The Triple Penalty

Mapping the Gender Gap in the AI Economy

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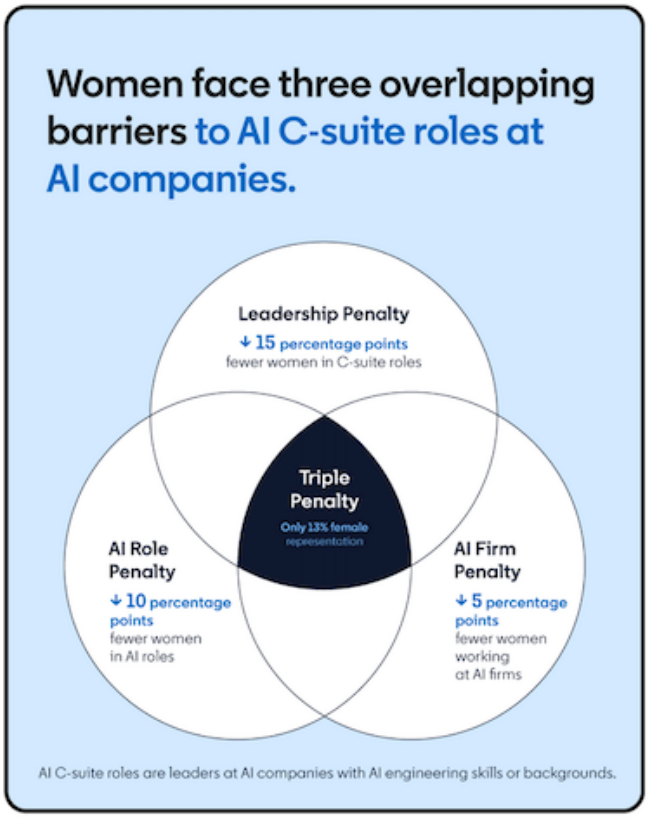
KEY FINDINGS

As AI reshapes the economy, women remain largely absent from the jobs shaping its future, especially in the highest-paying roles. Women hold just 13% of executive AI roles at AI companies across 27 countries. This reflects what we call the Triple Penalty: lower representation in leadership roles, AI jobs, and AI companies.

- **The leadership penalty.** Women are about 15 percentage points (pp) less represented in C-suite roles than in non-executive roles.
- **The AI role penalty.** Women are about 10 pp less represented in AI jobs than in non-AI jobs.
- **The AI company penalty.** All else equal, the share of workers in AI firms who are women is around 5 pp lower than in non-AI firms.

We further find that:

- **The AI leadership gap starts well before the C-suite.** Women make up 39% of leadership roles globally, but only 31% of AI leadership roles; the pipeline into AI leadership is already less female well before executive roles. (Director+ in an AI role or at an AI firm).
- **The AI leadership gap is often larger at smaller companies.** Women are underrepresented across the board, but smaller firms (51-200 employees) tend to have even fewer women in executive leadership roles than larger companies.
- **This is a global trend, not a local one.** We see the same pattern across nearly every country in our analysis. Women are less represented in leadership roles and AI jobs in all 27 countries studied, and less represented at AI firms in 24 of them.
- **No industry has solved the AI leadership gap.** AI firms are concentrated in professional services (41%), technology (31%), and financial services (8%), which together account for roughly 80% of AI firms in our sample. While the size of the gap varies across industries, women are less represented in executive roles across every industry we examined.



- **AI is creating some of the fastest-growing and highest-paying jobs in the economy.** In the U.S., the number of AI job postings have doubled in recent years, and the typical AI role pays more than twice as much as a non-AI role. But access to that opportunity is far from equal.
- **Women are underrepresented in many of AI's highest-paying jobs.** Women make up just 20% of Head of AI hires, 26% of Director of AI hires, and 18% of Member of Technical Staff hires. Meanwhile, women are better represented in lower-paying AI roles such as data annotation.

INTRODUCTION

AI is creating some of the fastest-growing and highest-paying jobs in the economy. Yet women remain less represented in many of the jobs, companies, and leadership roles shaping AI's future. This report examines three barriers women face: working in leadership roles, working in AI jobs, and working at AI companies. Together, these barriers create what we call the Triple Penalty. Using LinkedIn data, we defined our sample considering LinkedIn members working in medium to large firms (over 50 employees) across 27 countries, amounting to tens of millions of workers. The Appendix provides definitions and methodologies employed in this report.

