

GENDER PAY GAP (GPG): ADDRESSING THE CORRELATION BETWEEN PAY DISPARITIES AND FINANCIAL PERFORMANCE WITHIN ITALIAN LISTED COMPANIES

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Abstract

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This study investigates the relationship between the gender pay gap (GPG) and corporate financial performance in a sample of Italian listed companies on the FTSE MIB index. Drawing on theories of wage inequality, organisational performance, and industrial relations, it examines whether gender-based pay disparities are associated with firm profitability and explores the role of collective bargaining coverage. This quantitative analysis uses data collected from sustainability reports, annual reports, and financial statements of 39 FTSE MIB companies over the period 2022–2025. GPG, return on equity (ROE), return on assets (ROA), and collective bargaining agreement coverage (CBAC) were analysed through ordinary least squares (OLS) regression models. The results reveal that gender pay disparities remain widespread among Italian listed companies, with an average GPG of approximately 9 per cent, but do not indicate a statistically significant relationship between GPGs and corporate profitability. The regression model using ROE shows a weak positive but insignificant association between GPG and profitability, while the robustness test employing ROA indicates a weak negative and equally insignificant relationship. Furthermore, no meaningful association emerges between collective bargaining coverage and gender pay disparities. These findings suggest that gender pay inequality is not a significant predictor of firm profitability within the analysed sample, and that collective bargaining coverage alone is insufficient to explain differences in pay equity across firms. The study contributes to the emerging literature on gender pay transparency and corporate performance in Italy.

Keywords: Gender Pay Gap, Firm Performance, Corporate Profitability, Collective Bargaining, Trade Unions, Pay Transparency, FTSE MIB

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1. INTRODUCTION

The persistence of gender-based wage inequality across all advanced economies despite extensive regulatory interventions is a burning issue. Gender pay equality constitutes an essential right in today's advanced societies, making the reduction of the gender pay gap (GPG) a priority challenge. The GPG is defined as the difference in average gross hourly earnings between women and men, based on salaries paid directly to employees before income tax and social security contributions are deducted, taking into account only companies with 10 employees or more.

The European Union (EU) recognises the importance of women in the labour market, seeking to achieve economic growth, and while the EU has become a world leader in workplace gender gap reduction, no member country has yet achieved full equality. The GPG transcends individual choices; it is a complex result of historical, structural, and institutional factors that create disadvantages for women in the workforce (Goldin, 2014; Morin, 2025). Tackling this disparity is vital not only from a human rights standpoint but also in fostering economic growth and sustainability (Organisation for Economic Co-operation and Development [OECD], 2021; Morin, 2025).

The main purpose of the research outlined in this article is to explore the causal relationship between pay equity and firm performance, with reference to a sample of Italian listed companies, assessing how the implementation of pay equity policies impacts key performance indicators such as profitability, employee turnover, and innovation.

Additionally, this study aims to examine the role played by trade unions with reference to gender pay equity and business performance metrics across industries.

The study will also explore the relationship between GPGs and business performance across sectors, identifying unique challenges and best practices in addressing pay disparities and enhancing firm performance.

In the remainder of this article, we address two main research questions through the analysis of available data:

RQ1: Why might the GPG have an impact on the performance of firms?

RQ2: What is the impact of unions on the GPG? How are they able to affect the GPG within companies?

The focus of Italian research has often been on the contributing factors and the impact of gender diversity in leadership, rather than a direct correlation between the GPG and financial results: this study, one of the first to examine the relationship existing between the GPG and the financial performance of enterprises, contributes to the literature by focusing on two important matters not yet deeply analysed: firstly, it addresses the reasons underlying the causal relationship between the GPG and companies' performance; secondly, it investigates the role of Italian trade unions in helping companies reduce their GPG and thereby improve their financial performance.

The principle of equality is a fundamental value of the EU and continues to guide its social and economic policies. Building on the objectives of

the Europe 2020 Strategy, the current EU framework—including the European Pillar of Social Rights, the European Green Deal, and the Gender Equality Strategy 2020–2025—promotes sustainable growth, equal opportunities, high employment, and social cohesion, while placing increasing emphasis on reducing gender inequalities in the labour market.

This disparity cannot be attributed solely to differences in education or experience; it also reflects factors such as occupational segregation, societal norms, and workplace biases (Morin, 2025). In 2024, the GPG was observed globally, with women earning, on average, around 83 cents for every dollar earned by men. This translates to a global mean GPG of approximately 17%.

While progress has been made in some regions, achieving full gender parity in pay is still decades away.

Other relevant data for analysing the GPG is included in the Global Gender Gap Report published by the World Economic Forum (World Economic Forum [WEF], 2025). The report explains the existing issue using the Global Gender Gap Index, which is structured around four main areas: Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment.

The latest edition, published in June 2025, benchmarks gender parity across 148 economies, providing a basis for the analysis of gender parity developments across two-thirds of the world's economies.

Further, the index examines a subset of 100 economies that have been included in every edition of the report since 2006, offering a broad sample for longitudinal and trend analysis.

The index attributes to each geography a rating on a 0–1 scale, and scores can be interpreted as the distance covered towards parity. Cross-economy comparisons help identify the most effective policies in supporting reductions in the GPG.

The 2025 Global Gender Gap Index shows that no economy has yet achieved full gender parity: Iceland (0.926) continues to lead the index, holding the top position for 16 consecutive years, and remains the only economy to have closed more than 90% of its gender gap since 2022.

Italy ranked 85th out of 148 countries, with an overall score of 0.704, a slight improvement from 0.703 in 2024 (when it ranked 87th). This indicates that Italy has closed approximately 70.4% of its gender gap but remains below the European average and still far from the top 50.

A closer examination of the four pillars that make up the index (WEF, 2025) reveals the following:

- *Economic participation and opportunity:* Italy ranks 117th, with a score of 0.599. Women participate in the labour market much less than men (41.5% vs 58.8%) and earn significantly less (estimated income indicator: 0.567). Only 38.8% of managerial positions are held by women.

- *Educational attainment:* Italy has achieved excellent results in education, closing 99.8% of the gap (ranking 51st). Women outperform men in both literacy rates (100%) and university enrolment (63.5% vs 89.6%).

- *Health and survival:* Italy records a score of 0.966 (89th place). Women continue to have a higher life expectancy in good health (1.016).

• *Political empowerment*: With a score of 0.255 (65th place), Italy is still lagging behind the major European economies. Women make up 48.7% of the Parliament, but only 33.3% of ministers are women.

In addition to the evidence provided by the World Economic Forum, Italy ranks 14th in the EU on the Gender Equality Index developed by the European Institute for Gender Equality (EIGE, 2024), with a score of 69.2 points out of 100.

Since 2010, Italy's score has increased by 15.9 points, marking the largest overall increase among all Member States. This significant improvement has led to the greatest leap in the rankings, advancing Italy by seven places. This change occurred mainly due to improvements in the domain of power (+41.3 points).

