The Seven-Figure Pay Gap Isn't Gender-Neutral: Why the Gap Compounds for Women

Research Brief · Companion Analysis | Jiajun Zou & Jeff Joseph, Lossdog — March 2026

A companion to **The Seven-Figure Pay Gap: A Structural Analysis of Professional Compensation**
(Zou & Joseph, 2026)

Abstract

This companion brief examines a proposition that follows directly from our prior structural analysis (Zou and Joseph, 2026) of professional compensation: **the seven-figure career pay gap is not distributed equally across professionals**. Drawing on an integrative review of the gender pay gap literature by Livingston, Jeong, Klein, and Chakroborty (2025), we argue that **the same structural forces suppressing professional compensation — employer market power, firm-specific capital lock-in, and constrained labor mobility — bear down with compounded force on female professionals**. The five mechanisms documented in our prior brief establish a conservative career underpayment floor of approximately $3.9 million in nominal dollars for a professional starting at $75,000 over a 30-year career. For female professionals, each of those mechanisms is amplified by gender-specific structural disadvantages that Livingston et al. document across 970 peer-reviewed studies spanning economics, sociology, psychology, and management. **The seven-figure gap is not a ceiling for women. It is a floor.**

A note on dollar figures: Unless otherwise stated, all projected career figures are presented in nominal (non-inflation-adjusted) dollars. The value of these projections lies not in precise amounts but in the scale of the divergence between what female professionals earn and what structural equity would produce. That ratio holds regardless of the price level.

Key Statistics

40 – 60%

Share of the gender pay gap unexplained by qualifications, role, or experience — rather, attributed to discrimination

(as cited in Livingston et al., 2025)

~ $3.9M

Conservative career underpayment floor for a female professional starting at $75K — before gender-specific mechanisms apply

(Zou & Joseph, 2026)

Introduction: The Livingston Framework

Here is something that should embarrass the economics profession: it took nearly 1,000 peer-reviewed studies, researchers across four academic disciplines, and more than five decades of data collection to produce a framework that clearly explains why women get paid less than men. To be fair, the individual studies were often excellent. They just weren't talking to each other.

Beth Livingston and colleagues fixed that. Their integrative review — spanning economics, sociology, psychology, and management — is the synthesis the literature has needed for thirty years, and it is genuinely impressive work. Livingston et al. organize the causes of the gender pay gap into four core perspectives: **capital accumulation** (differences in education, training, and social networks), **sorting** (women's concentration in lower-paid occupations, firms, and levels), **nature- and nurture-based differences** (risk preferences, negotiation behavior, socialized expectations), and **gender bias and discrimination** (the employer preferences that suppress women's pay even after you've controlled for everything else). These aren't four separate problems. They interact, reinforce, and mediate each other in ways that the siloed prior literature had consistently missed.

The most important move Livingston makes — the one that earns this brief's existence — is dismantling the supply-versus-demand framework that has long structured how we talk about the gender pay gap. The standard story goes: some of the gap is women's choices (supply), some of it is employer discrimination (demand), and the debate is about the ratio. Livingston argues, with substantial evidence, that this framing is wrong in a specific and consequential way. **What looks like a choice — a woman sorting into a lower-paid field, accepting a lower opening offer, not negotiating — is frequently a constrained choice, shaped by discrimination, institutional design, and structural forces she didn't create and can't easily escape.** Calling it a choice is technically accurate in the same way it's technically accurate to say someone chose to take an umbrella because it was raining.

> "What appear to be women's individual 'choices' are shaped by social context factors in which they are embedded."
>
> — Kossek et al. (2017, p. 229), as cited in Livingston et al. (2025)

This is precisely the analytical frame that *The Seven-Figure Pay Gap* applied to professionals as a class. The parallel is not coincidental. It is structural.

I. Thesis: A Compounding Architecture

Our prior brief documented five mechanisms — productivity-compensation decoupling, labor market monopsony, declining professional share of income, value creation–capture asymmetry, and AI-driven acceleration — that collectively suppress professional career earnings by approximately $3.9 million in nominal dollars for someone starting at $75,000 annually over thirty years. The brief was careful to note

that none of this requires a conspiracy. It emerges from specific institutional choices — the Volcker Shock, shareholder primacy, equity-linked executive pay, the quiet normalization of salary benchmarking — that redirected productivity gains away from workers starting in the late 1970s.