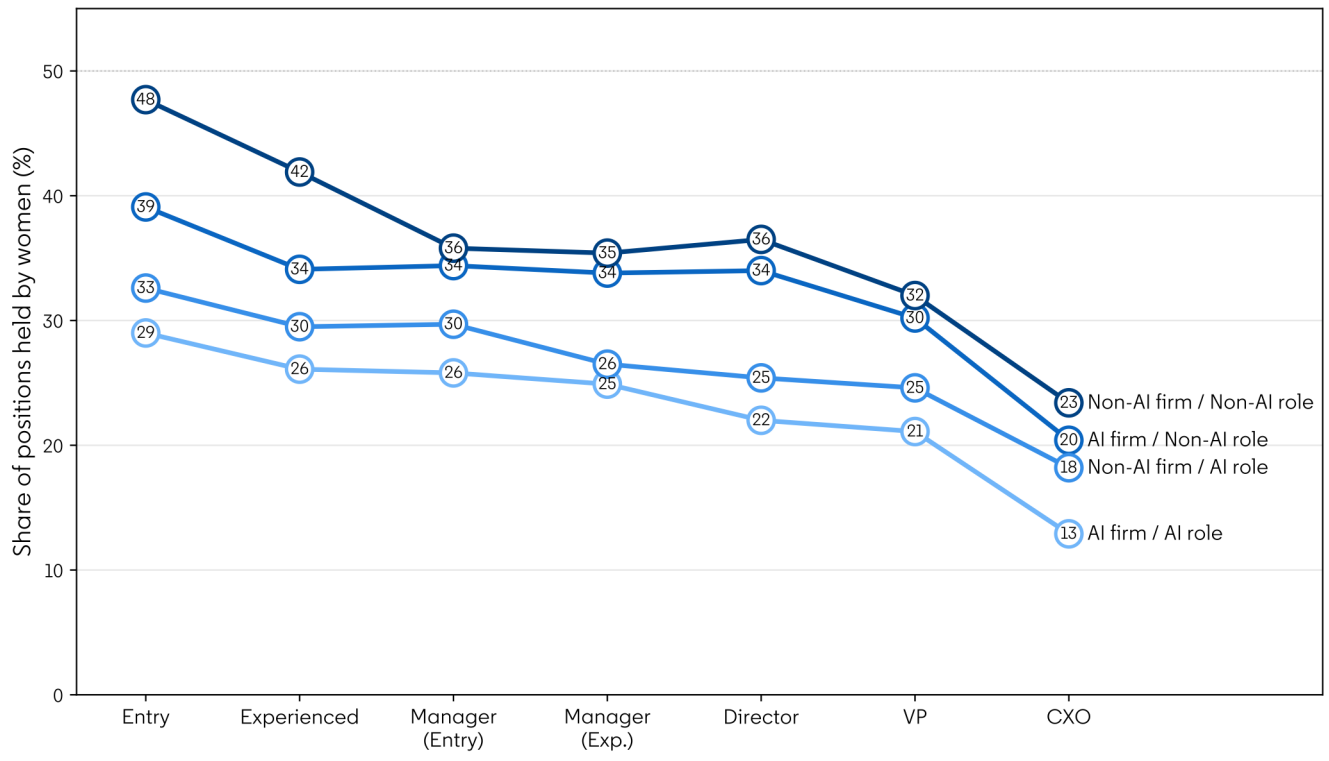
While these key roles—C-Suite AI roles in AI firms—are a small part of the economy (accounting in this sample for fewer than one in ten thousand workers), they drive the core decisions that shape the future of AI technologies. Roughly 1% of the sample represent non-C-suite workers in AI roles at AI firms. The vast majority of workers in the sample (over 90%) are non-AI workers in non-AI firms not in C-suite roles. Appendix Table A.1 presents the share of workers in each cell across these three segments.

HOW WOMEN'S SHARE OF JOBS CHANGES WITH SENIORITY

The AI leadership gap starts long before the C-suite. There are broken rungs in the ladder to senior leadership for women, for AI firms and non-AI firms and for AI roles and non-AI roles, as demonstrated by the downward slope with higher leadership. There is a clear divide between representation at AI versus non-AI jobs. The share of workers who are women retains the same relative ranking at every seniority level—the lines never cross each other in the figure. Women hold the largest share of jobs in non-AI roles at non-AI companies and the smallest share in AI roles at AI companies. Role type is a stronger driver of the gap than firm type. The shortage of women in AI roles at AI firms is stark: even at the entry level, women hold just 29% of these jobs—a number

The Broken Ladder By Segment

Average Across 27 Countries



barely higher than the notoriously low 23% average for traditional C-suite positions.

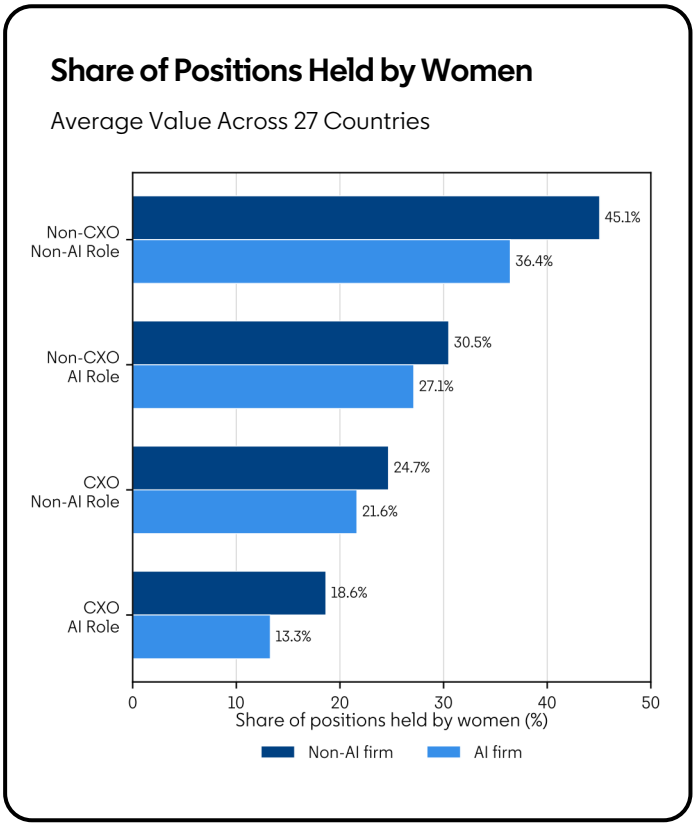
Women hold 38.5% of all Director+ positions globally but only 31.2% of AI leadership (Director+ in any AI role or at an AI firm) — a 7.3 pp gap. In other words, the leadership pipeline into AI is already less female long before the C-suite.

WOMEN IN THE C-SUITE

Continuing forward, we focus on the highest levels of leadership (CXO) against all lower levels. We average the share of workers who are women in each dimension. These shares present the triple penalty, where the share of women decreases for each of the three dimensions (AI roles, AI firms, CXO roles). Women hold a smaller share of C-suite roles (the top panel) than the corresponding roles and firm types for non-CXO positions (the bottom panel). Across every category we examined, women held fewer AI jobs, fewer jobs at AI companies, and fewer leadership positions: women's representation in the right column (AI roles) is always lower than the corresponding row in the left column (Non-AI roles).