On the other hand, since 2021, Italy's overall score has increased by 1 point. In the short term, the main driver of this increase has been the improvement in the domain of power (+3.8 points). Nevertheless, faster progress in other member states has led to Italy's ranking falling by one place since 2021.

At the European level, many strategies have been adopted and will be implemented in the next few years: one of the most significant is the EU Pay Transparency Directive, officially known as Directive (EU) 2023/970, which aims to reduce the GPG by increasing transparency in pay and pay-related information within organisations.

It mandates that EU member states implement national laws to ensure equal pay for men and women performing the same work or work of equal value.

The directive also introduces measures to enhance transparency regarding pay and pay progression, enabling employees to identify and address potential discrimination.

The rest of the study is structured as follows. Section 2 covers previous studies and the relevant literature on the issue of the GPG and examines the legislation and the policies taken in Italy. Section 3 describes the selection of the sample, the methodology, models, and variables selected, as well as the data gathered. Section 4 presents the analysis and discussion. Section 5 presents the conclusions, limitations, and suggestions for future research.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical background and previous studies

While extensive literature has examined the determinants of the GPG, less attention has been devoted to the joint relationship between firm performance and the role of trade unions in promoting gender pay equity.

A major factor contributing to the GPG is occupational segregation, the phenomenon whereby men and women are employed in different industries and job roles (Rosenfeld & Spenner, 1992).

Horizontal segregation describes the pattern of men and women working in distinct sectors. This is significantly influenced by societal norms and family expectations, which perpetuate ongoing earnings disparities (Küskü et al., 2007).

In contrast, vertical segregation pertains to the restricted opportunities for career advancement that women face within a given profession. Even in fields where women make up a large part of the workforce, they are often underrepresented in executive and leadership positions, a situation commonly referred to as the glass ceiling (Eagly & Carli, 2007).

Research shows that male employees are statistically more likely to be promoted to managerial roles, even when accounting for experience and performance levels (Eagly & Carli, 2007).

This results in a continuous earnings gap between men and women, as individuals in leadership roles typically earn higher salaries and enjoy better benefits (Bishu & Alkadry, 2017).

According to a study conducted in Italy, the persistent GPG is exacerbated by a low and selective female labour market participation rate, suggesting a significantly larger discrepancy than what is reflected in the unadjusted Eurostat gender wage gap data (Tasselli & Addabbo, 2026).

Tournament theory (Xu et al., 2025) is crucial in understanding the relationship between the GPG and firm performance.

The theory, in the context of organisational behaviour and economics, describes a system where employees compete against each other for a limited number of promotions or other rewards, with the prize being awarded based on relative performance rather than absolute performance. It uses the metaphor of a sports tournament to explain how firms can motivate employees by creating competition for advancement.

According to this theory, larger differences in pay between hierarchical levels (vertical pay gaps) are a more effective way to motivate employees to perform their best than rewarding them solely based on individual performance.

This is because the potential for a significant reward for achieving a higher rank acts as a powerful incentive, similar to a sports tournament where only a few players win the top prizes (Lazear & Rosen, 1981).

As a result, the effort to maintain equilibrium will rise, resulting in a positive correlation between pay dispersion and productivity.

Tournament models also suggest that the pay gap tends to widen as individuals ascend the hierarchy (Rosen, 1986).

If males consistently demonstrate greater productivity than females, these models indicate that males are awarded higher salaries, leading to a gender gap that contributes to increased profitability.

Significant vertical pay disparities among employees of varying ranks resemble the pronounced prize differences seen in a tournament, distinguishing winners from losers.

Lower-ranked employees who strive to excel beyond their colleagues are akin to winners, as they are the ones likely to be promoted to higher organisational levels, obtaining greater rewards in both financial compensation and enhanced status and prestige (Lim, 2019).

Based on the above considerations, the following hypothesis is inferred:

H1: There is a positive relationship between the GPG and firm performance.

However, another approach to the study of the relationship between the GPG and firm performance demonstrates the exact opposite.

According to Akerlof and Yellen (1990), employees may be less motivated to exert effort if they perceive their wages as unfair. Levine (1991) supports this view.

Lazear (1989) suggests that treating all employees with the same wage can help firms maintain worker unity, boost morale, and foster a collaborative work atmosphere.

If pay equality significantly enhances overall morale across the entire workforce, it could potentially compensate for any negative effects on the morale of high-quality workers, thereby improving firm performance. However, this approach might prompt high-quality employees to leave the organisation.

Additionally, wage compression might mitigate uncooperative behaviour, particularly in firms with a sizable group of competitive individuals.

Research has also demonstrated a positive correlation between employee satisfaction and firm performance (Edmans, 2011; Hansen & Wernerfelt, 1989).

Therefore, if pay equality, including the elimination of the GPG, contributes to higher employee satisfaction, this could lead to improved performance for the firm.

According to this alternative view, the second hypothesis is formulated:

H2: There is a negative relationship between the size of the GPG and the effectiveness or success of a company.

In Italy, the effects of trade unions on the gender wage gap are complex and not always straightforward.

While trade unions can play a role in reducing overall wage inequality, including the GPG, their impact on this specific disparity is not always clear-cut and can vary depending on factors such as context, sector, and level of pay distribution.

Therefore, according to a study aimed at analysing the effects that trade unions have on GPGs, three channels should be taken into consideration (Ma & Zhan, 2024).

The first channel is the gender gap in human capital endowment, often referred to as the endowment effect. According to human capital theory (Becker, 1964), wages for workers are affected by their productivity, which in turn is shaped by their human capital.

A wealth of research has shown that the gender gap in human capital endowment—encompassing education, work experience, and occupational choices—constitutes a key driver of the gender wage disparity (Blau & Kahn, 2017; Blinder, 1973; Oaxaca, 1973; Oaxaca & Ransom, 1994). This disparity in human capital endowment, observed among both unionised and non-unionised workers, may play a significant role in perpetuating the overall gender wage gap. Nevertheless, variations in human capital endowment between union members and non-union members might exist.

The second channel refers to the gender disparity in the returns on endowments, which include returns from human capital and union wage premiums. This return effect stems from

the differences in wage-setting mechanisms, particularly the discrimination faced by women in the workplace. Unions influence wage-setting through collective negotiations with employers, which generally benefits both male and female members with a positive union wage premium.

However, since many female union members are low-wage workers who are significantly impacted by these collective negotiations, they may experience a higher union wage premium compared to their male counterparts. As a result, unions could help diminish the GPG.

On the other hand, if discrimination against women persists within unionised workplaces, it could still lead to greater wage increases for male members than for female members, even when accounting for similar qualifications like education and occupation. This discrimination can suppress union wage premiums for women, further contributing to the overall GPG.

Moreover, women who are non-union members may face even harsher discrimination, lacking the protections that unions provide, which can exacerbate the GPG. Ultimately, the impact of this channel on the GPG is shaped by the interplay of these two opposing effects.