What the brief did not do was ask whether those mechanisms land equally on everyone. They do not.

Livingston et al. (2025) make clear that the structural forces suppressing professional compensation — employer market power, firm-specific capital lock-in, geographic constraint, constrained labor mobility — are exercised with greater force against workers with less bargaining leverage. Female professionals face a structurally guaranteed reduction in that leverage. Not because of anything they did. Because of how the institutions surrounding their careers were built.

The thesis here is simple: the five frameworks of professional underpayment documented in Zou and Joseph (2026) are exacerbated — in magnitude, in duration, and in mechanism — by the gender-specific structural forces Livingston documents. This is not two separate pay gaps running in parallel. It is one compounding architecture of underpayment, where the mechanisms reinforce each other at every stage of a career. For female professionals, $3.9 million is not the answer. It is the starting bid.

II. The Firm-Specific Capital Trap: Monopsony Has a Gender Problem

The Trap as a General Mechanism

Our prior brief established that U.S. labor markets are, by the DOJ's own antitrust standards, highly concentrated. The average Herfindahl-Hirschman Index (HHI) across professional labor markets is 4,378 — the mathematical equivalent of 2.3 competing employers — and 60% of all professional labor markets exceed the agency's threshold for "highly concentrated" (Azar, Marinescu, Steinbaum & Taska, 2020). If these were product markets, regulators would intervene. Because they are employment markets, the concentration goes largely unaddressed, and workers pay for it: employer market power suppresses wages 20–30% below what a competitive market would produce, generating an estimated $840,000 in lost nominal career earnings for a professional starting at $75,000 (Card et al., 2018).

Monopsony power is not, however, a flat tax. It is levied unevenly. And the mechanism that most clearly illustrates its uneven application is one we called the firm-specific capital trap.

Here is how the trap works for everyone. The longer you stay at a firm, the more valuable you become — and the less that value translates into compensation. Institutional knowledge, internal relationships, familiarity with proprietary systems: these accumulate over time and make you genuinely more productive. They also make you less portable. The employer knows this. You know this. And the employer, knowing you cannot command equivalent compensation elsewhere, has less incentive to raise

your pay to match what you're actually generating. You become more valuable and more trapped at the same time. Economists call this the "hold-up problem" (Naidu, Posner & Weyl, 2018). Everyone else calls it Tuesday.

The Gender-Specific Intensification

Livingston's review reveals that this trap is structurally deeper for female professionals — and through a mechanism the professional compensation literature hadn't fully named. Women sorted into female-typed roles within firms accumulate firm-specific capital that is simultaneously real in its internal value and discounted in external markets. The discount isn't about the individual's output. It's about the role itself. Drawing on England's (1992) theory of valuative inequality — formalized and organized within Livingston et al.'s (2025) four-perspective model — female-typed work is systematically appraised as worth less than comparable male-typed work, regardless of what it actually produces. So the professional becomes more embedded and less portable while the market discount on her specialization compounds alongside the monopsony markdown that was already suppressing her wages. Two mechanisms. One career. Compounding in the same direction.

The trap tightens further when career interruption enters the picture. Women who step back for family responsibilities — a pattern Livingston et al. (2025) document as driven not merely by preference but by the structural unavailability of affordable childcare, spousal career prioritization norms, and workplaces that quietly penalize visible flexibility — lose tenure-based salary momentum at precisely the career stage when the cost is highest.

The compounding arithmetic: A female professional who experiences a two-year career interruption at year 10 doesn't merely lose two years of income. In the productivity-pay gap model from Zou & Joseph (2026), she loses the compounding base effect of those two years — her year-12 salary is anchored not to where it would have been, but to where it was at year 8. Over the remaining 18 years of a 30-year career, that base suppression compounds forward at 4% annually. The motherhood penalty isn't a deduction. It's a reset of the exponent.