Women account for a smaller share of workers in AI firms (top row of each panel) than in non-AI firms (the bottom row of each panel). Together these converge such that, while women account for 45.1% of workers in non-CXO positions in non-AI roles at non-AI firms, that representation drops when all three penalties compound; only 13% of CXO positions in AI roles at AI firms are held by women.

Even after accounting for differences in country, role type, and firm type, all three penalties remain. CXO roles have a 15.3 percentage point (pp) gender gap. In other words, the share of workers who are women is 15.3pp lower for CXO roles than for non-CXO roles. This is the largest disparity. The second largest disparity is for AI roles, with a 9.7pp gender gap. The smallest, but still large, gap is for AI firms, where there is a 5.2pp gender gap. These differences—**a 15pp penalty for CXO roles, 10pp penalty for AI roles, and a 5pp penalty for AI firm positions**—compound to the ~30pp gap between non-



CXO/non-AI roles/non-AI firm representation (45.1%) and CXO/AI role/AI firm representation (13.3%).[1]

Additionally, these penalties are not only present in the aggregate across countries, but are the trend for each country. The gender gaps for C-suite and AI roles hold in all 27 of the countries. The AI firm gaps hold in 24 of the 27 countries. This is not a country-specific phenomenon. The same pattern appears across virtually every market examined. The three exceptions are India, Pakistan, and UAE.

[1] The breakdown of the gaps does not perfectly align to the raw gap due to methodological differences in the regression analysis.

WOMEN IN AI LEADERSHIP BY COMPANY SIZE

Does firm size play a role in driving this gap? One could argue that larger companies, with their more diversified C-suite structures, might be better equipped to integrate women into leadership. On the flip side, smaller firms might offer a better environment if they aren't as tied down by traditional, entrenched leadership pipelines. Our findings, however, show remarkably consistent trends across the board—particularly for non-CXO roles. The only real variance emerges when we look specifically at executive CXO positions.

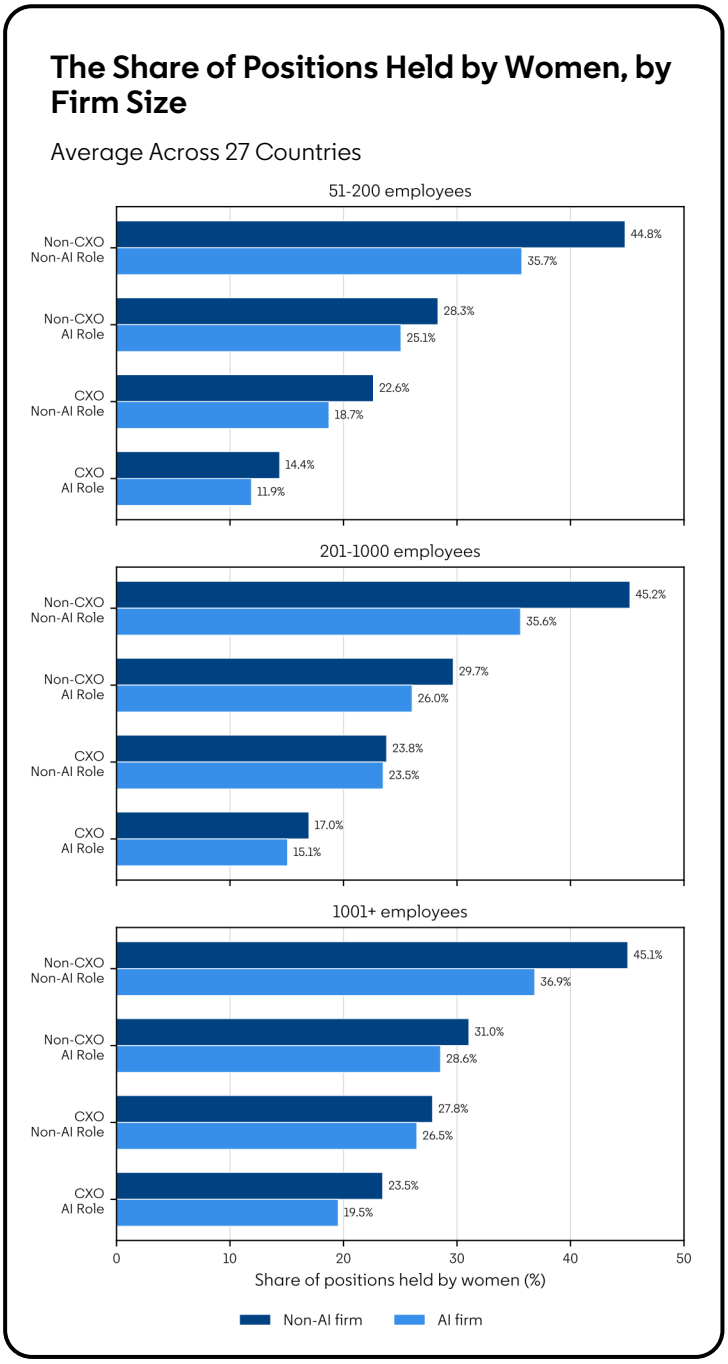
For example, for AI roles, small, non-AI, firms (51-200 employees) employ women in only 14.6% of CXO positions, compared to 23.3% in large firms. Smaller companies are not immune to the gap. In fact, they often have fewer women in AI leadership than larger firms. Small AI firms have 11.8% of CXO positions in AI roles held by women, compared to 21.6% for larger firms. Regression analysis confirms that the leadership gap is 3.7 percentage points larger at smaller firms compared to larger firms.