The third channel emphasises the gender disparity in union density, which refers to the unequal opportunities for males and females to achieve union membership (unionism effect). This disparity in union membership arises from two factors: the differences in endowments between genders and discrimination experienced by women in their efforts to engage in unions (Doiron & Riddell, 1994).

Based on this evidence, the third hypothesis considered is:

H3: Positive influence of trade unions on mitigating the adverse effects of the GPG on firm performance.

2.2. The role of policy and legal frameworks: Italy's path toward shrinking GPG

In response to the EU Pay Transparency Directive, which mandates that employers in EU member states report pay data, employers across Europe will be required to assess their current GPGs and chart a path to compliance.

The directive was initiated to tackle the 12.7% GPG across the EU: while Italy boasts one of the lower GPGs at 8.7%, this figure has been increasing in recent years.

Recently, Italy implemented an equal pay law requiring employers with 50 or more employees to submit pay data reports; however, these reports significantly fall short of the requirements that will be imposed on Italian employers under the EU Directive.

Italian employers with 50 or more staff members must provide essential pay information regarding their workforce.

The implementation of the EU Pay Transparency Directive significantly expands transparency requirements throughout the employment relationship. In addition to strengthening pay transparency, the directive introduces broader disclosure obligations concerning remuneration policies and other

elements of compensation. Consequently, employers are required to adopt more comprehensive reporting practices and, where applicable, transition from biennial to annual GPG reporting.

The directive also introduces several new obligations aimed at promoting equal pay and reducing gender-based wage disparities. In particular, employers are required to provide salary range information to job applicants before recruitment, refrain from requesting candidates' salary histories, monitor and report the GPG on a regular basis, and implement corrective measures where unjustified pay differences exceed the threshold established by the directive. Furthermore, employers must take into account intersectional discrimination in their pay practices and consider the specific needs of workers with disabilities when assessing pay equity.

A further innovation concerns the scope of application of the directive. Unlike the existing Italian equal pay legislation, which primarily applies to employees, the directive adopts the broader concept of "worker", thereby extending protection to categories of workers that may fall outside the traditional employment relationship, including certain contractors. This broader definition requires employers to reassess their remuneration policies and pay governance frameworks to ensure compliance with the new regulatory requirements.

The reporting obligations are being introduced progressively according to employer size. Large organisations with at least 250 employees are subject to annual reporting requirements, while employers with 100 or more employees will be incorporated into the reporting framework in subsequent implementation phases. Although Italy already had reporting obligations concerning gender equality before the adoption of the directive, the new regulatory framework substantially strengthens transparency requirements and accountability mechanisms. Consequently, Italian employers are expected to review their compensation policies, strengthen internal pay equity assessments, and implement appropriate governance procedures to ensure compliance with the revised European regulatory framework.

3. METHODOLOGY

The aim of the study is to analyse the GPG and its relationship with financial performance in a sample of Italian companies belonging to the FTSE MIB index.

The FTSE MIB is the main benchmark index for Italian stock markets and comprises leading, highly liquid companies in various Industry Classification Benchmark sectors in Italy.

The FTSE MIB index measures the performance of 40 Italian stocks and aims to reflect the weightings of the broader Italian stock market. It is created from the universe of stocks listed on the main market of the Italian Stock Exchange; each stock is evaluated based on its size and liquidity, thus ensuring accurate representation by sector.

The FTSE MIB index is weighted by market capitalisation, taking into account the fluctuations of its various constituents (Borsa Italiana, n.d.; FTSE Russell, 2026).

The reason behind the choice of the FTSE MIB is that constituent firms are more inclined to anticipate public scrutiny regarding their gender diversity reputations, be subject to the GPG mandate, and provide high-quality data on the GPG.

This study adopts a secondary quantitative research approach, a type of desktop research making use of available data from secondary sources.

Data were collated by consulting a variety of data sources, including data publicly available online, corporate official documents (such as financial statements and sustainability reports), academic journals, and libraries, among others.

3.1. Data and sample structure

Table 1 presents a database compiled from information on 40 Italian companies listed in the FTSE MIB index.

Table 2 lists some of the main information contained in the companies' annual reports that was taken into consideration and analysed for the purpose of the research.

Table 1. Sample of the study (Part 1)

No.	Company	Country	Sector
1.	Stellantis N.V.	Netherlands	Industrial
2.	Eni S.p.A.	Italy	Utilities
3.	Enel S.p.A.	Italy	Utilities
4.	Assicurazioni Generali S.p.A.	Italy	Insurance
5.	Intesa Sanpaolo S.p.A.	Italy	Financial
6.	UniCredit S.p.A.	Italy	Financial
7.	Leonardo S.p.A.	Italy	Industrial
8.	Prysmian S.p.A.	Italy	Industrial
9.	Telecom Italia S.p.A.	Italy	Communication
10.	Saipem S.p.A.	Italy	Industrial
11.	A2A S.p.A.	Italy	Utilities
12.	Iveco Group N.V.	Netherlands	Industrial
13.	Hera S.p.A.	Italy	Utilities
14.	STMicroelectronics N.V.	Netherlands	Industrial
15.	Tenaris S.A.	Luxembourg	Industrial
16.	Unipol Assicurazioni S.p.A.	Italy	Insurance
17.	Fincantieri S.p.A.	Italy	Industrial
18.	Ferrari N.V.	Netherlands	Industrial
19.	BPER Banca S.p.A.	Italy	Financial
20.	Banco BPM S.p.A.	Italy	Financial
21.	Poste Italiane S.p.A.	Italy	Financial
22.	Nexi S.p.A.	Italy	Financial

Table 1. Sample of the study (Part 2)

No.	Company	Country	Sector
23.	Banca Monte dei Paschi di Siena S.p.A.	Italy	Financial
24.	Buzzi S.p.A.	Italy	Industrial
25.	Terna S.p.A.	Italy	Utilities
26.	Snam S.p.A.	Italy	Utilities
27.	Moncler S.p.A.	Italy	Industrial
28.	Davide Campari-Milano N.V.	Netherlands	Industrial
29.	Recordati Industria Chimica e Farmaceutica S.p.A.	Italy	Industrial
30.	Banca Mediolanum S.p.A.	Italy	Financial
31.	Amplifon S.p.A.	Italy	Healthcare
32.	Lottomatica Group S.p.A.	Italy	Gambling
33.	Italgas S.p.A.	Italy	Utilities
34.	Mediobanca-Banca di Credito Finanziario S.p.A.	Italy	Financial
35.	Fincobank Banca Fineco S.p.A.	Italy	Financial
36.	Brunello Cucinelli S.p.A.	Italy	Industrial
37.	Diasorin S.p.A.	Italy	Healthcare
38.	Infrastrutture Wireless Italiane S.p.A.	Italy	Communication
39.	Azimut Holding S.p.A.	Italy	Financial
40.	Avio S.p.A.	Italy	Industrial/Defense

Source: Authors' elaboration based on the Orbis database and FTSE MIB data.

