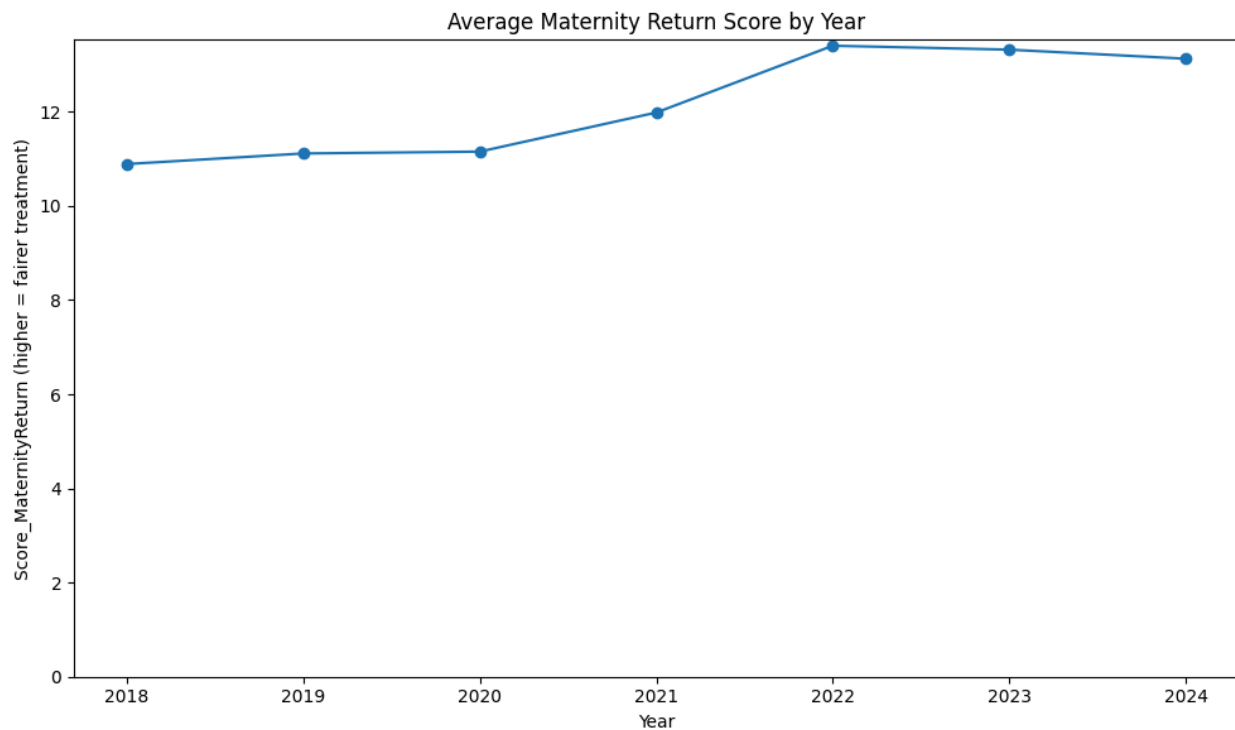
3. Raise Gap Score (Note Ecart taux d'augmentation)

Average Raise Gap Score by Year

Insight:

- Raise fairness scores show a clear upward trend, rising from 31 to nearly 33 points (out of 35), indicating increasing parity in annual salary raises between men and women.
- Raise decisions are becoming more standardized and equitable.
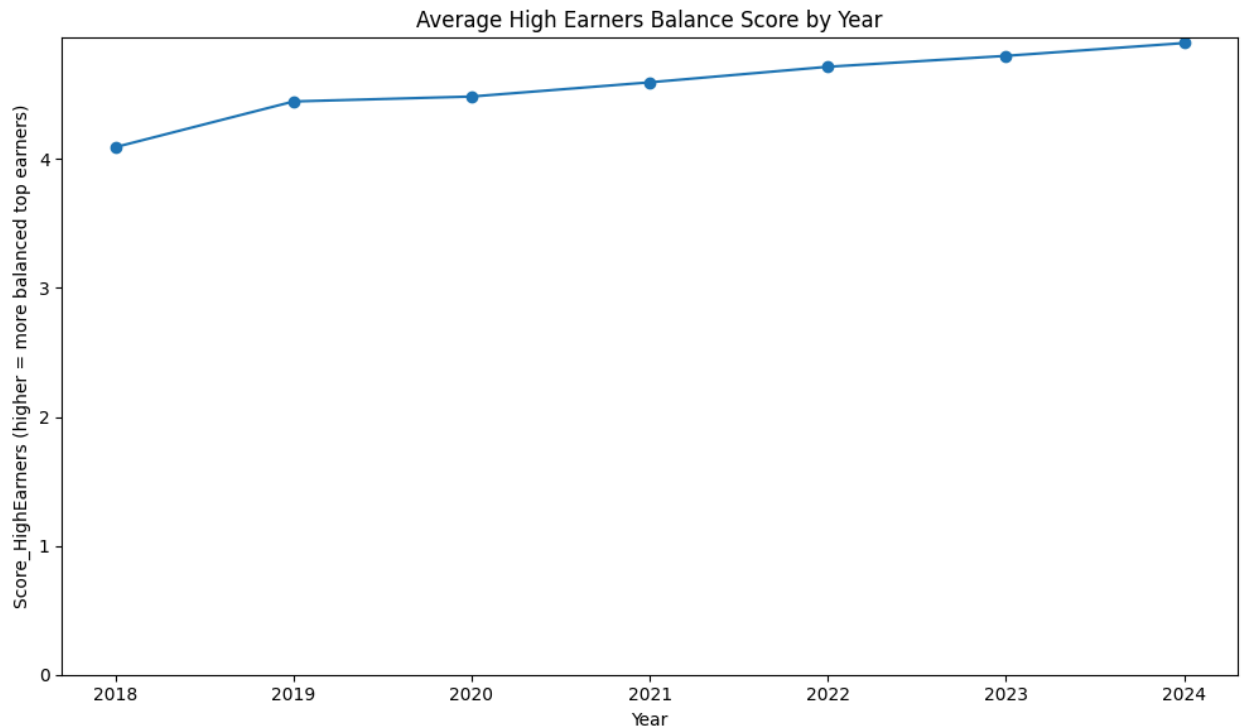- Companies are tightening their salary review processes to reduce bias.