VARIATION IN PENALTIES BY INDUSTRY

The leadership penalty is universal. The AI firm penalty is not. AI firms are predominantly concentrated in three industries: professional services (41.1% of AI firms in the sample); technology, information, and media (30.8%); and financial services (7.9%), which together account for around 80% of AI firms. Manufacturing (5.8%), Education (5.1%), Government Administration (2.0%), and Hospitals and Health Care (1.8%) have the next highest shares. The remaining 5% of AI firms are spread thinly through the remaining industries, most representing far less than 1% of all AI firms. Appendix Figure A.1 shows women's share of jobs across industries.

When we isolate and compare the gender penalties across sectors, we find that, while barriers to female leadership are universal, there are stark differences across industries. A few trends stand out:

- The CXO penalty is large and significant in every industry, with the largest penalty appearing in the real estate industry, while the smallest gap is in utilities. The industries with high AI firm representation—professional services, tech, and financial services—tend to be in the middle or lower end of the CXO penalty.
- Most, but not all, industries have a positive and significant AI role penalty. The exception is for the construction industry, which has low AI penetration.
- The AI firm penalty is not universal and has the most variation across industries. In 18 of the industries, 12 have a statistically significant and positive penalty, while the remaining 6 are not statistically significant



(largest is again hospitals and health care). Interestingly, the tech industry has a near zero (and only marginally significant, p≈0.05) AI firm penalty, but still a large positive AI role penalty.

VARIATIONS IN PENALTIES BY CXO ROLE

We next zoom into the AI role and AI firm penalties for specific CXO roles, to explore how gender is segregated within various roles. Top AI-talent CXO occupations by headcount are Chief Technology Officer (16.2% of CXO AI workers), Chief Data Officer (13.9%), and Chief Executive Officer (13.4%). Women are starkly underrepresented in these roles. For Chief Technology Officers, the numbers are low across the board—just 9.1% at non-AI companies and only a fraction higher (9.3%) at AI firms. For CEOs, the gap is compounded by an 'AI firm penalty': while women make up 19.1% of CEOs at traditional companies, that figure drops significantly to 13.9% at AI firms. Roles in which women have high representation, such as Chief People Officer (around 70%) and Chief Marketing Officer (around 45%), have little AI firm penalty, but these are not generally AI roles, and they are less frequently present in small companies. Figure A.3. shows the rates across several CXO roles.

CASE STUDY: MEMBER OF TECHNICAL STAFF

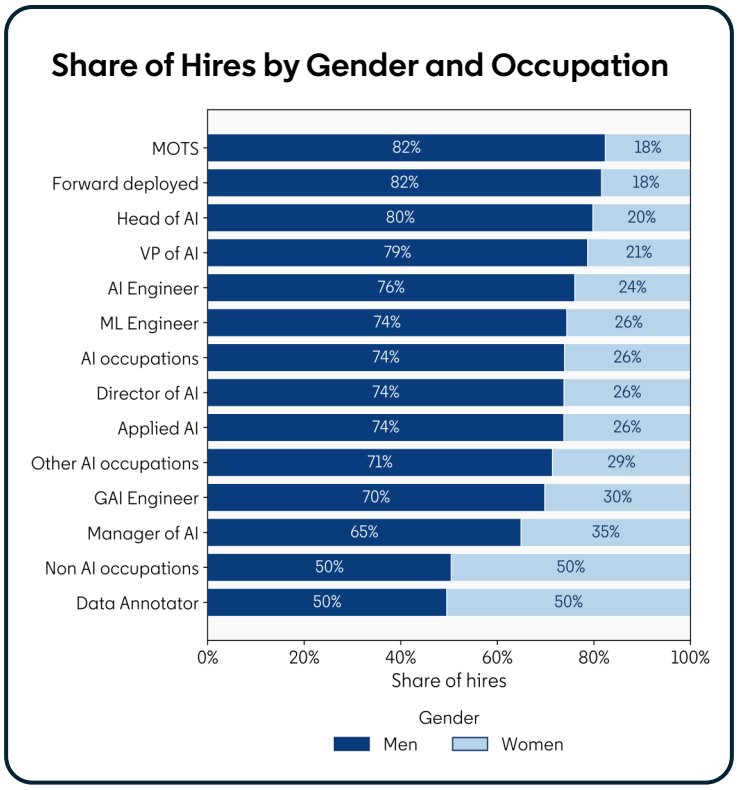
Between 2021 and 2026, the global number of LinkedIn members holding the title "Member of Technical Staff" (MTS) almost tripled, with most of the growth happening post 2023. These relatively new titles sit at the intersection of high-level research and full-stack engineering. Unlike traditional software roles, the MTS is a hybrid position, blending model development, data architecture, and systems infrastructure. Critically, the title spans the entire spectrum of seniority—encompassing everyone from junior data scientists to the most senior research scientists. This expansion is overwhelmingly concentrated in AI labs, where the need for nimble talent that is capable of pivoting between theory and production outpaces the demand for rigid, siloed job descriptions.

This rapid growth, however, coincides with a widening gender gap. The female share among MTS holders fell from 23% in 2021 to just 19% in May 2026. This trend suggests that as technical roles become more research-intensive and concentrated within the specific AI lab ecosystem, gender parity remains a significant structural challenge. This regression in the core technical talent pool may act as an early warning system: as technical roles become more exclusive, they reinforce the very AI role penalties that prevent women from climbing the broken ladder at key AI firms.