Table 2. Information examined for the sampled companies

No.	Description
1	<i>GPG disclosure</i> —To check the availability of information on the GPG.
2	<i>Analysis scope</i> —To determine if the analysis covers only the Italian company, or if it extends to the parent group and its international operations in other countries.
3	<i>Pay gap mean</i> —This datum shows the percentage disparity in average hourly pay between male and female employees.
4	<i>Financial performance</i> —ROE and ROA are the metrics used as a proxy for firms' performance.
5	<i>Collective bargaining agreement coverage (CBA)</i> —It measures the extent to which employees are directly affected by negotiated agreements between employers and unions or workers' organisations. This coverage rate is an important indicator of the influence and importance of collective bargaining and trade unions in a national or industry context.

Note: ROE = return on equity, ROA = return on assets.

Source: Authors' elaboration.

3.2. Variable measurement

3.2.1. GPG index

The main variable of interest used in this study is the GPG ratio, which evaluates the disparity between the average earnings of roles held by female

employees in relation to the average salary of roles held by male employees within a company.

The GPG for each of the selected companies is calculated as follows, according to the provisions of the new European Sustainability Reporting Standards S1 Own Workforce (Disclosure Requirement S1-16—Remuneration Metrics: Pay Gap and Total Remuneration):

$$GPG = \frac{\text{Average male gross hourly wage} - \text{Average female gross hourly wage}}{\text{Average male gross hourly wage}} \times 100 \quad (1)$$

where, *GPG* is the unadjusted *GPG* percentage, *Average male gross hourly wage* represents the mean gross hourly earnings of male workers, and *Average female gross hourly wage* represents the mean gross hourly earnings of female workers.

In this research, an unadjusted (raw) GPG is used as the most common metric that compares the average gross hourly earnings of men and women without considering other job-related factors to reveal the overall difference.

To explain the significance of this measure, a GPG of 10% suggests that, on average, female employees occupy roles that pay 10% less than those held by their male counterparts.

3.2.2. Return on equity

The variable used as a proxy for firms' financial performance is *ROE*, which is equal to the net income divided by the shareholders' equity. This ratio measures a company's profitability by showing how much profit it generates for every euro of shareholders' equity, and it is calculated as follows:

$$ROE = \frac{\text{Net income}}{\text{Shareholders' equity}} \times 100 \quad (2)$$

where, *ROE* is the return on equity percentage, *Net income* represents the net profit after taxes generated during the fiscal year, and *Shareholders' equity* represents the total equity belonging to the owners of the company.

A higher *ROE* indicates that a company is more efficient at generating profits from its shareholders' investments, making it a key metric for investors to compare companies within the same industry and assess management effectiveness.

3.2.3. Return on assets

An alternative performance measure used to strengthen this analysis is the *ROA*; the ratio is calculated by dividing a company's net income by its total assets and shows how efficiently a company uses its assets to generate profits.

$$ROE = \frac{\text{Net income}}{\text{Total assets}} \times 100 \quad (3)$$

where, *ROA* is the *ROA* percentage, *Net income* represents the net profit after taxes generated during the fiscal year, and *Total assets* represents the total book value of all assets owned by the company.

A higher *ROA* means the company is making more profit for each euro invested in assets, indicating stronger operational efficiency.

3.2.4. Collective bargaining agreements coverage

Collective bargaining agreement coverage (CBAC) defines the proportion of the workforce whose employment terms and conditions are determined by union-negotiated labour contracts rather than individual negotiations. The coverage rate is a statistical metric representing the percentage of all eligible employees in an industry, company, or country whose jobs are covered by a valid, active collective agreement.

3.3. Research model

As shown in the previous section, relationships are translated into econometric models to capture the sign and the significance of the coefficients in order to test the hypotheses.

First, using a simple linear regression, we estimated the model to measure the relationship between the GPG and the firm's financial performance (measured by ROE) as follows:

$$ROE_i = \beta_0 + \beta_1 GPG_i + \varepsilon_i \quad (4)$$

where, the dependent variable is the *ROE* of firm *i*, β_0 is the intercept (or constant), which represents the expected value of *ROE* when all other explanatory variables are equal to zero, $\beta_1 \times GPG_i$ is the marginal effect of the explanatory variables (or regressors) associated with entity *i*, such as the GPG index, and ε_i is the error term, which captures all variables or factors not included in the model that influence.

To verify the results of the model and to provide a more in-depth analysis, we performed an additional test using *ROA* instead of *ROE* as a proxy for financial performance. The equation of the model is:

$$ROA_i = \beta_0 + \beta_1 GPG_i + \varepsilon_i \quad (5)$$

where, the dependent variable is the *ROA* of firm *i*.

Second, using a simple linear regression, we estimated the model to measure the connection between the GPG and the percentage of employees covered by CBAC as follows:

$$CBAC_i = \beta_0 + \beta_1 GPG_i + \varepsilon_i \quad (6)$$

where, the dependent variable is the *CBAC* of firm *i*.

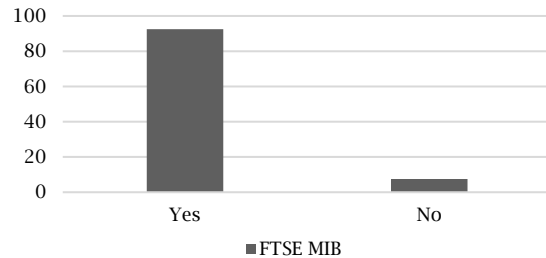
4. EMPIRICAL RESULTS AND DISCUSSION

4.1. Evidence from the analysis of the sample companies

The analysis of the collected data highlights the following significant results.

All companies acknowledge having gender-based pay disparity, but not all provide information on the GPG: 39 companies out of 40 provide disclosures regarding the calculation of GPG; only Buzzi S.p.A. does not report such data; therefore, the company was excluded from the analysis (final sample size: $n = 39$).

Figure 1. Companies providing GPG information



Source: Authors' elaboration.

All (100%) companies that provide disclosures regarding GPG provide information with reference to the Group perimeter, but only a small percentage of these companies also provide information with reference to the Italian perimeter. For this reason and to ensure better data comparability, the GPG ratio related to the Group has been considered.

Most companies that provide disclosures regarding the Group GPG, as shown in Table 3, have a positive GPG, meaning they are in a situation where male workers receive, on average, a higher salary than female workers.

Table 3. Percentage of companies with positive GPG

Year	Positive GPG	Negative GPG
2022	84%	16%
2023	82%	18%
2024	72%	28%
2025	79%	21%

Source: Authors' elaboration.

The pay disparity ranges between -23% and +47% over the four years analysed, as shown in the summary table below (see Table 4).

Table 4. GPG: Min, max, mean

Year	GPG min	GPG max	GPG mean
2022	-23%	33%	8,2%
2023	-21%	39%	7,2%
2024	-20%	47%	9,8%
2025	-16,6%	47%	8,5%

Source: Authors' elaboration.