The motherhood penalty, as Livingston et al. (2025) document across multiple national contexts, is not a one-time salary cut. It is a permanent reset of the base from which all future raises compound (Killewald & Gough, 2013; Lucifora et al., 2021; Ma, 2022; Petersen et al., 2014, as cited in Livingston et al., 2025). Combine that with the valuative inequality discount on her firm-specific specialization, and a female professional faces a version of the firm-specific capital trap that is structurally deeper than her male colleagues' — not because of individual choices, but because of the institutional architecture surrounding those choices.

Non-Compete Agreements and the Shrinking Outside Option

The trap has one more layer. Our prior brief identified non-compete agreements as a primary mechanism of monopsony: approximately 30 million American professionals are legally barred from accepting higher offers from competitors, severing the link between their productivity and their outside options (FTC, 2024; Prescott, Bishara & Starr, 2016). Livingston et al. (2025) add an interaction effect that

the professional compensation literature missed entirely. Geographic mobility constraints — a general professional vulnerability we documented — fall disproportionately on female professionals. Spousal career prioritization, childcare infrastructure dependencies, and family network ties limit women's effective geographic mobility more severely on average (Sorenson & Dahl, 2016, as cited in Livingston et al., 2025). The non-compete clause that suppresses a male professional's wages by blocking competitive recruitment suppresses a female professional's wages by a wider margin, because her set of realistic alternative employers was already smaller before she signed the agreement.

Summary: The Monopsony-Gender Interaction

Monopsony Mechanism	**Effect on All Professionals**	**Gender-Specific Amplification**
Firm-specific capital lock-in	Widens internal productivity / external value gap over tenure	Valuative inequality (England, 1992) discounts female-typed specialization; motherhood penalty resets the compounding base
Non-compete agreements	Blocks competitive bidding from rival employers	Geographic mobility constraints shrink the effective alternative employer pool further (Sorenson & Dahl, 2016, as cited in Livingston et al., 2025)
Employer concentration	20–30% markdown below marginal revenue product	40–60% of gender pay gap unexplained even after controlling for role and qualifications (Livingston et al., 2025)

Sources: Azar, Marinescu, Steinbaum & Taska (2020); Card et al. (2018); Livingston et al. (2025); Sorenson & Dahl (2016, as cited in Livingston et al., 2025).

These mechanisms don't simply add together — they interact. **The monopsony markdown sets the floor. The gender-specific amplifiers operate within that already-suppressed range, compressing female professionals' compensation below a floor that was already below the competitive market wage. A female professional isn't underpaid once. She's underpaid by compounding layers of structural disadvantage, each operating quietly and simultaneously**, none of them requiring anyone to have intended the outcome.

III. The Broader Synthesis: Constrained Choice and the Illusion of a Fair Market

The most useful thing Livingston et al. (2025) give us — beyond any specific empirical finding — is a name for what is actually happening. They call it the architecture of constrained choice: an interlocking set of structural conditions that make below-competitive outcomes appear voluntary while ensuring that workers lack the information, mobility, and bargaining leverage to achieve anything else. The choice is real. The freedom isn't.

This is, almost word for word, the argument *The Seven-Figure Pay Gap* made for professionals as a class. What looks like a freely negotiated salary — a number a professional "accepted" — is the product of monopsony power, salary benchmarking practices that function as soft collusion, non-compete clauses that eliminate outside options, and institutional wage-setting norms designed to pay the market rate rather than the productive rate. The professional chose to accept the offer. She just didn't have much of a choice.

> "The 'competitive market' that would set fair compensation is, for most professionals, a theoretical construct rather than an empirical reality."
>
> — Zou & Joseph (2026), *The Seven-Figure Pay Gap*

What Livingston et al. (2025) add is evidence that the architecture of constrained choice isn't uniformly constructed. It has load-bearing walls — points where structural disadvantages concentrate and compound — and those walls fall disproportionately along gender lines. The firm-level wage premium gap documented by Card, Cardoso, and Kline (2016) — cited in both research streams — illustrates this precisely: women are less likely to work at premium-paying firms, and this sorting effect has grown more important over time as superstar firms capture more economic activity (Card, Cardoso & Kline, 2016, as cited in Livingston et al., 2025). The declining professional share of income doesn't reduce the labor share equally. It reduces it most for workers least positioned to resist. Female professionals, structurally disadvantaged in negotiation, mobility, and market access, absorb a disproportionate share of the reduction.