GENDER DIFFERENCES IN AI OCCUPATIONS HIRING

The AI labor market is growing quickly, but access to that growth is uneven. We next turn to job postings across seniority levels for different AI occupations. Given data limitations, this analysis is focused only on the US. Over the last few years, the number of job posts for AI occupations–jobs focusing on building AI technologies–in the US has doubled, compared to more modest growth for non-AI jobs. These roles also pay higher than average roles. But the benefits of that growth are unevenly distributed.[2]

Women remain significantly underrepresented in one of the fastest-growing and highest-paying segments of the



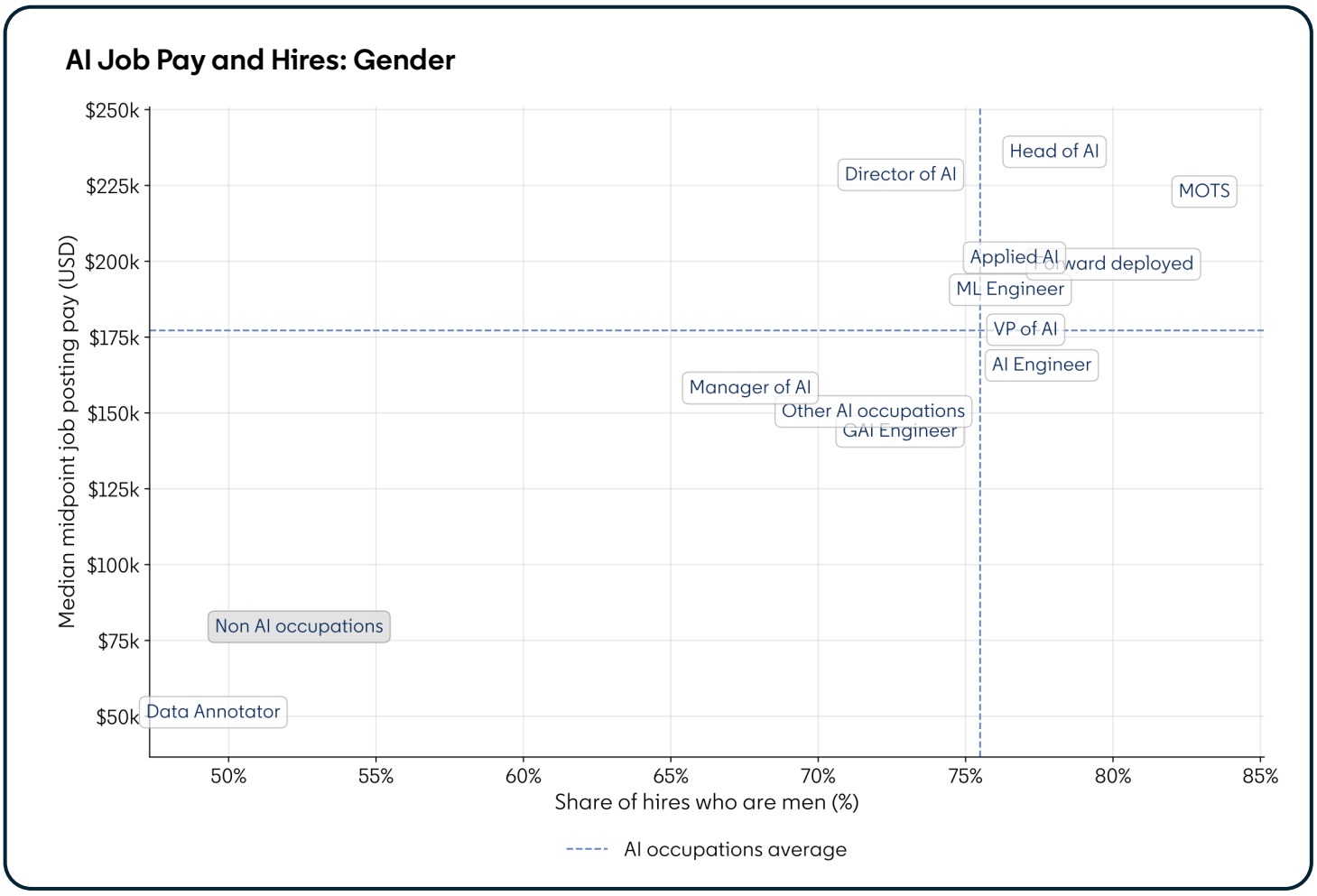
[2] This section is reproduced from Baird, M., S. Lara, and M. Carpanelli (2026). "The AI Talent Divide: Strong Demand and Pay, Uneven Returns." *LinkedIn Economic Graph Research Institute Research Note*. See that paper for further details.

labor market. In 2025, women accounted for only 26% of new hires in AI roles, compared with 50% of new hires in non-AI occupations. Representation is even lower in some of the highest-paying AI roles. Women make up just 20% of Head of AI hires, 26% of Director of AI hires, and 18% of Member of Technical Staff hires.

This gap is especially concerning because women's representation in AI has not improved as the market has grown. For AI roles overall, listed compensation has remained relatively stable over the past three years, while the share of hires who are women has declined (Appendix Figure A.2). We also see some decline in women's representation in non-AI roles, which may reflect broader labor market conditions and the barriers women often face when labor markets worsen.

Within AI occupations, the higher paying occupations have lower shares of hires who are women. Not only do AI jobs pay more than non-AI jobs on average, while having lower representation of women. But even within-AI, the sorting persists. The roles that pay more tend to have a higher share of male hires. Head of AI and Member of Technical Staff roles are among the highest-paid AI jobs, and women make up less than a quarter of hires in both categories. The appendix shows how each of these AI occupations have shifted over the last few years (Figure A.3). Most of the occupations have been relatively stable in the past three years; however, MOTS has shown a clear movement to fewer women hires but higher average pay. Interestingly, VP of AI shows the reverse pattern.

The most gender-balanced AI role (Data Annotator) is also the AI occupation with the lowest pay. Women represent more than half of hires in these roles, making data annotation one of the few AI occupations with greater gender balance. These roles also tend to have lower specialized education requirements than other AI



jobs. The structure of the work may help explain this pattern: data annotation is often paid hourly, can be project-based, and is frequently remote. For women balancing paid work with caregiving responsibilities, remote and flexible hourly work may be more feasible than traditional full-time technical roles with higher credential requirements.