All (100%) restricted samples of companies provide information on the percentage of employees covered by collective bargaining agreements in Italy.

4.2. GPG and financial performance

4.2.1. Descriptive statistics and correlations

Table 5 presents the descriptive statistics for the variables of interest over the four-year period, with separate calculations for each year, in order to illustrate the trend.

Table 5. Descriptive statistics

Variable	Mean	Std. dev.	Min	Max
Average GPG	0.092	0.101	-0.053	0.365
Average ROE (%)	13.09	10.50	-13.45	40.09

Note: $n = 39$.

Source: Authors' elaboration.

Two companies reported GPG values as "N.A." (not available):

• *Buzzi S.p.A.*: N.A. for all four years, meaning no average GPG can be calculated; therefore, the company was excluded from the analysis (final sample size: $n = 39$).

• *Avio S.p.A.*: N.A. only for 2022–2023. Since only two values are available, the correct average was calculated on the valid observations only.

In line with the research objective of assessing the relationship between GPG and financial performance, the assessment is based on detecting a connection between the GPG Index of the selected organisations, as outlined in their Sustainability Reports, and the ROE, which serves as an indicator of the companies' financial performance and is derived from their published financial statements, by calculating Pearson's correlation coefficient (r).

The aim of this coefficient is to measure the strength and direction of the linear relationship between two quantitative variables (GPG ratio and ROE), indicating how closely the data points align with a straight line on a scatter plot: a value close to +1 signifies a strong positive linear relationship, while a value near -1 indicates a strong negative linear relationship. A value of 0 suggests no linear relationship.

Table 7. Results of the regression: Relationship between GPG and financial performance

Parameter	Coefficient	Std. error	t-statistic	p-value
Intercept (β_0)	11.782	2.303	5.116	< 0.001
GPG (β_1)	14.144	16.970	0.833	0.410

Table 8 presents the outputs obtained by running the regression analysis:

Table 8. Output of the regression analysis

Statistic	Value
Observations	39
R^2	0.018
R^2 adjusted	-0.008
F-statistic	0.695
Prob > F	0.410
GPG coefficient	14.144
Std. error	16.970
t-statistic	0.833
p-value	0.410

Source: Authors' elaboration.

The estimated equation of the model is as follows:

$$ROE = 11.78 + 14.14 \times GPG + \varepsilon_i \quad (7)$$

The estimated coefficient is positive ($\beta_1 = 14.144$). This implies that, theoretically, an increase in the GPG of 0.10 points would be associated with an increase in the ROE equal to:

The correlation matrix presented in Table 6 offers valuable insights into the relationship between GPG and corporate performance.

The correlations were derived from a comprehensive dataset that includes 154 year-firm observations.

Table 6. Pearson and Spearman correlation matrix

Variable	Average GPG	Average ROE
Panel A: Pearson correlation		
Average GPG	1.000	0.136
Average ROE	0.136	1.000
Panel B: Spearman rank correlation		
Average GPG	1.000	0.208
Average ROE	0.208	1.000

Note: Pearson correlation coefficients are reported in Panel A, while Spearman rank correlation coefficients are reported in Panel B. The corresponding p-values are 0.410 and 0.204, respectively.

Source: Authors' elaboration.

The correlation points out a Pearson correlation coefficient: $r = 0.136$ ($p = 0.410$) and a Spearman rank correlation coefficient: $\rho = 0.208$ ($p = 0.204$). Both coefficients are positive, very weak, and not statistically significant.

Therefore, no statistically relevant relationship emerges between GPG and corporate profitability.

4.2.2. Results of the regression model

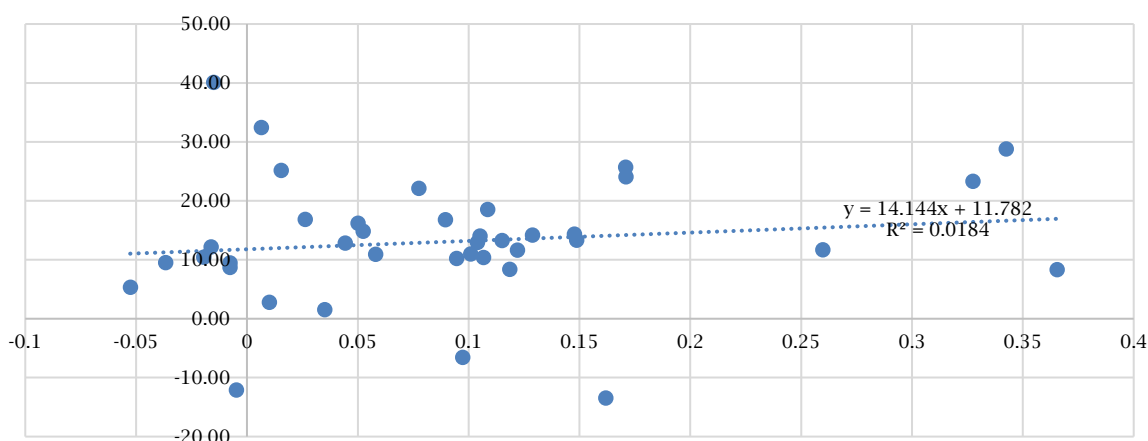
Table 7 displays the results of the model, examining the relationship between GPG and corporate financial performance for four consecutive years.

$14.144 \times 0.10 = 1.41$ percentage points. However, this result is not statistically significant.

The scatter plot below (see Figure 2) illustrates the distribution of observations together with the estimated regression line.

The results indicate a very weak and statistically insignificant association between GPG and ROE. The model explains only 1.8% of the variation in ROE, and neither the slope coefficient nor the overall F-test reaches conventional levels of statistical significance ($p > 0.05$). Therefore, based on this cross-sectional sample of 39 companies, the average GPG does not appear to be a reliable linear predictor of profitability as measured by ROE.

Therefore, over 98% of the differences in profitability between companies are explained by other factors, including industry sector, capital structure, company size, operational efficiency, macroeconomic conditions, and competitive strategies. This means that by including other variables in the research model, the results could change significantly, potentially even leading to the acceptance of the hypothesis that a negative relationship exists.

Figure 2. Average GPG vs average ROE with ordinary least squares regression line

Note: Companies ($n = 39$); Regression line: ordinary least squares (OLS).
Source: Authors' elaboration.

An important point should be highlighted: the estimated coefficient is positive ($\beta_1 = +14.14$). We verified the results both at the level of company averages ($n = 39$) and using a pooled company-year dataset ($n = 154$ observations, excluding missing values): in both cases, the correlation remains positive and statistically insignificant (pooled sample: $r = 0.054$, $p = 0.505$).