4. Maternity Return Score (Note Retour congé maternité)

Insight:

- Maternity return fairness shows the **strongest improvement** of all index components, rising sharply from **~11 to 13 points (out of 15)** between 2018 and 2022, with only a slight leveling in 2023–2024.
- Employers are **much more consistent in awarding raises to women returning from maternity leave**.
- This reflects a **positive cultural shift** toward supporting women after parental leave.
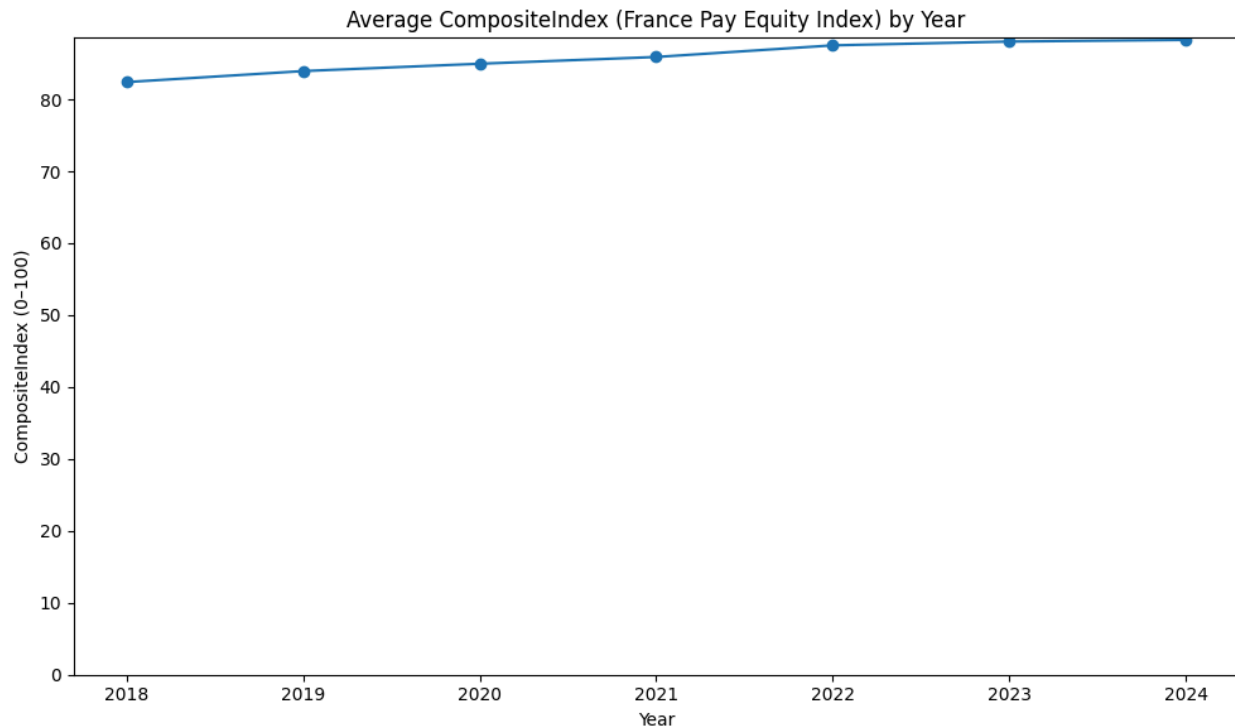
5. High Earners Balance Score (Note Hautes rémunérations)

Average High Earners Balance Score by Year

Insight:

- Representation of women among the top 10 highest-paid employees shows a steady upward improvement, increasing from 4.1 to nearly 4.9 out of 10.
- Women are becoming more present among top earners, though progress is gradual.
- Leadership pipelines and senior-level gender balance are improving, but still have room to grow.
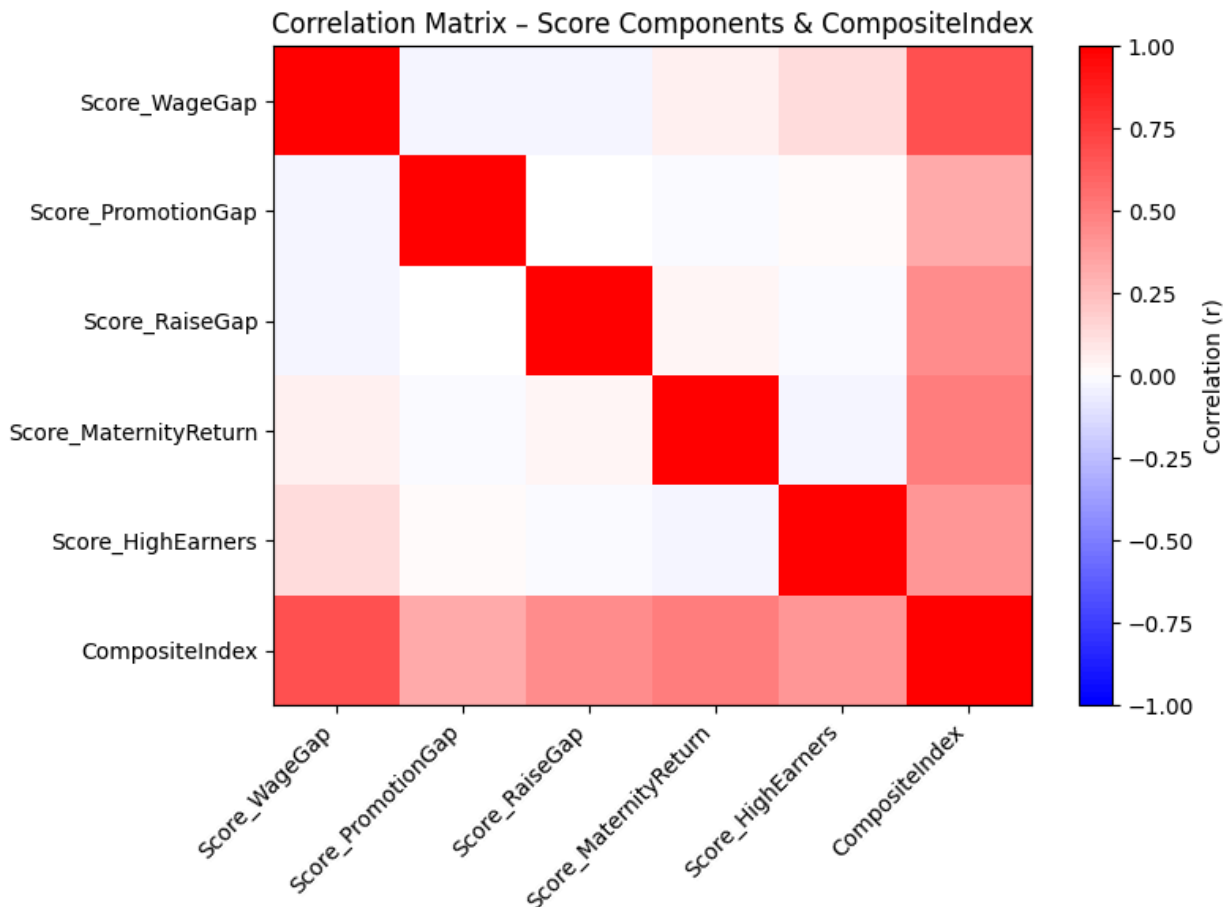
6. CompositeIndex (Overall France Pay Equity Index Score)

Average CompositeIndex (France Pay Equity Index) by Year

Insight:

- The national CompositeIndex has improved every single year, climbing from ~83 in 2018 to almost 87 in 2024.
- France is experiencing systemic improvement in gender equity across organizations.
- The rise is driven by gains in maternity return fairness, balanced raises, and wage-gap stability.
- The system of mandatory reporting is working—companies are steadily improving to maintain compliance.

Correlation Matrix

Correlation Matrix – Score Components & CompositeIndex

- **Wage Gap has the strongest correlation** with the CompositeIndex, confirming it is the biggest driver of France's pay-equity score.

- **Raise Gap and Promotion Gap show moderate correlations**, meaning improvements in advancement and salary growth equity also lift the overall index.

- **Maternity Return and High Earners have weaker correlations**, indicating inconsistent employer performance and smaller influence on the final score.

- **Low cross-component correlations** show that companies perform differently across dimensions—pay equity in France is **multidimensional**, not driven by any single factor.