But this exception also reveals a deeper problem. Data annotation is more accessible and more gender-balanced, but it is also one of the lowest-paid AI roles. In other words, women are better represented in the part of the AI labor market with lower pay, while they remain underrepresented in the highest-paying AI roles.
This relationship shows up clearly in the data. AI occupations with a higher share of male hires tend to have significantly higher listed salaries. A 10 percentage point increase in the male share of hires is associated with roughly $45,000 higher median listed pay across AI occupations. In 2026 alone, that relationship is even larger, at around $50,000. That is a much stronger relationship between occupation relationship between share of hires who are men and typical pay of the occupation in job postings, which is around $10K per 10 percentage point higher share.

The gender divide in AI isn't just about who gets into AI. It's who gets access to the highest-paying opportunities once they're there.

ACKNOWLEDGEMENTS

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DEFINITIONS AND METHODOLOGY

CXO ANALYSIS

Sample: Workers working in firms with at least 50 LinkedIn Members, employed in the country set detailed below.

CXO: Any C-suite position

Non-CXO: All workers not in C-suite positions

AI talent: if a member has one of the following:

- At least one current or past occupation of the member is classified as an AI occupation. At least 1 match in prior occupations to the segment's AI occupations
- 2+ matches to the segment's AI engineering skills

AI firm: if a firm has at least 10% of their members who are AI talent. We verified manually that this list includes known AI companies, that the largest companies excluded are not AI companies, and that the largest companies included are AI companies.

Countries included: those with sufficient gender representation and at least 1,000 C-suite holders overall and at least 10 workers in each cell of (C-suite x AI firm x AI role). The final list of countries includes Argentina, Australia, Belgium, Brazil, Canada, Chile, Colombia, Denmark, Finland, France, Germany, Hong Kong, India, Ireland, Israel, Italy, Mexico, Netherlands, Pakistan, Poland, Singapore, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, and United States.

JOB POSTING PAY ANALYSIS

Sample for pay analysis: LinkedIn's platform data for the United States. Two primary data sources are used: job postings (for pay statistics) and member employment histories (for workforce composition).

Job postings pay data are constructed from US-based job postings listed on LinkedIn between 2023 and 2026.

Compensation sources. Pay figures are drawn from two complementary sources within LinkedIn's job postings data: extracted compensation (standardized by LinkedIn's systems from the posting text) and poster-provided compensation (entered directly by the job poster).

Annualization. All pay figures are converted to annual equivalents using the compensation period reported in the posting. Scaling factors are: monthly × 12, weekly × 52, hourly × 40 × 52 (assuming a 40-hour work week). Postings reporting a daily or unspecified period are excluded. Per-period sanity bounds are applied before annualization to remove implausible values (e.g., an "hourly" wage of $500,000 or an "annual" salary of $200) without aggressively trimming the tails of a market that includes both low-wage and extremely high-paying roles. The bounds are intentionally wide; given that the analysis uses percentiles rather than means, residual outliers have limited influence on reported figures.

Midpoint construction. For postings that report both a minimum and maximum salary, the midpoint is computed as (min + max) / 2. Where only one bound is available (truncated range), that bound is used as both the min and max, making the midpoint equal to the single reported value. Postings that report an exact salary (range = 0) are treated equivalently. Min and max are also order-corrected so that the smaller value is always treated as the floor and the larger as the ceiling, regardless of how they were reported.

Aggregation and thresholds. Pay statistics are computed per occupation × list year cell using approximate percentiles (p5, p25, p50, p75, p95 of the midpoint distribution, plus median of the posted min and max). Occupations/years with fewer than 30 qualifying postings (with pay listed) are excluded from the data. Only US postings are included.

Currency. Only USD-denominated compensation is retained; postings with non-USD or missing currency codes are excluded.

Workforce composition data are constructed from LinkedIn member profiles. A "hire" is defined as a member who began a new position in a given occupation in a given calendar year, as reported on their LinkedIn profile. Demographic attributes — gender, birth year cohort (generation), and educational attainment — are drawn from member-reported profile data. Occupation-year demographic cells with fewer than 30 total hires are excluded. All composition figures reflect US members only.

Occupation Classification

Occupations are classified using LinkedIn's standardized occupation taxonomy. This research note focuses on AI builder occupations, manually selected out of all AI occupations standardized in our taxonomy. The 12 most common specific AI occupations (e.g., AI Engineer, Generative AI Engineer, Machine Learning Engineer, Data Annotator, and so on) were selected, while all other AI builder occupations are assigned to Other AI. All non-AI builder occupations are assigned to a Non-AI occupations category. An "AI occupations" aggregate is computed across all AI builder occupations.

For more details, see Baird, M., S. Lara, and M. Carpanelli (2026). "The AI Talent Divide: Strong Demand and Pay, Uneven Returns." *LinkedIn Economic Graph Research Institute Research Note*.

SUPPLEMENTARY TABLES AND FIGURES

Table A.1 Member Representation in Each Segment

Firm	Role	Leadership	Share of workers
AI firm	AI	CXO	0.004%
AI firm	AI	Other	0.971%
AI firm	Non-AI	CXO	0.035%
AI firm	Non-AI	Other	3.638%
Non-AI firm	AI	CXO	0.021%
Non-AI firm	AI	Other	3.642%
Non-AI firm	Non-AI	CXO	0.885%
Non-AI firm	Non-AI	Other	90.804%