It is worth noting that several companies with relatively high GPG values (e.g., Mediobanca: 0.365, Azimut: 0.343, Brunello Cucinelli: 0.328) also exhibit relatively high average ROE values. This tends to push the correlation in a positive direction and provides an important argument in the final discussion, particularly if sectoral differences (e.g., financial and luxury firms versus industrial companies) are considered before drawing any causal conclusions.

The positive coefficient suggests that firms with higher gender pay disparities exhibit higher ROE levels: this leads us to accept $H1$ and reject $H2$, ascertaining a weak positive effect of the GPG on a firm's financial performance. This result may reflect short-term cost advantages associated with workforce composition rather than a genuine productivity effect. Therefore, the relationship should be interpreted with caution.

4.2.3. Robustness test

To test the validity of the results presented in the previous paragraph, we performed the following robustness test. ROE was replaced with ROA as a parameter indicating the financial size of companies.

Table 9 presents the descriptive statistics for the variables of interest over the four-year period, with calculations of the averages for each year used to illustrate the trend.

Table 9. Robustness test: Descriptive statistics

Variable	Mean	Std. dev.	Min	Max
Average GPG	0.0923	0.1008	-0.0527	0.3654
Average ROA (%)	3.40	4.01	-4.81	15.04

Note: $n = 39$.

Source: Authors' elaboration.

The correlation matrix presented in Table 10 offers valuable insights into the relationship between GPG and corporate performance.

The correlations were derived from a comprehensive dataset that includes 154 year-firm observations.

Table 10. Robustness test: Correlation matrix

Variable	Average GPG	Average ROA
Average GPG	1.000	-0.075
Average ROA	-0.075	1.000

Source: Authors' elaboration.

The correlation points out a Pearson correlation coefficient: $r = -0.075$ ($p = 0.649$) and a Spearman rank correlation coefficient: $\rho = -0.053$ ($p = 0.749$). Both coefficients are negative but extremely weak and statistically insignificant. These findings suggest that there is no meaningful linear or monotonic association between gender pay disparities and firm profitability within the sample. Consequently, the data do not provide evidence that firms with lower GPGs systematically achieve higher or lower levels of ROA.

Table 11 displays the output of the regression model, which examines the relationship between GPG and corporate financial performance for the four consecutive years.

Table 11. Robustness test: Output of the regression analysis

Statistic	Value
Observations	39
R^2	0.006
R^2 adjusted	-0.021
F-statistic	0.210
Prob > F	0.649
GPG coefficient	-2.993
Std. error	6.528
t-statistic	-0.458
p-value	0.649

Source: Authors' elaboration.

The results of the simple OLS regression further support this conclusion. The estimated model is:

$$ROA = 3.676 - 2.993 \times GPG + \varepsilon_i \quad (8)$$

The coefficient associated with GPG is negative ($\beta_1 = -2.993$), indicating that, in principle, an increase in GPG is associated with a reduction in ROA. However, the coefficient is not statistically significant ($t = -0.458$; $p = 0.649$), meaning that the observed relationship is indistinguishable from zero from a statistical perspective. Therefore, the null hypothesis that GPG has no effect on profitability cannot be rejected.

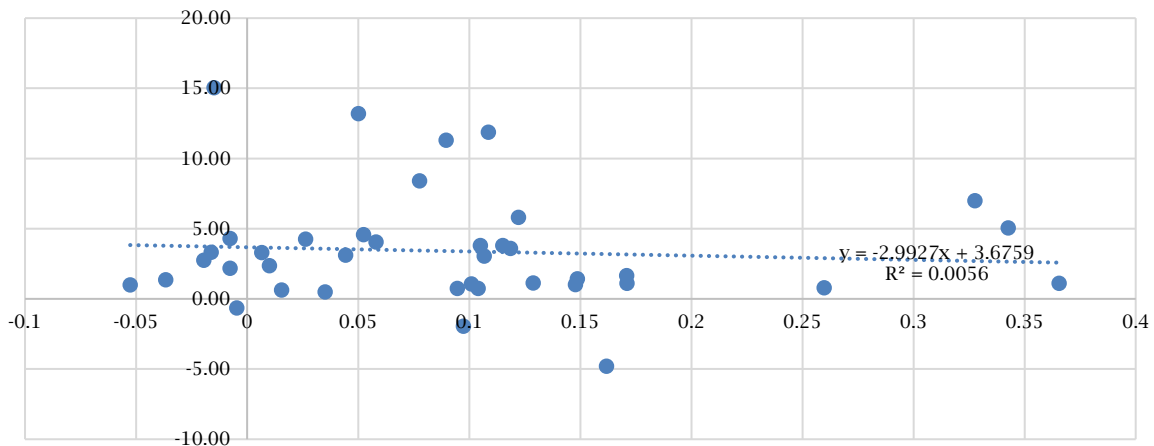
The explanatory power of the model is extremely limited. The coefficient of determination is $R^2 = 0.006$, implying that only 0.6% of the variation in ROA is explained by differences in GPG. Furthermore, the adjusted R^2 is negative (-0.021), indicating that the model performs worse than a simple mean-based prediction. The overall

regression is also not statistically significant, as confirmed by the F-test ($F = 0.210$; $p = 0.649$).

Overall, the empirical evidence suggests that gender pay disparities do not represent a significant determinant of firm profitability, at least when profitability is measured through ROA and analysed in a simple bivariate framework. Although the estimated coefficient is negative and therefore consistent with the theoretical expectation that greater pay equality may be associated with better organisational performance, the lack of statistical significance indicates that this relationship is weak and potentially overshadowed by other factors influencing profitability, such as firm size, industry characteristics, leverage, governance quality, market conditions, and operational efficiency.

The scatter plot below (see Figure 3) illustrates the distribution of observations together with the estimated regression line.

Figure 3. Average GPG vs average ROA with ordinary least squares regression line



Note: Companies ($n = 39$). Regression line: OLS.
Source: Authors' elaboration.

4.3. GPG and collective bargaining coverage

Having analysed the relationship between the GPG and the financial performance of companies, the research expands the analysis to allow for a clearer comprehension of the effect that Unions have on GPG.

Specifically, the variables taken into account are the GPG ratio and the percentage of employees covered by collective bargaining agreements in Italy in the four-year period 2022-2025.

The same model used in the previous paragraph, with the same sample size of 39 companies, has been employed for this empirical analysis.

Table 12 presents the descriptive statistics for the variables of interest over the four-year period, with separate calculations of the averages for each year to illustrate the trend.

Table 12. GPG and CBAC: Descriptive statistics

Variable	Mean	Std. dev.	Min	Max
Average GPG	0.0923	0.1008	-0.0527	0.3654
Average CBAC (%)	0.878	0.181	0.33	1.00

Note: $n = 39$.

Source: Author's elaboration.

The correlation points out a Pearson correlation coefficient: $r = 0.005$ ($p = 0.978$) and a Spearman rank correlation coefficient: $\rho = -0.079$ ($p = 0.633$).

Table 13 displays the output of the regression model, which examines the relationship between GPG and corporate financial performance for the four consecutive years.