The AI acceleration framework extends this into the future in ways that should give anyone pause. Livingston et al. (2025) flag remote work as a double-edged sword for women — enabling workforce participation while reducing visibility and, consequently, pay. The same dynamic applies directly to AI augmentation. Workers who increase their productivity using AI tools, without that gain becoming visible to compensation decision-makers, are unlikely to see wages adjust upward. Under conditions of imperfect productivity observability — precisely the conditions AI-augmented knowledge work creates — employers fall back on structural assumptions to evaluate performance. For female professionals, those assumptions carry forty years of documented bias. AI doesn't create a new problem. It inherits and accelerates the existing one. And it does so, as with everything else in this brief, unequally.

IV. Summary: The Compounding Gap at the Career Level

The interaction between the structural underpayment documented in Zou and Joseph (2026) and the gender-specific amplifiers documented in Livingston et al. (2025) operates at every stage of a female professional's career, and in the same direction at every stage.

Career Stage	**General Mechanism (Zou & Joseph, 2026)**	**Gender-Specific Amplification (Livingston et al., 2025)**
Entry	Monopsony markdown on opening offer; salary anchoring	Lower negotiation returns; anticipated career interruptions depress initial ask (Card, Cardoso & Kline, 2016)
Mid-career	Firm-specific capital lock-in; non-compete constraint	Valuative inequality discounts female-typed specialization in external market
Career interruption	Base salary reset; compounding loss on future raises	Motherhood penalty: slower, flatter career trajectory following interruption
Late career	Productivity-pay gap widens; AI commoditizes output	Bias and discrimination residual persists: 40–60% of gap unexplained after controlling for all observables

Sources: Zou & Joseph (2026); Livingston et al. (2025); Card et al. (2018); Azar, Marinescu, Steinbaum & Taska (2020); Sorenson & Dahl (2016, as cited in Livingston et al., 2025).

The precise magnitude of the additional career gap for female professionals resists a single clean estimate — it depends on occupation, geography, career interruption timing, and sector in ways that demand their own rigorous analysis. But the directional conclusion isn't ambiguous. Where our prior brief found that the competitive market for professional labor is a theoretical construct for most professionals, Livingston et al. (2025) demonstrate that it is an even more theoretical construct for female professionals — and that the distance between the theory and the reality has been measured, replicated, and documented with increasing precision for half a century.

Conclusion

The Seven-Figure Pay Gap documented a structural underpayment of approximately $3.9 million in nominal career earnings for a typical professional. We were careful to say that the gap isn't the result of malice. It emerges from specific institutional choices that have redirected productivity gains from workers to capital owners and executives since 1979. Nobody had to plan it. The system just works that way.

Livingston et al.'s (2025) review adds an uncomfortable precision to that finding. The system works that way — and it works that way harder for women. The firm-specific capital trap closes earlier and deeper. The motherhood penalty resets the compounding base at the worst possible moment in a career's earnings trajectory. Geographic mobility constraints shrink the already-thin market of competing employers. Valuative inequality discounts female-typed specialization in external markets while the work continues to generate full value internally. None of these mechanisms require intention. All of them require acknowledgement.

The seven-figure career gap is, for female professionals, a floor. The gap doesn't announce itself. It compounds quietly, year over year, in the distance between the value you create and the compensation you capture. You do not need to feel underpaid to be underpaid. For female professionals navigating the compounding architecture documented here, you do not need to feel doubly underpaid to be doubly underpaid. Understanding the structure is the first step toward closing it — whether through individual negotiation, organizational policy, or something more structural.

A note on scope: This brief focuses on the intersection of gender and structural professional underpayment. The frameworks developed by Livingston et al. (2025) encompass a far richer body of evidence on race, national context, and intersectional disadvantage than this analysis addresses. Future work should examine how the compounding architecture documented here operates across racial and ethnic lines — where the evidence, consistent with the Livingston et al. framework, strongly suggests further amplification.

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Key sources: Livingston et al. (2025); Card et al. (2018); Card et al. (2016); Azar, Marinescu, Steinbaum & Taska (2020); EPI Productivity-Pay Tracker (2025); Sorenson & Dahl (2016).

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