Table A.2 Female Representation in Each Segment by Country

Country	Seniority	Non-AI role / Non-AI firm	Non-AI role / AI firm	AI role / Non-AI firm	AI role / AI firm
Argentina	CXO	23.5%	26.3%	18.1%	
Argentina	Other	46.7%	37.0%	29.8%	28.3%
Australia	CXO	28.1%	21.6%	23.9%	15.0%
Australia	Other	49.7%	36.9%	33.9%	27.6%
Belgium	CXO	21.3%	15.0%	19.6%	
Belgium	Other	45.4%	31.2%	27.4%	21.2%
Brazil	CXO	24.1%	22.1%	10.7%	4.7%
Brazil	Other	45.4%	34.5%	24.0%	22.1%
Canada	CXO	28.0%	26.3%	23.7%	22.5%
Canada	Other	48.8%	37.2%	34.3%	28.5%
Chile	CXO	24.2%	15.4%	12.5%	
Chile	Other	43.9%	32.4%	23.9%	21.1%
Colombia	CXO	34.6%	30.2%	16.9%	
Colombia	Other	48.7%	37.4%	26.5%	23.5%
Denmark	CXO	19.4%	15.3%	13.6%	
Denmark	Other	47.8%	35.3%	29.3%	22.6%
Finland	CXO	42.0%	38.5%	31.5%	
Finland	Other	61.4%	44.2%	39.9%	34.9%
France	CXO	31.6%	25.5%	21.4%	18.0%
France	Other	48.6%	38.6%	32.5%	27.8%
Germany	CXO	18.9%	16.3%	17.5%	8.0%
Germany	Other	39.8%	35.3%	25.8%	24.5%
Hong Kong	CXO	27.3%	25.6%	23.4%	
Hong Kong	Other	49.5%	43.4%	33.6%	32.0%
India	CXO	14.4%	13.9%	14.9%	12.2%
India	Other	29.6%	33.0%	29.5%	29.3%
Ireland	CXO	25.0%	22.8%	15.9%	
Ireland	Other	47.2%	39.9%	32.5%	31.9%
Israel	CXO	21.9%	20.4%	22.6%	11.1%
Israel	Other	36.7%	29.5%	27.7%	24.7%
Italy	CXO	29.3%	28.6%	27.5%	
Italy	Other	50.7%	42.8%	37.2%	34.4%
Mexico	CXO	22.0%	18.1%	19.0%	
Mexico	Other	39.5%	33.9%	26.6%	22.4%
Netherlands	CXO	21.0%	18.3%	20.3%	7.3%
Netherlands	Other	47.5%	35.4%	30.3%	27.5%
Pakistan	CXO	8.9%	6.9%	9.5%	
Pakistan	Other	20.6%	23.7%	19.0%	20.8%
Poland	CXO	28.4%	24.5%	13.8%	
Poland	Other	50.8%	38.7%	36.9%	29.7%

Singapore	CXO	28.2%	23.8%	21.4%	
Singapore	Other	49.1%	47.2%	38.8%	36.9%
Spain	CXO	26.4%	24.3%	20.4%	18.8%
Spain	Other	47.4%	35.1%	29.9%	26.9%
Sweden	CXO	30.1%	28.3%	19.9%	
Sweden	Other	49.6%	36.6%	30.8%	25.8%
Switzerland	CXO	20.8%	16.6%	16.7%	
Switzerland	Other	43.7%	32.8%	27.7%	22.4%
United Arab Emirates	CXO	14.0%	15.7%	11.5%	
United Arab Emirates	Other	31.7%	34.6%	28.5%	27.3%
United Kingdom	CXO	25.0%	21.1%	17.2%	12.8%
United Kingdom	Other	46.9%	37.8%	31.7%	27.4%
United States	CXO	28.2%	23.1%	19.9%	15.7%
United States	Other	50.0%	39.3%	35.3%	30.8%
Average	CXO	24.7%	21.6%	18.6%	13.3%
Average	Other	45.1%	36.4%	30.5%	27.1%