Table 13. GPG and CBAC: Output of the regression analysis

Statistic	Value
Observations	39
R^2	0.00002
R^2 adjusted	-0.027
F-statistic	0.001
Prob > F	0.978
CBAC coefficient	0.0028
Std. error	0.10
t-statistic	0.028
p-value	0.978

Source: Authors' elaboration.

The descriptive statistics show that the sample firms exhibit an average GPG of 9.23%, with a standard deviation of 10.08%, indicating substantial variability in gender pay disparities across companies. The average CBAC is 87.8%, with

a standard deviation of 18.1%, suggesting that most firms in the sample have a high level of employee coverage under collective bargaining agreements, although some variation remains.

The Pearson correlation coefficient between GPG and CBAC is 0.005 ($p = 0.978$), while the Spearman rank correlation coefficient is -0.079 ($p = 0.633$). Both coefficients are extremely close to zero and statistically insignificant. These results indicate the absence of any meaningful linear or monotonic relationship between gender pay disparities and collective bargaining coverage. In other words, firms with higher levels of collective bargaining coverage do not appear to systematically exhibit either lower or higher GPGs.

The OLS regression analysis confirms this finding. The estimated equation is:

$$GPG = 0.0899 + 0.0028 \times CBAC + \varepsilon_i \quad (9)$$

The estimated coefficient of CBAC is positive but extremely small ($\beta = 0.0028$) and statistically insignificant ($p = 0.978$). The results indicate that variations in collective bargaining coverage do not explain differences in GPG across the sampled firms. The model exhibits virtually no explanatory power ($R^2 \approx 0$), suggesting that other organisational, structural, and institutional factors may be more relevant determinants of gender pay inequality.

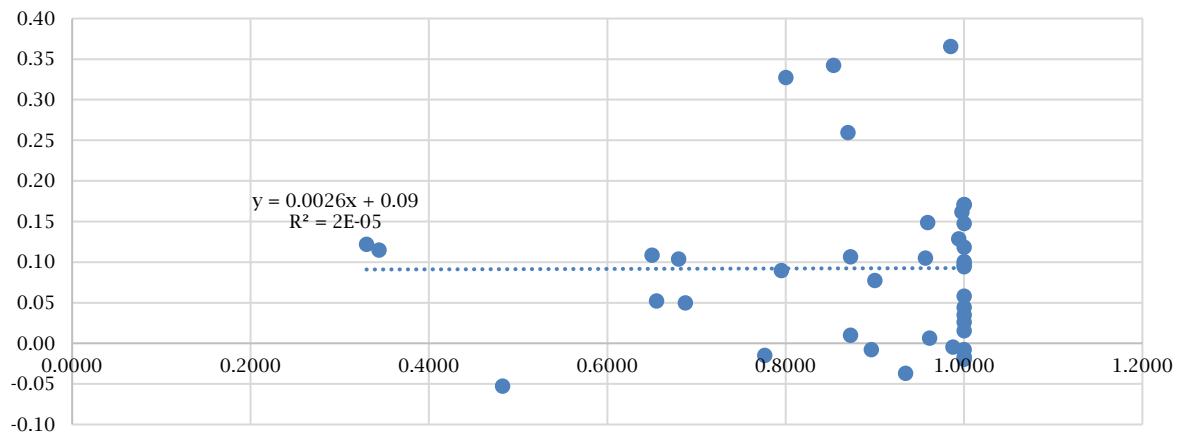
The explanatory power of the model is virtually non-existent. The coefficient of determination is $R^2 = 0.00002$, meaning that less than 0.01% of the variation in CBAC is explained by differences in GPG. The adjusted R^2 is negative (-0.027), further indicating that the model does not improve the prediction of collective bargaining coverage relative to a model based solely on the sample mean. The F-statistic is also insignificant ($F = 0.001$; $p = 0.978$), confirming the lack of overall explanatory power.

From an economic and institutional perspective, these findings suggest that collective bargaining coverage alone is not associated with reductions in gender pay inequality within the firms analysed.

Although collective bargaining agreements are often considered mechanisms for promoting pay transparency and reducing wage disparities, the results indicate that the mere existence or extent of bargaining coverage does not necessarily translate into a smaller GPG. Other factors, such as occupational segregation, differences in career progression, managerial representation, firm-specific remuneration policies, and industry characteristics, may play a more important role in explaining gender pay disparities.

The scatter plot below (see Figure 4) illustrates the distribution of observations together with the estimated regression line.

Figure 4. Relationship between collective bargaining agreement coverage and GPG (2022–2025)



Source: Authors' elaboration.

5. CONCLUSION

This study examines the relationship between GPG and firm performance in a sample of Italian companies listed in the FTSE MIB index, while also investigating the role of collective bargaining coverage in shaping gender pay disparities.

The research has been motivated by the growing importance of pay transparency, gender equality policies, and sustainability reporting requirements introduced at both the European and national levels.

The descriptive analysis confirms that gender pay disparities remain a widespread phenomenon among large Italian listed companies. Although the average GPG observed in the sample is lower than the global average reported by international organisations, a substantial proportion of firms

continue to report positive GPG, indicating that male employees earn, on average, more than female employees. The results therefore suggest that gender equality in remuneration remains an important challenge even among leading Italian corporations.

On the other hand, empirical findings provide limited support for the existence of a direct relationship between gender pay inequality and corporate financial performance. The analysis based on ROE reveals a weak positive association between GPG and profitability; however, the estimated coefficient is not statistically significant, and the explanatory power of the model is extremely low. The robustness test using ROA produces the opposite sign, showing a weak negative relationship that is likewise statistically insignificant. Collectively, these results indicate that

gender pay disparities do not appear to represent a relevant determinant of firm profitability within the analysed sample. Evidence suggests that corporate performance is influenced primarily by other factors, including industry characteristics, firm size, capital structure, governance quality, operational efficiency, and broader macroeconomic conditions.

The analysis of the relationship between GPG and CBAC leads to similar conclusions: neither the correlation analysis nor the regression results reveal a statistically significant association between collective bargaining coverage and gender pay inequality. Although trade unions and collective bargaining mechanisms are often regarded as important instruments for promoting wage equality and pay transparency, the findings indicate that coverage alone does not automatically translate into lower GPGs. Structural factors such as occupational segregation, career progression opportunities, leadership representation, and firm-specific compensation policies may exert a stronger influence on gender pay outcomes.

From a theoretical perspective, the results do not provide strong support for either the tournament theory argument that wider pay differentials enhance organisational performance or the fairness-based perspective suggesting that greater pay equality improves profitability through higher employee satisfaction and motivation. Instead, the findings point toward a more complex relationship in which the impact of gender pay disparities on firm performance is indirect and mediated by a range of organisational and institutional factors.

The study contributes to the literature by providing one of the first empirical investigations

focused specifically on the relationship between GPG and firm performance among Italian listed companies.