Figure A.1 Share of AI Firms in Each Industry

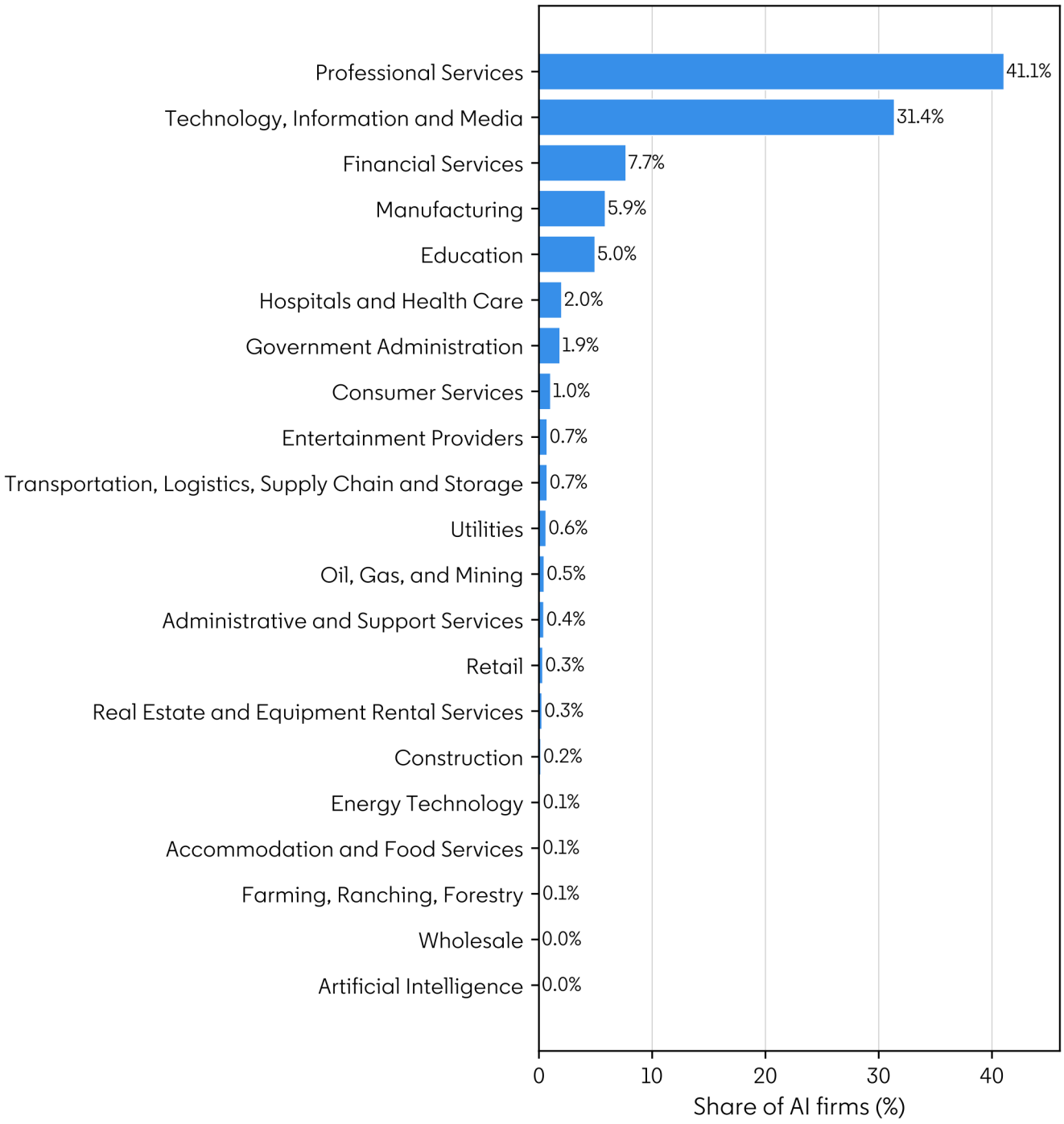

Figure A.2 CXO, AI Firm, and AI Role Relative Penalties by Industry

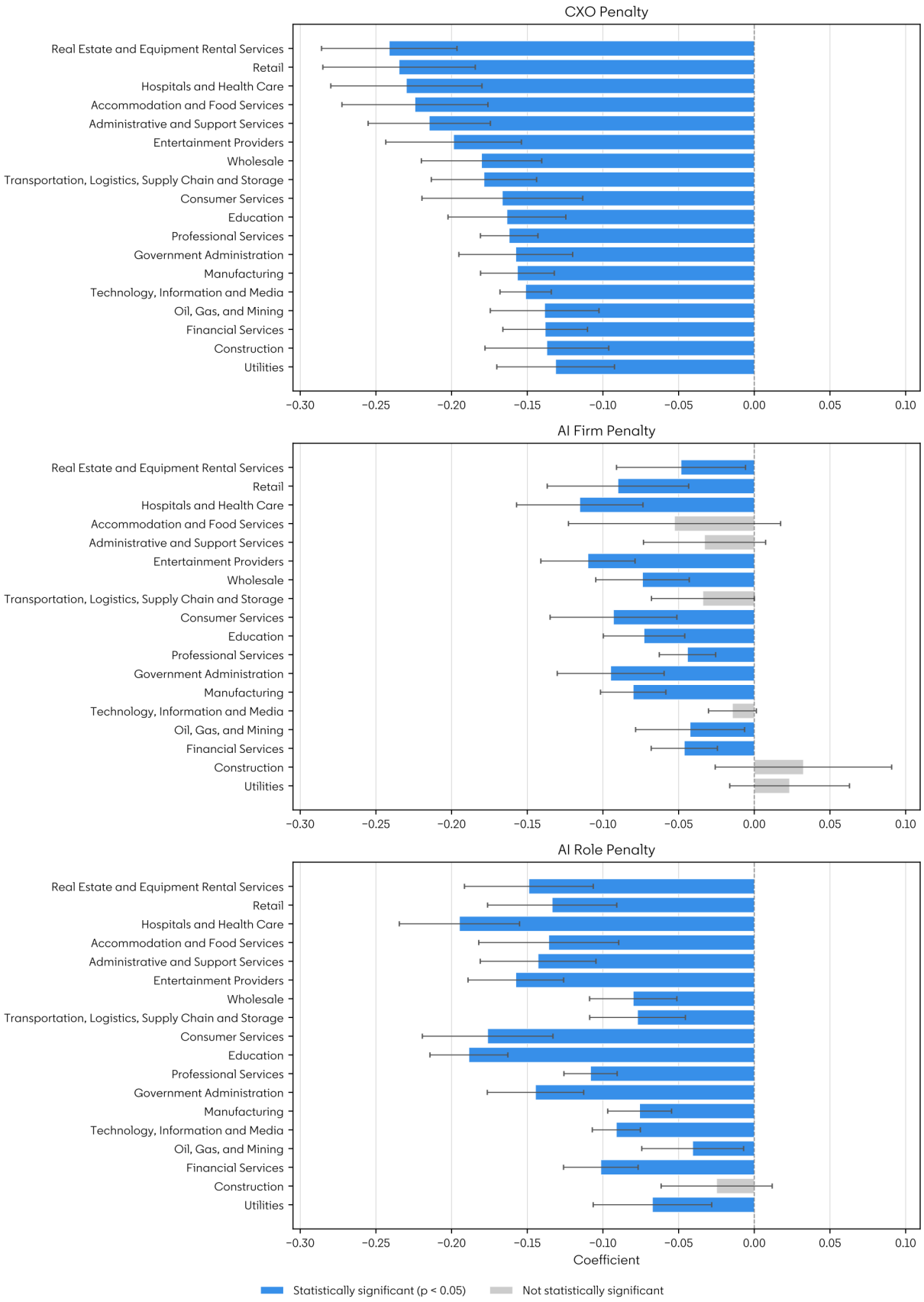

Figure A.3 Representation of Women by CXO Role