At the same time, several limitations should be acknowledged: firstly, the sample is limited to FTSE MIB firms and therefore may not be representative of smaller companies or non-listed organisations; secondly, the use of a simple bivariate regression framework does not allow for the inclusion of potentially important control variables; finally, the analysis relies on publicly disclosed raw GPG measures, which may not fully capture differences in job characteristics, experience, or occupational composition.

Future research should employ larger datasets, panel-data methodologies, and multivariate models including firm-level controls such as size, leverage, board diversity, industry effects, and ESG performance indicators. Further analyses could also investigate the impact of the implementation of the EU Pay Transparency Directive and explore whether increased transparency contributes to reducing gender pay disparities over time. Such research would provide a deeper understanding of the mechanisms linking gender equality, corporate governance, and long-term organisational performance.

Overall, evidence suggests that while gender pay inequality remains a significant social and governance issue, its direct impact on firm profitability is not clearly observable. Consequently, initiatives aimed at reducing GPG should be pursued primarily on the grounds of fairness, equal opportunity, regulatory compliance, and long-term sustainability rather than solely as a strategy for improving short-term financial performance.

REFERENCES

- Akerlof, G. A., & Yellen, J. L. (1990). The fair wage-effort hypothesis and unemployment. *The Quarterly Journal of Economics*, 105(2), 255–283. <https://doi.org/10.2307/2937787>
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. National Bureau of Economic Research. <https://www.nber.org/books-and-chapters/human-capital-theoretical-and-empirical-analysis-special-reference-education-first-edition>
- Bishu, S. G., & Alkadry, M. G. (2017). A systematic review of the gender pay gap and factors that predict it. *Administration & Society*, 49(1), 65–104. <https://doi.org/10.1177/0095399716636928>
- Blau, F. D., & Kahn, L. M. (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature*, 55(3), 789–865. <https://doi.org/10.1257/jel.20160995>
- Blinder, A. S. (1973). Wage discrimination: Reduced form and structural estimates. *The Journal of Human Resources*, 8(4), 436–455. <https://doi.org/10.2307/144855>
- Borsa Italiana. (n.d.). *FTSE MIB*. Retrieved August 28, 2026, from <https://tinyurl.com/3puz4d63>
- Doiron, D. J., & Riddell, W. C. (1994). The impact of unionization on male-female earnings differences in Canada. *The Journal of Human Resources*, 29(2), 504–534. <https://doi.org/10.2307/146108>
- Eagly, A. H., & Carli, L. L. (2007). *Through the labyrinth: The truth about how women become leaders*. Harvard Business School Press.
- Edmans, A. (2011). Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics*, 101(3), 621–640. <https://doi.org/10.1016/j.jfineco.2011.03.021>
- European Institute for Gender Equality (EIGE). (2024). *Gender Equality Index 2024—Sustaining momentum on a fragile path*. Publications Office of the European Union. <https://eige.europa.eu/sites/default/files/documents/gender-equality-index-2024-sustaining-momentum-on-a-fragile-path.pdf>
- FTSE Russell. (2026, August 31). *FTSE MIB Index*. London Stock Exchange Group. <https://research.ftserussell.com/Analytics/Factsheets/Home/DownloadSingleIssue?issueName=FTSEMIB>
- Goldin, C. (2014). A grand gender convergence: Its last chapter. *American Economic Review*, 104(4), 1091–1119. <https://doi.org/10.1257/aer.104.4.1091>
- Hansen, G. S., & Wernerfelt, B. (1989). Determinants of firm performance: The relative importance of economic and organizational factors. *Strategic Management Journal*, 10(5), 399–411. <https://doi.org/10.1002/smj.4250100502>
- Küskü, F., Özbilgin, M. F., & Özkale, L. (2007). Against the tide: Gendered prejudice and disadvantage in engineering a comparison of Turkey and the UK. *Gender, Work & Organization*, 14(2), 109–129. <https://doi.org/10.1111/j.1468-0432.2007.00335.x>

- Lazear, E. P. (1989). Pay equality and industrial politics. *Journal of Political Economy*, 97(3), 561–580. <https://doi.org/10.1086/261616>
- Lazear, E. P., & Rosen, S. (1981). Rank-order tournaments as optimum labor contracts. *Journal of Political Economy*, 89(5), 841–864. <https://doi.org/10.1086/261010>
- Levine, D. I. (1991). Cohesiveness, productivity, and wage dispersion. *Journal of Economic Behavior & Organization*, 15(2), 237–255. [https://doi.org/10.1016/0167-2681\(91\)90031-R](https://doi.org/10.1016/0167-2681(91)90031-R)
- Lim, E. (2019). Attainment discrepancy and new geographic market entry: The moderating roles of vertical pay disparity and horizontal pay dispersion. *Journal of Management Studies*, 56(8), 1605–1629. <https://doi.org/10.1111/joms.12430>
- Ma, X., & Zhan, P. (2024). Trade unions and the gender wage gap: Evidence from China. *Journal of Applied Economics*, 27(1), Article 2369430. <https://doi.org/10.1080/15140326.2024.2369430>
- Morin, S. L. (2025). The gender pay gap: A persistent socioeconomic challenge. *SocioEconomic Challenges*, 9(1), 162–174. [https://doi.org/10.61093/sec.9\(1\).162-174.2025](https://doi.org/10.61093/sec.9(1).162-174.2025)
- Oaxaca, R. (1973). Male-female wage differentials in urban labor markets. *International Economic Review*, 14(3), 693–709. <https://doi.org/10.2307/2525981>
- Oaxaca, R. L., & Ransom, M. R. (1994). On discrimination and the decomposition of wage differentials. *Journal of Econometrics*, 61(1), 5–21. [https://doi.org/10.1016/0304-4076\(94\)90074-4](https://doi.org/10.1016/0304-4076(94)90074-4)
- Organisation for Economic Co-operation and Development (OECD). (2021). *Pay transparency tools to close the gender wage gap*. OECD Publishing. <https://tinyurl.com/bddjbn8k>
- Rosen, S. (1986). Prizes and incentives in elimination tournaments. *American Economic Review*, 76(4), 701–715. <https://doi.org/10.3386/w1668>
- Rosenfeld, R. A., & Spenner, K. I. (1992). Occupational sex segregation and women's early career job shifts. *Work and Occupations*, 19(4), 424–449. <https://doi.org/10.1177/0730888492019004005>
- Tasselli, C., & Addabbo, T. (2026). The gender wage gap: Evidence from organisations in Northern Italy. *Italian Economic Journal*, 12(1), 639–667. <https://doi.org/10.1007/s40797-025-00316-7>
- World Economic Forum. (2025). *Global gender gap report 2025*. <https://tinyurl.com/yjrdwfen>
- Xu, L., Ponnappalli, A. R., & Wang, C. (2025). CEO-TMT vertical pay gap and firm productivity: A tournament theory perspective. *Journal of Business Research*, 197, Article 115453. <https://doi.org/rmk4>